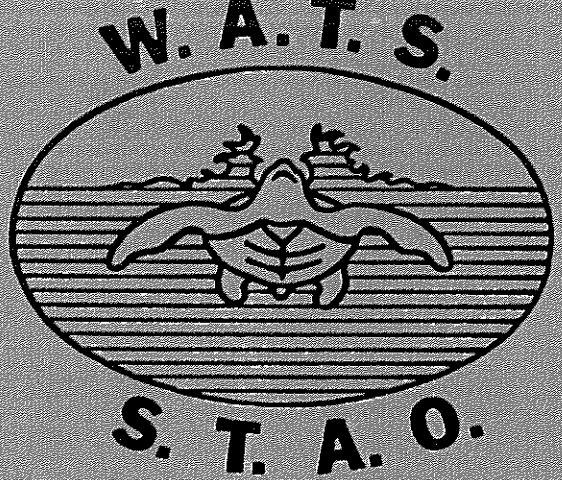
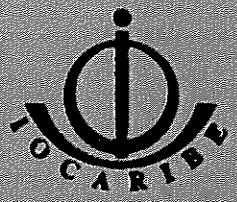
PROCEEDINGS
OF THE
WESTERN ATLANTIC TURTLE SYMPOSIUM



San Jose, Costa Rica
17-22 July 1983



ENGLISH EDITION

VOLUME 3

Appendix 7

THE NATIONAL REPORTS

PROCEEDINGS OF THE WESTERN ATLANTIC TURTLE SYMPOSIUM

EDITORS

Peter Bacon
Fred Berry
Karen Bjorndal
Harold Hirth
Larry Ogren
Michael Weber

SYMPOSIUM ON
SEA TURTLE RESEARCH
OF THE WESTERN ATLANTIC
(POPULATIONS AND SOCIOECONOMICS)

17-22 July 1983
San Jose, Costa Rica

Sponsored By The
INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION
ASSOCIATION FOR THE CARIBBEAN AND ADJACENT REGIONS

Supported By The
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VOLUME 3

TABLE OF CONTENTS

		Page
1.A	Format of the National Report	3- 1
1.B	Status of the National Reports	3- 5
1.C	Copies of the National Reports	3- 7
	Anguilla, National Report	3- 7
	Antigua-Barbuda, National Report	3- 12
	Bahamas, National Report	3- 30
	Barbados, National Report	3- 36
	Belize, National Report	3- 41
	Bermuda, National Report	3- 49
	Brazil, Ad Hoc Data Report	3- 55
	British Virgin Islands, National Report	3- 70
	Cayman Islands, National Report	3-118
	Colombia, Draft National Report	3-123
	Costa Rica, National Report	3-131
	Cuba, Ad Hoc Data Report	3-143
	Dominica, National Report	3-161
	Dominican Republic, National Report	3-169
	French Guiana, National Report	3-177
	Grenada, National Report	3-184
	Guadeloupe, National Report	3-197
	Guatemala, National Report	3-201
	Guyana, National Report	3-209
	Haiti, National Report	3-216
	Honduras, National Report	3-220
	Jamaica, National Report	3-225
	Martinique, National Report	3-296
	Mexico-Caribbean, National Report	3-300
	Mexico-Gulf, National Report	3-310
	Montserrat, National Report	3-322
	Netherlands Antilles-Aruba+, Ad Hoc Data Report	3-329
	Netherlands Antilles-Saba+, Ad Hoc Data Report	3-334
	Nicaragua, National Report	3-337
	Panama, National Report	3-344
	Puerto Rico, National Report	3-349
	St. Kitts-Nevis, National Report	3-364
	St. Lucia, National Report	3-370
	St. Vincent, National Report	3-381
	Suriname, National Report	3-386
	Trinidad-Tobago, National Report	3-398
	Turks-Caicos, National Report	3-409
	U.S.A., National Report	3-423
	U.S. Virgin Islands, National Report	3-489
	Venezuela, National Report	3-500

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1.A Format of the National Reports

The data deemed of value on the populations and socioeconomics of the sea turtles of the western Atlantic area was developed into a National Report Form by the WATS Steering Committee and Technical Team. The final format was compiled by Harvey R. Bullis, Jr. The Form was distributed to all National Representatives and other interested parties -- first in xerox copies, and in May 1982 as bound copies in both English and Spanish.

The substance of the National Report Form is contained in 21 tables and 9 supplementary tables or pages:

1. Geographic Inventory
2. Coastal Habitat Inventory of Marine Shoreline
2a. Marine Habitat Inventory of Bottom Types
3. Nesting Beach Inventory
3s. Nesting Beach Inventory
4. Nesting Census For Beach
5. Aerial Beach Survey
5s. Aerial Beach Survey Summary
6. Estimated Populations of Nesting Females
6s. Estimated Populations of Nesting Females
7. Foraging Areas Inventory
8. Turtle Species Present on Foraging Areas
9. Non-Foraging Turtles At Sea
10. Natural Mortality
10s Natural Mortality
11. Landing Sites for Turtles and Turtle Products
12. Total Annual Turtle Landings in Numbers and Weight
13. Estimated Incidental Turtle Catch
13c Estimated Turtle Catch For Foreign Fisherman
14. Estimated Turtle Catch for Foreign Fisherman
15. Official Statistics of Turtle Production
15s Official Statistics of Turtle Catch and Production
16. Employment Dependant on Turtles
16s Employment Dependant on Turtles
17. Turtle Mariculture Operations
18. Public and Private Institutions concerned With Turtle Conservation/ Management/Utilization.
19. Sanctuaries and Refuges
20. Regulatory Authority
20s Regulatory Authority
21 National Research Projects

The National Report Form contains 9 pages of Introduction, Instructions, and Explanatory Data Concepts for Tabular Material.

INTRODUCTION

In recent years increasing concern has been expressed on the global status of marine turtle stocks. The economic importance of marine turtles in the western central Atlantic region requires that attention be paid to the status of turtle stocks to ensure that this resource is not placed in jeopardy and that maximum social advantage be achieved through informed management.

The Western Atlantic Turtle Symposium (WATS) has been planned to bring together data and other information concerning the turtle stocks and their utilization in the area extending from northeastern Brazil to the eastern United States. The objective of WATS will be to consider the validity of contemporary data as a basis for preparing an assessment of the regional turtle stocks and to recommend needed research activities if and where needed to maintain a regional overview of population changes. To assemble the information needed for the Symposium, the responsible Senior Governmental Offical for each country of the region has been invited to participate. They have been requested to designate a National Representative who will have the responsibility to complete a WATS National Report for their country and who will also attend the Symposium to be held in San Jose, Costa Rica in July 1983.

The data of the National Reports will be translated into English and Spanish, and a regional summary will be made prior to the Symposium. At the Symposium, the National Representative will review and discuss the data, will assess the status of knowledge and research of sea turtles of the area, and will make official recommendations for future research and other pertinent actions.

The Symposium Organization

The Symposium is sponsored by IOCARIBE (Intergovernmental Oceanographic Commission Association for the Caribbean and Adjacent Regions) and supported by WECAFC (Western Central Atlantic Fisheries Commission).

A Symposium Steering Committee has been established to organize and facilitate the Symposium, and to prepare the Proceedings of the Symposium for distribution. The Steering Committee membership is listed at the end of this report.

A Symposium Technical Team is established to assist any National Delegate with preparation of the National Report, to assist in conducting limited sea turtle research during 1981 and 1982, and to assemble, edit, translate, and summarize the National Reports. The Technical Team is listed at the end of this report.

The Symposium Research Plan

The Symposium proposes that certain basic and limited sea turtle research be conducted during 1982, primarily during the major sea turtle nesting season, that extends from February through September;

— that this research be done, as much as possible, in each country participating in the Symposium;

— that this research be done by the National Delegate and/or the Representative's designates. The Symposium's Technical Team is prepared to assist in part or all of this research, as requested by and coordinated with the National Representative.

The basic research planned is:

A. Compilation of all historical and current data possible on sea turtle populations and socioeconomics - from literature records, research reports, data files, and official records.

B. Beach surveys of all major sea turtle nesting beaches possible.

C. Aerial surveys of all marine shorelines possible, and to record and quantify sea turtle tracks and nests, and to categorize the shoreline with respect to nesting and non-nesting areas.

The Manual

A Manual of Sea Turtle Research and Conservation Techniques has been prepared to support and coordinate the Symposium program. Copies of the Manual will be mailed to the National Representatives and to sea turtle workers in the area.

The National Reports

The National Report forms are to be completed by the National Representative and his assistants, including the Symposium Technical Team, if requested. It is recognized that some items of information and data requested in the National Report form will not be available or even exist for many countries. For the most part, the National Report Form has been structured in "Tables" that are self-explanatory. However, in order to ensure that the intended use of the tabular material is fully understood by the persons compiling the National Report, a further conceptual definition is given for each table on the following pages. Several tables have "Supplement" pages to provide additional material and explanations to describe how the data were developed. For further clarification, several supporting documents are requested.

These are:

1. Map A. Country map showing nesting sites described in Table 3.
2. Map B. Country map showing foraging areas described in Table 7.
3. Map C. Country map showing landing sites described in Table 11.
4. Map D. Country map showing sanctuaries and refuges described in Table 19.

Note: Any standardized country map projection and scale is acceptable.

5. Copies of legislation identified in Table 20 Supplement.
6. Copies of all available publications on marine turtles.

Data Concepts for Tabular Material

Table 1. Geographic Inventory

There is a need to categorize coastline distances and Continental Shelf areas between various jurisdictions that may be used to manage and/or control the conservation and utilization of sea turtles.

Table 2. Habitat Inventory

Certain habitat categories may be considered suitable or desirable for sea turtle activities such as foraging, nesting, etc. A quantitative overview of desirable and undesirable conditions for sea turtle activities will provide guidance in prioritizing future survey and research activities.

Table 3. Nesting Beach Inventory

Most of the nesting surveys are conducted within geographic parameters that are frequently referred to as named beaches. Nesting areas may be known by other descriptive names as well. Since nesting surveys by either beach patrolled or aerial reconnaissance will refer to geographic sectors of shoreline, a geographic sequential listing of all possible nesting sites is needed.

Table 4. Nesting Census for Beach

This summarizes all of the beach patrol census data for each beach included in the survey. Correlation of this data, with that included in Table 5, will provide the summary given in Table 6 on the estimated population of nesting females.

Table 5. Aerial Beach Survey Summary

During the nesting seasons of 1981 and 1982, aerial reconnaissance surveys of all potential nesting beach areas in the western Atlantic area will be attempted. In addition, a number of more intensive surveys are planned for areas with known high incidence of nesting activities. Where possible, these surveys will be coordinated with ground truth activities including beach patrol surveys. This table summarizes the numbers of nests identified during the overflights and, compiled with the material in Table 4, will be used for the population estimates of nesting females in Table 6.

Table 6. Estimated Populations of Nesting Females

The survey data indicated in Tables 4 and 5 should provide, along with other observations, a basis for estimating by numbers of nesting females of each species of sea turtle in your country. Methods of estimation can vary from country to country so a descriptive account as to how these estimations are derived is needed. Any methods including simple extrapolation or detailed analytical calculations will be useful.

Table 7. Foraging Areas Inventory

In order to better understand the seasonal distribution of sea turtles, it is important to categorize and quantify activities in important foraging areas. This table identifies the areas that will be used in the following table(s), to present monthly activities summaries.

Table 8. Turtle Species Present on Foraging Areas

One of these tables is needed for each major foraging area. Compilation and correlation of this data throughout the western Atlantic will aid in more sharply defining population distributions and seasonal distribution patterns.

Table 9. Non-Foraging Turtles at Sea

Please list all incidental observations on sea turtles in your waters. If large numbers of observations have been recorded, please attempt to summarize these in time and space.

Table 10. Natural Mortality

Sea turtles are normally subjected to very high levels of natural mortality at different life stage units. It is important to understand the relative importance of these mortality factors throughout the entire geographic range and life history span of each species. Precise data on these processes is very difficult to obtain; therefore, opinion as to the relative importance of each mortality factor is of value. In the right-hand column requesting information on the percentage of the life stage unit effective for natural mortality causes, indicate your estimation of the percentage of the total unit effected each year. For example, for nests/eggs, give 90/40 if you believe that 90% of the nests are effected and 40% of the eggs have been destroyed. Similarly, give a percentage of the hatchlings which appear not to successfully escape to sea, etc. Since it is difficult to categorize many additional biological data parameters, please include on the supplementary pages for Table 10 all available biological data on measurements, sex ratios, food habits, hibernation, etc., that would help define the turtle stocks in your country.

Table 11. Landing Sites for Turtles and Turtle Products

The material in this table is intended to give an overview of the utilization of sea turtles. It is desirable to know if there are seasonal patterns of utilization that relate to seasonal patterns of distribution for the various species.

Table 12. Total Annual Turtle Landings in Numbers and Weight

This summary should include all production of turtles that were taken in fisheries targeted for turtles. Accidental or incidental catches should be reported in the following table.

Table 13. Incidental Turtle Catch

This information is desired to understand possible additional mortality factors for sea turtle populations. Without detailed records, incidental catch data is difficult to evaluate. Incidental captures by shrimp trawls might be released alive, discarded when dead, or retained for marketing ashore. Any information that would increase our understanding of incidental catch and its disposition will be useful.

Table 14. Estimated Turtle Catch by Foreign Fishermen

This type of information is probably very difficult to obtain. However, some countries have observer programs for foreign vessels fishing within national jurisdictions. Any information on foreign catches supplemental to the national catches should be included.

Table 15. Official Statistics of Turtle Catch and Production

Please complete one of these tables for each species of sea turtle harvested in your country. When official statistics do not exist, please estimate quantities and indicate the methods of calculation.

Table 16. Employment Dependent Upon Turtles

There is little available information on the utilization of sea turtles in terms of employment and value. Accurate statistics for most countries are probably not available; however, best estimates categorized in the general activities of fishing, processing, and selling, will be informative. In each of these categories, consider the total numbers of individual fishermen, members of cooperatives as well as Government and private companies that are either dependent upon or seasonally utilize sea turtle stocks.

Table 17. Turtle Mariculture Operations

There is a need to know how many countries are conducting population enhancement activities. Any activities that include the hatching of eggs or the holding of live turtles for egg production should be quantified. If data are available for more than one year, please complete and sequence Table 17 (17-1, 17-2, 17-3) for each year data are available for the past five years.

Table 18. Public and Private Institutions Concerned with Turtle Conservation/Management/Utilization

An inventory of all current institutional interests with sea turtles will be useful for future research planning. A complete listing of these interests will enhance international communications on sea turtle activities.

Table 19. Sanctuaries and Refuges

Many countries have designated beaches and foraging areas as sanctuaries from harvesting. Other countries have national prohibition against the taking of sea turtles. An inventory of these areas and the intended conservation goals will be compiled. The query regarding enforcement requests an estimation as to whether there are effective means for controlling poaching in these areas.

Table 20. Regulatory Authority

This table is optional except when special legislation and enforcement authority has been enacted. It is the intent to understand how many countries are pursuing turtle management activities and to identify the responsible Government authorities.

Table 21. National Research Projects

It is desirable to identify all research activities currently underway throughout the region. Please list all identifiable projects for your country.

The National Reports are to be completed by December 1982. A copy should be retained by the National Representative. The original should be mailed expeditiously to:

Dr. Robert R. Lankford
IOC Assistant Secretary for IOCARIBE
% UNDP
Apartado 4540
San Jose, Costa Rica

1.B Status of National Report

The National Reports were designated in four categories by the WATS Steering Committee:

1. NATIONAL REPORT -- The Official National Report, submitted to the WATS Administrator or Secretary prior to the Symposium, and presented by the National Representative at the Symposium.

2. DRAFT NATIONAL REPORT -- Prepared by the National Representative and/or the WATS Technical Team, and presented to the Symposium by the Technical Team in the absence of the National Representative. Also, a Report prepared or approved by the Technical Team, prior to its official adoption by the National Representative.

3. AD HOC DATA REPORT -- Prepared or approved by the Technical Team for area countries not officially participating in the Symposium.

4. SUPPLEMENTAL DATA REPORT -- An official Report, presented by the National Representative, during or after the Symposium, to include data obtained and compiled after submission of the National Report. (Supplemental Data Reports were presented by five countries). These have not yet been included in the revised WATS Computerized Data Base.)

Forty REPORTS were presented to the Symposium for the 38 WATS region countries. Two each were submitted by Mexico and Netherlands Antilles to facilitate subregional analyses. The categories of these REPORTS are listed below by country. The date accompanying each is either the date it was received by the WATS Secretary, or the date it was officially adopted by its National Representative, whichever came later.

ANGUILLA	NATIONAL REPORT	6 Jan 83
ANTIGUA	NATIONAL REPORT	9 Mar 83
BAHAMAS	NATIONAL REPORT	6 Jan 83
BARBADOS	NATIONAL REPORT	17 Feb 83
BELIZE	NATIONAL REPORT	25 Jan 84
BERMUDA	NATIONAL REPORT	19 May 83
BRAZIL	AD HOC DATA REPORT	13 Apr 83
BRITISH VIRGIN ISLANDS	NATIONAL REPORT	2 Jun 83
CAYMAN ISLANDS	NATIONAL REPORT	3 Dec 82
COLOMBIA	DRAFT NATIONAL REPORT	18 Jul 83
COSTA RICA	NATIONAL REPORT	6 Jul 83
CUBA	AD HOC DATA REPORT	27 Jun 83
DOMINICA	NATIONAL REPORT	1 Dec 83
DOMINICAN REPUBLIC	NATIONAL REPORT	18 Jul 83
FRENCH GUIANA	NATIONAL REPORT	1 May 83
GRENADA	NATIONAL REPORT	28 Feb 83
GUADELOUPE	NATIONAL REPORT	6 Jul 83
GUATEMALA	NATIONAL REPORT	20 Dec 82
GUYANA	NATIONAL REPORT	10 Jul 83

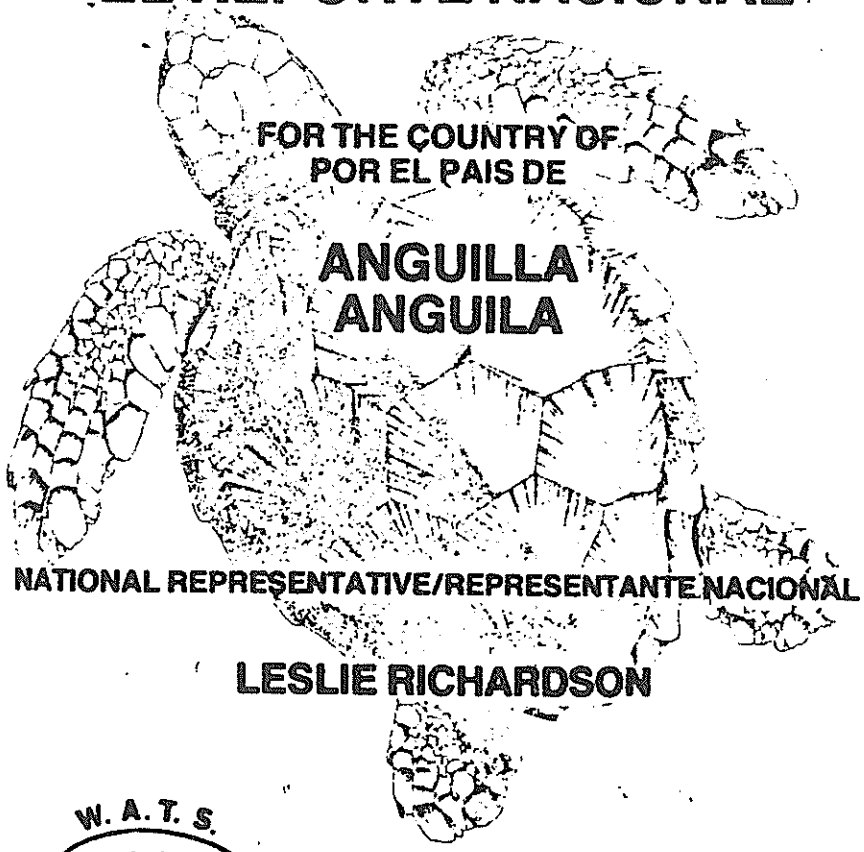
HAITI	NATIONAL REPORT	14 Dec 82
HONDURAS	NATIONAL REPORT	24 Jan 83
JAMAICA	NATIONAL REPORT	29 Jun 83
MARTINIQUE	NATIONAL REPORT	6 Jul 83
MEXICO-CARIBBEAN	NATIONAL REPORT	12 Jun 83
MEXICO-GULF	NATIONAL REPORT	12 Jun 83
MONTSERRAT	NATIONAL REPORT	6 Jun 83
NETHERLANDS ANTILLES-ARUBA+	AD HOC DATA REPORT	8 Dec 82
NETHERLANDS ANTILLES-SABA+	AD HOC DATA REPORT	8 Dec 82
NICARAGUA	NATIONAL REPORT	2 Dec 82
PANAMA	NATIONAL REPORT	13 Dec 82
PUERTO RICO	NATIONAL REPORT	1 Jul 83
ST. KITTS-NEVIS	NATIONAL REPORT	27 Jun 83
ST. LUCIA	NATIONAL REPORT	27 Jan 83
ST. VINCENT	NATIONAL REPORT	25 Feb 83
SURINAME	NATIONAL REPORT	3 Dec 82
TRINIDAD-TOBAGO	NATIONAL REPORT	1 Jul 83
TURKS-CAICOS	NATIONAL REPORT	30 Jun 83
U.S.A.	NATIONAL REPORT	11 Jul 83
U.S. VIRGIN ISLANDS	NATIONAL REPORT	3 Dec 82
VENEZUELA	NATIONAL REPORT	18 Jul 83

Appropriate data was extracted from all REPORTS (except for Belize, Colombia, Dominican Republic, and Venezuela) and entered into the WATS Computerized Data Base; print-out copies of which were distributed at the Symposium. Since the Symposium (and as of February 1984), revised REPORTS have been received from Belize, USA, and Venezuela, and all REPORTS and all corrections received have been entered into the Computerized Data Base. The Belize report has been submitted as a National Report by the National Representative of Belize.

1.C Copies of the National Reports

Copies of the 40 REPORTS are reproduced here. Pages from the National Report Form that contained no significant notations were not copied. The original pages were reduced in size, either 50% or 75%. The original of each of the 40 REPORTS is on file with the WATS Secretary. Copies of each of the REPORTS were delivered to the appropriate National Representative.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

ANGUILLA
ANGUILA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

LESLIE RICHARDSON

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

Anguilla

NATIONAL REPORT PRESENTED BY

Leslie Richardson
The National Representative

Address: Leslie Richardson
Department of Agriculture & Fisheries
Valley Anguilla

NATIONAL REPORT PREPARED BY

Leslie Richardson & Cephas Grumbs

DATE SUBMITTED: 6 January 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country ANGUILLA

Length of Coastline* ..... 65 km

Km² of Continental Shelf Area ..... 1996 km²

Seaward Extent of Jurisdictions:

Territorial Sea ..... 6.5 km

Extended Economic Zone ..... 370 km

Fisheries Jurisdiction ..... ___ km

Other (Describe) _____ ... ___ km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Dog Island		E, Cm	
2. Prickly Pear Cays		E, Cm	
3. Scrub Island		D	
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

The best hawksbill nesting is on Dog Island and Prickly Pear Cays. However, sporadic, low-density nesting occurs on several beaches on the main island.

Green turtles appear to nest very rarely in Anguillan waters, although there are a few reliable reports for Dog Island.

The best nesting for leatherbacks in Anguillan waters is reported by interviewees to be on Scrub Island. No estimate of numbers is available. A very small number, probably fewer than 5/year, nest on the beaches of the main island. Interviewees report that 1 or 2 nest each year at the northwest coast (Road Bay, Mead's Bay, or Barnes Bay), but emergences have been recorded over the years on beaches all over the island.

There are no reliable reports of loggerhead nesting on Anguilla

NAME OF AREA (or give coordinates)	APPROX. AREA (km²)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Shoal Bay W		E; Cm	Interviews
2. Nill Village — Along cliffs at North		E; Cm	Interviews E -- direct observation (4 sightings) (1980, 1981)
3. South Hill. — Along cliffs at East		E; Cm	E; Cm interviews
4. Long Bay		Cm	Interviews Cm -- direct observation (2 sightings) (1980, 1981)
5. Mead's Bay		Cm; E	Cm; E -- interviews
6. Between Shoal Bays and Flowing Rock		Cm	Interviews

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Name of Area or Jwe Coordinates	Approx Area (km²)	Species Foraging (see abbreviations approx & numbers)	Nature of Evidence (observation, fishery incidental catching)
7. Sand Island		E; Cm	Interviews
8. Bernier Reef Off North Coast		E	Interviews
9. Sandy Island		E; Cm; Cc	Interviews
10. Dog Island		E; Cm	Interviews
11. Sombrero Island		E	Interviews.
12.			

Table 7. Foraging Areas Inventory

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	-	-	Reported			to	be	year	round	resi	dents	-	
Dermochelys coriacea													
Eretmochelys imbricata	-	-	Reported			to	be	year	round	resi	dents	-	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS. Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

A tagged green turtle weighing 48 pounds was caught by a diver at Sandy Island in August 1980. The turtle had been released as a yearling weighing just over one pound, at Merritt Island National Wildlife Refuge, Cape Canaveral, Florida, on 28 May 1975, by the Florida Department of Natural Resources Marine Research Laboratory.

A loggerhead caught by a turtle fisherman at Scilly Cay, near Island Harbour, on 12 April 1980 weighed 120 pounds (54.5 kg). (Personal observation, by Anne Hayden)

The dried carapace of a juvenile hawksbill caught at Little Bay in June 1980, measured 20 cm (longest length). The divers reported that they had caught it by hand. Specimen is deposited in Florida State Museum (UF 49767).

Four hawksbills caught by a diver at Dog Island on 6 April 1980 ranged in size from 40-55 cm straight carapace length (longest length).

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Sandy Ground	E; Cm; Cc	Turtle nets, Spear guns	—	—
2. Island Harbour	E; Cm; Cc	" " , " "		
3. Crocus Bay	E; Cm; Cc	" " , " "		
4. Rondepous Bay	E Cm	" " , " "		
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				
Chelonia mydas				Taken by spearfishermen who are primarily seeking fish and lobster.
Dermochelys coriacea				
Eretmochelys imbricata				Taken by spearfishermen who are primarily seeking fish and lobster
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

TABLE 14. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

Divers equipped with spearguns come to Anguilla to get lobsters, fish and turtles, especially at Dog Island. Estimate of catch is unknown but probably significant.

TABLE 15. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

Polished carapace of juvenile hawksbill are sold at a gift shop in Sandy Ground, at the airport and at a restaurant/bar in Island Harbour.

Raw tortoiseshell and turtle meat are sold by divers and net fisherman directly to buyers on St. Maarten. Raw shell is also sold to St. Thomas and Puerto Rico.

Whole turtles are occasionally sent to Marigot, St. Maarten on the ferry.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	5 - 10	N A	None exclusively dependent
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
East Caribbean Natural Area Management Program (ECNAMP)		Anguilla Resources Development Project.

TABLE 10. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Turtle Ordinance

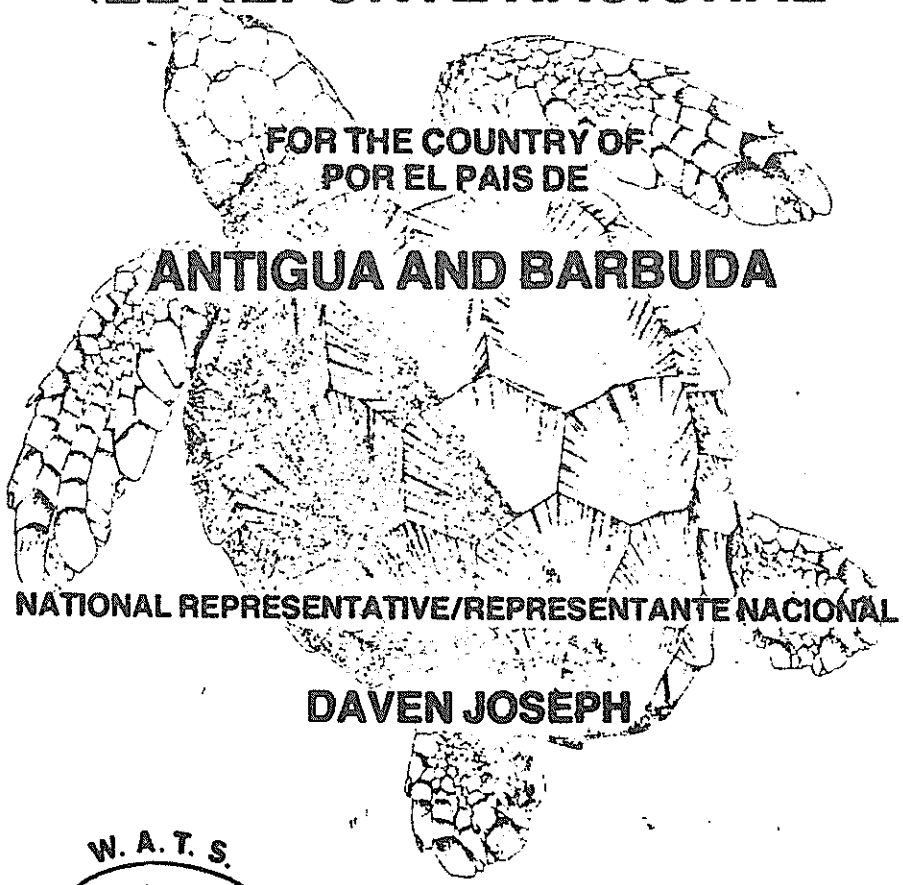
Stated Purpose – Conservation measures

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Carr, A., Meylan, A., Mortimer, J., Bjorndal, K., and Carr, T. 19?? Surveys of sea turtle populations and habitats in the Western Atlantic.
2. NOAA Technical Memorandum NMFS-SEFC-91.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

ANTIGUA AND BARBUDA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

DAVEN JOSEPH

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

3-12

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

ANTIGUA AND BARBUDA

NATIONAL REPORT PRESENTED BY

Daven Joseph
The National Representative

Address: c/o Permanent Secretary
Ministry of Lands, Agriculture,
Lands and Fisheries
St. Johns, Antigua WI

NATIONAL REPORT PREPARED BY

Mr. DAVEN JOSEPH (FISHERIES OFFICER)

Mr. JOHN FULLER (SEA TURTLE CONSERVATION

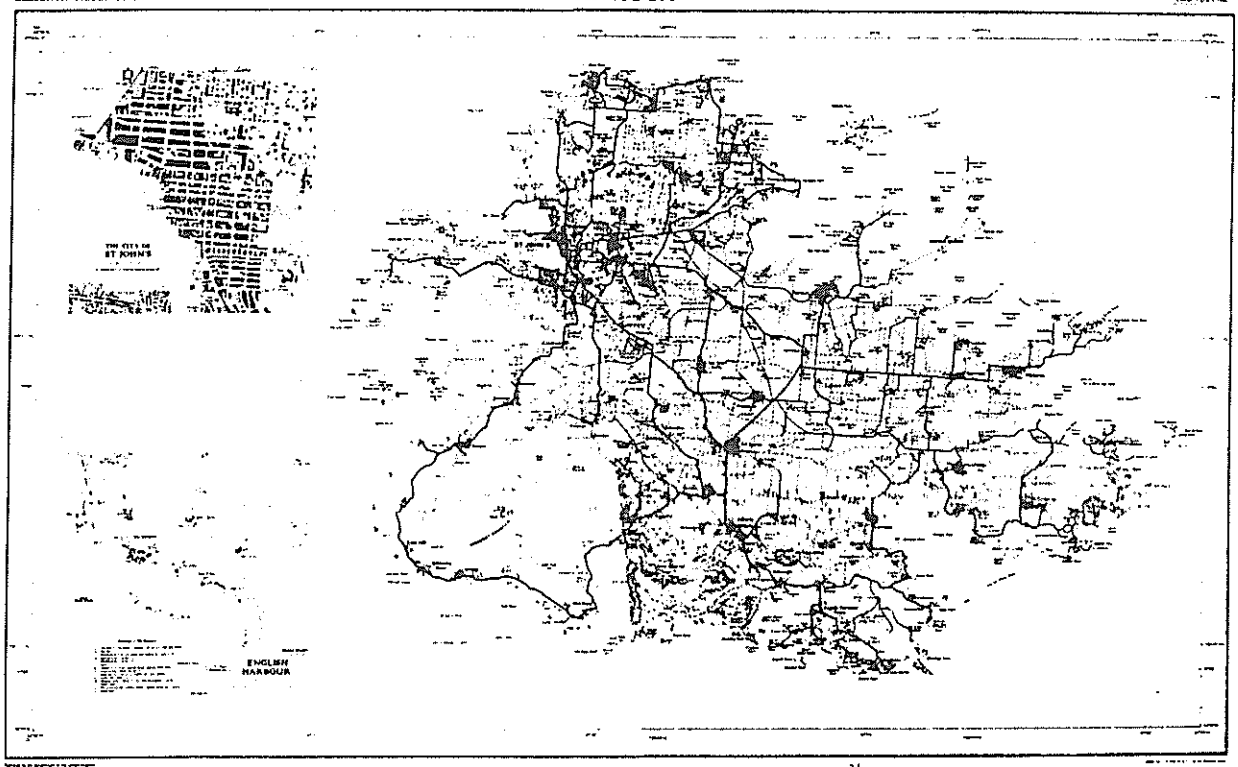
MR. RALPH CAMACHO (FISHERIES OFFICER)

DATE SUBMITTED: March 2, 1981

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

LESSER ANTILLES 1:50,000

ANTIGUA



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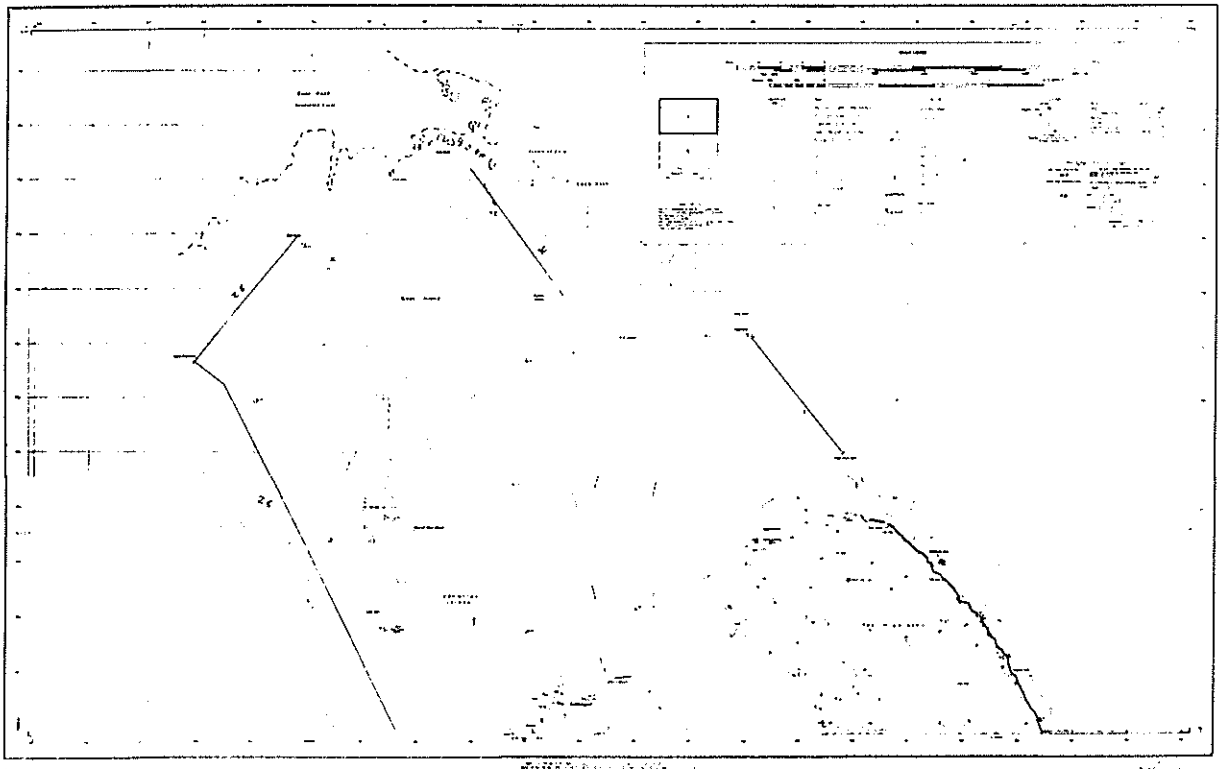
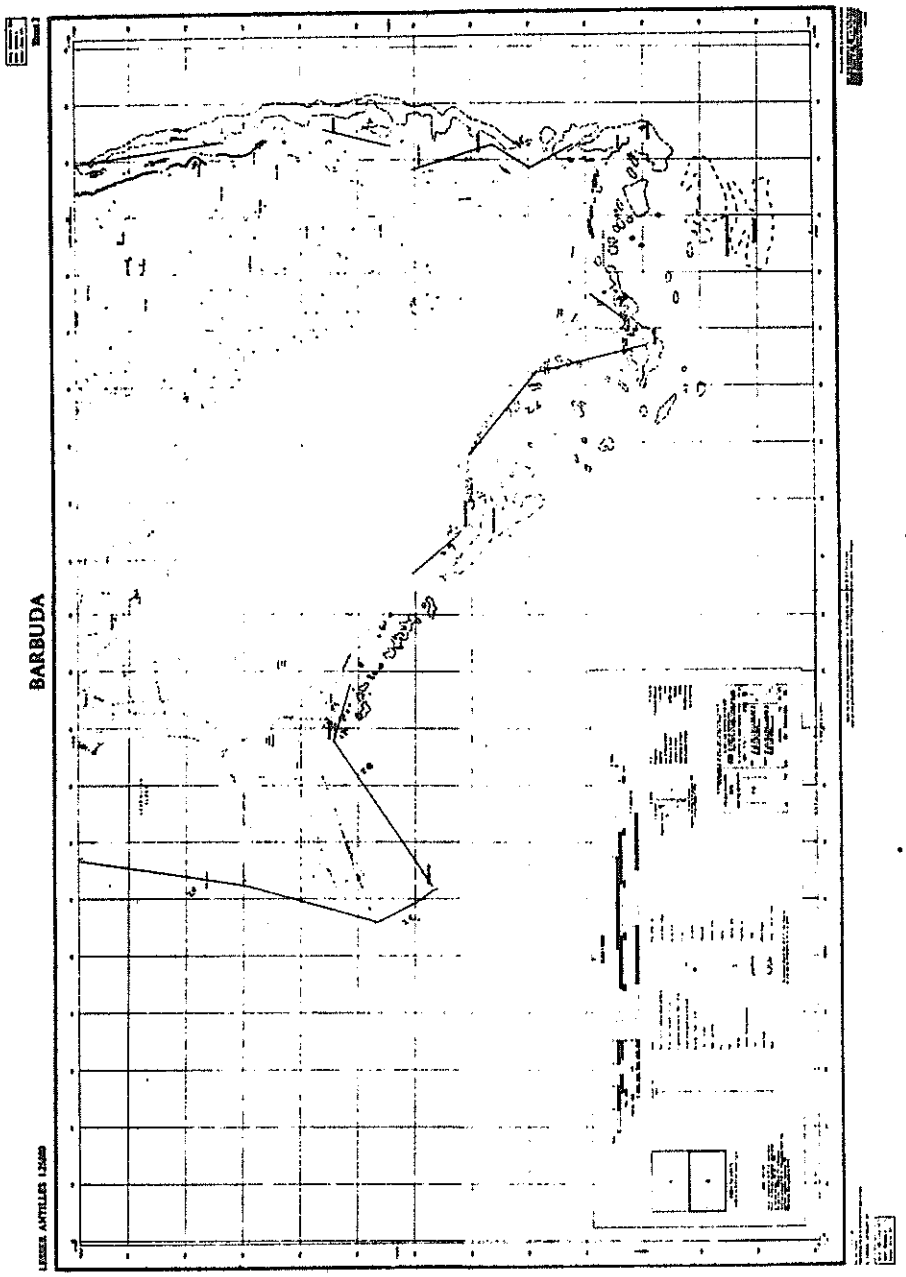
BARBUDA




BARBUDA

Country ANTIGUA = 168 k.m. BARBUDA = 113 k.m.

Length of Coastline* . . . . . 281 Km

Km² of Continental Shelf Area . . . . . 3400 Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 19.3 Km

Extended Economic Zone . . . . . 482.6 Km

Fisheries Jurisdiction . . . . . NONE . . . . . Km

Other (Describe) - . . . Km

TABLE 1. GEOGRAPHIC INVENTORY ANTIGUA AND BARBUDA is a 3 island State, the third being Redonda which is excluded because its coastline, being all vertical stone is unsuitable for any turtle habitat of significance. The coastline of Antigua and Barbuda is legally undivided (save for 2 small conservation areas) with respect to marine wildlife and is all suitable for marine turtle habitat. The WHOLE continental shelf is an ideal habitat for selected marine turtle species and Antigua and Barbuda's coastline contains 102 km of available / nesting beaches. Antigua 26 km; Barbuda 76 km.

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

TABLE 1. (cont'd)

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total) 95% Sand only with most undeveloped sparsely covered with sand vine	73	29	102
A. High Energy	½	½	1
B. Low Energy (incl. 5k.m. of none Beaches-no surf)	73½	27½	101
2. Reef (exposed) offshore 200M - 500M	6	1	7
3. Rocks none significantly obstructs any beach (volcanic, limestone and coral)	29	67.5	96.5
4. Cliffs	12	0	12
5. Vegetation (Total)	73	29	102
A. Vines { on beaches } both often	58.4	14.5	72.9
B. Grasses { on beaches } found together	51.1	26.1	77.2
C. Mangroves	54½	10	64½
D. Coconut Trees	0	5½	5½
E. Other Trees or Shrubs usually with vine and grass	43.8	11.6	55.4
F. Marshes	5	0	5
6. Mouths of lagoons, rivers, canals	1	0	1
7. Total Shoreline	124.5	106.5	231

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE * Refer to SEA TURTLE MANUAL (Aerial Survey) ** Human development or use (Sea MANUAL)

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	4.0 km²	69 km²
2. Mud	.15km²	5 km²
3. Rocks	.35km²	3 km²
4. Submerged Vegetation	2.08km²	3000
5. Reefs (Total)	.45km²	25 km²
A. Fringing Reefs	.25km²	20 km²
B. Patch Reefs	.2 km²	5 km²
6. Other Coral & Rocks, vegetation mixed		304

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

ANTIGUA

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Carlise Bay	.3	E	July
2. Curtain Bluff	.3	D	April
3. Morris Bay	.5	E	September
4. Crabb Hill Bay	.6	E	August
5. Darkwood Beach	.6	E	August
6. Pryes Bay	.4	E	August
7. Valley Church Bay	.4	E	June
8. Pearns	.6	E	July
9. Pinchin Bay	.5	E & Cm	June, July
10. Runaway Bay	1.0	E	October

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11. Elyas Bay	.7	D	May, April
12. Dutchman Bay	.3	D	April
13. Pasture Bay	.2	E & Cm	June, July
14. Grape Bay	.2	E & Cm	June, July
15 Long Bay	.7	E	July
16. Hog Hole	.05	E	July
17 Green Island	1.3	E	July & October
18 Mill Roof	.8	E	August
19. Machin Bay	.1	D	August
20. Indian Creek	.05	E	July
21 Windward Bay	0.1	E	
22 Dieppe Bay	0.6	E	
23 Turtle Bay	0.5	E	
24. Rendezvous Bay	0.7	E	
25 Tuckr Bay	0.5	E	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
18 Cocoa Point Beach	5	D & E & Cm	April, May, June, July, August, Sept - Nov.
Spanish Well Point	.1	E	May, April to Nov.
19(Continuous Beach.	21	D & E & Cm	(inclusive)
20 North Beach	1	E & Cm	April to October (Inclusive)
21 Rabbit Island Beach	8	E & Cm	May to Nov. (")
Hog Point to Two 22 Feet Bay (Inclusive)	8	E & Cm	May to Nov (")
23 Rubbish Bay	.5	E & Cm	May to October (")
24 Castle Bay	.5	E & Cm	May to Nov. (")
25 Welch Point Beach	1.5	E & Cm	May to October (")
26 Pelican Bay	4.5	E & Cm	May to Nov. (")
27 Spanish Point	.3	E	May to Nov. (")

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page) ANTIGUA

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

1. Carlise Bay - Beige - Fine 5°-10° Coconut no lights
2. Curtain Bluff - Beige - Fine 10°-15° Grass Hotel
3. Morris Bay - Beige - Fine 20° Grass Coconut - Small Hotel
4. Crabb Hill Bay - White - Fine 5°-10° Shrub Village
5. Darkwood - white - fine 5° coconut no lights
6. Fryes Bay - white - fine 10°-15° Grass & Trees no lights
7. Valley Church - white - coarse 10° Grass & shrub no lights
8. Pearns - beige - fine 15°-20° shrub & vine
9. Pinchin Bay - Beige - fine 10°-15° - rub & vine no lights
10. Runaway Bay - white - medium 5°-10° Grass vines & shrub- hotel
11. Ely's Bay - white - medium 5°-10° vine & grass & shrub
12. Dutchman's Bay - white - medium -5° vine & grass hotel
13. Pasture Bay - white - medium 5°-10° grass, vine & shrubs - no lights
14. Grape Bay - white - medium 5°-10° grass, vine & shrub - no light
15. Long Bay - white - medium 5°- grass, trees - light
16. Hog Hole - white - medium 5° no vegetation - no light
17. Green Island (two west coarse beaches) white - medium 5°-10° grass, vine, shrub - no light
18. Mill Roof (3 beaches) white - medium 5°-10° - grass, vine - no light
19. Machin Bay - white - medium 5°-10° grass and vine - no lights
20. Indian Creek - beige - medium 10° grass no light
21. Windward Bay - beige - fine 10°-15° sea grape & vine - no light
22. Dieppe Bay - beige - medium 10°-15° sea grape & vine no light
23. Turtle Bay - beige - medium 10°-15° sea grape & vine no light
24. Rendezvous Bay - beige - medium 10°-15° sea grape & vine no light
25. Tunks Bay - beige - medium 10°-15° sea grape & vine no light

* Number, on this Supplementary page Refer to [illegible]

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page) BARBUDA

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

26. Coconut Beach - white - fine 5°-15° vine & Grass- little lights
27. Spanish Well Point - white - fine 5°-15° Glass & Shrub- no lights
28. River to Billy Point - " Medium to fine 10°-30°-Grass vine & Shrubs, no li
29. North Beach - White - Medium 5° Grass & vine no lights
30. Rabbit Island Beach - white - Medium 5°-30° Grass & vine no lights
31. Hog Point to Two Foot Bay- White - medium 5° 30° Grass vin Little light
32. Rubbish Bay - white - Medium 5°-10° Grass &vine, no lights
33. Castle Bay - White - Medium 10°-30° " " " "
34. Welsch Point Beach - White - Medium 10°-30° Grass & vine, no lights
35. Pelican Bay - White - Medium - 5°-20° Grass & vine no light
36. Spanish Point - White - Medium 5° " " " "

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	NR		
Dermochelys coriacea	NR		
Eretmochelys imbricata	Negligible	1	June 1981
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH CAPE ROMAIN
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	Negligible	less than 1	May 1979
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH CURTAIN BLUFF
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	less than 1	October 1976
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 3 NESTING CENSUS FOR BEACH MORRIS BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	2	yearly reports in July and August from Fishermen
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 4 NESTING CENSUS FOR BEACH CRABB HILL BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	negligible	less than 1	June 1981
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5 NESTING CENSUS FOR BEACH DARK WOOD
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	negligible	less than 1	July 1980
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH PETES BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	negligible	less than 1	June 1982
Dermochelys coriacea			
Eretmochelys imbricata	negligible	less than 1	June 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7 NESTING CENSUS FOR BEACH VALLEY CHURCH BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	Negligible	2	July 1982 June 1981
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	2	July 1982 June 1981
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH PEARNS BEACH
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	4-1	June 1981
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH DUNGUN BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	1	July 1981 August 1981
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 10 NESTING CENSUS FOR BEACH RUNAWAY BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	Negligible	less than 1	April and May 1981
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 11 NESTING CENSUS FOR BEACH KLYS BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	Negligible	less than 1	April 1981
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 12 NESTING CENSUS FOR BEACH DUTCHMAN'S BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	Negligible	4	June, July Annually
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	4	June, July Yearly
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 13 NESTING CENSUS FOR BEACH PASTURE BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	Negligible	3	June , July Annually
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	3	June, July Annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 14 NESTING CENSUS FOR BEACH GRAPE BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligable		June - September
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 15 NESTING CENSUS FOR BEACH Long Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	less than 1	September 1980
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 16 NESTING CENSUS FOR BEACH HOG HOLE
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 17 NESTING CENSUS FOR BEACH Green Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 18 NESTING CENSUS FOR BEACH Mill Reef
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	Negligible	less than 1	August 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 19 NESTING CENSUS FOR BEACH MATCHING BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	1	Annual Reports July
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 20 NESTING CENSUS FOR BEACH INDIAN CREEK
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 21 NESTING CENSUS FOR BEACH Windward Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 22 NESTING CENSUS FOR BEACH Dinnpe Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 23 NESTING CENSUS FOR BEACH Turtle Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 24 NESTING CENSUS FOR BEACH Rendezvous Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than 1		June - October
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 25 NESTING CENSUS FOR BEACH Ducks Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than 1	5	May, June, July, August October, Annually
Dermochelys coriacea	Negligible	less than 1	April 1981
Eretmochelys imbricata	less than 1	12	May - November (inclusive - Annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 26 NESTING CENSUS FOR BEACH COCO POINT
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	2	May and June 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 27 NESTING CENSUS FOR BEACH SPANISH WELL POINT
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than 1	25	June - October (inclusive) Annually
Dermochelys coriacea	Negligible	less than 1	May 1977
Eretmochelys imbricata	less than 1	40	May - November-Annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 28 NESTING CENSUS FOR BEACH PIERCE NO. BILLY POINT (continuous Beach)
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	Negligible	2	June - October (inclusive Annually
Dermochelys coriacea			
Eretmochelys imbricata	Negligible	8	May - October (Inclusive Annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 29 NESTING CENSUS FOR BEACH NORTH BEACH
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than 1	10	June - October (inclusive Annually
Dermochelys coriacea			
Eretmochelys imbricata	less than 1	15	May - November (inclusive Annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 30 NESTING CENSUS FOR BEACH HARRIS ISLAND BEACH
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than 1	6	June - October Annually
Dermochelys coriacea			
Eretmochelys imbricata	less than 1	10	May - November Annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 31 NESTING CENSUS FOR BEACH HOG POINT - TWO FOOT BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	negligible	3	May to Nov. annually
Dermochelys coriacea			
Eretmochelys imbricata	negligible	5	June to Nov. incl. annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 32 NESTING CENSUS FOR BEACH RUBBISH BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than	9	June 15 to Oct inclusive annually
Dermochelys coriacea			
Eretmochelys imbricata	less than	15	May to Nov inclusive annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 23 NESTING CENSUS FOR BEACH CASTLE BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than	8	June to Oct. inclusive annually
Dermochelys coriacea			
Eretmochelys imbricata	1	14	May to Nov. inclusive annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 24 NESTING CENSUS FOR BEACH WELCH POINT BEACH
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	less than	6	June to Oct. inclusive annually
Dermochelys coriacea			
Eretmochelys imbricata	less than	10	May to Nov. inclusive annually
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 25 NESTING CENSUS FOR BEACH PELICAN BAY
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	less than	2	Oct. 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 26 NESTING CENSUS FOR BEACH SPANISH POINT
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
11.10.8	RIVER TO BILLY POINT (No.24)	—	—	—	—	—	—	8
11.10.8	NORTH BEACH (No.25)	—	—	—	—	—	—	0
11.10.8	RABBIT ISLAND BEACH	—	—	—	—	—	—	1
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—
		—	—	—	—	—	—	—

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

4 of the 8 tracks on beach No.24 were less than 24 hours old. The others were possibly as old as one week. No ground truth observation conducted.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta	0	0	0	0	0	0
Chelonia mydas	39	N.A.	N.A.	N.A.	N.A.	N.A.
Dermochelys coriacea	1	1	N.A.	N.A.	N.A.	N.A.
Eretmochelys imbricata	76	N.A.	N.A.	N.A.	N.A.	N.A.
Lepidochelys kempi	0	0	0	0	0	0
Lepidochelys olivacea	0	0	0	0	0	0

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

ESTIMATE TOTAL NESTS & DIVIDE BY 2.

N.A. - NOT AVAILABLE

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations ↓ approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
The whole of the continental shelf around Antigua & Barbuda is evidently a suitable foraging habitat for CM & E year round whereas D is seen usually only in April and May and the young rarely, if ever, after hatching. H.H. Jellyfish swarms in July and August co-inciding with most D hatching.	3400km^2	CM E D	Observation Fishery It is a rare sea voyage in the territorial waters of Antigua & Barbuda that one doesn't observe some CM or E

TABLE 7. FORAGING AREAS INVENTORY

N.B. See attached note re "HOLATTO" TURTLE

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea				✓	✓	✓	✓	✓	✓	✓			
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs		NO RELIABLE INFORMATION AVAILABLE HOWEVER: LITTLE OR NO EROSION TAKES PLACE ON NESTING BEACHES. NO EVIDENCE EXISTS OF CRAB PREDATION OF EGGS NESTINGS AND THERE IS NO RELIABLE OBSERVATION OF SEA BIRD PREDATION. NO WILD ANIMALS EXIST HERE. TIGER SHARKS HAVE BEEN CAUGHT WITH UNDIGESTED CAREY IN THEIR STOMACHS A LARGE GREEN WAS DISCOVERED DEAD ON DUTCHMAN'S BAY - NO APPARENT CAUSE SAVE FOR GROWTHS WHERE LIMBS JOINED CARCASS. UNDOUBTEDLY THERE IS CONSIDERABLE PREDATION BY FISH - GROUPERS, SNAPPERS ETC... RECENT REPORTS OF HUMAN PREDATION OF HAWKSBILLS OBSERVED AT LAVE BAY.	
Hatchlings			
Juveniles			
Adults (in water)			
Nesting females			

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. ST.JOHN'S	DC CM Ei	NETS	AUG-APRIL	DC? AVAILABLE
2. PARHAM	CM Ei	NETS	"	"
3. VALLEY CHURCH BAY	CM Ei	NETS	"	"
4. OLD ROAD	CM Ei	NETS	"	"
5. CODRINGTON	CM Ei	NETS & BOAT CHASE	"	"
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ANTIGUA

No. 17 of 1927

An Ordinance for the Protection of Turtles and Terteises.

BE IT ORDAINED by the Governor and Legislative Council of Antigua as follows:-

1. This Ordinance may be cited as the Turtle Ordinance, 1927. — Short Title.

2. In this Ordinance the word "Turtle" shall be deemed not to include the Logger head Turtle (Thalassochelyscaretta). "Terteise" shall include Land Turtle. — Interpretation.

3.3. Any person who —

(a) catches or takes, or attempts to catch or take, or causes to be caught or taken any turtle or turtle eggs between the first day of June and the thirtieth day of September both days inclusive.

(b) at any time catches or takes, or attempts to catch or take, or causes to be caught or taken any turtle which is under twenty pounds in weight.

(c) buys, sells or exposes for sale or has in his possession any turtle eggs between the first day of June and the thirtieth of September both days inclusive.

(d) catches or takes, or attempts to catch or take or causes to be caught or taken any terteise or terteise eggs between the first day of April and the thirty-first day of July both days inclusive.

(e) at any time catches or takes, or attempts to catch or take, or causes to be caught or taken any terteise of which the length measured from neck scale to tail piece is less than ten inches ,

(f) has in his possession any terteise eggs between the first day of April and the thirty-first day of July both days inclusive,

shall be guilty of an offence against this Ordinance, and, on summary conviction, shall be liable to a fine not exceeding Ten Pounds.

4. If any constable shall have reasonable grounds for believing that any person is committing or attempting to commit an offence against this Ordinance he may arrest such person without a warrant. — Power of arrest.

5. Any turtle or turtle eggs or any terteise or terteise eggs in respect of which any constable has reasonable grounds for believing an offence against this Ordinance has been committed shall be seized by such constable, and upon the conviction of any person for such offence in respect of the turtle or turtle eggs or terteise or terteise eggs sei_e', shall be forfeited. — Forfeiture of turtle, terteise, etc.

6. Any net, instrument or thing which any constable has reasonable grounds for believing is being or has been used for or in connection with the commission of any offence against this Ordinance shall be seized by such constable, and any Magistrate may, upon the conviction of any person for an offence against this Ordinance in connection with which such net, instrument or thing so seized was used, order such net, instrument or thing to be forfeited. — Forfeiture of nets,

7. Upon any conviction under this Ordinance the Magistrate may order that a part of any fine imposed not exceeding a moiety be paid to any person or persons whose information led to such conviction. — Moiety of fine to informer

T. H. ST.JOHNSON,
President.

No. 17 of 1927 The Turtle Ordinance, 1927

Passed the Legislative Council the 30th day of June, 1927.

E. P. H. BELL,
Clerk of the Council.

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta				
Chelonia mydas	150	NA	NA	ESTIMATE BASED ON PERSONAL EXPERIENCE OF FISHERIES OFFICER AND OFFICIAL & UNOFFICIAL ASSISTANTS.
Dermochelys coriacea	1	1	1	
Eretmochelys imbricata	250	NA	NA	
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				
Chelonia mydas				NEGLIGIBLE INCIDENTAL CATCH - MOST TURTLE CAUGHT ARE ~~eaten~~ WERE INTENDED TO BE CAUGHT BY FISHERMEN.
Dermochelys coriacea				
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing			
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

NO DIRECT EMPLOYMENT BASED ON TURTLES - AS ALL TURTLES CAUGHT ARE INCIDENTAL AND MARGINAL TO LOBSTER AND FISHING ACTIVITIES - A TURTLE IS AN "EXTRA" TO BE WHO CATCHES IT.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: 2500
2. Estimated number of nesting females: 30
3. Number of turtles caught at sea: 20
4. Other: _____

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

NONE.

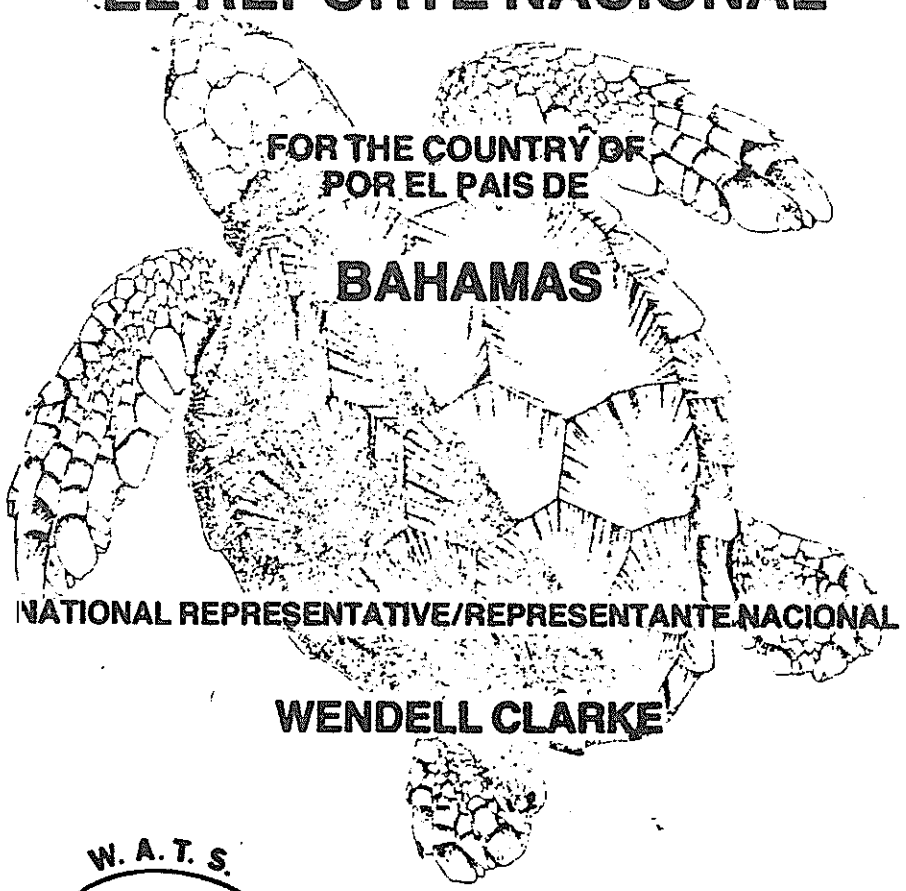
INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
FISHERIES DEPARTMENT ANTIGUA GOVERNMENT	3	SUPERVISING CLOSE SEASON 1. COMPILING DATA 2. REARING TO MONTH OLD. 3. GENERAL CONSERVATION ACTIVITIES - lobbying. etc.
NO OTHER INSTITUTION BUT SEVERAL INDIVIDUALS.		

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Fisheries Dept. Point Wharf St. John's Antigua		1	Regular bulletin on radio and newspapers against the taking of turtles and eggs during close season.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

BAHAMAS

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

WENDELL CLARKE

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

The Bahamas

NATIONAL REPORT PRESENTED BY

Wendell Clarke
The National Representative

Address: Department of Fisheries
P.O.Box N-3028
Nassau, Bahamas

NATIONAL REPORT PREPARED BY

Colin Higgs

DATE SUBMITTED: 1 Dec. 1982

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

THE COMMONWEALTH OF THE BAHAMAS

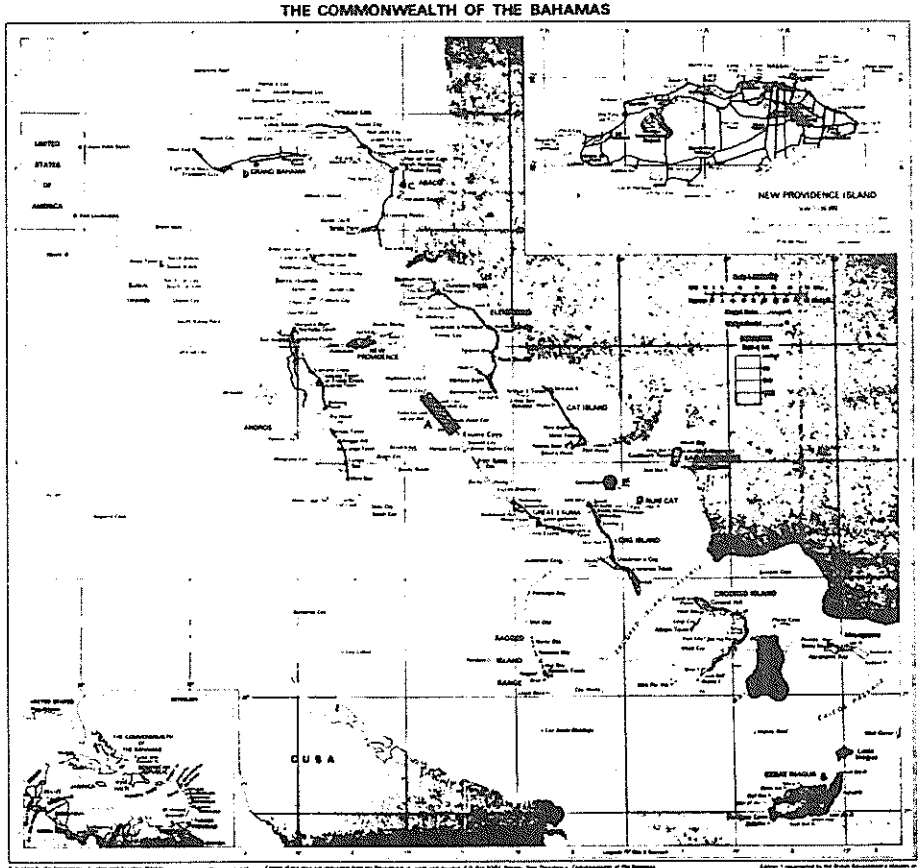


Table 19.

A Exuma Cays Park
B Inagua Park
C Pelican Cays Park
D Peterson Cay Park
E Conception Is. Park

Country The Bahamas

Length of Coastline* . . . . . ? Km

Km^2 of Continental Shelf Area . . . . . 124,320 Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 4.82 Km

Extended Economic Zone . . . . . 321.8 Km

Fisheries Jurisdiction . . . . . 321.8 Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Bahama Banks	124,320	Cc, Cm, & Ei	Observation and fishery
2. Surrounding oceanic waters		Dc	Observation
3.			
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea Dc
Eretmochelys imbricata Ei
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Apr. - Jul.
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar. - Aug.
Dermochelys coriacea	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Sept. - Mar.
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete _____ of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Cc Cm Ei	Human poaching, crabs, vegetation roots, storm erosion	10 - 20
Hatchlings	Cc Cm Ei	Avian predators and marine predators	?
Juveniles	Cc Cm Ei	Commercial fishery and marine predators	50 - 60
Adults (in water)	Cc Cm Ei	Commercial fishery	20 - 30
Nesting females	Cc Cm Ei	Human poaching	?

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF PORT OR SITE	SPECIES LANDED (Use Abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Nassau N.P.	Cc Cm Ei	Nets, diving, spears	All year	? 19000 kg
2. Abaco (central	Cc Cm Ei	• • •	• •	? 200 kg
3. Moores Island	Cc Cm Ei	• • •	• •	? 3500 kg
4. Andros (north)	Cc Cm Ei	• • •	• •	? 2000 kg
5. Great Exuma	Cc Cm Ei	• • •	• •	? 250 kg
6. Grand Bahama (west)	Cc Cm Ei	• • •	• •	? 2500 kg
7. Other inhabited islands	Cc Cm Ei	• • •	• •	? unknown subsistance fishery
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

* Closed season for Cc Apr. - June inclusive.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

YEAR / SPECIES	1982*	1981	1980	METHOD OF DETERMINATION
Caretta caretta	?/7181.7	?/9166.5	?/3514.8	Landing Statistics
Chelonia mydas	?/1298.1	?/9154.2	?/4006.3	• •
Dermochelys coriacea				
Eretmochelys imbricata	?/3856.4	?/7887.6	?/19769.4	• •
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

* Jan - Oct., 1982

TURTLE PRODUCT	YEARS 1982*	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs	-	-	-		
Meat (Kg) *	1436.7	1833.3	1103.0	US$1.10/kg	Landing Statistics
Shell No./Wt.	-	-	-		
Skins No./Wt.	- -	- -	- -		
Stuffed Juveniles	-	-	-		
Other					

SPECIES Cc

* Jan - Oct., 1982

* Assumed 20% total turtle weight is meat.

TABLE 13. ___ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TURTLE PRODUCT	YEARS 1982 +	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs	-	-	-		
Meat (Kg) *	2469.2	1830.8	801.3	US$2.20/kg	Landing Statistics
Shell No./Wt.	-	-	-		
Skins No./Wt.	-	-	-		
Stuffed Juveniles	?	?	?		
Other					

SPECIES Cm

+ Jan - Oct., 1982

* Assumed 20% total turtle weight is meat

TABLE 15.___ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TURTLE PRODUCT	YEARS 1982 +	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs	-	-	-		
Meat (Kg) *	771.3	1577.5	3953.9	US$2.20/kg	Landing Statistics
Shell No./Wt.	960.7	?	7651.3	US$44.00/kg	Export returns
Skins No./Wt.	-	-	-		
Stuffed Juveniles	?	?	?	?	
Other Jewelery	?	?	?	?	

SPECIES Ei

+ Jan - Oct., 1982

* Assumed 20% of total turtle weight is meat.

TABLE 15.___ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	None		No fishing effort directed exclusively at turtles. Turtles caught are associated with multiple fishery i.e. fishing effort for lobster and scalefish.
Processing	None		Turtle landings are not substantial. Account for approx. 1.0% of total marine products landed. Processed and sold local market.
Selling	None		No vendors deal exclusively in turtle.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Bahamas National Trust	?	Public education Assists Caribbean Conservation Coporation with project concerned with turtle growth rates from infancy to maturity.
Caribbean Conservation Corporation	?	Growth of green turtles under quasi-natural conditions.
Department of Fisheries, Ministry of Agriculture, Fisheries & Local Government	20	Public education concerning local sea turtle regulations. Collection of statistical data.

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Department of Fisheries	0	9	Effective at primary landing sites where fisheries inspectors are present. Not assigned specifically to turtles but to all marine resources.
Police Department	0	0	
Defence Force	0	0	

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Exuma Cays Land and Sea Park Exuma	455.8	Protect from development and protection of marine resources	1 Warden Enforcement Fair
Inagua Park Great Inagua	743.3	Protection of wildlife especially flamingo and Bahama parrot. Site of Turtle research project.	2 Wardens Enforcement fair
Pelican Cays Land and Sea Park Abaco	?	Protection of plant and bird life and coral reefs.	No enforcement
Conception Island Park	?	Protection of migratory and other birds and nesting beaches for green turtles	No enforcement.
Peterson Cay Park Grand Bahama	?	Protection of natural flora and fauna	No enforcement

TABLE 19. SANCTUARIES AND REFUGES

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

1. Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Bahamas is a signatory to CITES. Ministry of Agriculture, Fisheries and Local Government is the Management Authority. The Bahamas National Trust is the Scientific Authority.

2. Local Legislation

The Marine Products (Fisheries) Rules (1954)

(i) Min. size limit for Ei of 17" from neck scales - tail pieces

(ii) " " " " Cm of 15" " " " " "

(iii) Closed season for Cc 1 April - 30 June inclusive.

(iv) Protection of turtles on the beach.

(v) Protection of turtle eggs.

3. Legislation in draft

(i) Min. size limits for Cc and Cm of 30".

(ii) Complete protection of Ei and closed season for other turtles Apr - Jul. inclusive.

(iii) Prohibit capture of turtles within 500 yds of any beach.

(iv) Protection of turtle eggs.

THE NATIONAL REPORT
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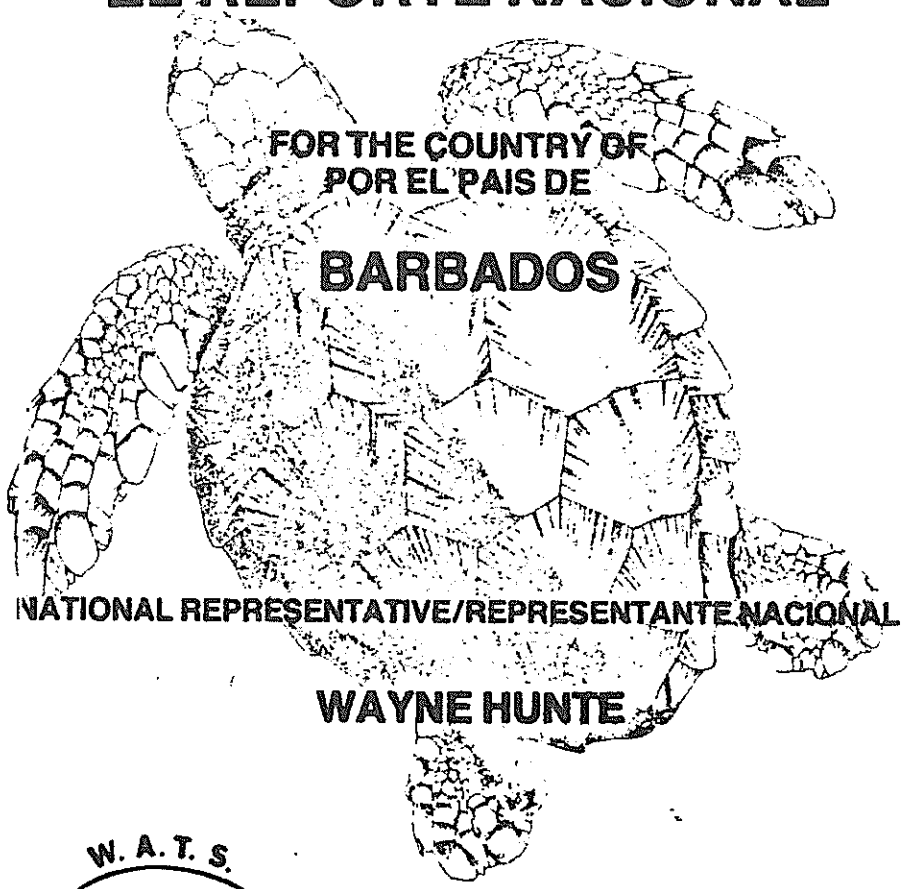

FOR THE COUNTRY OF
POR EL PAIS DE

BARBADOS

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

WAYNE HUNTE

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

THE BELLAIRS RESEARCH INSTITUTE
OF
MC GILL UNIVERSITY
ST. JAMES — BARBADOS, W.I.

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

BARBADOS

NATIONAL REPORT PRESENTED BY

Dr. Wayne Hunte

The National Representative

Address: Bellairs Research Institute
of McGill University
St. James
Barbados, West Indies

NATIONAL REPORT PREPARED BY

Dr. Wayne Hunte

DATE SUBMITTED: 11/11/83

I Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country	BARBADOS
Length of Coastline*	57 MILES ____ Km
Km² of Continental Shelf Area	320 Km² ____ Km
Seaward Extent of Jurisdictions:	
Territorial Sea	12 NAUTICAL MILES ____ Km
Extended Economic Zone	200 NAUTICAL MILES ____ Km
Fisheries Jurisdiction	200 NAUTICAL MILES (LIN PRACTICE - 12 MILES) ____ Km
Other (Describe)	____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

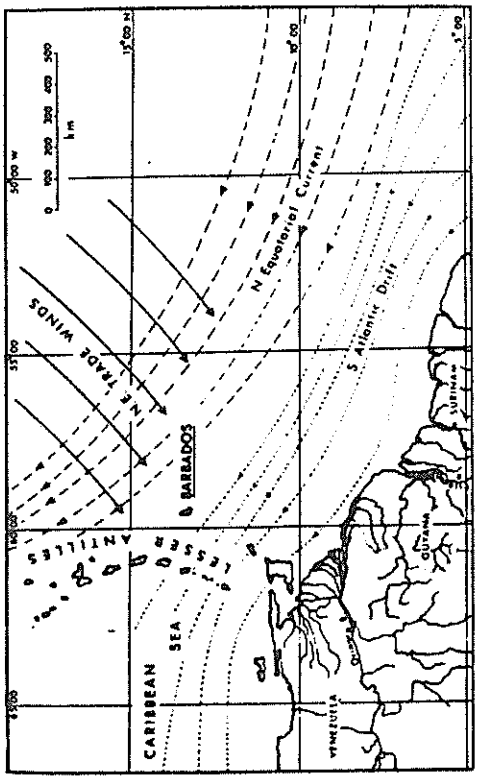

Fig 1 Location and Regional setting of Barbados

INTRODUCTION

During 1982, an attempt was made to gather what information is available on sea turtles in Barbados, to organise and synthesize it, and to prepare a Report based on the information. The purpose of this exercise was to produce the Barbados National Report for the Western Atlantic Turtle Symposium to be held in July 1983 in San Jose, Costa Rica.

The guidelines for the research were provided by W.A.T.S. and are:

A. Compilation of all historical and current data possible on sea turtle populations and socio-economics - from literature records, research reports, data files, and official records.

B. Beach surveys of all major sea turtle nesting beaches possible.

C. Aerial surveys of all marine shorelines possible, and to record and quantify sea turtle tracks and nests, and to categorise the shoreline with respect to nesting and non-nesting areas.

Given the limited information existing in records, reports and files, and the limited time available for personal observations in the field; much of the information herein included has been gathered by the process of interviews. There is therefore considerable variation in the extent to which the objectives of the study have been met, and this will become evident in the pages to follow.

GEOGRAPHIC AND COASTAL DESCRIPTION OF BARBADOS

Lying 90 miles east of the Lesser Antilles on top of a North-

South trending submarine ridge, Barbados is the most easterly and the only non-volcanic island in the Lesser Antilles chain (Fig. 1). It has an area of 166 sq.miles and an extreme length of 21 miles. About 6/7 of the island is covered by Pleistocene reef limestone which reaches a maximum depth of nearly 300ft. On the north-east side of Barbados, the raised reef rock has broken away exposing the underlying sedimentary formations of banded mudstones and sandstone, and a 'chalky' Radiolarian earth.

The coastline is regular, there being no deep indentations. It is about 57 miles long and made up of 26 miles of sandy beach, 20 miles of coral limestone cliffs and scarps, 7 miles of rough sedimentary slopes and 4 miles of artificial shore defenses. Of the 26 miles of beach, approximately 19 miles are composed of nearly pure fine-grained calcareous sands (containing fragments of calcareous algae, coral, molluscs, and foraminifera), and 7 miles are of medium-grain mainly silica sand beach. The latter forms a shore on the north-eastern coast of the island. Mangrove growth on the island is negligible.

Actively growing coral reefs of Barbados are restricted to the Western coast. Individual reefs are separated by shallow bays with very light coloured sand or rubble bottoms. In some areas, at shallow depths, the bottom is composed of sea-grass beds, primarily Thalassia and Synigodium.

OCEANOGRAPHIC PARAMETRES

Tides

Tides in Barbadian waters have a small range, averaging between

2.2 and 2.5 ft. The tides are semi-diurnal (i.e. two tidal cycles daily).

Wind and Waves

The north-east trade winds which blow throughout the year are an important feature of Barbados' climate. Wind direction dominantly remains within an arc from ESE through E to ENE. There is therefore a marked contrast in wave amplitude on different coasts. On a calm day, the east coast waves have an amplitude 4 times that of the west. On a rough day, they can be 8 times as large.

Temperature

Typical mean monthly sea temperatures for Barbados are shown in Fig. 2.

Salinity

Typical mean monthly salinities for Barbados are shown in Fig. 3.

THE TURTLE FISHERY

Fishing Methods

Trammel (entangling) nets used to be set frequently off the east coast, but this practice no longer prevails. The nets now used range between 8" - 12" square mesh, are typically 8 to 12 ft. deep, and anywhere from 20 to 150 meters long. They are set both near the surface, and at the bottom or on bars.

Fishing Regulations

It is illegal to take turtle eggs; and to catch any turtle on the beach or within 100 years of the shore.

It is illegal to set any gear for the purpose of catching turtles

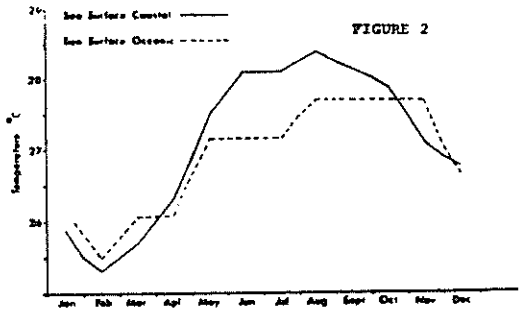

FIGURE 2

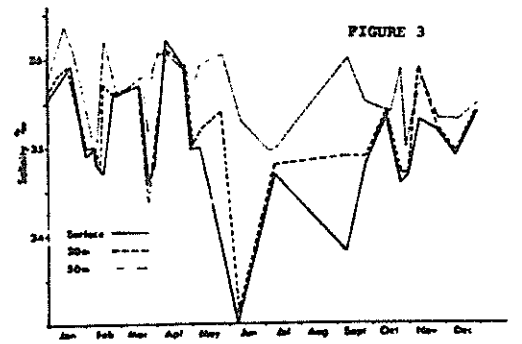

FIGURE 3

within 100 yards of the shore.

It is illegal to buy, sell or possess any turtle of weight less than 30 lbs.

These offences are punished by confiscation of turtle(s), eggs, and/or gear and by a fine of up to $100.00.

There is no closed season for turtle fishing in Barbados.

State of the stocks

There are approximately 29 landing sites for exploited marine stocks in Barbados, and catch statistics are recorded by the Fisheries Division of the Ministry of Agriculture at 11 of them. This practice has operated since the early 1960's. The fact that there is no separate column for turtle landings on the Fishery Division's Recording Forms may suggest that, even then, turtle landings were rare. To date, such landings are listed under a column entitled 'Any other deep water species'.

The landings are not recorded spearately for the different turtle species. However, interviews and personal observations suggest that there are three species found in Barbadian waters - the green turtle (Chelonia mydas), the hawksbill (Eretmochelys imbricata) and the loggerhead (Caretta caretta). Of these, the green turtle is agreed to be the most common, followed by the hawksbill. Loggerheads are relatively rare.

Two parameters are commonly used to indicate the state of exploited stocks: changes in the catch (more properly catch per unit effort) with time; changes in the mean size of animal caught.

It is impossible, without further study, to ascertain what

proportion of the turtle catch is landed at landing sites; and of those landed at sides, what proportion is recorded. Consequently, the landing statistics cannot be relied upon to reflect real trends in abundance of turtle stocks around Barbados. Nevertheless, the weight (kg) of turtles recorded as landed in Barbados per operational landing site each year for the last 20 years (1962- 1982) is shown in Fig. 4. In spite of the problems with the recording system, the data do indicate a general decline in turtle landings in Barbados. This pattern was supported by all persons interviewed. During fishing seasons in the 1950's the mean number of turtles caught per fisherman per month was reported as being in the order of 35. It is now about 2 turtles per fisherman per month.

Based on weights recorded at landing sites, the mean weight of the turtles landed in each year was calculated, and is shown in Fig. 5. The data do not suggest that there has been a decrease in the mean size of the turtles landed. However, many fishermen interviewed felt that turtles caught now are smaller than they were in the past. The discrepancy between catch statistics and fishermen observations may result from the tendancy of fishermen to return small turtles to the sea prior to their being recorded.

Management and rehabilitation

Apart from the Fisheries Regulations previously stated, no management program exists for turtle stocks in Barbados.

An experimental attempt at rehabilitation has been conducted on the east coast of the island. About 630 hawksbill turtles were reared from eggs and released on the east coast when between eight

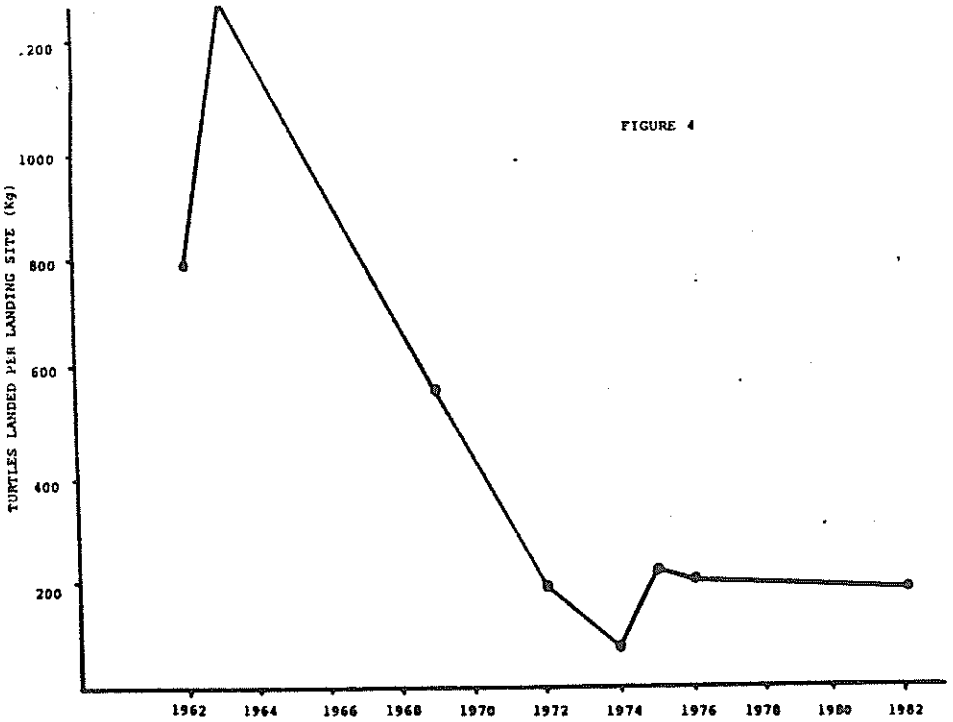

FIGURE 4

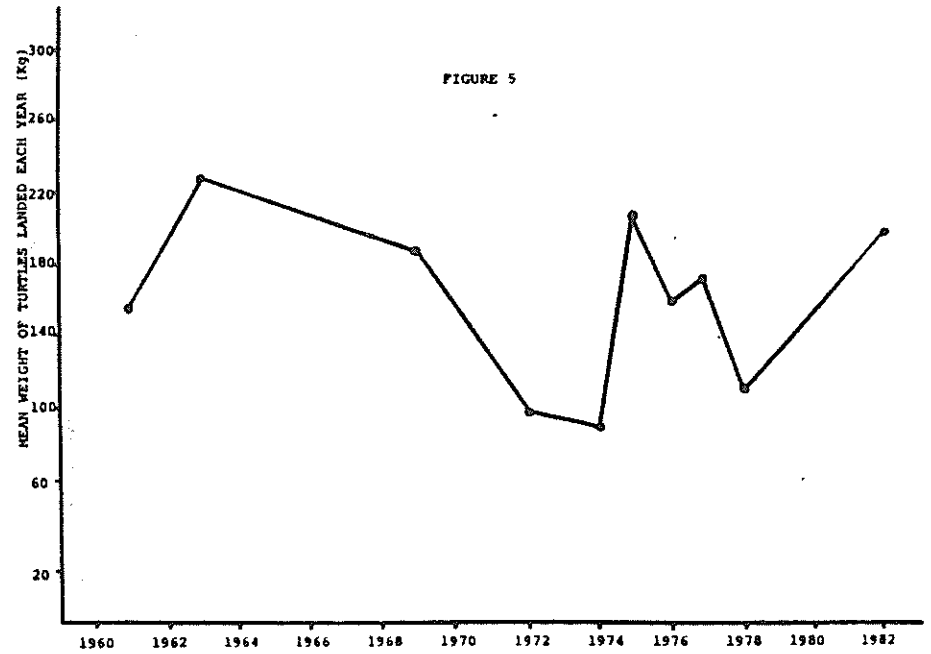

FIGURE 5

and nine months of age. It is difficult to ascertain what impact, if any, this has had on the hawksbill population. However, a few fishermen have reported seeing longer numbers of smaller turtles at sea than they had done prior to the rehabilitation exercise.

Seasonality of Catch

From the catch statistics, the weight of turtles landed each month as a percentage of the total weight landed, is shown in Fig. 6. The data suggest that most turtles are landed between August and March; with April - July being the period of lowest catches. Most fishermen interviewed felt that the turtle season ran from July through till October; and tended to fish more heavily for turtles in that period.

Distribution of Catch

Most turtle fishing in Barbados is now carried out off the east coast. This is the exposed Atlantic coast of the island. It's beaches are the least used for recreational persons, and the least disturbed by housing and hotel developments. In the past, the west coast landing sites recorded most of the turtles landed in the island, but little fishing is now done there. Turtles have apparently never been landed in large numbers on either the north or south coasts.

DEMOGRAPHY

Reproduction

In the past, turtles have been reported as nesting on sandy beaches on all coasts of Barbados. Nests are now rarer on all coasts, but are particularly rare on the more developed west and

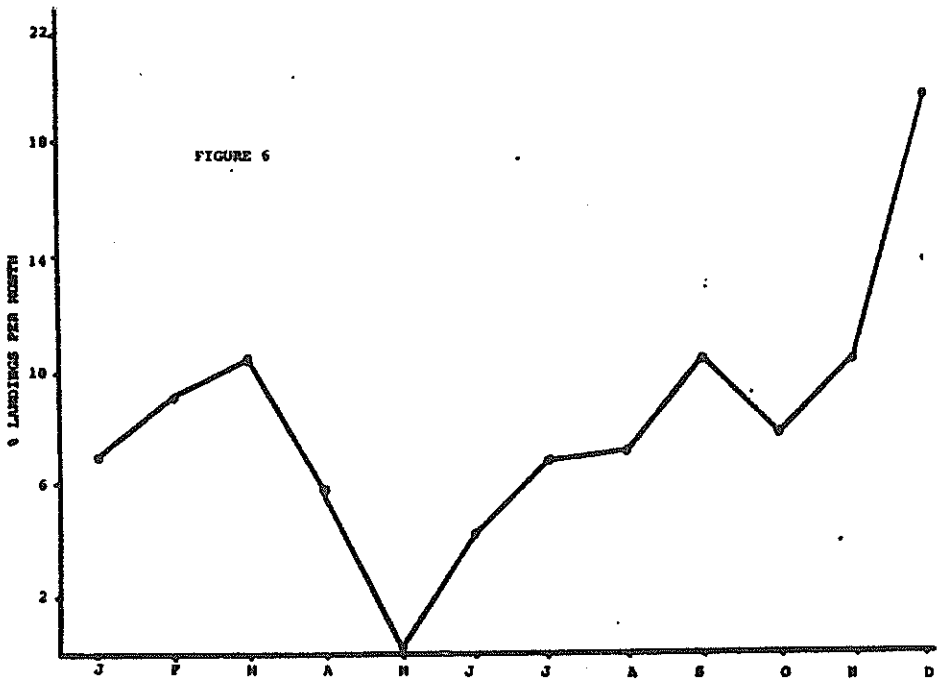

FIGURE 6

south coasts. In 1982, nests were recorded on Cattlewash beach (north-east coast), Bath beach (east coast), and Foul Bay beach (south-east coasts). All nesting turtles are Hawksbills. There are no reports or records of either Green or Loggerhead turtles nesting in Barbados. Interestingly, however, whereas Loggerheads are caught far from shore, Hawksbills and Greens are typically caught near or inside of reefs.

The breeding season for Hawksbill in Barbados is primarily from May to October; which overlaps with the period that fishermen consider to be the turtle season and hence the period over which they concentrate most of their fishing effort. The rehabilitation exercise indicated that Hawksbill eggs take about 60 days to hatch after laying.

Growth

At the time of release in the rehabilitation exercise, the Hawksbills weighed about 6-8 lbs and were about 8-9 months old.

Mortality

Predation-free survivorship of Hawksbills in the rehabilitation exercise was 90% at age 8-9 months; and was 100% in a few Hawksbill kept at Bellairs in concrete tanks up to age five months. The only health problem that occurred in the Bellairs turtles was a thin mucous film that occasionally grew over the eyes. It could be removed by a few drops of dilute Hydrogen peroxide, with no apparent ill effect.

SOCIOECONOMICS

Turtle-fishing is now conducted by only a few fishermen, and

only as a supplement to their other fishing activities.

RECOMMENDATIONS

1. Conduct studies on the population ecology of the exploited species, such that future fisheries regulations can have a stronger biological basis, e.g. Should there be a closed season, and if so when? What is the size/age to sexual maturity, and the fecundity/size relationship; and so what should be the minimum size limit taken?
2. Improve the present system of recording landing statistics on turtles; so that the effects of management and/or rehabilitation exercises can be more accurately monitored.
3. Impose harsher penalities for breaking current and future fisheries regulations and increase efforts to implement them.
4. If feasible, establish major nesting beaches as sanctuaries.
5. Attempt further, more large-scale, rehabilitation exercises.
6. Mount a public education program aimed at increasing co-operation from public re turtle rehabilitation and management.

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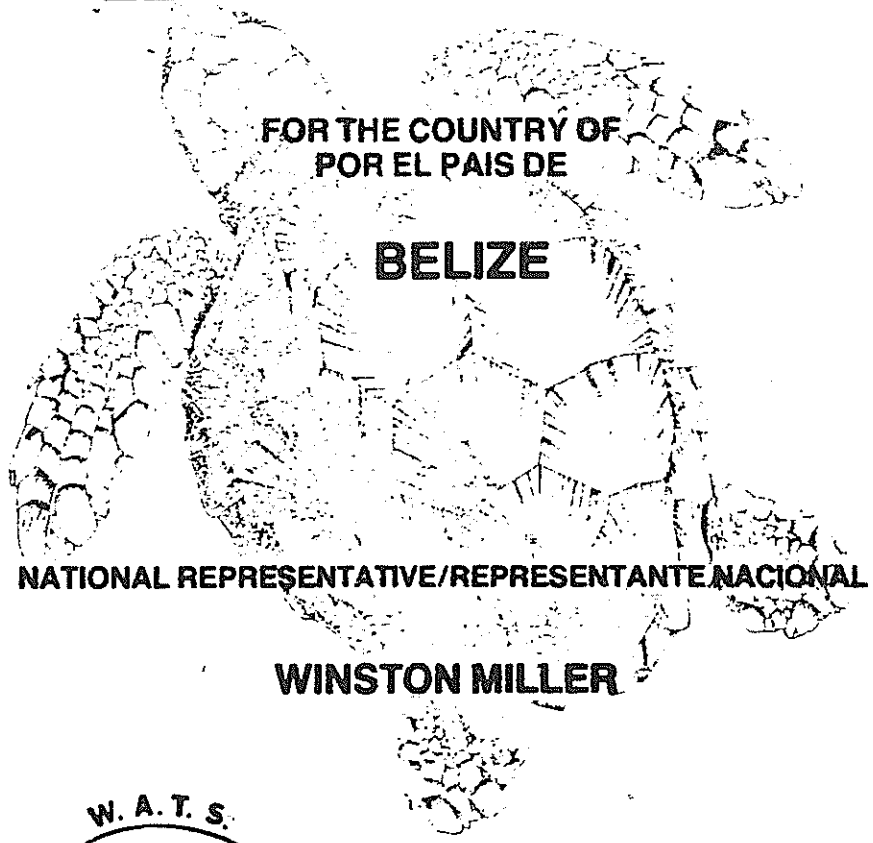

FOR THE COUNTRY OF
POR EL PAIS DE

BELIZE

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

WINSTON MILLER

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
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NATIONAL REPORT FOR THE COUNTRY OF

BELIZE

NATIONAL REPORT PRESENTED BY

W. G. Miller
The National Representative

Address: Fisheries Unit Lab
Princess Margaret Drive
Belize City, P.O. Box 148-Belize

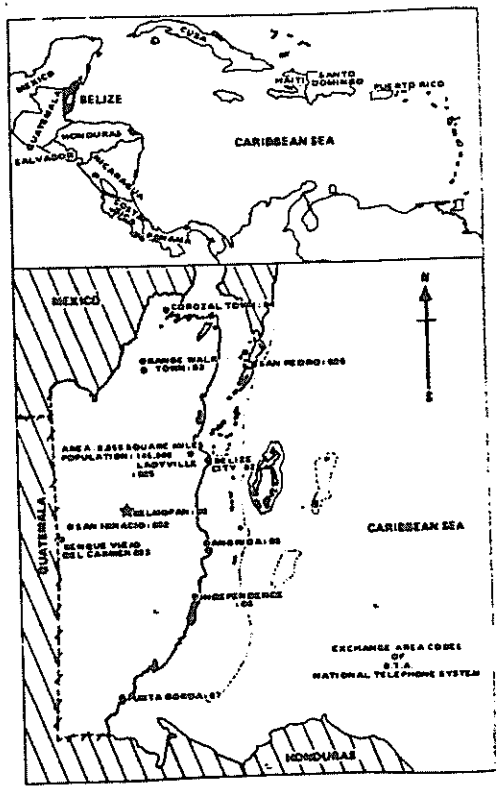
NATIONAL REPORT PREPARED BY

W.G. Miller, Fredrick Berry, and John R. Fletemeyer

DATE SUBMITTED: January 25, 1984

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

FIGURE 1: Belize--W.A.T.S. National Report Study Area.



Country Belize

Length of Coastline* . . . . . 250 Km

Km^2 of Continental Shelf Area . . . . . 7,450 Km^2

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 4.8 Km

Extended Economic Zone . . . . . --- Km

Fisheries Jurisdiction . . . . . 4.8 Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	42.0	63.0	105.0
A. High Energy	16.0	5.0	21.0
B. Low Energy	26.0	58.0	84.0
2. Reef (exposed)	111.3	166.95	278.25
3. Rocks	14.85	1.65	16.5
4. Cliffs	0.10	1.9	2.0
5. Vegetation (Total)	---	---	---
A. Vines	---	---	---
B. Grasses	232.18	---	232.18
C. Mangroves	530.76	24.78	555.54
D. Coconut Trees	11.25	52.75	64.0
E. Other Trees or Shrubs	---	---	---
F. Marshes	8.04	24.15	32.0
6. Mouths of lagoons, rivers, canals	---	---	---
7. Total Shoreline	982.48	398.58	1,381.06

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Ambergris	15	Cm, Cc	June, July
2. Half Moon	2	Cm, Cc	June, July
3. Long	5	Cc, E	June, July, August
4. Caulker	9	Cm, Cc	June, July
5. Chapel	5	Cm, Lc	June, July, August
6. Goff	1	E	June, July, August
7. Placencia	22	E, Cc	June, July
8. Ranguana	0.5	E, Cc	June, July, August
9. Lime	0.5	E, Cc	June, July, August
10. Hunting	0.5	E, Cc	June, July, August

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Nicholas	0.2	E., Cc	June, July, August
2. Frank's	0.2	E., Cc	June, July, August
3. Pampion	0.1	E., Cc	June, July, August
4. Round	0.3		
5. Silk	0.2	Cm, E.	
6. South Water	0.3		
7. Tabacco	0.9		
8. Sapodilla	2.0	E., Cc, Cm	June, July, August
9. Glovers	10.0	E., Cc Cm	June, July, August
10. Turnette	20.0		

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

*June, July, and August represents the months when most sea turtle nesting activity is observed.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		10	7/07/82
Chelonia mydas		6	7/07/82
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH Ambergis
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		12 (Represents a combined estimate for Caretta caretta and Chelonia mydas	7/28/82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH Half Moon
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		7	6/12/82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		4	6/12/82
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH Long
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3	1979-81
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		1	1979-81
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7 NESTING CENSUS FOR BEACH Placencia
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3	1981-83
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		4	1981-83
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH Ranguana
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3	1982-83
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		4	1982-83
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH Lime
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3	1982-83
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		7	1982-83
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 13 NESTING CENSUS FOR BEACH Pompion
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2	1981-83
Chelonia mydas		5	1981-83
Dermochelys coriacea			
Eretmochelys imbricata		6	1981-83
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 18 NESTING CENSUS FOR BEACH Sapodilla
(name)

Please complete one of these tables to summariza census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3	1981-83
Chelonia mydas		2	1981-83
Dermochelys coriacea			
Eretmochelys imbricata		9	1981-83
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 19 NESTING CENSUS FOR BEACH Glovers
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
1/07/82	Roof Point							3
	Palmore Point							1
2/07/82	Grassy Caye							1
	Three Corner Caye							1
	Sandbore Caye							1
	N.E. Caye, Glovers Reef							1
8/25/80 8/26/80	All sand beaches and reefs and most of shoreline surveyed--NO sea turtle tracks sighted.							
8/01/81 8/02/81	-do-							

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

*Refer to Map below for areas covered during aerial survey.

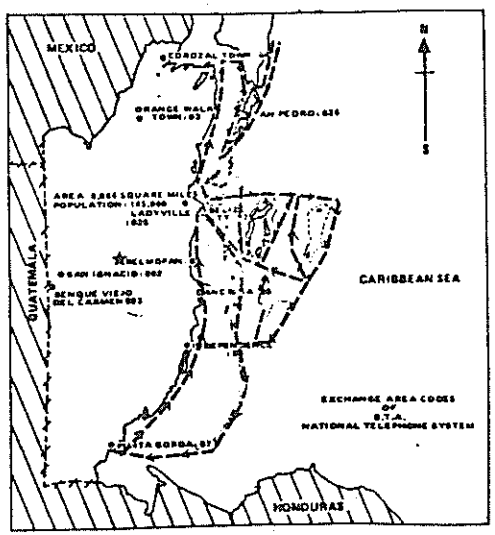


Figure 2: Map showing Flight Path of Aerial Surveys conducted on June 6, 1982, July 1, 1982 and July 2, 1982. Total flight time was 7.1 hours.

SPECIES \ YEAR	1982	1981	1980	1979		Average Year Estimate /1
Caretta caretta						40
Chelonia mydas						19
Dermochelys coriacea						
Eretmochelys imbricata						31
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

/1 Mean estimate for recent years (1979-1982).
*There is not sufficient data to make a precise estimate by year.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

An average year estimate is given in Table 6, that is based on the estimates by beach in Table 4.. Those estimates were based on limited interviews with fishermen and beach residents, beach and aerial surveys.

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs		Human Poaching, Raccoons, ?	
Hatchlings		Birds, Crabs, Predatory Reef Fish (other?)	
Juveniles		Predatory Fish	
Adults (in water)		?	
Nesting females		?	

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS /†	NUMBERS & WEIGHTS (Estimate
1. Belize City Market	Cc,Cm,E.	Nets (infrequently taken incidentally when diving	Sept.-Nov. Feb.-May	200/40.460kg
2. Newtown Barracks	Cc,Cm,E.	Nets	"	50/8,800kg
3. Corozal Town	"	"	"	75/15,675kg
4. Dangriga	"	"	"	90/15,840kg
5. Punta Gorda	"	"	"	250/46,750kg
6. San Pedro	" E*	"	"	180/14,300kg
7. Caye Caulker	"	"	"	70/7,700kg
8. Sarteneja	"	"	"	90/14,300kg

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

*There is a fairly heavy trade in Juveniles to satisfy tourist demand.

†Occasionally turtles are landed in the months of DEC. and JAN.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMENATION
Caretta caretta	400	425	415	Market Surveys and Reports From Fishermen
Chelonia mydas	280	325	350	Market Surveys and Reports From Fishermen
Dermochelys coriacea				
Eretmochelys imbricata	325	370	360	Market Surveys and Reports From Fishermen
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				
Chelonia mydas				Incidental Catchof Juv. by Divers and Fishermen
Dermochelys coriacea				
Eretmochelys imbricata				Incidental Catch of Juv. by Divers and Fishermen
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

TABLE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

*There is no direct evidence of foreing fishing. However fishing floats floating ashore and secondary reports by fishermen of foreigh fishing supports the belief that foreign fishing is being carried of of the coast of Belize. It is also believed that the Japenese are mainly responsible for this foreign fishing pressure. It is impossible to estimate the catch of turtles.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	20-30	Unknown	This represents the estimate for full-time turtle fishermen.
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: 10,000
2. Estimated number of nesting females: ?
3. Number of turtles caught at sea: ?
4. Other: _____

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Fisheries Unit--Ministry of Health, Housing & Co-Ops	6	Market Surveys and Enforcement of Regulations

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Ministry of Trade and Industry, Cooperatives and Consumer Protection Belmopan, Belize *The Fisheries Regulations 1963 are attached for sea turtles (p. 1-3).	NA	NA	Opportunistic

TABLE 19. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

Fisheries

BELIZE

STATUTORY INSTRUMENT

No. 66 of 1977

REGULATIONS made by the Minister responsible for Fisheries in the exercise of the powers conferred upon him under section 9 of the Fisheries Ordinance, Chapter 133 of the Laws, and all other powers thereunto him enabling.

(Gazetted 1st October, 1977)

1.—(1) These Regulations may be cited as the

FISHERIES REGULATIONS 1977 *(Short Title.*

(2) The Fisheries Regulations 1963 and the amendments thereto are hereby revoked.

PART I—PRELIMINARY

2. In these Regulations:—

"bonefish" means the fish commonly known in this country as mantak, the scientific name of which is *Albula vulpes Linne*;

"carapace length" means complete measurement of crawfish determined by beginning at the most anterior edge of the groove between the horns directly above the eyes, then proceeding along the midabdominalline to the rear edge of the carapace;

"closed season" means in relation to any kind or species of fish, a time or season during which the taking of that kind or species of fish is prohibited by these Regulations;

"conch" means any mollusc of the species *Strombus gigas Linne*;

"crawfish" means fish of the genus *Panulirus* which is commonly known as crayfish or spiny lobster;

"crustacea" includes marine and fresh water shrimp, conch, and crawfish;

"lobster trap" means any device that is designed for use, or is capable of being used for or in connection with the taking of crawfish;

"mesh size" means the measurement from knot to knot across the diagonal of the slightly stretched wet mesh;

"scale fish" means all members of the class Pisces;

"seine" means a net of any description used for taking fish by drawing along the bottom of the sea or fresh water (whether drawn on the beach or otherwise);

"shellfish" means any mollusc, specifically including oysters, clams, mussels, conchs, and conch, including members of the genus *Strombus*;

"to buy" means to come into possession or attempt to possess property in fish by means of an offer or exchange for money or other valuable consideration;

"to sell" includes an exchange or an offer or attempt to sell or exchange for money or for any other valuable consideration or an agreement to sell and any exposure of the goods in connection with a stock indicating a price shall be deemed to be an offer to sell;

"to take" includes all operations preparatory, and subsequent to an attempt—whether successful or not—to capture, kill, pursue, or otherwise harm or reduce to possession any fisheries resource;

"turtle" means a marine as distinguished from a terrestrial or fresh water species of tortoise.

PART II—GENERAL

3. No person shall take in the waters of Belize or buy, sell or have in his possession crawfish—

(a) if the tape length is less than 3 1/4 inches or the tail weight is less than 4 ounces;

(b) between the 15th day of March and the 14th day of July, inclusive, in any year;

(c) that is berried, has eggs or spawn;

(d) that has had the berries, eggs or spawn removed;

(e) that is moulting or has a soft shell.

4. No person shall detach or otherwise remove from any female lobster any eggs or spawn or the setae or fibre to which any eggs or spawn are or have been attached.

5. No person shall take any soft shelled crustacea.

6. No person shall take conch in the waters of Belize during the months of July, August and September in any year.

7. No person shall take scale fish in the waters of Belize using fishing equipment except under special permit from the Fisheries Administrator.

8. In all areas outside the barrier reef and within a radius of two miles of the mouth of the Belize River, Haulover Creek and Sibun River, no person shall take fish by means of any beach seine, trap, weir or stop net.

9. No person shall buy or sell bonefish, after the 31st day of December, 1978.

10. No person shall take or have in his possession any turtle during the period from the first day of June to the thirty first day of August inclusive in any year, or take any turtle at any time when the same shall be found on the shoals of Belize and adjacent cayes thereof.

11. No person shall take or have in his possession any turtle eggs.

12. No person shall set or attempt to set within one hundred yards of the shores of Belize or of the adjacent cayes thereof any net or seine, or other instrument whatsoever for the purpose or with the intent of taking turtles.

13. No person shall take, buy, sell or have in his possession any turtle of the following description:—

(a) green turtle (*Chelonia midas*) less than 20 pounds in weight;

(b) hawksbill turtle (*Eretmochelys imbricata*) less than 10 pounds in weight;

(c) loggerhead turtle (*Caretta caretta*) less than 10 pounds in weight.

14. No person shall after the 30th day of June, 1977 export or attempt to export any turtle or any articles made from any part of a turtle otherwise than under a licence granted by the Minister.

15.—(1) Subject to paragraph (2) of the Regulations, no person shall take any fish in the waters of Belize with a net constructed of a natural or artificial fibre the mesh size of which is less than three inches.

(2) The prohibition in paragraph (1) of this Regulations shall not apply to—

(a) throw or cast nets;

(b) the holder of a special licence for scientific investigation who may be permitted to use meshing of smaller mesh provided that such person be of an approved person and that the written authority of the Fisheries Administrator is obtained and entered on the licence at the time of issue;

(c) trawl or seine net the mesh size of which is not less than 1 1/2 inches.

(3) The provisions of this Regulations shall not apply to the meshes of a device constructed of materials other than synthetic or natural fibre webbing, where the device conforms to special patterns laid down for that device, for the purpose of releasing the fish or for the escape of such fish.

16. No person shall capture any fish of such a variety or in such quantities as would result in wanton waste and any fish captured as aforesaid shall be released immediately.

17. No beach seine, trap, weir, or stop net shall be set, landed or otherwise used for the purpose of taking fish at any place situated within a distance of half a mile from any city, township, village, settlement or other inhabited locality in Belize.

18. No person shall use monofilament in the waters of Belize except under special permit from the Fisheries Administrator.

19.—(1) No person shall take, buy, or sell any conch.

20.—(1) No person shall—

(a) have in his possession, or buy, sell, export or attempt to export any lobs or unprocessed black conch.

(b) buy, sell, export or attempt to export black conch in any form.

except under a licence obtained therefor from the Fisheries Administrator under this Regulations.

THE NATIONAL REPORT
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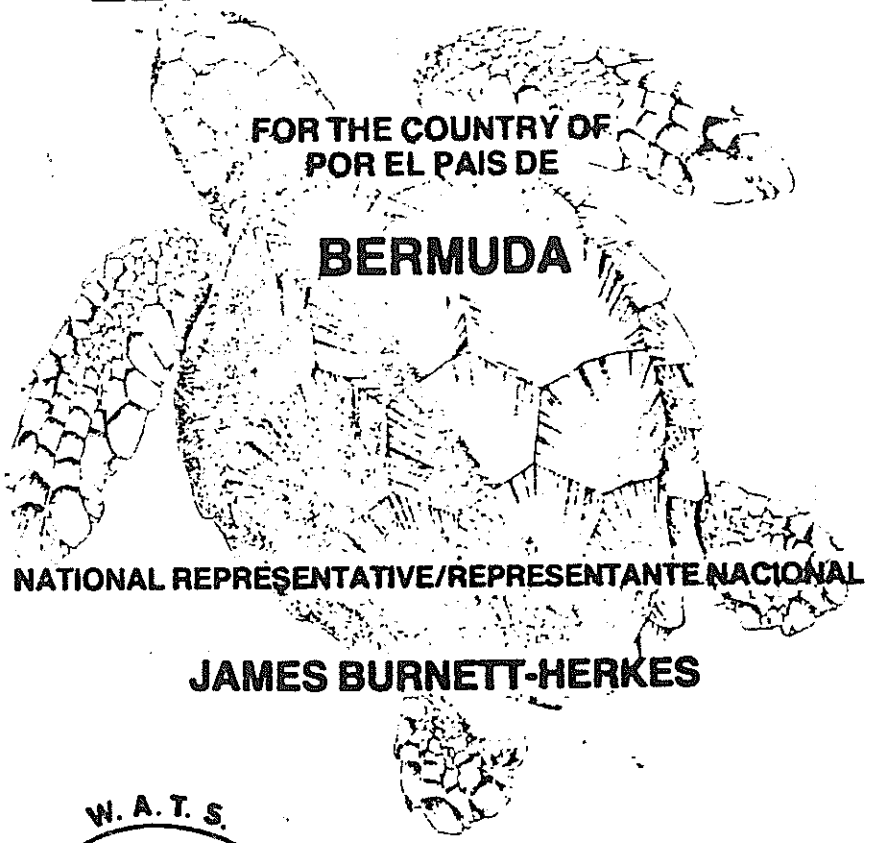


FOR THE COUNTRY OF
POR EL PAIS DE

BERMUDA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

JAMES BURNETT-HERKES

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

BERMUDA

NATIONAL REPORT PRESENTED BY

Dr. James Burnett-Herkes
The National Representative

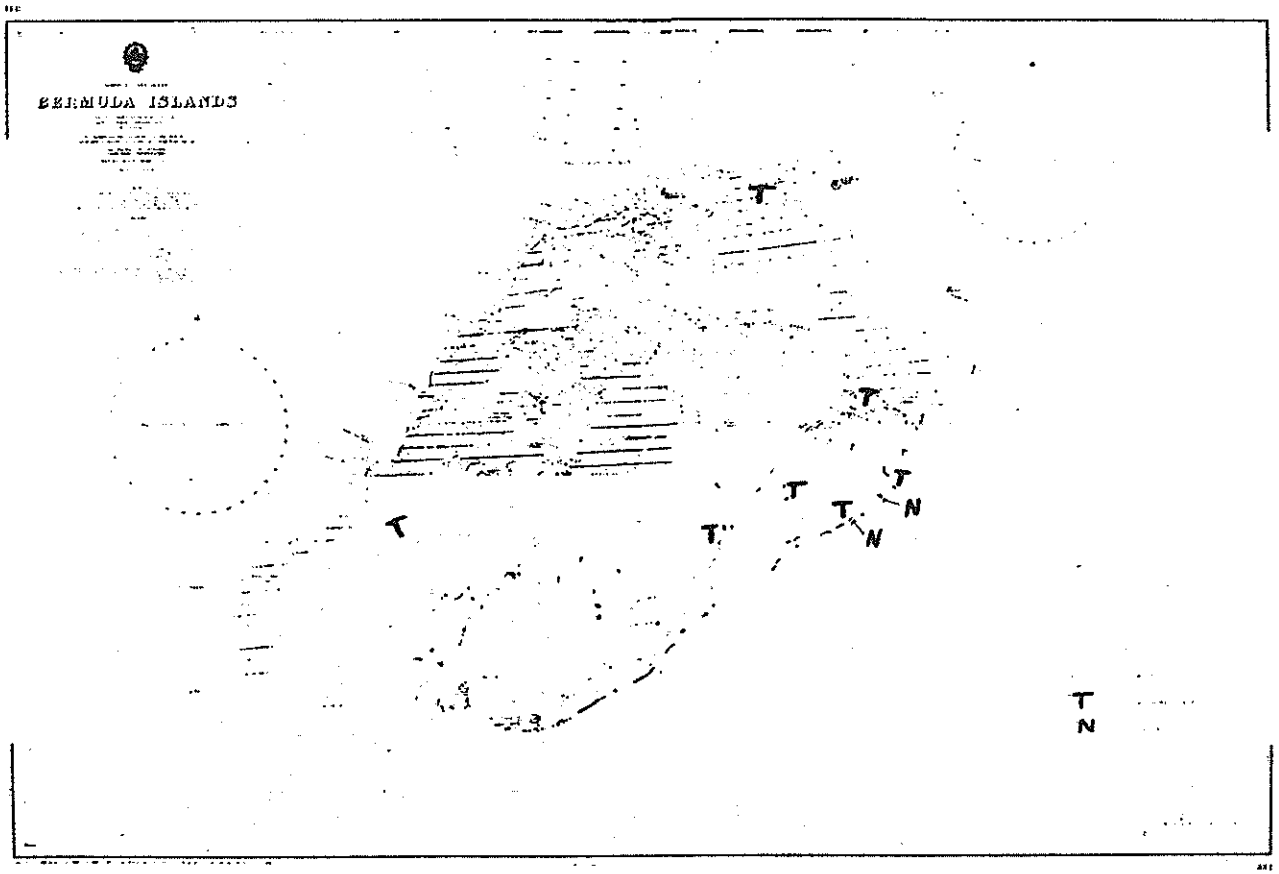
Address: Department of Agriculture & Fisheries
P.O. Box 834
Hamilton Bermuda

NATIONAL REPORT PREPARED BY

James Burnett-Herkes

DATE SUBMITTED: 15 May 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.


BERMUDA ISLANDS
T
N

Country BERMUDA

Length of Coastline* 115 Nautical miles (approx) ..... 183 Km

Km² of Continental Shelf Area 260 sq nautical miles ..... 871 Km²

Seaward Extent of Jurisdictions:

Territorial Sea 3 nautical miles from baselines (chart) ..... 5.5 Km

Extended Economic Zone ..... NONE ..... — Km

Fisheries Jurisdiction 200 miles (nautical) from baselines of territorial sea ..... 366 Km

Other (Describe) NONE ..... — Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	1.5	10.0	11.5
A. High Energy (Short stretches = pocket beaches)	1.5	6.5	8.0
B. Low Energy	—	3.5	3.5
2. Reef (exposed)	—	—	—
3. Rocks	30.0	108.5	138.5
4. Cliffs	15.0	15.0	30.0
5. Vegetation (Total)	1.5	—	1.5
A. Vines	—	—	—
B. Grasses	—	—	—
C. Mangroves	1.5	—	1.5
D. Coconut Trees	—	—	—
E. Other Trees or Shrubs	—	—	—
F. Marshes	—	—	—
6. Mouths of lagoons, rivers, canals	—	—	—
7. Total Shoreline	49.5	132.5	183

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	3	90.0
2. Mud	0.2	5.0
3. Rocks	0.75	3.0
4. Submerged Vegetation	0.6	90.0
5. Reefs (Total)	0.2	182.0
A. Fringing Reefs	—	17.0
B. Patch Reefs	0.2	70.0
6. Other - DROWNED REEFS	—	101.0

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

2 BEACHES USED FOR EGG TRANSPLANT EXPERIMENTS IN UNDEVELOPED HIGH ENERGY AREAS (SEE 'N' ON CHART) HAVE POWDERY WHITE SAND (APPROX 1mm GRAIN SIZE). BEACHES SLOPE TO LOW DUNES (1.5-2m ABOVE H.W.M.) VEGETATION CONSISTS MAINLY OF SEASIDE MORNING GLORY (Ipomoea pes-caprae) AND WEST INDIAN CRABGRASS (Eustachys petraea). ARTIFICIAL LIGHTS NEAR ONE BEACH ONLY. THESE EXTINGUISHED DURING HATCHING. APPROX 6.5 Km OF BEACHES SUITABLE FOR NESTING

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Bermuda Islands	871	Cm > 1000	CAPTURE/TAG/RELEASE STUDIES OBSERVATIONS AND REPORTS FROM FISHERMEN & BOATMEN
2. " "	871	Cc > 100	OBSERVATIONS AND REPORTS FROM FISHERMEN AND RESEARCH
3. " "	871	Ei > 50	OBSERVATIONS AND REPORTS FROM FISHERMEN AND
DEPENDENT FROM			OBSERVATIONS AND REPORTS
4. Bermuda Islands	7850	Dc < 5	FROM FISHERMEN — OCCASIONALLY CAUGHT IN NETS ETC.
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	H J	H J	H J	J	J	J	J	J	J	H J	H J	H J	H = HATCHLINGS IN SARGASSUM J-JUV. MOST COMMON JUNE-OCT. PRESENT ALL YEAR
Chelonia mydas	J	J	J	J	J	J	J	J	J	J	J	J	MAY-OCT OCCASIONALLY SEEN BY FISHERS MAY-OCTOBER
Dermochelys coriacea					J/A	J/A	J/A	J/A	J/A	J/A			JUNE-OCTOBER
Eretmochelys imbricata	J	J	J	J	J	J	J	J	J	J	J	J	STRANDED ANIMALS FOUND IN WINTER MONTHS.
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

J = JUVENILES
A = ADULTS
H = HATCHLINGS

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs			
Hatchlings	Cc	DISORIENTED-POSSIBLY OR UNDER TEMPS TOO LOW	5%
	Ei	" " " "	
Juveniles	Cc	" " " "	15%
	Cm	" " " " + boat propellers	
Adults (in water)	Dc	" " or fouling of pieces of net (cargo, fishing, etc) hoops, etc.	"
Nesting females			

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

Collection of such data has only just begun
Studies of diseases also just commenced
And will be reported on by years end.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta	42	5	5	Unknown	—	—	1	1
"DEVILS HOLE"	105	51	42	Unknown	9	—	2	1
Chelonia mydas	348*	346	346	Unknown	—			
IMPORTED								
Dermochelys coriacea								
— — —						—	—	—
Eretmochelys imbricata								
—							—	—
Lepidochelys kempi								
— — — —							—	—
Lepidochelys olivacea								

* NOTE Eggs Collected Overseas. Shipped to Bermuda via Air freight on Commercial flight.

YEAR 1991

TABLE 17 - / TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SEE OVER →

NOTE TABLE 17

BETWEEN 1967-1977 JUST OVER 17,000 GREEN TURTLE (Cm) EGGS WERE TRANSPLANTED TO BERMUDA FROM COSTA RICA. FROM THESE 10,000 HATCHLINGS WERE RELEASED FROM INCUBATION BEACHES (SEE CHART 'N') AND 450 WERE RETAINED FOR 2 YEARS TO HEADSTART, TAG AND RELEASE. IT IS ANTICIPATED THAT THIS PROJECT MIGHT CONTINUE IN THE FUTURE

IN 1976 TURTLES IN A NATURAL POND (SINK HOLE) "DEVILS HOLE" TOURIST ATTRACTION LAID 3 CLUTCHES TOTALLING 252 EGGS. ALTHOUGH MOST WERE FERTILE NONE HATCHED BECAUSE OF SHADE OVER SITE AND RAINS

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
DEPARTMENT OF AGRICULTURE AND FISHERIES P.O. Box 834 HAMILTON BERMUDA (INCLUDES: DIVISION OF FISHERIES, BERMUDA AQUARIUM, MUSEUM & ZOO CONSERVATION DIVISION)	6	Tagging/release wild caught turtles Egg transplant - population enhancement Captive breeding Disease studies

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND LOCATION	AREA km^2	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
BERMUDA'S EEZ EXTENDING 183 Km FROM BASELINES	456,095	ALL MARINE TURTLES CONSIDERED THREATENED / ENDANGERED IN WEST ATLANTIC ALSO ATTEMPTING TO REESTABLISH BREEDING POPS.	FISHERIES ACT / REGULATIONS WARDENS & MARINE POLICE PUBLIC & FISHERMAN COOPERATE.

TABLE 19. SANCTUARIES AND REFUGES

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Dept. Agriculture + Fisheries P.O. Box 834 Hamilton Bermuda.	US $ 58,000	2-4	ENFORCEMENT OF ALL FISHERIES REGULATIONS
Bermuda Police & Department of Defence Bermuda (The Commissioner).	N/A	8	ENFORCEMENT OF ALL FISHERIES REGULATIONS AND OTHER MARINE LEGISLATION (eg SAFETY BOAT LICENCES) MARINE SECTION OF POLICE.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

UNDER FISHERIES ACT 1972, THE "FISHERIES (PROTECTED SPECIES) ORDER, 1978" PROHIBITS THE TAKING OF ANY MARINE TURTLE

"FISHERIES REGULATIONS 1972" PROHIBIT THE TAKING OR ATTEMPTED TAKING OF A NESTING TURTLE

(Copies enclosed)

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Re-establishment of green turtle nesting rookery at Bermuda	1966	(cont'd)	Department Agriculture & Fisheries P.O. Box 834 Hamilton Dr. D.B. Wingate.
Studies of Populations of Bermuda Turtles	1968	(cont'd)	Department of Agriculture & Fisheries P.O. Box 834 Hamilton Dr. J. Burnett-Herkes
Diseases of wild and captive marine turtles in Bermuda	1982	(cont'd)	Department of Agriculture & Fisheries P.O. Box 834 Hamilton Miss. Rand.

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Burnett-Herkes, J. 1974. Notes on green sea turtles (C. mydas) tagged at Bermuda. Biol. Cons. 6(4): 307-312

2. Frick, J. 1976. Orientation and behaviour of hatchling green turtles (C. mydas) in the sea. Anim. Behav. 24: 849-857

3. Ireland L.C. 1979. Homing behavior of juvenile green turtles C. mydas. In A Handbook on Biotelemetry

4. and Radio Tracking. Eds. Amlaner, C.J. & D.W. Macdonald. Pergamon Press, Oxford, N.Y.

THE AD HOC DATA REPORT
EL REPORTE DE DATOS AD HOC

W. A. T. S.

S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.

S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 19E?[illegible]

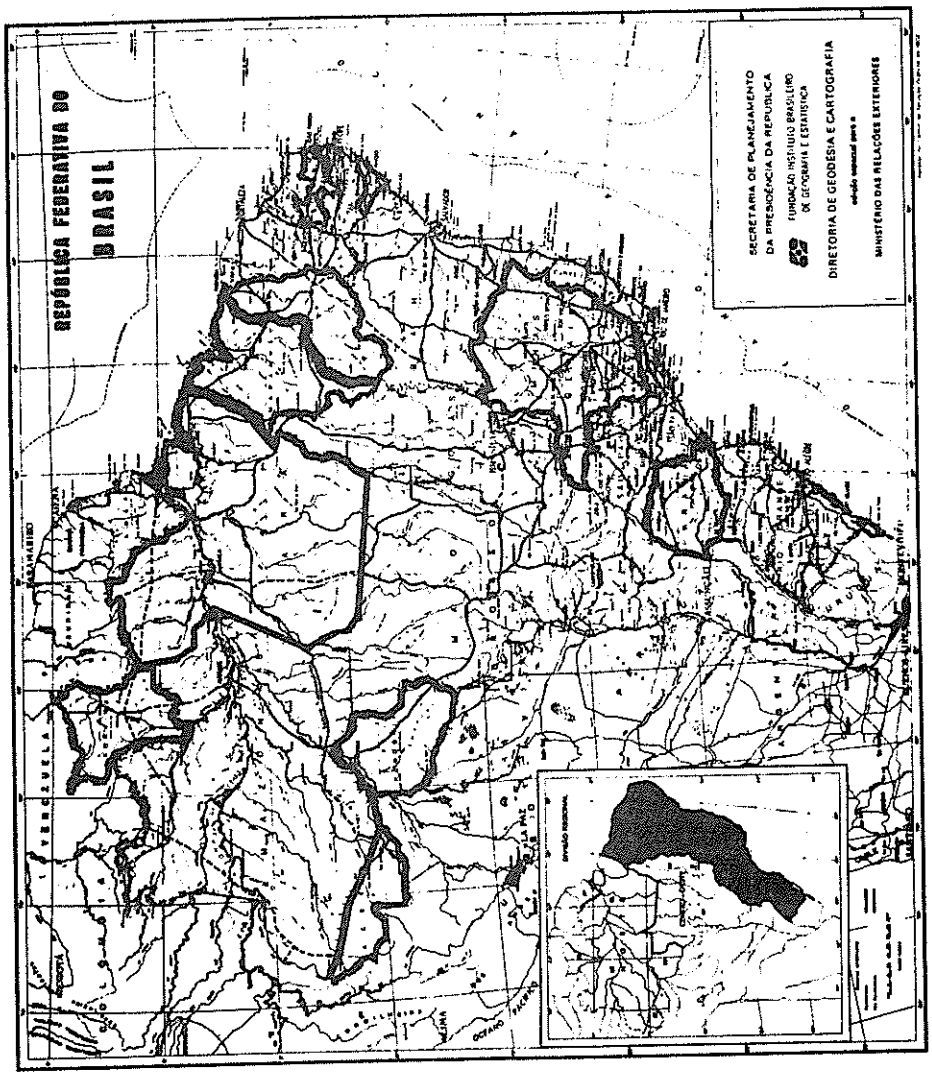
AD HOC DATA REPORT

FOR THE COUNTRY OF

BRAZIL

Prepared by: H.A. Reichart
STINASU
P.O. Box 436
Paramaribo
Suriname

Submitted: 11 April 1983


REPÚBLICA FEDERATIVA DO
BRASIL
SECRETARIA DE PLANEJAMENTO
DA PRESIDÊNCIA DA REPÚBLICA
FUNDAÇÃO INSTITUTO BRASILEIRO
DE GEOGRAFIA E ESTATÍSTICA
DIRETORIA DE GEODÉSIA E CARTOGRAFIA
MINISTÉRIO DAS RELAÇÕES EXTERIORES

Most of the information for this Ad Hoc Data Report on Brazil has been obtained during fieldtrips to the coastal northeast region of the country in 1979 and 1980 as part of WWF/IUCN Project # 1803, "Operation Headstart", green sea turtle populations Suriname-Brazil. The purpose of that project was to monitor tag returns from captive-reared green sea turtle yearlings, released to the sea from Surinam nesting beaches. During these fieldtrips to Brazilian coastal areas it soon became evident that Brazil had many more sea turtles than most people were aware of, and that there exists a considerable paucity of available information on the subject. Therefore, the goals of Project # 1803 were redefined to include the gathering of all sea turtle information that could be obtained during the course of the Project's fieldtrips, and to make this available to Brazilian authorities; this has been accomplished. There is, however, still a wealth of data to be gathered, out there on the beaches and in the Natural Resources Departament offices, but it will require the efforts of dedicated fieldworkers to extract it and put it to use.

METHODS

This Ad Hoc Data Report has been modeled after the National Report format, but where deemed desirable, supplementary information and photographs have been inserted in suitable places.

Brazil has 16 states and one territory bordering on the Atlantic Ocean; all have sea turtles in their offshore waters and most also have nesting beaches.

Starting in the north, at the border with French Guiana, they are: the Territory of Amapá, and the States of Pará, Maranhão, Piauí, Ceará, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, Bahia, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina, Rio Grande do Sul. Of these, the following states were visited: Pará, Maranhão, Ceará, Rio Grande do Norte, Pernambuco, Alagoas, Bahia.
No states south of Bahia were visited, which means that only about half of Brazil's coastline has been sampled. There are reports of turtles nesting in Espírito Santo and large nesting populations of Caretta caretta on the beaches of Rio Grande do Sul, the southernmost state of Brazil.

Where possible a standard NATS table was used to describe a particular condition for Brazil as a whole - for instance, table 5, beach survey summary, could be filled out for all of Brazil, because there is no knowledge of any aerial sea turtle surveys ever having been performed in Brazil; or table 19, where all the currently known sea turtle sanctuaries or refuges in Brazil could be placed on this one page. On the other hand, some tables had to be filled out on a state-by-state basis, especially tables 2, 2A, and 3. For clarification all tables used are headed by either the word "Brazil" or the name of the pertinent state in order to indicate whether the table applies nationwide or statewide.
Although the States of Piauí, Paraíba, and Sergipe were not visited, they are located between states that were visited and some cautious, generalised statements have been made about some aspects, due to comparable conditions in the neighboring states.

Personal observations received priority in entering data into the tables, but most information was obtained from SUDENE*, SUDEPE, and the various academic institutions visited. Additional data came from interviews with federal, state, and local officials. Information obtained from fishermen and other apparently knowledgeable persons on or near the beaches was doublechecked and, when thought to be reliable, was accepted. Unreliable data were recorded in the fieldnotes, but were either not used in the NATS report or were marked as being unreliable.

Very little quantitative information could be given, and in the tables a ✓ mark was used to indicate that the requested item is present, but that it could not be enumerated. When the item is not present a horizontal stripe —— was used. When the item's status was unknown the space was left blank.

As a supplemental reference a copy of the current status report for WWF/IUCN Project # 1803 has been enclosed. From it, perhaps, additional information may be gleaned for the Symposium records.

CONCLUSION

When reviewing this Ad Hoc Data Report for Brazil it is clear that many gaps exist in the requested information and that practically no numerical data have been supplied. What the Ad Hoc Data Report does provide is a

rather general overview of the situation in the northeast region of Brazil. In this the report could serve as a starting point on which to establish priorities for future Brazilian action plans regarding their sea turtle resources. It should be recommended that any such plans be developed and executed on sub-regional, preferrably state-by-state, bases, naturally with close cooperation and coordination between the states.

As stated in the introduction, a good amount of valuable data on sea turtles in Brazil is buried in the filing cabinets of the various natural resource offices and academic institutions of the coastal states. There are also a number of field fisheries officers with practical sea turtle know-how. Any organized sea turtle conservation or research program should start by first assimilating this information to provide additional base data.

ACKNOWLEDGEMENTS

It would have been impossible to obtain the information provided here were it not for the excellent cooperation given during the fieldwork by the offices and personnel of SUDENE, and SUDEPE in Pará, Ceará, Rio Grande do Norte, Pernambuco and Bahia. The marine laboratories of the Universities of Ceará, Rio Grande do Norte and Bahia were also of immeasurable help.

* Acronyms explained in tables 18 and 20, or in Appendix B of Report #1803.

BLANK = UNKNOWN.
✓ = PRESENT, BUT NOT QUANTIFIED.

Country BRAZIL

Length of Coastline* . . . . . 7408 Km

Km^2 of Continental Shelf Area . . . . . ____ Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 200 nautical miles . . . . . ____ Km

Extended Economic Zone . . . . 12 nautical miles . . . . . ____ Km

Fisheries Jurisdiction . . . . 12 nautical miles . . . . . ____ Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

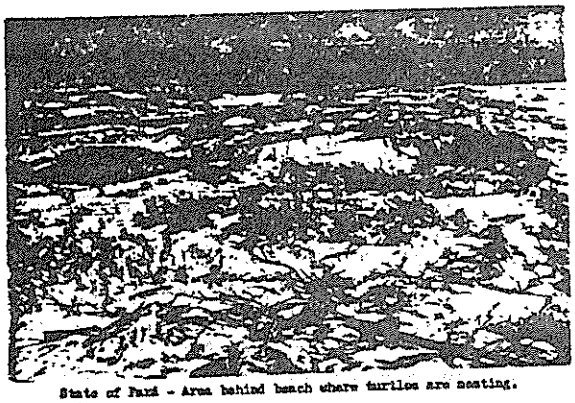
* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

STATE OF PARÁ

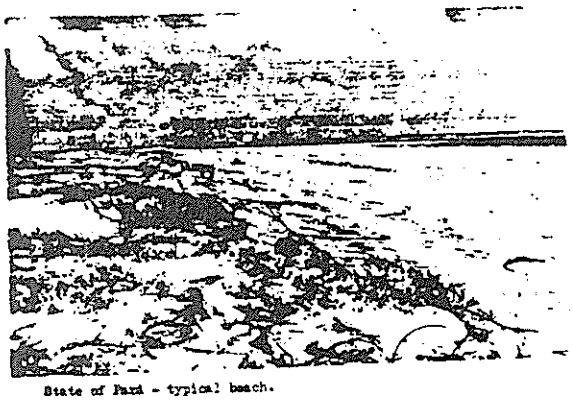
MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy	✓	✓	✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)			✓
3. Rocks			✓
4. Cliffs			✓
5. Vegetation (Total)	✓	✓	✓
A. Vines			
B. Grasses			
C. Mangroves			✓
D. Coconut Trees			✓
E. Other Trees or Shrubs			✓
F. Marshes			✓
6. Mouths of lagoons, rivers, canals			✓
7. Total Shoreline			

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

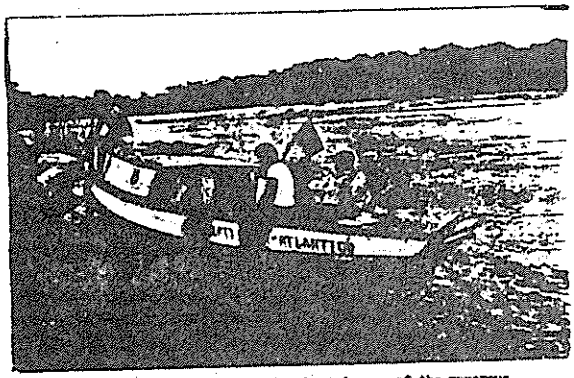
TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE



State of Pará - Area behind beach where turtles are nesting.



State of Pará - typical beach.



State of Pará - typical fishing boat in one of the numerous sea inlets (not necessarily river or creek mouths).

State of Pará - Shrub vegetation behind beach; turtles are supposedly nesting in this area.

State of Pará - Praia do Macarico, a recreational beach in the resort town of Salinópolis. Cars regularly drive on the beach. A few hundred meters away from the town area sea turtles are supposed to nest on this beach.

State of Pará - typical sandbeach with stone cliffs behind beach.

BLANK = UNKNOWN

STATE OF CEARÁ

√ = PRESENT, BUT NOT QUANTIFIED

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy	✓	✓	✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)			✓
3. Rocks			✓
4. Cliffs			✓
5. Vegetation (Total)	✓	✓	✓
A. Vines			
B. Grasses	✓	✓	✓
C. Mangroves			✓
D. Coconut Trees	✓	✓	✓
E. Other Trees or Shrubs			
F. Marshes			✓
6. Mouths of lagoons, rivers, canals	✓	✓	✓
7. Total Shoreline			APPROX 310 KM

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

BLANK = UNKNOWN

STATE OF MARANHÃO

√ = PRESENT, BUT NOT QUANTIFIED

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy		✓	✓
B. Low Energy		✓	✓
2. Reef (exposed)			
3. Rocks			✓
4. Cliffs			✓
5. Vegetation (Total)			✓
A. Vines			
B. Grasses			
C. Mangroves	✓		✓
D. Coconut Trees			
E. Other Trees or Shrubs			✓
F. Marshes	✓		✓
6. Mouths of lagoons, rivers, canals	✓	✓	✓
7. Total Shoreline			

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

BLANK = UNKNOWN

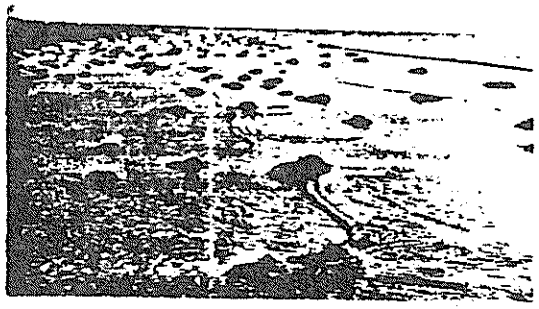
STATE OF PIAUÍ

√ = PRESENT, BUT NOT QUANTIFIED

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy	✓		✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)			
3. Rocks			✓
4. Cliffs			
5. Vegetation (Total)			
A. Vines			
B. Grasses	✓	✓	✓
C. Mangroves			
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes	✓		✓
6. Mouths of lagoons, rivers, canals	✓		✓
7. Total Shoreline			

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE



Stranded, broken-off seaweed on beaches near Icapuí, Ceará

"Canoguda" (sailing raft), type of fishing boat, used almost exclusively on NE coast of Brazil. Incidentally caught turtles are locally consumed (Barra de S. Antônio, Alagoas).

BLANK = UNKNOWN

STATE OF PERNAMBUCO ✓ = PRESENT, BUT NOT QUANTIFIED

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy	✓	✓	✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)	✓		✓
3. Rocks	✓		✓
4. Cliffs	✓	✓	✓
5. Vegetation (Total)			
A. Vines			
B. Grasses		✓	✓
C. Mangroves			✓
D. Coconut Trees		✓	✓
E. Other Trees or Shrubs			✓
F. Marshes	✓	✓	✓
6. Mouths of lagoons, rivers, canals	✓	✓	✓
7. Total Shoreline			

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE * Refer to SEA TURTLE MANUAL (Aerial Survey) ** Human development or use (See MANUAL)

BLANK = UNKNOWN

STATE OF RIO GRANDE DO NORTE ✓ = PRESENT, BUT NOT QUANTIFIED

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy	✓	✓	✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)			✓
3. Rocks	✓	✓	✓
4. Cliffs			✓
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves			✓
D. Coconut Trees			✓
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, rivers, canals			✓
7. Total Shoreline			157 KM

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE * Refer to SEA TURTLE MANUAL (Aerial Survey) ** Human development or use (See MANUAL)

BLANK = UNKNOWN

ALAGOAS ✓ = PRESENT, BUT NOT QUANTIFIED

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)			✓
A. High Energy	✓	✓	✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)	✓		✓
3. Rocks			✓
4. Cliffs			✓
5. Vegetation (Total)			
A. Vines			
B. Grasses			✓
C. Mangroves			
D. Coconut Trees	✓	✓	✓
E. Other Trees or Shrubs			✓
F. Marshes			✓
6. Mouths of lagoons, rivers, canals			✓
7. Total Shoreline			

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE * Refer to SEA TURTLE MANUAL (Aerial Survey) ** Human development or use (See MANUAL)

BLANK = UNKNOWN.
✓ = PRESENT, BUT NOT QUANTIFIED

STATE OF BAHIA

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	✓	✓	✓
A. High Energy	✓	✓	✓
B. Low Energy	✓	✓	✓
2. Reef (exposed)	✓	✓	✓
3. Rocks	✓	✓	✓
4. Cliffs	✓	✓	✓
5. Vegetation (Total)			
A. Vines			
B. Grasses			✓
C. Mangroves			✓
D. Coconut Trees			✓
E. Other Trees or Shrubs			✓
F. Marshes			✓
6. Mouths of lagoons, rivers, canals	✓	✓	✓
7. Total Shoreline			

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

STATE OF PARÁ

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTS. . 25m (SEAWARD)
1. Sand	✓	
2. Mud	✓	
3. Rocks	✓	
4. Submerged Vegetation	—	
5. Reefs (Total)	✓	✓
A. Fringing Reefs	—	—
B. Patch Reefs	✓	✓
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED

— = NOT PRESENT

BLANK = UNKNOWN

STATE OF MARANHÃO

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	✓	
2. Mud	✓	
3. Rocks	✓	
4. Submerged Vegetation		
5. Reefs (Total)	✓	
A. Fringing Reefs	—	—
B. Patch Reefs		
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED

BLANK = UNKNOWN

STATE OF PIAUÍ

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	✓	
2. Mud		
3. Rocks	✓	✓
4. Submerged Vegetation		✓
5. Reefs (Total)		✓
A. Fringing Reefs		
B. Patch Reefs		✓
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED

BLANK = UNKNOWN

STATE OF CEARÁ

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	✓	
2. Mud		
3. Rocks	✓	✓
4. Submerged Vegetation	✓	✓
5. Reefs (Total)	✓	✓
A. Fringing Reefs		
B. Patch Reefs	✓	✓
6. Other BARRIER REEFS	✓	✓

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED

BLANK = UNKNOWN

STATE OF RIO GRANDE DO NORTE

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	✓	
2. Mud	✓	
3. Rocks	✓	✓
4. Submerged Vegetation	✓	✓
5. Reefs (Total)	✓	✓
A. Fringing Reefs		
B. Patch Reefs	✓	✓
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED

BLANK = UNKNOWN

BLANK = UNKNOWN

STATE OF PERNAMBUCO ✓ = PRESENT, BUT NOT QUANTIFIED

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	✓	
2. Mud	✓	
3. Rocks	✓	✓
4. Submerged Vegetation	✓	✓
5. Reefs (Total)	✓	✓
A. Fringing Reefs	✓	✓
B. Patch Reefs	✓	✓
6. Other	✓	✓

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

STATE OF ALAGOAS

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	✓	✓
2. Mud		
3. Rocks	✓	✓
4. Submerged Vegetation	✓	✓
5. Reefs (Total)	✓	✓
A. Fringing Reefs	✓	✓
B. Patch Reefs	✓	✓
6. Other BARRIER REEFS		✓

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED.

BLANK = UNKNOWN.

STATE OF BAHIA

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand (MOSTLY CORAL SAND)	✓	✓
2. Mud		
3. Rocks	✓	✓
4. Submerged Vegetation	✓	
5. Reefs (Total)	✓	✓
A. Fringing Reefs	✓	✓
B. Patch Reefs	✓	✓
6. Other BARRIER REEF		✓

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

✓ = PRESENT, BUT NOT QUANTIFIED.

BLANK = UNKNOWN

STATE OF PARÁ

NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ALLEGED NESTING
1. THERE ARE WELL OVER A HUNDRED SEPARATE BEACHES IN THE STATE OF PARÁ.		C.m. E.i.*	MAY – AUGUST (Peak in June)
2. OF THE DOZEN OR SO BEACHES			
3. VISITED, SPECIES AND NESTING			
4. PERIODS CAN BE EXTRAPOLATED			
5. FOR THE ENTIRE STATE WITH			
6. RELATIVE SAFETY.			
7.			
8.			
9.			
10.			

*E. MORE COMMON NESTER THAN C.m.

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF MARANHÃO

NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ALLEGED NESTING
1. THERE ARE MANY BEACHES ALONG		C.m. E.i.	DEC. – FEBR. (UNRELIABLE)
2. THIS COAST WHERE			
3. NESTING TAKES PLACE.			
4. BEACHES ACCESSIBLE			
5. ONLY BY SEA OR			
6. AIR. NO BEACHES			
7. WERE VISITED.			
8. SEVERAL VILLAGES			
9. HAVE AIRSTRIPS			
10. FOR EASY ACCESS.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF PIAUÍ

NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ALLEGED NESTING
1. MOST OF THE SHORELINE IN		E.i. SOME C.m.	DEC. – MARCH (UNRELIABLE)
2. PIAUÍ CONSISTS			
3. OF SANDY BEACHES WITH			
4. A WIDE BAND OF SAND DUNES			
5. BEHIND THEM			
6. ONLY THE WESTERN- MOST STRETCH			
7. (60 KM) AT THE BORDER WITH CEARÁ			
8. HAS SOME DRY GRASSES REACHING			
9. THE COAST.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF CEARÁ

NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ~~RECORDED~~ ALLEGED NESTING
1. SHORELINE PRACTICALLY ONE CONTINUOUS BEACH,		E.i. D.c.*	DEC. – MID APRIL
2. BUT SUBDIVIDED INTO SEVERAL BEACHES WITH SEPARATE NAMES.			
3. TOTAL BEACH LENGTH APPROX. 200 KM			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

* RELIABLE REPORT OF ONLY ONE EVER NESTING OF D.C. IN CEARÁ (1978).

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF RIO GRANDE DO NORTE

NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ~~RECORDED~~ ALLEGED NESTING
1. MARARANGUAPE		E.i.	DEC. – MARCH
2. CARAÚBAS		E.i. Cm. Cc.	JAN. – MARCH
3. MARACAJAÚ		E.i. Cm.	JAN. – MARCH
4. ZUMBI		E.i. Cc.	
5. CAIÇARA		E.i. Cm. Cc.	
6. ATOL DAS ROCAS (260KM OFFSHORE)		Cm. E.i.	DEC. – MARCH
7. MANY MORE BEACHES IN THIS STATE			
8. BUT THESE WERE NOT			
9. VISITED			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF PERNAMBUCO

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF ~~RECORDED~~ ALLEGED NESTING
1. SHORELINE IS MOSTLY ONE CONTINUOUS		E.i. Cm.*	DEC. – MARCH
2. BEACH WHICH IS SUBDIVIDED			
3. BY SEPARATE NAMES INTO			
4. MANY BEACHES. ONLY BEACHES			
5. SOUTH OF RECIFE WERE VISITED			
6. BUT EXTRAPOLATION FOR ENTIRE STATE SEEMS			
7. JUSTIFIABLE.			
8.			
9.			
10.			

* Cm. ONLY OCCASIONALLY

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF ALAGOAS

NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ~~RECORDED~~ ALLEGED NESTING
1. SHORELINE IS MOSTLY ONE CONTINUOUS BEACH		E.i.* Cm.*	JAN. – FEBR.
2. (WITH BREAKS FOR RIVERS).			
3. BEACH SUBDIVIDED BY SEPARATELY			
4. NAMED BEACH-SECTIONS.			
5. EXTRAPOLATION JUSTIFIABLE.			
6. BEACHES VISITED: GUAOAICUPE –			
7. GAMELA – CARNIFICS –			
8. GOIA			
9.			
10.			

* NEITHER SPECIES NESTING IN LARGE NUMBERS

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATE OF BAHIA

	NAME OF BEACH	LENGTH IN KM.	SPECIES NESTING (Use abbreviations)*	MONTHS OF ~~NESTING~~ ALLEGED NESTING
1.	MANY SUITABLE BEACHES ACCORDING TO		C.c. (MANY)	
2.	SHORT OFFICE PEOPLE IN		C.m. (SOME)	
3.	SALVADOR.		E.i. (SOME)	
4.			L.o. (RARE)	
5.				
6.				
7.				
8.				
9.				
10.				

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

BRAZIL

	NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1.	STATE OF MARANHÃO	ALL? THE WESTERN HALF OF THE COAST	C.m.	HEARSAY, AND EXTRAPOLATION OF OBSERVED ALGAE FIELDS OFF THE COAST OF CEARÁ'
2.	STATE OF PIAUÍ	ALONG ENTIRE COAST	C.m. E.i.	EXTRAPOLATION OF OBSERVED FIELDS IN CEARÁ', AND SOME OBSERVATION OF PART OF THE PIAUÍ' FIELDS
3.	STATE OF CEARÁ'	ALONG ENTIRE COAST	C.m. E.i. C.c.	PERSONAL OBSERVATION. INTERVIEWS. STOMACH CONTENTS.
4.	STATE OF RIO GRANDE DO NORTE	ENTIRE COAST ?	C.m. E.i. C.c.	PERSONAL OBSERVATION ALONG CENTERMOST OF COASTLINE NW AND SE COAST UNKNOWN BUT SHOULD BE ALIKE.
5.	ISLANDS OF FERNANDO DE NORONHA	ALL AROUND ISLANDS	C.m. E.i.	CONSISTENT REPORTS OF MAJOR FORAGING FIELDS; FROM INTERVIEWS. (APPROX. 280KM OFF MAIN COAST BRAZIL)
6.	STATE OF PARAÍBA			NO INFORMATION, BUT SHOULD BE FORAGING AREA, DUE TO COAST SIMILARITY

TABLE 7. FORAGING AREAS INVENTORY
PG 1 OF 2

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

BRAZIL

	NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1.	STATE OF PERNAMBUCO	ALONG ENTIRE COAST	C.m. E.i. C.c.	OBSERVATION. INTERVIEWS.
2.	STATE OF ALAGOAS	ALONG ENTIRE COAST	C.m. E.i. C.c.	OBSERVATION INTERVIEWS TAG RETURNS
3.	STATE OF SERGIPE			NO INFORMATION, BUT SHOULD BE FORAGING AREA DUE TO COAST SIMILARITY
4.	STATE OF BAHIA		C.m. E.i. C.c. L.o.	INTERVIEW L.o. APPARENTLY RARE.
5.	ARQUIPELAGO DOS ABROLHOS. (OFF SOUTHCOAST STATE OF BAHIA)	AROUND THE ISLANDS	C.m. E.i. C.c. L.o. (RARE)	INTERVIEW
6.				

TABLE 7. FORAGING AREAS INVENTORY
CONT'D
PG 2 OF 2

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

STATES OF CEARÁ - RIO GRANDE DO NORTE - PARAÍBA - PERNAMBUCO - ALAGOAS

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta NOT MANY BUT EVIDENT													UNKNOWN
Chelonia mydas MANY	✓	✓	✓	✓	✓	✓	✓				✓	✓	MARCH - JULY
Dermochelys coriacea													
Eretmochelys imbricata MANY BUT LESSER THAN C.m.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	UNKNOWN, BUT OCCURING ALL YEAR AROUND
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8. ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

BRAZIL

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
APPROX. 47°55'W 0°10'S (STATE OF PARÁ)	EARLY SUMMERTIME (FEBRUARY)	D. c.	ONE SPECIMEN WAS SPEARED BUT WAS BEING DISCARDED AS USELESS. ANOTHER SPECIMEN WAS ROPED AND USED TO PULL THE BOAT IN FUN; OTENIBLY RELEASED LATER.
OFF THE COAST OF RNC (STATE RIO GRANDE DO NORTE)	REGULARLY	D. c.	SPORADIC SIGHTINGS BY FISHERMEN FAR OUT AT SEA. (~ 7 15KM) ONE FISHERMAN CLAIM OF REGULAR SIGHTINGS (@ 7KM OUT)

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	I
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

BRAZIL

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate)
1. BITUPITÁ (STATE OF CEARÁ)	C.m. E.i.	FLOATING, HANGING NETS. BAITED FISHLINES.	APRIL-MAY MOST	
2. ALMOFALA (STATE OF CEARÁ)	C.m. E.i.	FLOATING, HANGING NETS	JULY LARGEST CATCHES	UP TO 50/DAY
3. ICAPUÍ (STATE OF CEARÁ)	C.m. E.i.	FLOATING, HANGING NETS	MAY LARGER CATCHES	ONE FISHERMAN HAD 200 C.m. IN ONE YEAR
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

ALTHOUGH ALL SEA TURTLE TAKING HAS BEEN PROHIBITED SINCE 1978 SOME TURTLE FISHING CONTINUES. ABOVE-NAMED AREAS WERE VISITED BUT FISHING APPEARS TO CONTINUE IN MANY MORE BEACH AREAS.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

BRAZIL

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta				
Chelonia mydas				
Dermochelys coriacea				
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

UNKNOWN.
FOR REFERENCE DATA SEE APPENDIX D - ATTACHED TO TABLE 15

STATE OF PARÁ

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				
Chelonia mydas				FISHWEIRS. ALL YEAR AROUND. DURING HEIGHT OF SEASON (JAN-MAY) CATCH APPROX. 2-3 PER 10 FISHWEIRS PER DAY HOWEVER, PARÁ MUST HAVE MORE THAN ONE THOUSAND WEIRS IN OPERATION. *
Dermochelys coriacea				SAME AS FOR C.m. BUT NOT AS MANY E.i. ARE BEING CAUGHT. *
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

* SPECIMENS CAUGHT ARE 30 CM TO ADULT SIZE.
ALL ARE LOCALLY CONSUMED.

DATA IS FOR UP TO 1980 BUT NO REASON TO ASSUME IT IS ANY DIFFERENT NOW.

STATE OF CEARÁ

SPECIES \ YEAR	~~1982~~	~~1981~~	~~1980~~	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				FISHWEIRS
Chelonia mydas				FISHWEIRS - UP TO 3 SPECIMENS PER DAY CEARÁ MAY HAVE WELL OVER 100 FISHWEIRS SHARK NETS - BECAUSE OF LARGE MAKE SIZE SMALL CHEY (HATCHLINGS, YEARLINGS ?) ARE NOT USUALLY BEING CAUGHT. FISHWEIR - D.C. BEING CAUGHT, BUT RARILY
Dermochelys coriacea				
Eretmochelys imbricata				FISHWEIRS
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

APPENDIX D TURTLE CATCHES* IN N.E. STATES OF BRAZIL

(Data provided by SUDENE, Recife)

		HAWKSBILL	GREEN TURTLE	LOGGERHEAD
MARANHAO	1977	100	-	-
	½ 1978	150	-	-
PIAUI	1976	67	594	6
	1977	48	1,530	-
	½ 1978	44	985	-
CEARA	1976	58	5,333	-
	1977	113	3,167	-
	½ 1978	51	2,016	-
R.G. DO NORTE	1976	4,186	-	-
	1977	1,026	677	81
	½ 1978	244	1,238	-
PARAIBA	1976	208	-	-
	1977	107	-	-
	½ 1978	45	-	-
PERNAMBUCO	1976	223	17,483	-
	1977	15	1,213	-
	½ 1978	-	467	-
ALAGOAS	1976	?	-	-
	1977	-	-	-
	½ 1978	369	-	-
SERGIPE	1976	?	?	-
	1977	?	?	-
	½ 1978	72	-	-
BAHIA	1976	?	?	?
	1977	90	1,812	4,024
	½ 1978	-	400	1,759
TOTALS FOR N.E. STATES	1976	4,749	23,410	-
	1977	1,684	8,399	4,111
	½ 1978	975	5,106	1,759

*) weighed in kg: probably without head, intestines, carapace and plastron.

BRAZIL

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs					
Meat (Kg)					
Shell No./Wt.					
Skins No./Wt.					
Stuffed Juveniles					
Other					

SPECIES

NO DATA AVAILABLE FOR THE REQUESTED PERIOD. ATTACHED APPENDIX "D" GIVES CATCH DATA FOR NE BRAZIL FOR 1976-1978.

TABLE 15. OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

BRAZIL

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing			
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

SINCE 1978 SEA TURTLES ARE FULLY PROTECTED BY LAW. THEREFORE, SINCE THAT YEAR THERE SHOULD BE NO OFFICIAL EMPLOYMENT DATA INVOLVING SEA TURTLE EXPLOITATION.

BRAZIL

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
IBDF (Instituto Brasileiro de Desenvolvimento Florestal) S.A.I.N. AV ¾ B/No BRASILIA D.F. 70.300, BRASIL.		IBDF HAS OFFICES IN ALL STATES ONLY RECENTLY CONCERNED WITH SEA TURTLES. APPARENTLY IBDF HAS NO SAME BIOLOGISTS VISITING BRANCHES OCCASIONALLY. NOTHING FURTHER KNOWN.
LABOMAR (Laboratório de Ciências do Mar) UNIVERSIDAD FEDERAL DO CEARA CAIXA POSTAL 1072 60.000 FORTALEZA CEARA, BRASIL		CURRENT ACTIVITIES UNKNOWN BUT IN THE PAST HAVE DONE ALGAE FIELD INVENTORY AND SEA TURTLE STOMACH CONTENTS ANALYSIS. VERY COOPERATIVE INSTITUTE WITH GOOD FACILITIES (See literature list for some of their contributions)

PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

BRAZIL

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
ATOL DAS ROCAS Approx. 260 KM E.N.E. OFF Natal, state of Rio Grande do Norte.		MASSIVE NESTING OF C. m ALSO SOME E. i.	RECENTLY MADE A SANCTUARY, NO CONTROL BUT ATOL IS VERY INACCESSIBLE. RARELY VISITED.
ILHA DE SANTO ALEIXO Just a few km offshore in the State of Pernambuco at mouth of Rio Sirinhaem	Less than one Km²	E. i. WEST HERE IN NUMBERS (DEC. - JAN.)	PRIVATE ISLAND OF CONSERVATIONIST, DR. CARLOS ANTUNE MENEZES (Recife) NO POACHERS E. i.

TABLE 19. SANCTUARIES AND REFUGES

BRAZIL

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
IBDF (Instituto Brasileiro de Desenvolvimento Florestal) S.A.I.N. AV ¾ B/No Brasilia DF. 70.300, Brazil Tel.: (061) 1711 or 2130			THIS IS CURRENTLY THE AUTHORITY UNDER WHOSE JURISDICTION SEA TURTLES REST.
SUDENE (Superintendência do Desenvolvimento do Nordeste) Dept. de Recursos Naturais e/UNIV UNIVERSITARIA RECIFE, PERNAMBUCO			SUDENE IS REPRESENTED IN EVERY STATE OF NE. BRAZIL NOT SURE WHAT THEIR OFFICIAL JURISDICTION IS, BUT SUDENE CAN OPEN MANY DOORS.
SUDEPE (Superintendência do Desenvolvimento da Pesca) Travessa Padre Prudencio 226 BELÉM, Para, CEP 66.000			THIS IS THE FISHERIES DEPT. ADDRESS GIVEN IS FOR THE STATE OF PARA AND AMAPA TERRITORY. ALL STATES HAVE A SUDEPE OFFICE. TURTLE FISHERIES USED TO BE UNDER THEM

IBDF - SUDENE - SUDEPE ARE ALL UNDER MIN. OF AGRICULTURE.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY

(Supplementary page)

PORTARIA No. 18, dated 29 October 1976, provides restrictions in the taking of sea turtles for all of Brazil.
A copy is attached with a copy of the translation (abbreviated) done by the Brazilian Embassy in Suriname.

In 1978 a new PORTARIA was issued, prohibiting the taking of any sea turtle in Brazil. Although a copy of this Portaria was shown, no copy was made available.

PORTARIA Nº 18 DE 29 DE OUTUBRO DE 1976.

O Superintendente da Superintendência do Desenvolvimento da Pesca - SUDEPE, no uso das atribuições que lhe são conferidas pelo Art. 29, inciso VII, do Decreto nº 73.032, de 13 de fevereiro de 1974, tendo em vista o disposto no art. 33, § 2º, do Decreto-Lei nº 221 de 28 de fevereiro de 1967 e o que consta do processo nº S/3800/73,

R E S O L V E :

Art. 1º - Proibir a captura de tartarugas marinhas.

Parágrafo Único - O disposto neste artigo não se aplica às tartarugas das espécies Chelonia mydas e Caretta caretta, na forma disciplinada nesta Portaria.

Art. 2º - É proibido a colheita de ovos de tartarugas marinhas.

Art. 3º - Ressalvado o disposto no Parágrafo Único do art. 1º, são vedados o descroçamento, o transporte, a comercialização ou a simples detenção de tartarugas marinhas e de ovos de qualquer espécie destes quelônios.

Art. 4º - É defeso molestar tartarugas marinhas nos locais de reprodução.

Art. 5º - A pesca de tartarugas marinhas das espécies e nas dimensões a seguir discriminadas é permitida, concomitantemente, no período de 1º de maio a 30 de novembro, exclusivamente a pescadores artesanais.

I - Chelonia mydas - 80 cm

II - Caretta caretta - 70 cm.

Parágrafo Único - As medidas a que se refere este artigo corresponderão ao comprimento do carapaço superior tomado, em linha reta, da extremidade do escudo nuchal à do bordo posterior.

Art. 6º - As licenças para a pesca das espécies permitidas serão fornecidas, mediante pedido formal, pela SUDEPE, a pescadores filiados a cooperativas ou colônias de pescadores.

Parágrafo Único - As embarcações pertencentes a esta entidade ou a ela arrendadas, e que estejam a serviço da Administração do Órgão Regional da SUDEPE, permanecerão ou quando por esta solicitadas, o número de tripulantes conforme, segundo a espécie.

Art. 7º - Aos infratores do presente Portaria serão aplicadas as penalidades previstas no art. 56 do Decreto-Lei nº 221, de 28 de fevereiro de 1.967, sem prejuízo da suspensão, pelo prazo de um ano, das licenças concedidas.

Art. 8º - Obrigam-se as cooperativas e colônias de pescadores a denunciar as irregularidades praticadas por seus associados, sob pena de serem excluídos durante um ano, dos benefícios desta Portaria.

Art. 9º - Esta Portaria entra em vigor na data de sua publicação, revogadas as disposições em contrário.

JOSÉ LUIZ DE ANHAIA MELLO
Superintendente

(Publicada no Diário Oficial de 3º de novembro de 1976).

Samenvatting van Portaria no. 18
van 29 - 10 - 1976. (Brazilië)

No. 95

Act No. 18 dd 29-10-1976 of Sudepe-

It is forbidden the capture of sea turtles.

This determination does not apply to species such as CHELONIA MYDAS and CARETTACA CARETTA.

Is forbidden the gathering of eggs of sea turtles.

Except for the precept under the exclusive paragraph from the 1º art, is forbidden the: landing, transport, comercialization, or the simple imprisonment of sea turtles and of eggs of any kind from these CHELONIANS.

Is prohibited to harass sea turtles at reproduction areas.

It is authorised hereby, the fishing of sea turtles of the species and dimensions discriminated as follow:

a) Yearly from May, 1st till November 30.
b) Exclusively by skilled fishermen.
c) CHELONIA MYDAS -80 cm.
   CARETTACA CARETTA - 70 cm.

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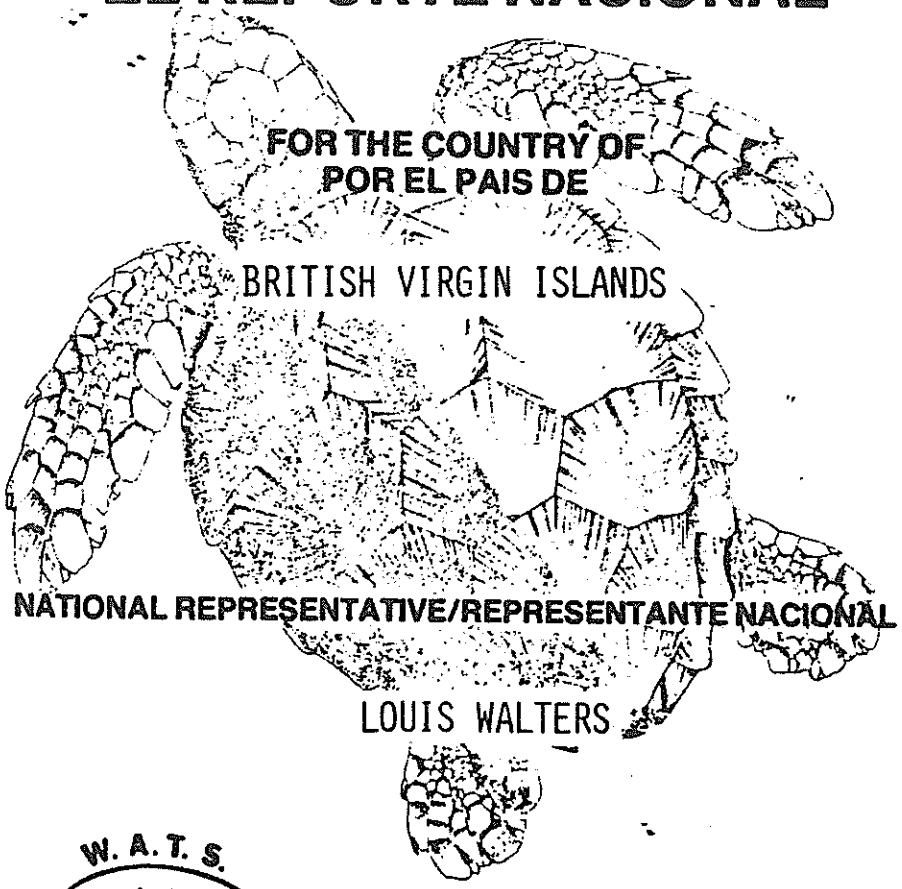

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

BRITISH VIRGIN ISLANDS

NATIONAL REPORT PRESENTED BY -

LOUIS WALTERS
The National Representative

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NATIONAL REPORT PREPARED BY

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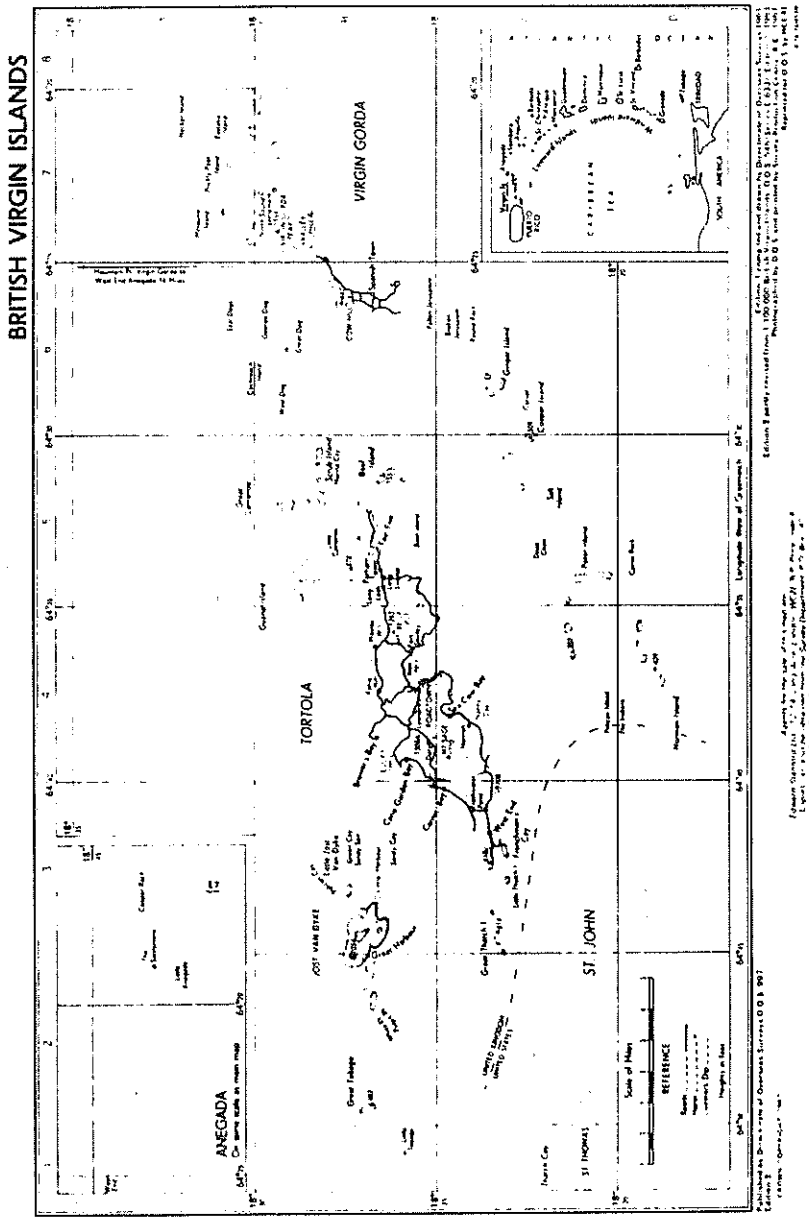
DATE SUBMITTED: 2 JUNE 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.


BRITISH VIRGIN ISLANDS
ANEGADA
TORTOLA
VIRGIN GORDA
ST JOHN
ST THOMAS
JOST VAN DYKE
REFERENCE

W. A. T. S.

WESTERN ATLANTIC TURTLE SYMPOSIUM

NATIONAL REPORT OF

BRITISH VIRGIN ISLANDS

REPORT PREPARED BY

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TO: W.A.T.S. Technical Team

The national report for the British Virgin Islands was completed on 27 November 1981 with some modifications from the original outline. These modifications include the following:

1. Addition of Table 1A which summarizes the length of coastline and beach of the islands involved in the July 1981 aerial survey.
2. Addition of Table 3A which supplements Table 3 and gives a detailed description of all the possible nesting beaches found within the territory of the B.V.I.
3. Addition of Table 7A which summarizes observations made of turtles in foraging habitats during the July 1981 aerial surveys.
4. Deletion of Table 4 because of insufficient data.
5. Deletion of Table 9 because of lack of data on the subject of non-foraging turtles in offshore areas.
6. Deletion of Table 14 because of lack of information on turtles taken by foreign fishermen.
7. Deletion of Table 15 due to the fact that no official governmental statistics on turtles exist.
8. Deletion of Table 17 because no mariculture operations involving turtles have been attempted in the B.V.I.
9. Deletion of Table 21 because no study has been conducted on sea turtles within the territory defined as the B.V.I.

Although some data could not be obtained to complete all the tables in this report, it nevertheless represents the first attempt to make a comprehensive inventory of the status of the sea turtle stock in the B.V.I. When reading this report, it should be kept in mind that most of the data presented in this report was collected over a short period of time and may not be representative of a long term picture. It is, therefore, important to conduct a "follow-up" study to determine the dynamics of the sea turtle populations inhabiting B.V.I. waters.

Very sincerely,

John R. Fletemeyer

JRF:km

TABLE OF CONTENTS

SECTION	PAGE
INTRODUCTION	1
BACKGROUND	2
RECOMMENDATIONS	7
REFERENCE MAP OF B.V.I.	8
PLATES OF MAJOR NESTING BEACHES	10
DIAGRAM OF SAND ANALYSIS	15
TABLE 1. GEOGRAPHIC INVENTORY	16
TABLE 1A. SUMMARY OF BEACH LENGTHS	17
TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE	18
TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES	19
TABLE 3. NESTING BEACH INVENTORY	20
Anegada	20
Beef Island	26
Buck Island	29
Cockroach Island	30
Cooper Island	32
Dead Chest Island	36
Eustatia Island	38
Frechhmans Cay	42
Fallen Jerusalem Island	45
George Dog Island	47
Ginger Island	51
Great Camanoe Island	55
Great Dog Island	59
Great Tabgo Island	62
Great Thatch Island	66
Green Cay	68
Guana Island	70
Jost Van Dyke	73
Little Camanoe	78
Little Jost Van Dyke	80
Little Tabago Island	82
Little Thatch Island	84
Mosquito Island	87
Necker Island	90
Norman Island	93
Pelican Cay	96
Peter Island	98
Prickly Pear Island	101
Round Rock	104
Sandy Cay & Sandy Spit	106
Salt Island	109
Scrub Island	111
Seal Dog Islands	114
Tortola	116
Virgin Gorda	126
West Dog Island	133
TABLE 4. NESTING CENSUS FOR BEACH	134
TABLE 5. AERIAL BEACH SURVEY SUMMARY	135
TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES	137
TABLE 7. FORAGING AREAS INVENTORY	139
TABLE 7A. OBSERVATIONS OF TURTLES IN FORAGING HABITATS	140
TABLE 8. TURTLE SPECIES PRESENT IN FORAGING AREAS	141
TABLE 9. NON-FORAGING TURTLES AT SEA	142
TABLE 10. NATURAL MORTALITY	143
TABLE 11. LANDING STIES FOR TURTLES & TURTLE PRODUCTS	145
TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS	146
TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH	147
TABLE 14. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN	149
TABLE 15. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION	150
TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES	152
TABLE 17. TURTLE MARICULTURE OPERATIONS	154
TABLE 18. PUBLIC AND PRIVATE INSTITUIONS CONCERNED WITH TURTLE CONSERV.	155
TABLE 19. REGULATROY AUTHORITY	156
TABLE 20. SANCTUARIES AND REFUGES	157
TABLE 21. NATIONAL RESEARCH PROJECTS	159
REPORTS AND PUBLICATIONS	160
ACKNOWLEDGEMENT	161
APPENDIX	162

INTRODUCTION

On 25 July 1981 a technical assistant was sent to conduct a twelve-day sea turtle socio-economic and nesting study of the British Virgin Islands. In addition, the assistant was to assist governmental officials in preparing a national report for the Western Atlantic Turtle Symposium (W.A.T.S.) to be held in San Jose, Costa Rica in July 1983 over a five-day period. This report was written with the following objectives in mind.

1. Conduct surveys of all the marine shoreline within the territory defined as the British Virgin Islands.
   - Record the types of shoreline present -- for the purpose of recording actual or potential sea turtle nesting beaches (so that subsequent surveys can be more time and cost effective), and to document the kinds and amounts of shoreline throughout the area.
   - Record all signs of sea turtle tracks and nests on nesting beaches -- for the purpose of developing a comprehensive index of the extent of sea turtle nesting activity, include updated data on prior known concentrations, determination of extend of dispersed nesting activity, and determination of any prior unrecorded nesting sites.
2. Compile data of all kinds to determine the status of sea turtle populations.
3. Review present conservation and management programs in regards to sea turtles.
4. Determine socio-economic importance of sea turtles.
5. Make recommendations to help promote the survival status of sea turtle populations inhabiting the territorial waters of the British Virgin Islands.

During the twelve-day field trip to the British Virgin Islands much of the data required to prepare this report was obtained. In addition to collecting written documents on sea turtles and conducting interviews with local government officials and fishermen, aerial and boat surveys were conducted along all the beaches in the British Virgin Islands. During these surveys nine turtles were observed in foraging habitats, 38 "fresh" nests were surveyed and one stranding was observed. This data and more is presented in this report.

The objectives and goals were taken from a memorandum to W.A.T.S. Steering Committee on Technical Team dated 27 July 1981 (Page 4).

BACKGROUND

The British Virgin Islands represent an 800 square kilometer area of the Caribbean Sea which is located between 65° and 64°24' longitude (west of Greenwich) and 18°15' and 18°46' latitude. The many islands lying within these coordinates support a permanant population of about 11,000 people (1979 census estimate). There is also a large non-resident, tourist population of unkown number which is heaviest during the winter season.

The largest island within the territory defined as the British Virgin Islands is Tortola. Road Town, the capital of the Islands, is located on this island and has a population of about 8,000 people. The remaining population is widely dispersed on the many smaller islands in fishing villages and settlements. It should be mentioned that many of the smaller islands such as Great Tabago, Little Tabago and Green Cay (to name just a few) are uninhabited, although they are sometimes visited by boaters.

All but one of the British Virgin Islands are of volcanic origin. The typical geomorphological features of these islands include steep, intensly weathered cliffs which are usually boardered by narrow rocky shorelines. Occasionally, this predominant feature is interrupted by small sandy "pocket" beaches which may be no more than 20 meters in length. Depending on the

location of these small beaches with respect to being located either windward or leeward to an island, they may be considered either "high" energy beaches or "low" energy beaches.

Although some of the beaches in the British Virgin Islands are composed of gravel and shingle sized material, most of the beaches have a primarily sandy compositon. The sand is typically biogenic marine carbonate, with only a small terrigenous component represented. On most of the sand beaches, the grains tend to be well sorted (ranging from fine to coarse grains) and are well rounded indicating a long weathering process. The only exception is on "low" energy beaches where the sand tends to be poorly sorted. The tides affecting these beaches are microtidal (= less than 2 meters).

The one exception to this description is the island of Anegada. This island with its 39.6 km coastline represents a coral and limestone formation with a very low topographic profile. Two thirds of this island are fringed by sandy, narrow beaches which are boardered by dense vegetation. Although narrow, this long stretch of beach provides suitable nesting habitat for sea turtles. The remaining third of Agegada is mangrove swamp and is unsuitable for turtle nesting.

Beyond most of the larger islands are numerous rocky outcrops and cays, some which are uncharted. Also there are many shallow and midwater reef systems which support abundant and diverse marine plant and animal communities. In addition to many extensive reef systems, there are a number of sea grass beds (predominately Thalassia and Syringodim). Most of the grass beds are located adjacent to low energy beaches in shallow water (less than 10 meters). The most extensive grass community is located off the east coast of Anegada. These marine grasses cover more than 25 square kilometers of seabottom.

Information on sea turtle activity for the British Virgin Islands is nonexistent, although there are some useful data on turtle activity for the U.S. Virgin Islands. Dr. Edward Towle, Dr. Allen Putney and Mr. Randy Rainey have collected a great deal of data regarding nesting activity and population estimates for this U.S. territory which provides useful insight about sea turtle activity in the neighboring waters of the British Virgin Islands.

Since no investigation has been conducted in the British Virgin Islands, the only information on turtles is from personal observations of local fishermen, divers and boaters. Dr. Putney has made an attempt to compile some of these observations to construct a number of island resource maps which show possible turtle nesting areas for the British Virgin Islands (refer to the appendix). Although the reliability of these observations must be questioned, they do, nevertheless, represent a place to begin the national report.

When many of the more reliable observations made by local fisherman are used to fill in some of the gaps in this national report, it is important to point out an underlying theme about the status of sea turtles in the British Virgin Islands. This is the general belief that the British Virgin Islands sea turtle populations have declined significantly over the past couple of decades. The reason for this reduction in the number of sea turtles is due to the adverse impact of human development on many of the islands which began after WWII but which is assuming epidemic proportions in recent years.

Today sea turtle nesting in the British Virgin Islands is restricted to many uninhabited cays and sandspits which are not suitable for development and which are well away from the more highly developed beaches on the larger islands. Even these remote beaches are being impacted by humans as many more boating

enthusiasts are anchoring off these cays and spits. In addition to the problems caused by development, sea turtles are being taken by fishermen using seine nets and harpoons. In some cases this is legal but in many it is not, because they are taken "out-of-season". Also many turtle nests are being poached despite a well publicized law prohibiting this activity. During the July field trip, it was estimated that 50 percent of the turtle eggs deposited on British Virgin Islands beaches were illegally taken for human consumption. Based on this information which is presented in more detail in other section of this report, it is only possible to conclude that a remnant population of sea turtles remain in the waters of the British Virgin Islands.

METHODS

To obtain the most accurate and comprehensive data on sea turtles and to prepare the national report for the British Virgin Islands, this investigator employed five different strategies. These include beach and pelagic aerial surveys, visits to many of the beaches for the purpose of "ground truthing" and to make more accurate nest species determinations, researching governmental records, conducting personnel inerviews with local fishermen and conducting local market surveys.

Aerial Surveys: A total of 6.8 hours was spent conducting aerial surveys. A Cessna 172 was used to conduct these surveys between the hours of 7:00 AM and 9:00 AM. During these surveys the entire coastline of the British Virgin Islands was flown over at least once. These surveys were conducted according to the method described in the Manual of Sea Turtle Research and Conservation Techniques (pp. 43-64). Before each flight, each island to be surveyed was

divided into zones which were usually defined by a major geomorphological coastal feature (i.e., the mouth of an estuary or a large rock easily identified on a chart) or some kind of human architecture (i.e., an airstrip or marina). In most cases the surveys were made at an altitude of 100 feet and at an airspeed of 80 KTS, and in all cases, flights were made so that the observer could see the coastline on his right. Pelagic surveys were conducted in the same manner but the elevation was increased to 400 feet and the air speed was increased to 120 KTS. Also the pilot was instructed to watch for turtles over open water. When a nest or turtle was identified, it was plotted on a chart and a record was made of the time of the sighting, the location, species and size of the turtle using a small hand held tape recorder.[2] Also, the zone which each nest or turtle was observed was recorded.

Ground Truthing: Visits were made to many of the beaches where turtle nests had been observed from the air. Most of the visits to the beaches were made by boat, however on the Island of Tortola, it was possible to travel to many of the beaches using a Honda dirt bike. When a beach was visited, its entire length was walked. In addition to recording nesting activity and other features of interest (i.e., vegetation type), sand samples were collected for later analysis and comparison.

Research of Local Records: Two days were spent researching government records for information on sea turtles (i.e., laws, local statutes, records of catches). Many productive hours were spent in the library of Road Town while other useful information was found at the departments of Agriculture and Fisheries. Mr. Robert Creque and Mr. Noel Vanterpool deserve special recognition

[2] It was possible to record all of this data in the plane because of the small number of turtles and nests which were observed on each of the survey flights.

for assisting in collecting a great deal of data which appears in the contents of this text and in the appendices.

Interviews with Fishermen: At least ten local fishermen were interviewed to gain some additional useful information for this report. Interviews were conducted according to the questionnaire found in the Manual of Sea Turtle Research and Conservation Techniques (pp. 81-91).

Market Surveys: All the local gift shops and markets were visited to learn more about the importance of sea turtle products to the British Virgin Island economy. Whenever it was possible, the owners of the shops and markets were questioned about types of products they sold, the source of the products, and the availability of the products at different times of the year. In addition to the above, some individuals were asked about their attitudes toward selling products made from turtles and how U.S. embargo on turtle products has affected their sales.

RECOMMENDATIONS

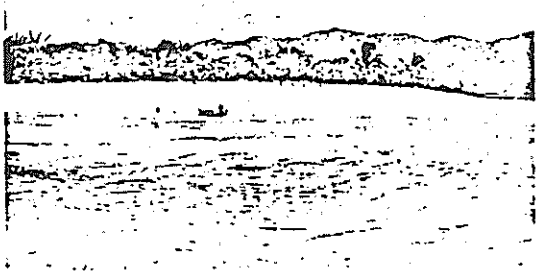
The following recommendations would make a significant contribution to the survival of the sea turtles inhabiting the 800 square kilometer area defined as the British Virgin Islands.

1. Actively enforce the law regulating sand mining and restrict the issuance of special permits on beaches where sea turtle nesting is known to occur.
2. Actively enforce the sea turtle protection law which was passed on 21 May 1959 (refer to appendix).
3. Set annual quotas for the number, species and size of turtles which each native fisherman is allowed to take by issuing special licenses.

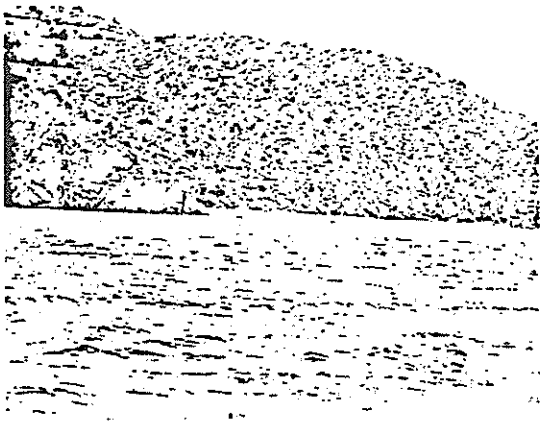
4. Use revenues from license fees to develop a management program which will be able to determine reasonable quotas and to ensure the continued existence of a viable sea turtle population in the territorial waters of the British Virgin Islands.
5. Restrict the taking of sea turtles except for use for local consumption.
6. Establish Sandy Cay and Sandy Spit as a National Park and restrict people from using these areas for recreastion between the months of June and October.[3]
7. Establish an artificial egg hatchery on Anegada and make daily beach patrols to relocate nests using the Sea Turtle Conservation Manual as a guideline for this operation.
8. Develop a public eduation program for the British Virgin Islands involving the local newspaper (The Island Sun), schools, library and supporting fishing villages which will stress the need to protect the remaining populations of sea turtles which have become highly impacted by humans and their activities in recent years.
9. Publish information showing that leatherback sea turtle oil has no medical applications.
10. Ban the sale of all hawksbill sea turtle jewelry in local shops and markets.

[3] Sandy Cay and Sandy Spit is owned by the Rockefeller Family. Mr. Robert Creque has instructed the W.A.T.S. assistant to act in his government's behalf to detemine if this land could be donated for a National Marine Park.

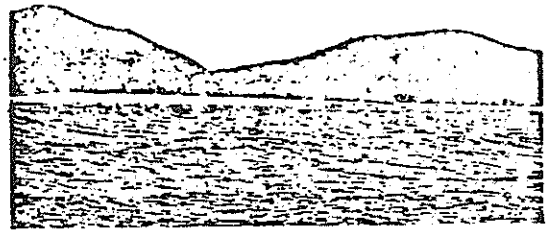
TRUNK BAY, TORTOLA



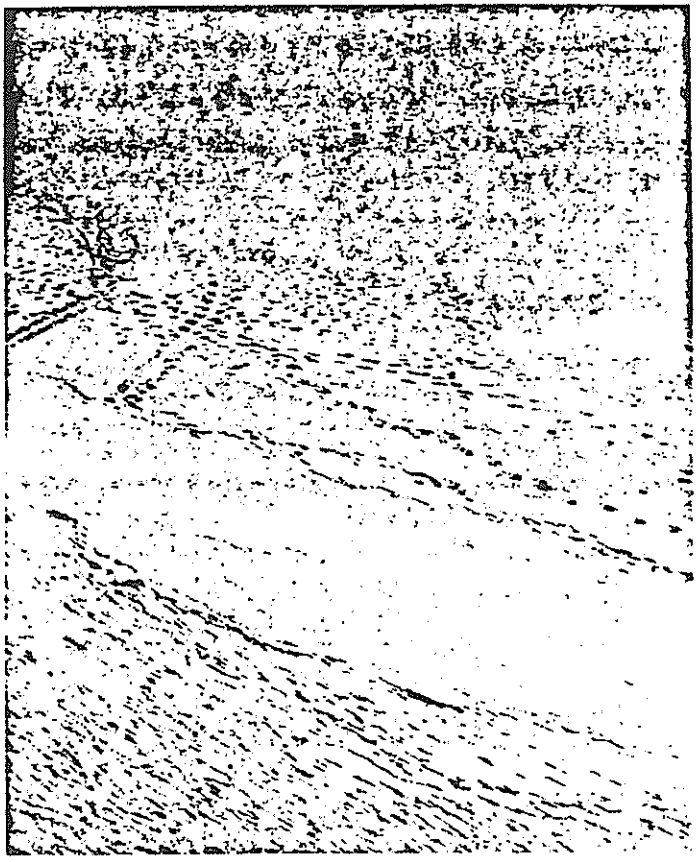
SANDY KEY



LONG BAY, TORTOLA
- 11 -

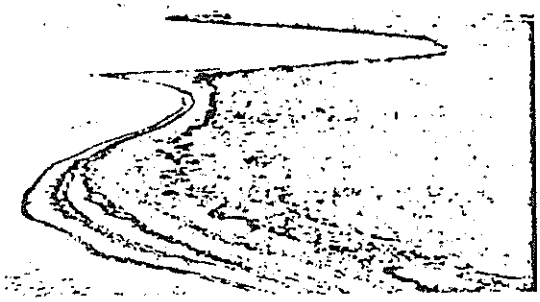


SANDY SPIT
- 12 -



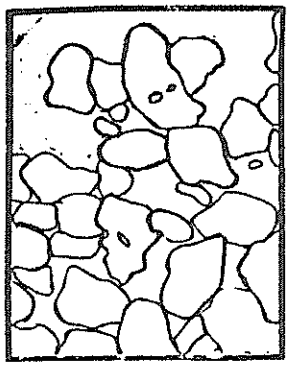
TURTLE CRAWL OBSERVED DURING FLIGHT SURVEY ON ANEGADA
- 13 -

SOUTHWEST END OF VIRGIN GORDA



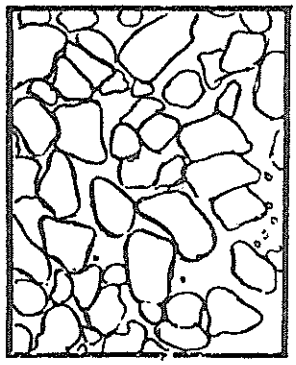
WEST END OF ANEGADA
- 14 -

TORTOLA, TRUNK BAY



BEEF ISLAND

ANEGADA



VIRGIN GORDA, EAST END

DIAGRAM OF BEACH SAND PARTICLE SHAPE TAKEN FROM FOUR NESTING BEACHES (50 x MAGNIFICATION)

Country BRITISH VIRGIN ISLANDS

Length of Coastline* . . . . . 300 Km

Km² of Continental Shelf Area . . . . . 4,500 Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 800 Km

Extended Economic Zone . . . . . 7 Km

Fisheries Jurisdiction . . . . . 200 Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

ISLAND	TOTAL LENGTH OF COASTLINE (KM)	TOTAL LENGTH OF BEACH (KM)
Anegada	39.6	25.1
Buck Island	2.5	0.0
Cooper Island	7.9	2.5
Cockroach Island	.2	0.0
Dead Chest Island	.9	0.0
Eustatia	1.6	.6
Great Camanoe	13.8	1.3
Frenchmans Cay	3.2	.9
Fallen Jerusalem	2.2	0.0
George Dog Island	2.0	.2
Ginger Island	7.0	.6
Great Dog Island	3.3	0.0
Great Tabago	3.9	.3
Great Thatch Island	7.2	.5
Guana Island	8.2	2.0
Green Cay	.75	0.0
Jost Van Dyke Island	19.0	2.8
Little Camanoe	1.8	0.0
Little Tabago Island	1.8	0.0
Little Thatch Island	2.1	0.0
Little Jost Van Dyke	4.2	0.0
Mosquito Island	3.4	.4
Necker Island	2.2	0.0
Norman Island	14.2	.7
Pelican Cay	.6	0.0
Peter Island	19.2	2.6
Prickly Pear Island	5.1	4.1
Round Rock Island	.3	0.0
Sandy Spit and Cay	1.8	.75
Salt Island	4.8	.7
Scrub Island	5.8	.2
Seal dog Islands	1.0	0.0
Tortola	69.6	13.1
Virgin Gorda	51.6	9.7
West Dog Island	.5	0.0
TOTAL	303.25	69.05

Table 1A: Summary of coastline and beach length of each island in B.V.I.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	50.00	19.05	69.05
A. High Energy	20.00	6.00	26.00
B. Low Energy	10.00	13.00	23.00
2. Reef (exposed)	25.00	20.00	45.00
3. Rocks	70.00	20.00	90.00
4. Cliffs	58.00	20.00	78.00
5. Vegetation (Total)			
A. Vines			
B. Grasses	20.00	10.00	30.00
C. Mangroves	20.00		20.00
D. Coconut Trees	4.15	10.00	6.15
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, rivers, canals	2.00	10.00	12.00
7. Total Shoreline	219.15	128.05	297.20

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	250.00	-
2. Mud	NONE	
3. Rocks	?	
4. Submerged Vegetation	100.00	
5. Reefs (Total)	200 +	
A. Fringing Reefs	200.00	
B. Patch Reefs	?	
6. Other	?	

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

SUPLEMENT TO TABLE 3

NAME OF BEACH Potato Point to West End Beach ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, well sorted. Fine to Med.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE toLIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Ideal nesting beach. Well vegetated about 50' from mean high water line. Putney's Island Resource Map using secondary source data records nests on this beach, however, no mention is made of species.

NAME OF BEACH West End to Cow Wreck Beach ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, well sorted, Fine to Med.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Ideal nesting beach. Extensive shallow water reef systealies beyond beach

NAME OF BEACH Cow Wreck to Low Windlass point Beach ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine sediment, White.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Narrow beach, well vegetated beyond sand. Extensive shallow water reef system. Putney's Island resource map reports nesting on this beach, however species are not mentione

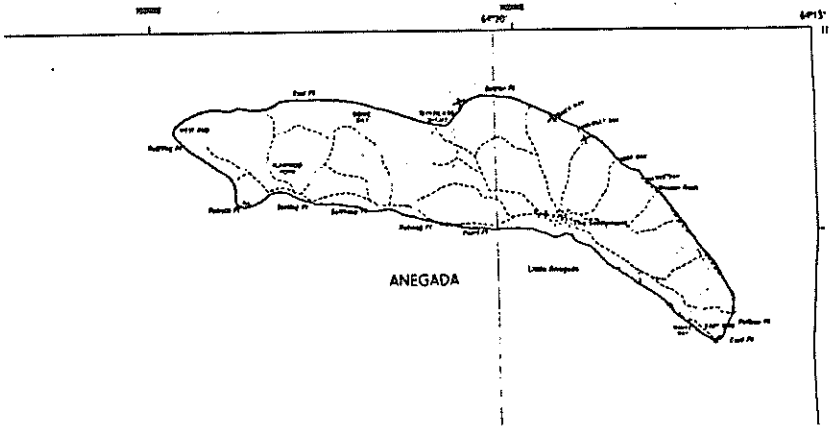
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Potato Point to W. End	3.2	E, Cm	June,July, Aug. Sept. Oct.
2. West End to Cow Wreck	3.4	E., Cm	June,July, Aug. Sept. Oct.
3. Cow Wreck to Low Point Windlass	3.5	E., Cm	June,July, Aug., Sept. Oct.
4. Low Point to Soldier Pt. Windlass	3.0	E., Cm	June,July, Aug., Sept. Oct.
5. Soldier Pt. to Lobolly Pt.	3.4	E., Cm	June,July, Aug., Sept. Oct.
6. Lobolly Pt. to East Pt.	6.9	E., Cm	June, July,Aug., Sept. Oct.
7. Saltheap Point to Potato Point	3.7	E., Cm	June, July, Aug., Sept. Oct.
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ANEGADA -39.6 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH Windless Low Point to Soldier Point ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine, poorly sorted, white sand

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although no nests surveyed on this beach section, many fishermen report that this is a major nesting area for both E. and Cm.

NAME OF BEACH Soldier Point to Lobolly Point Beach ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, fine grained beach

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Many human footprints observed on this beach. Well vegetated Island Resource Map repared by Putney reports nests on this beach--species not mentioned.

NAME OF BEACH Lobolly Point to East Pont Beach ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, fine grain

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) ? INCIDENTAL

COMMENTS: Fishermen report turtle nests are common on this stretch of beach. Well vegetated. Extensive reef system beyond beach. Island Resource Mapy prepared by Putney records neting on this beach, however species of turtles are not mentioned.

SUPLEMENT TO TABLE 3

NAME OF BEACH Saltwap Point Beach to Potato Point Beach ISLAND Anegada

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, fine grained

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Mangrooves and very shallow water prevent nesting except for perhaps an occassional E.

NAME OF BEACH ISLAND

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS:

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS:

NAME OF BEACH ISLAND

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS:

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS:

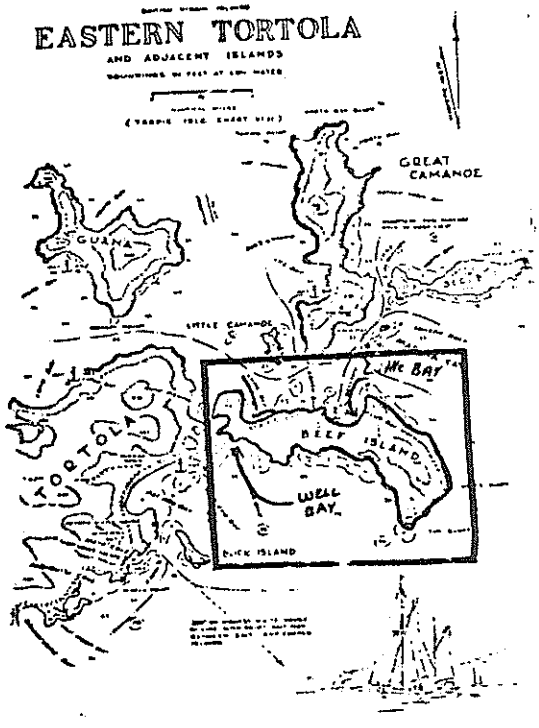
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Wall Bay Beach	.2	E., Cm(?)	June, July, Aug., Sept., Oct.
2. Long Bay Beach	.4	E., Cm	June, July, Aug., Sept. Oct.
3. Little Bay Beach	.3	E., Cm	June, July, Aug., Sept. Oct.
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

BEEF ISLAND = 12.8 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo



SUPLEMENT TO TABLE 3

NAME OF BEACH Well Bay Beach ISLAND Beef Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine grain sediment (White to lt. tan).

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although there is no development, this is a popular beach for bathing. Fishermen say this has reduced nesting greatly. However a number of turtles, mainly [illegible] still nest on this beach. Beach has a fringing reef, with a shallow channel inside.

NAME OF BEACH Long Bay Beach ISLAND Beef Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine sorted white sandy beach with low beach profile. Highly vegetated in background with sea grapes. A number of large rocks on beach.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Beach was once heavily used for nesting by hawksbills. A few greens have also been reported to nest on this beach. Pitsey reports nesting on this beach on Island Resources Map.

NAME OF BEACH Little Bay Beach ISLAND Beef Island

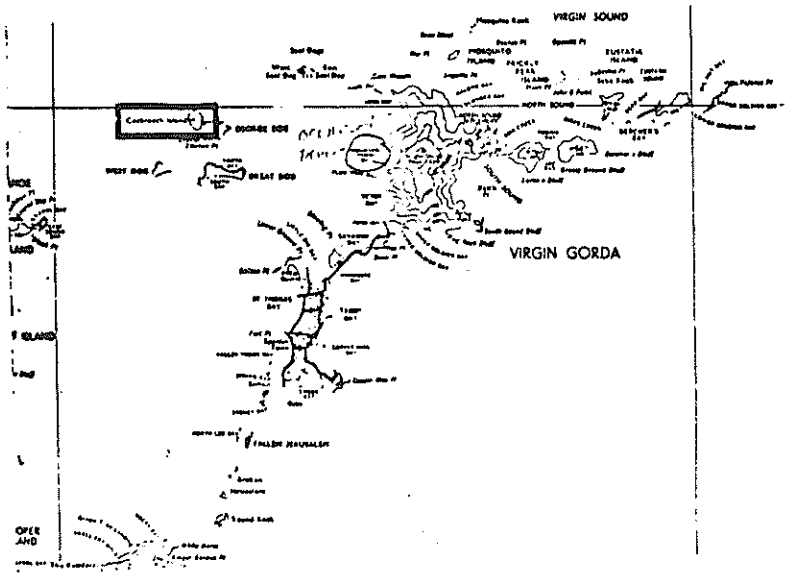
TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine grain sediment

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Once popular for nesting but no longer due to predestrain traffic



NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Beaches Suitable for Nesting.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

BUCK ISLAND 2.5 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No known nesting beaches on this island.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

COCKROACH IS , .2 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SUPLEMENT TO TABLE 3

NAME OF BEACH Halloevers Beach ISLAND Cooper

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, fine grains

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Nesting status is unknown for this beach, however, Putney reports nesting on this beach on Island Resource Map.

NAME OF BEACH _____ ISLAND _____

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: _____

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: _____

NAME OF BEACH _____ ISLAND _____

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: _____

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

SUPLEMENT TO TABLE 3

NAME OF BEACH Hachioneel Bay Beach ISLAND Cooper

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, with some gravel.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Interview with a fishermen, indicates that this beach might be used for turtle nesting.

NAME OF BEACH Carvel Bay Beach ISLAND Cooper

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Sand, well sorted. White and tan in color

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: _____

NAME OF BEACH Markoe Bay Beach ISLAND Cooper

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Sand, well sorted, white to tan color.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

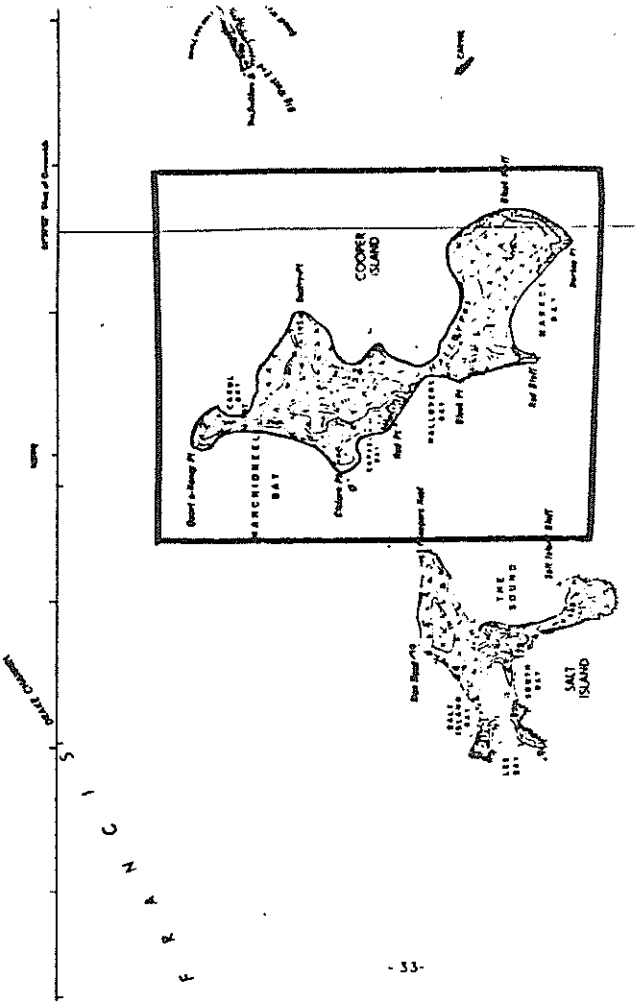
COMMENTS: Although no nests were surveyed on this beach, this beach is suitable for nesting.

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Manchioneel Beach	.7	E. and Cm.	June, July, Aug., Sept. Oct.
2. Carvel Bay Beach	.3	E. and Cm.	June, July, Aug., Sept. Oct.
3. Markoe Bay Beach	.6	E. and Cm.	June, July, Aug., Sept. Oct.
4. Halloevers Beach	.9	E. and Cm.	June, July, Aug., Sept. Oct.
5.			
6.			
7.			
8.			
9.			
10.			

Species Abbreviations:
Cc Caretta caretta
Cm Chelonia mydas
Dc Dermochelys coriacea
Ei Eretmochelys imbricata
Lk Lepidochelys kempi
Lo Lepidochelys olivacea

COOPER ISLAND 7.9 KM



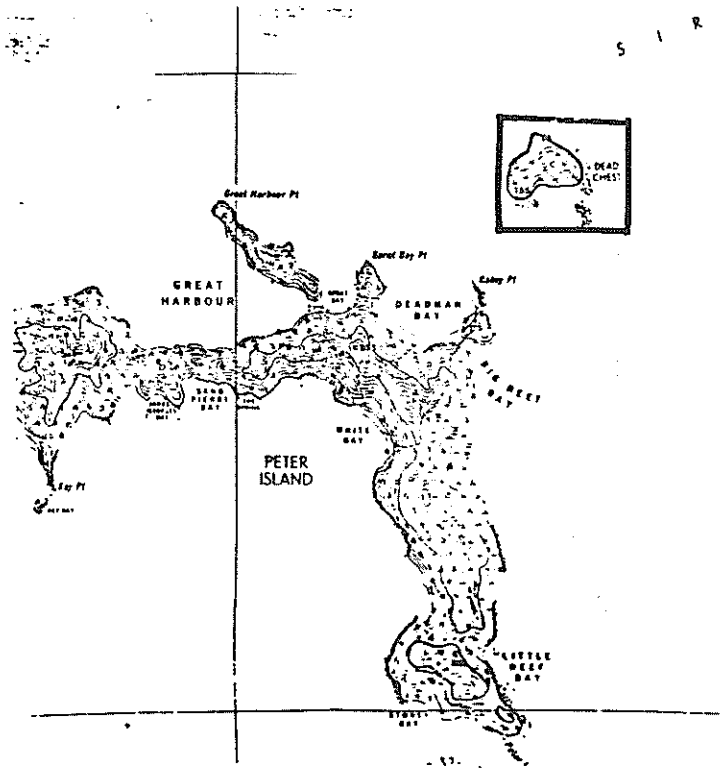
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Beaches Sutiable	for Nesting		
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

DEAD CHEST ISLAND .9 KM



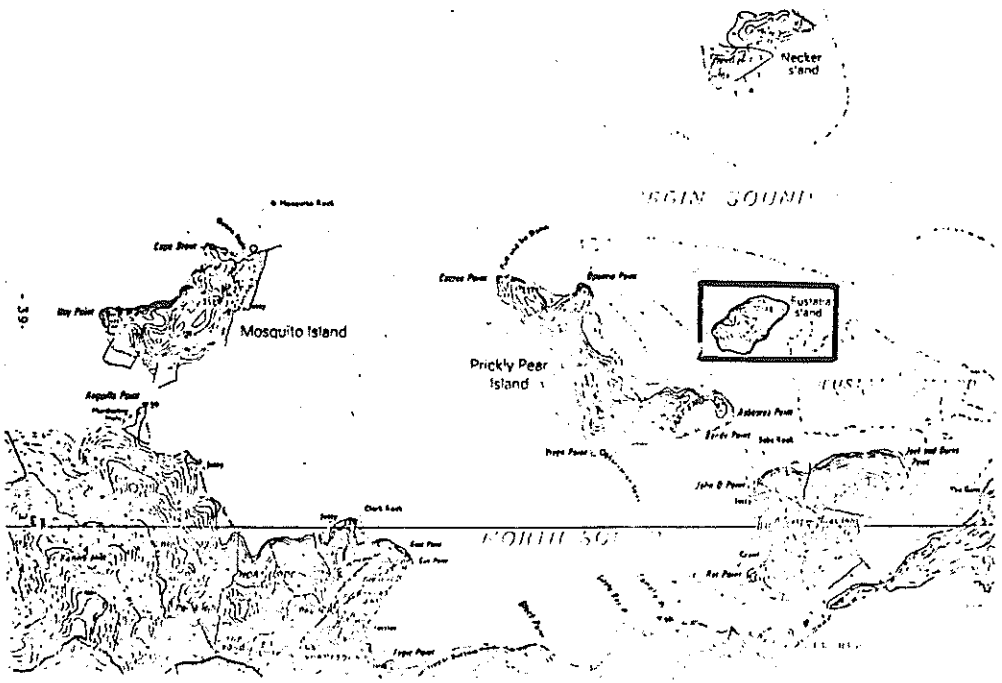
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. North East Beach	.6	Unknown	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

EUSTATIA IS ,1.6 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH North East Beach ISLAND Eustatia

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL Unknown

COMMENTS: This is a possible nesting beach, although the nesting status could not be determined.

NAME OF BEACH _____ ISLAND _____

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: _____

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: _____

NAME OF BEACH _____ ISLAND _____

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: _____

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

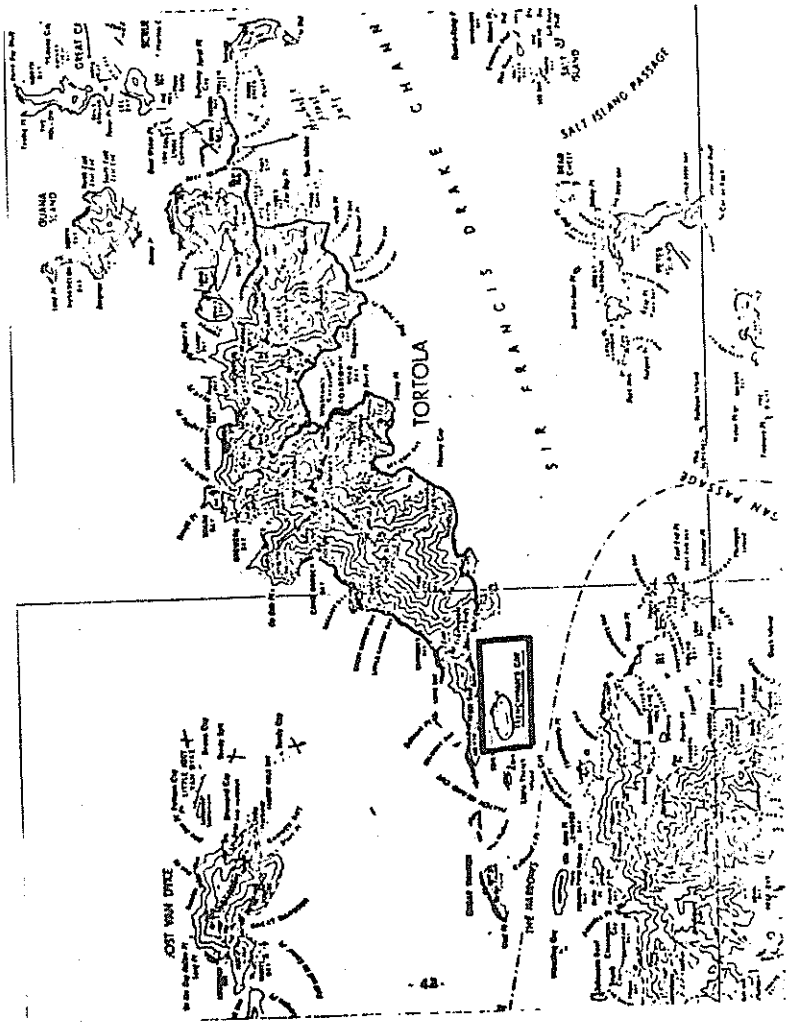
NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Soper's Hole Beach	.4	Unknown	
2. South Beach	.5	Unknown	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta C
Chelonia mydas C
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi L
Lepidochelys olivacea L

FRECHMANS CAY =3.2 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH Soper's Hold Beach ISLAND Frechmans Cay

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Tan, poorly sorted, fine sediment.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No data avialable for this beach. However survey indicates that beach is not well suited for nesting.

NAME OF BEACH South Beach ISLAND Frenchmans Cay

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL (?)

COMMENTS: No information on turtle nesting for this beach.

NAME OF BEACH _____ ISLAND _____

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: _____

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

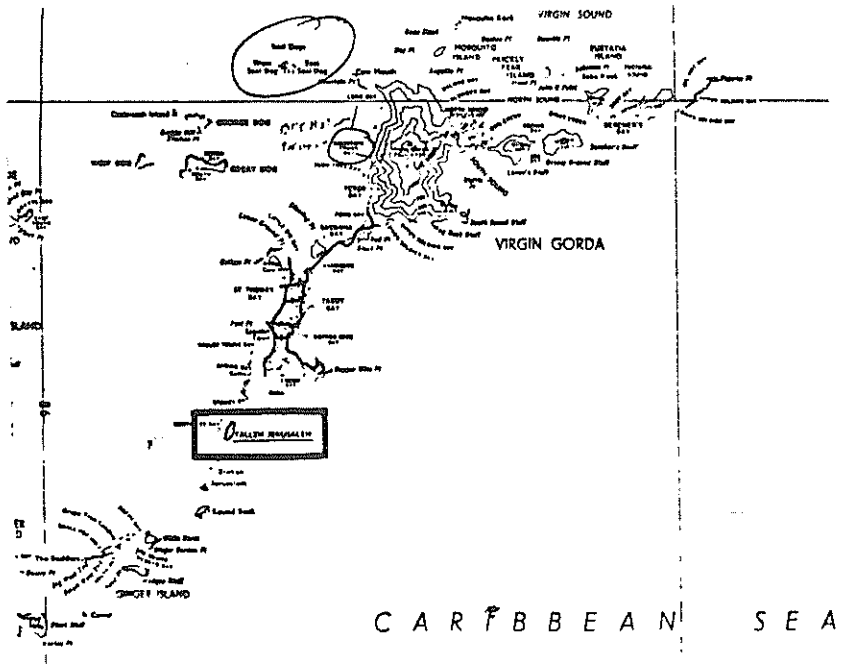
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Beach Suitable For Nesting			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

FALLEN JERUSALEM :2.2 KM



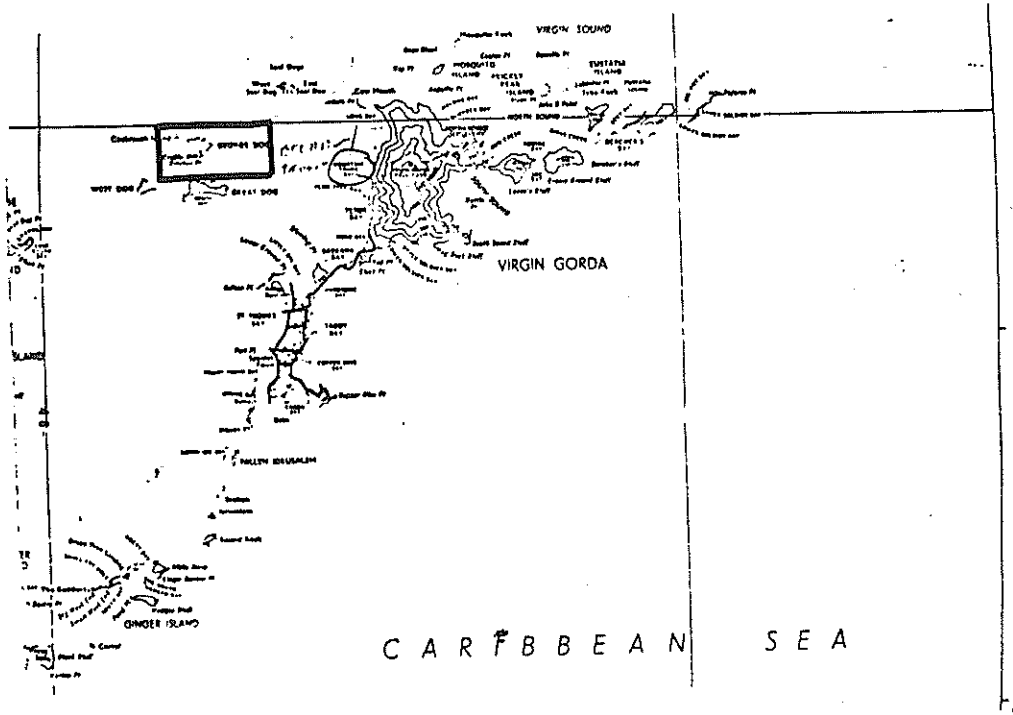
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Csabbe Hill Beach	.2	Unknown	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

GEORGE DOG 2 KM



BUPLEMENT TO TABLE 3

NAME OF BEACH Crabbe Hill Beach ISLAND George Dog

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown--this beach was not surveyed.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL Unknown

COMMENTS: Since this beach was not surveyed and no fishermen which were interviewed had information on this beach, the nesting status is unknown.

NAME OF BEACH _____ ISLAND _____

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

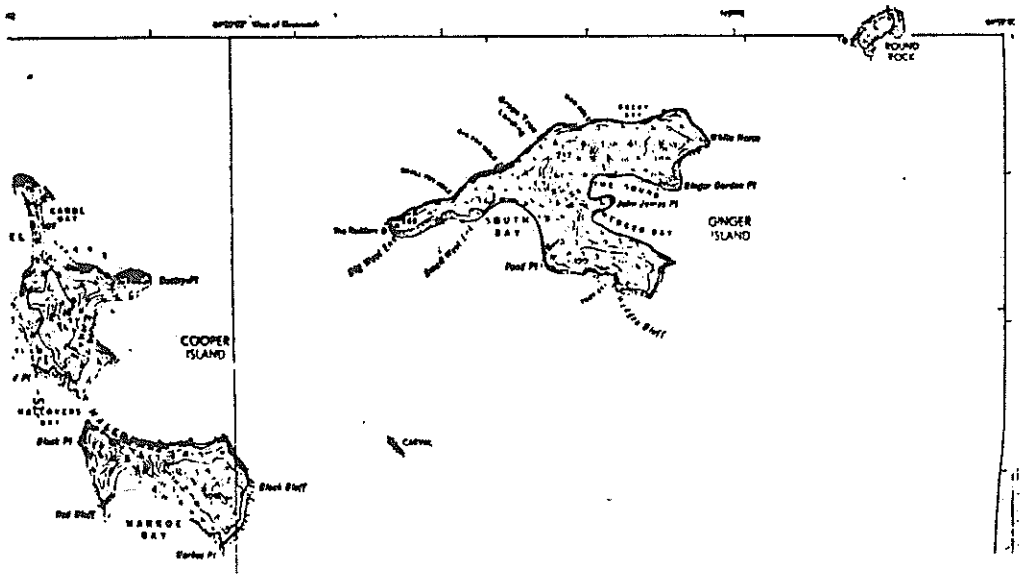
SAND CHARACTERISTICS: _____

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: _____

BRITISH VIRGIN ISLANDS Shee



NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. South Bay Beach	.4	Unknown	
2. Wedgeo Bay Beach	.2	Unknown	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas C
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

GINGER ISLAND 7.0 KM

BUPLEMENT TO TABLE 3

NAME OF BEACH South Bay Beach ISLAND Ginger Is.

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Nesting status is unknown for this beach.

NAME OF BEACH Wedgeo Bay Beach ISLAND GingerIs.

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Nesting status is unknown for this beach.

NAME OF BEACH _____ ISLAND _____

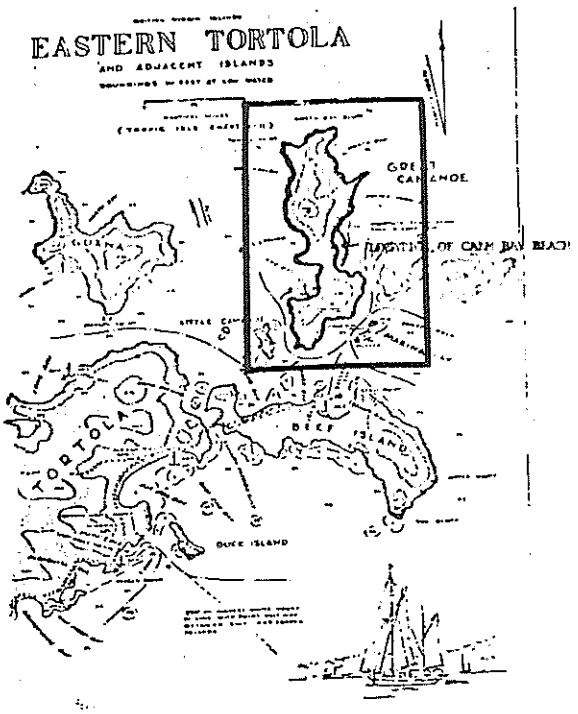
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Cam Bay Beach	.4	E. and Cm.	June, July, Aug., Sept. Oct
2. Low Bay Beach	.2	Unknown	
3. Lee Bay Beach	.3	Unknown	
4. North Bay Beach	.4	Unknown	
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

GREAT CAMANOE 13.8 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo



SUPLEMENT TO TABLE 3

NAME OF BEACH Calm Bay Beach ISLAND Great Camanoe

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to tan, well sorted with medium to fine grains.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: More than one fishermen report nesting on this beach.

NAME OF BEACH Low Bay Beach ISLAND Great Camone

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to tan (sediment composition is unknown)

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Unknown whether nesting occurs on this beach.

NAME OF BEACH Lee Bay Beach ISLAND Great Camone

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to tan (sediment composition is unknown)

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Unkoown whether nesting occurs on this beach.

SUPLEMENT TO TABLE 3

NAME OF BEACH North Bay Beach ISLAND Great Camone

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to light tan--sediment characteristics unknown.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Nestin status for this beach is unknown, however Putney reports nesting on this beach on Island Resource Map.

NAME OF BEACH ISLAND

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS:

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS:

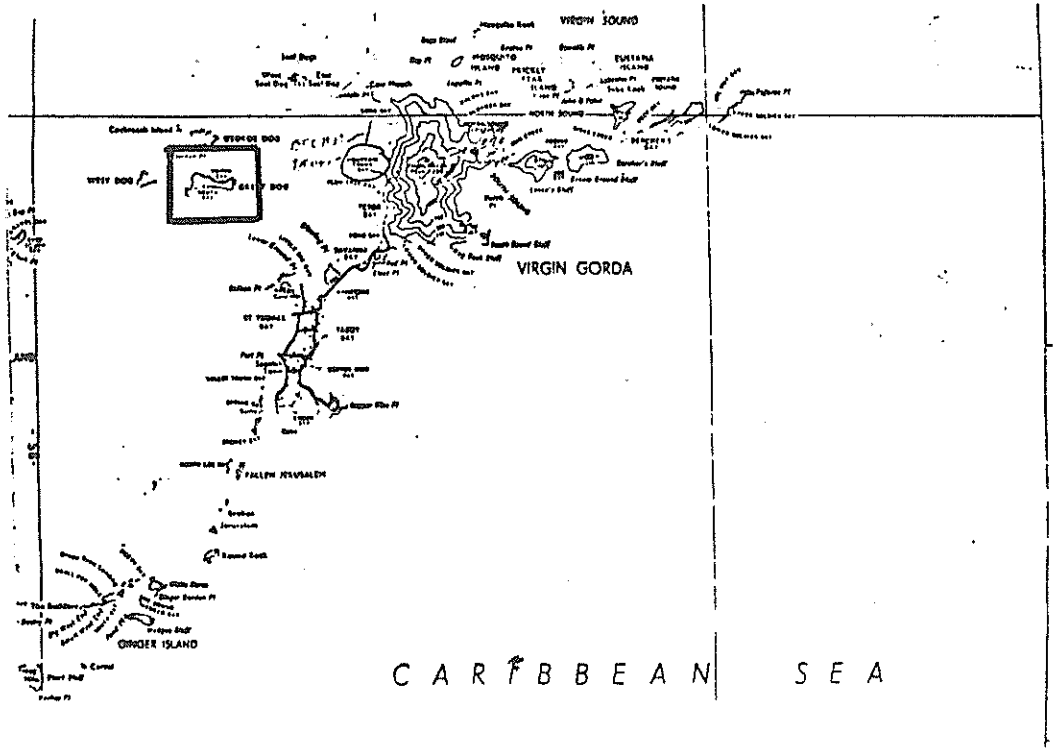
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. North Bay Beach	.4	Unknown	
2. South Bay Beach	.5	Unknown	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

GREAT DOG 3.3 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH North Bay Beach ISLAND Great DOG

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL ?

COMMENTS: No data obtained on 1981 survey but Putney reports nesting on this beach.

NAME OF BEACH South Bay Beach ISLAND Great Dog

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL ?

COMMENTS: No data obtained during 1981 survey but Putney reports nesing on this Beach.

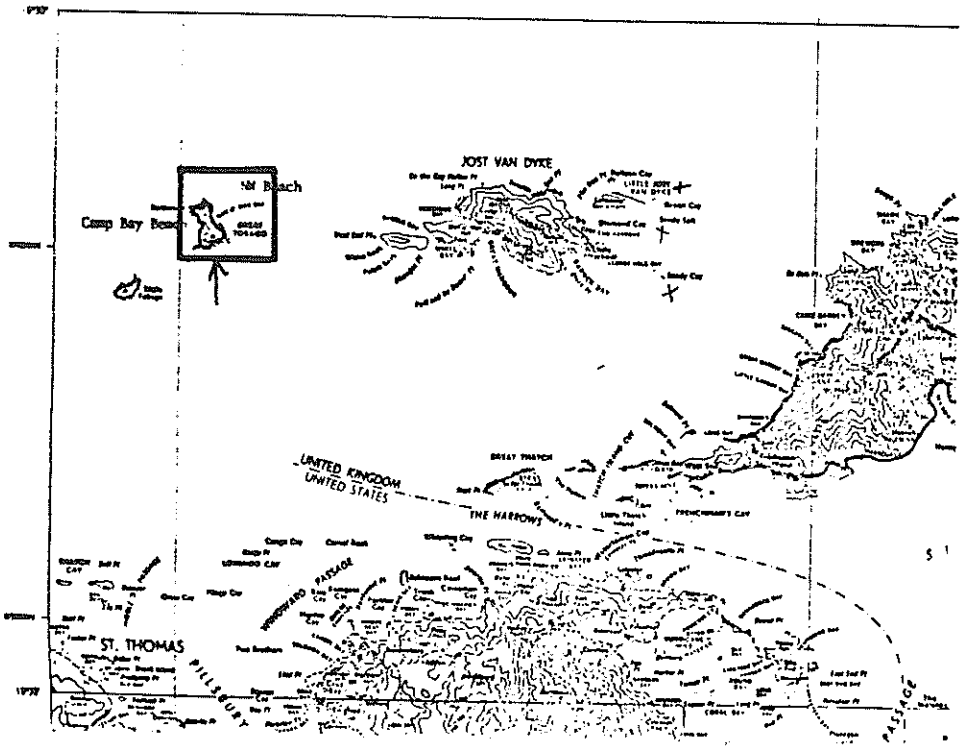
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Camp Bay Beach	.1	E. and perhaps Cm.	June, July, Aug., Sept. & Oct.
2. North West Beach	.2	No Nesting	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

GREAT TABAGO -3.9 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH Camp Bay Beach ISLAND Great Tabago

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Moderate to Coarse Gain sediment, mainly sand (White to tan)

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Hawksbill turtles are known to nest on this beach, Unkown if greens nest. Very isolated. Fisherman report nesting here to be more comron in the past.

NAME OF BEACH North West Beach ISLAND Great Tabago

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Most Gravel

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: It is unlikely that this beach is suitable for turtle nesting.

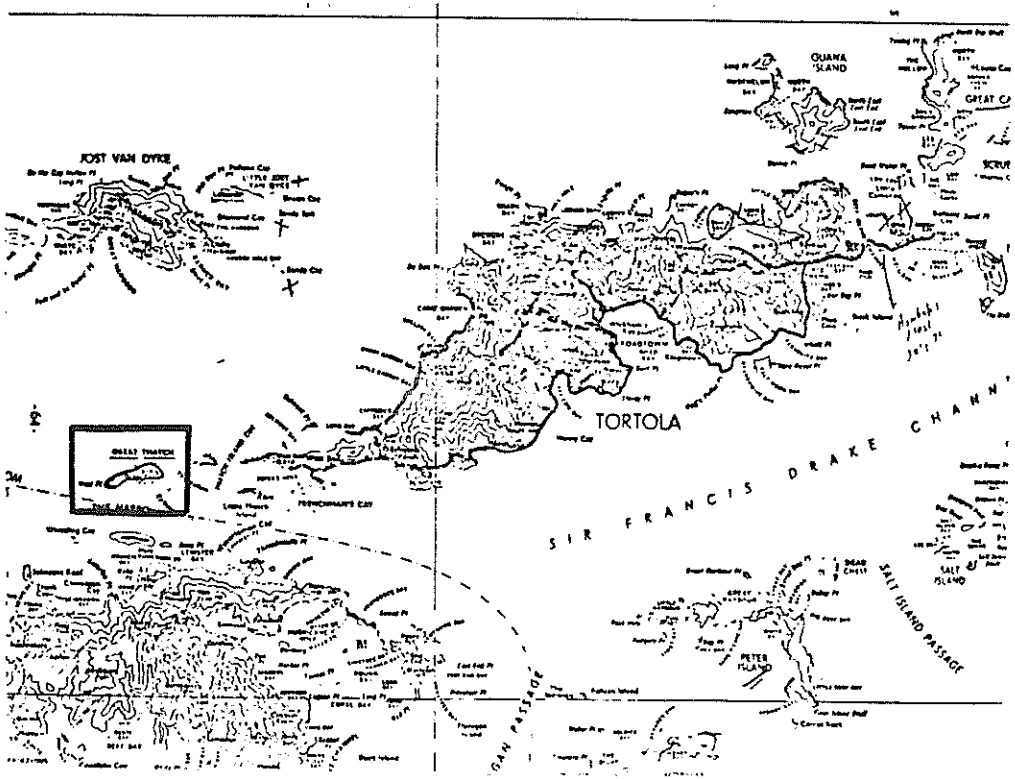
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. The Hollow Beach	.5	E., Cm. (?)	June, July, Aug. Sept. Oct
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

GREAT THATCH ISLAND -7.2 KM



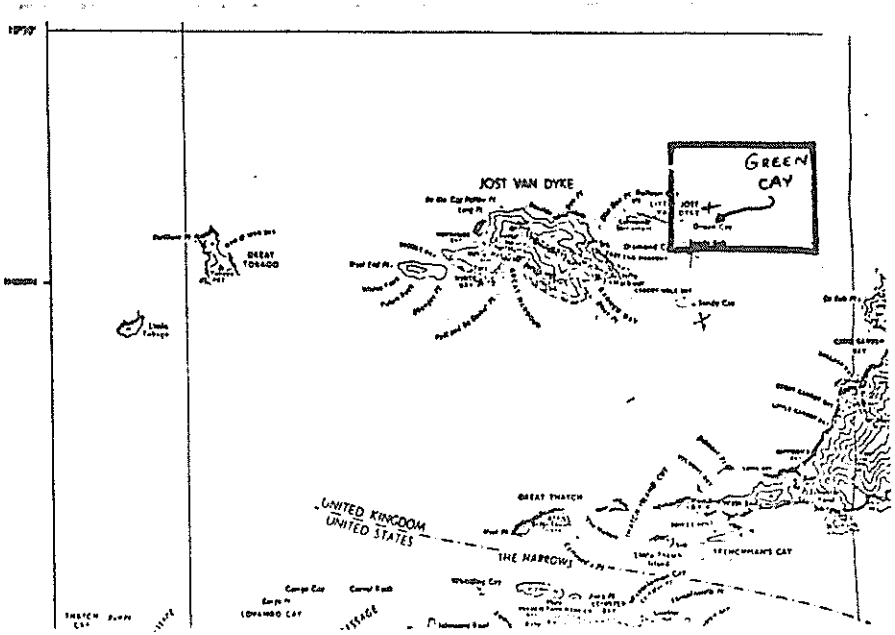
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Suitable Nesting Beaches			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

GREEN CAY -.75 KM



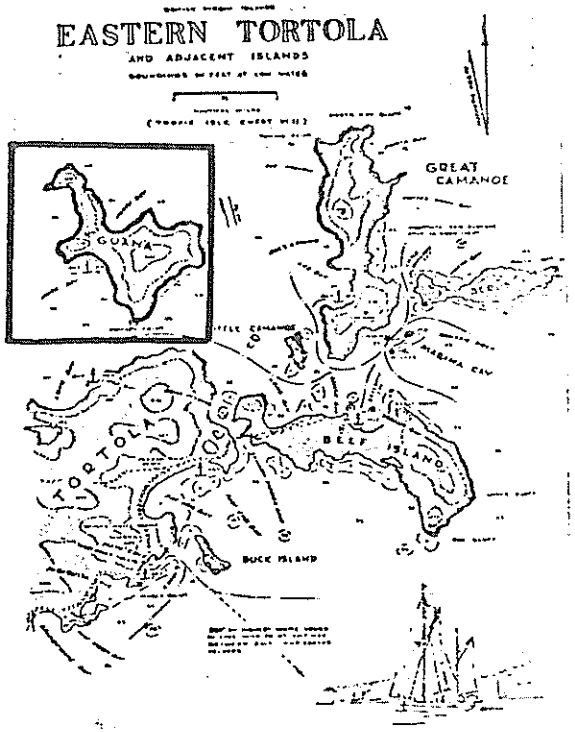
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. White Bay Beach	.6	E., Cm and Perhaps D.	June, July, Aug. Sept. Oct.
2. Muskmelon Bay Beach	.5	Unknown	
3. North Bay Beach	.9	Unknown	
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

GUANA ISLANDA 8.2 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH White Bay Beach ISLAND Guana Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Med. to coarse, White.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Do to some development, this beach is likely a poor nesting beach.

NAME OF BEACH Muskmelon Bay Beach ISLAND Guana Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Med. to coarse grains, & poorly sorted.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although no nests were surveyd on this beach, fishermen have observed some nesting taking place.

NAME OF BEACH North Bay Beach ISLAND Guana Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Medium grains that are poorly sorted.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Does not appear to be an importatn beach for nesting. No nests surveyed on this island.

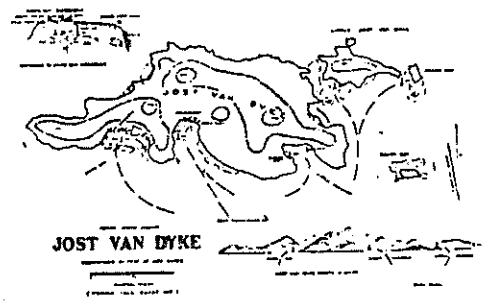
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Saddle Bay	.2	NONE	
2. White Bay	.6	E., Cm.	June, July, Aug., Sept., Oct.
3. Upper Dog Hole	.4	E., Cm.	June, July, Aug., Sept. Oct.
4. Great Harbour Beach	.3	E., Cm.	June, July, Aug., Sept. Oct.
5. Garner Bay Beach	.2	E., Cm.	June, July, Aug., Sept. Oct.
6. East End Beach	.2	E., Cm.	June, July, Aug., Sept. Oct.
7. Long Bay Beach	.6	E., Cm.	June, July, Aug., Sept. Oct.
8. North Side Bay Beach	.3	NONE	
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

JOST VAN DYKE - 19 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH Great Harbour Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, fine sediment

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Human development serious impacts turtles attempting to nest on this beach. Putney reports nesting on this beach on Island Resource Mgt.

NAME OF BEACH Garner Bay Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to lt tan. Fine to medium grains.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Data for this beach is not available. Could be suitable for nesting and could perhaps be classified as a regular nesting beach instead of an incidental nesting beach.

NAME OF BEACH East End Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No data (White to Lt. tan color).

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Unknown if turtles nesting takes place on this beach.

SUPLEMENT TO TABLE 3

NAME OF BEACH Long Bay Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No data for this beach, although could provide suitable nesting habitat.

NAME OF BEACH North Side Bay Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Unknown if turtles nest on this beach.

SUPLEMENT TO TABLE 3

NAME OF BEACH Saddle Bay Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data Available

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No data for this beach.

NAME OF BEACH White Bay Beach ISLAND Jost Van Dyke

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to lt. tan, fine to medium grains

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Good nesting beach, but human traffic probably limits nesting on this beach. Putney reports nesting on this beach on Island Resource Map (refer to appendix).

NAME OF BEACH Upper Dog Bule Beach ISLAND Jost Van Dyke

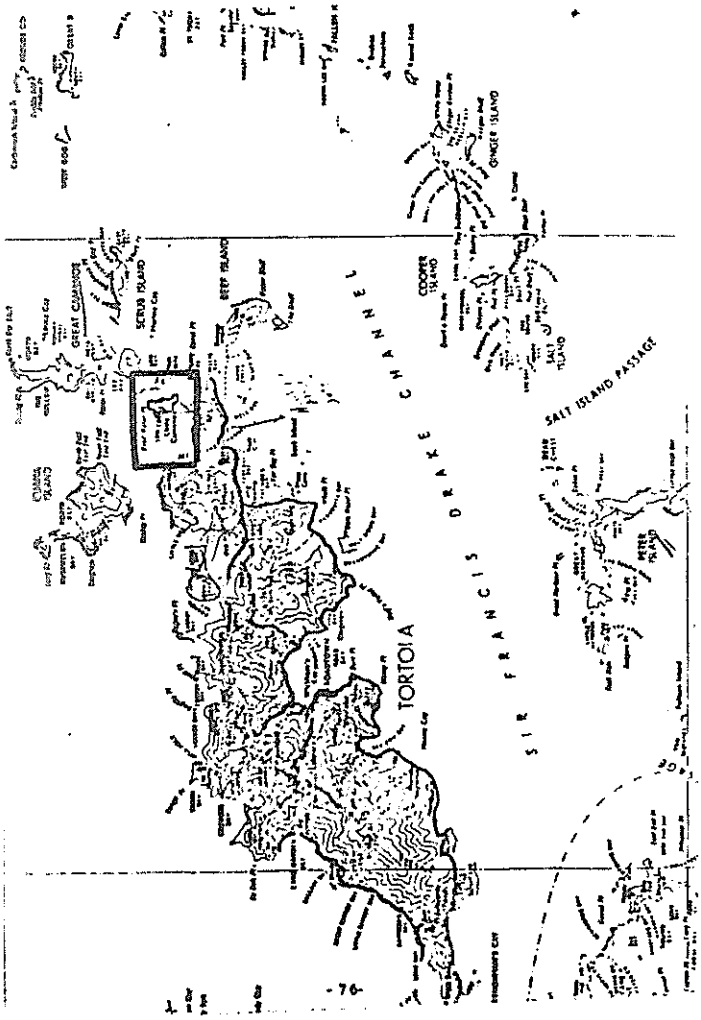
TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data available

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL.

COMMENTS: Unknown if turtles select this beach for nesting.



NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No beaches appear to	be suitable	for nesting on this island	
2.			
3.			
4.			
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8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

LITTLE CAMANOE 1.8 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

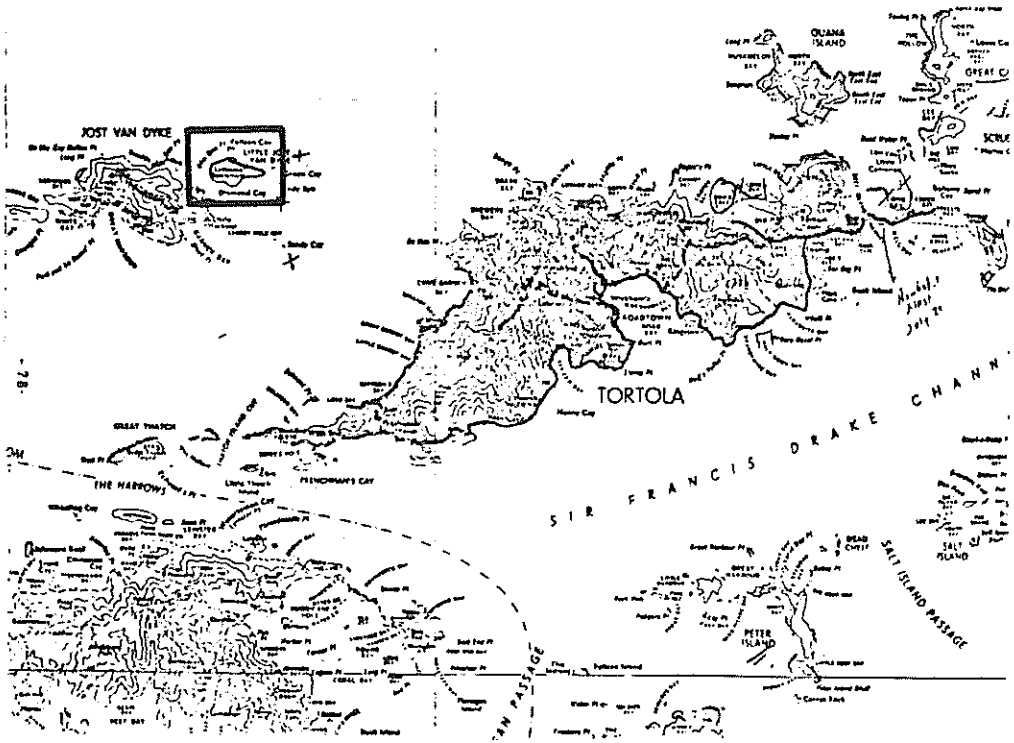
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. NO NESTING BEACHES			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LITTLE JOST VAN DYKE 4.2 KM



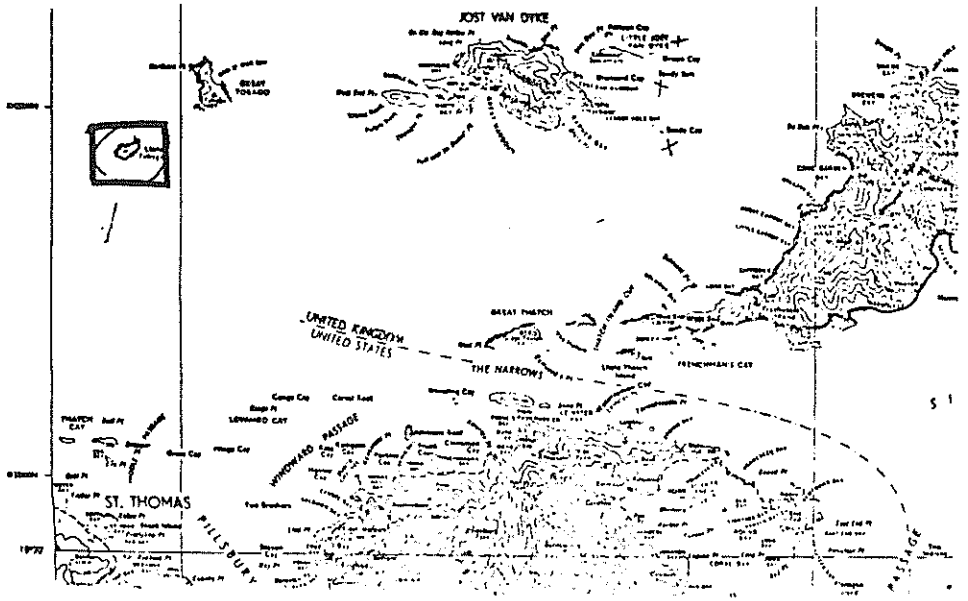
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Suitable Nesting Beaches			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LITTLE TABAGO 1.8 KM



NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No suitable beaches for turtle nesting.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

3-92

LITTLE THATCH ISLAND -2.1 KM

SUPLEMENT TO TABLE 3

NAME OF BEACH West END Beach ISLAND Little Thatch

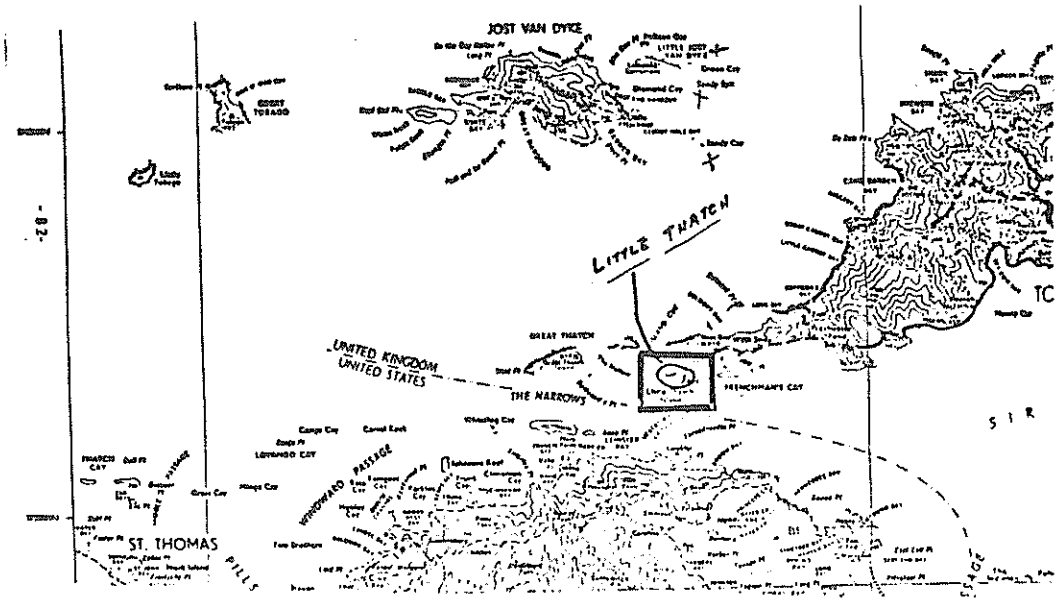
TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No data avialable (sand = lt. tan to white)

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No information avialable, however human development probably severly restricts nesting on this island.



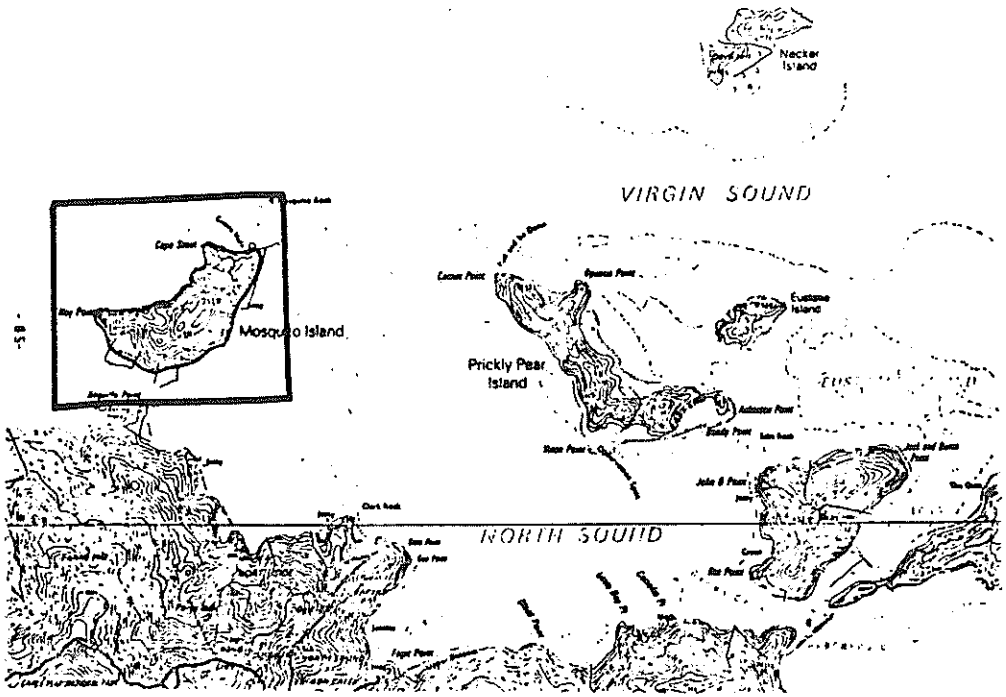
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. North Beach	.4	C., Cm.	June, July, Aug., Sept., Oct.
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

MOSQUITO ISLAND : 3.4



SUPLEMENT TO TABLE 3

NAME OF BEACH North Beach (refer to Map) ISLAND Mosquito Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data (color: white to lt. tan).

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No data, but one fishermen reports seeing a turtle nest on this beach.

3-93

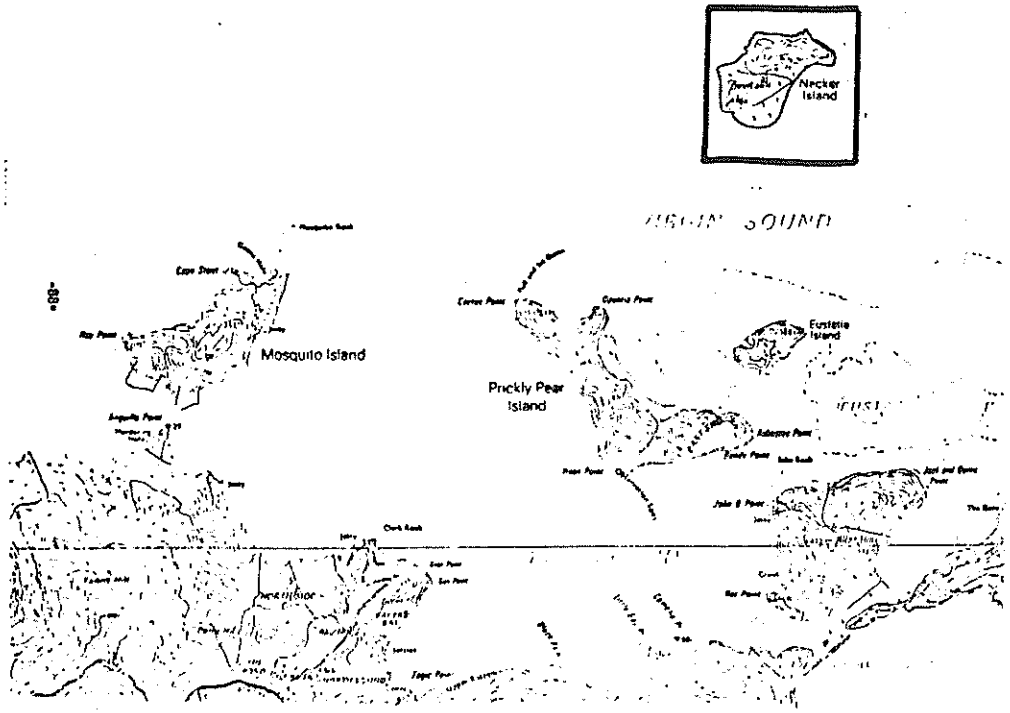
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Devil'Bill Bay Bch	.4	UNKNOWN	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

NECKER IS 2.2 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo



SUPLEMENT TO TABLE 3

NAME OF BEACH Devil Bill Bay Beach ISLAND Necker Is.

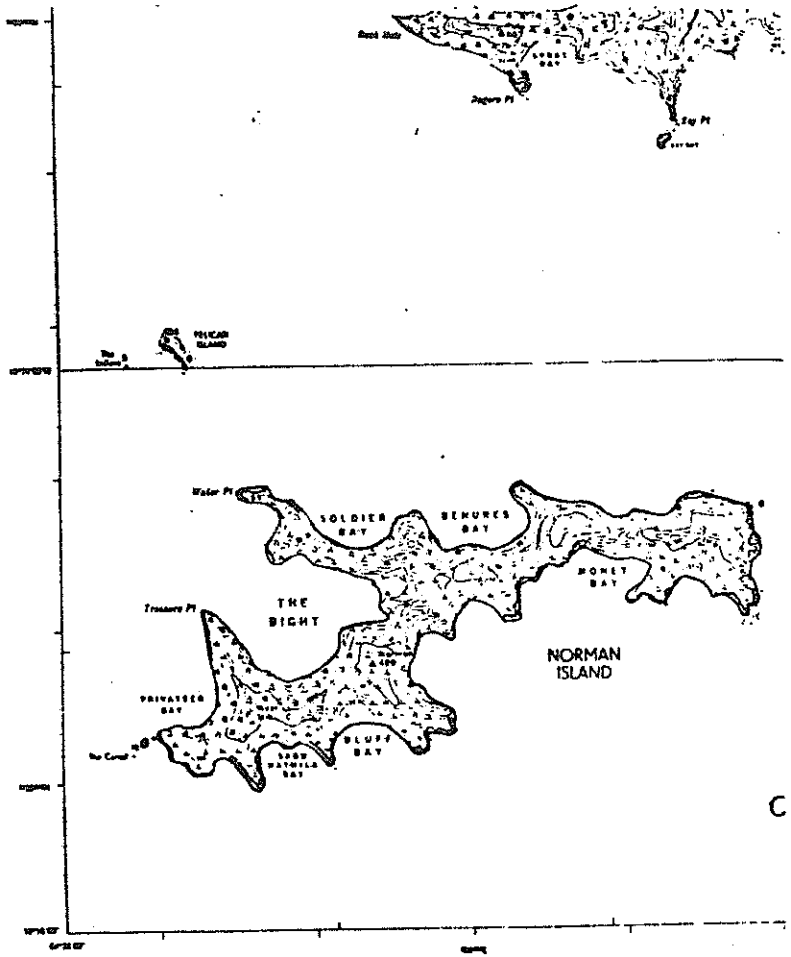
TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Lt. tan to white, poorly sorted with some gravel.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although no nesting was observed on this Is. during summer survey, fishermen report that there may be turtles nesting on this beach. Putney also reports nesting on this beach on Island Resource Map (refer to appendix).



C

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Buff Bay Beach	.7	E. and Cm.	June, July, AUg., Sept. OCt
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NORMAN IS ,14.2 KM

SUPLEMENT TO TABLE 3

NAME OF BEACH Buff Bay Beach ISLAND Norman Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Poorly sorted, mixed grains

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although no nest was surveyed on this beach, fishermen report nesting on this beach. Putney reports nesting on this beach (refer to appendix).

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Suitable Nesting Beaches			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

PELICAN CAY -.6 KM

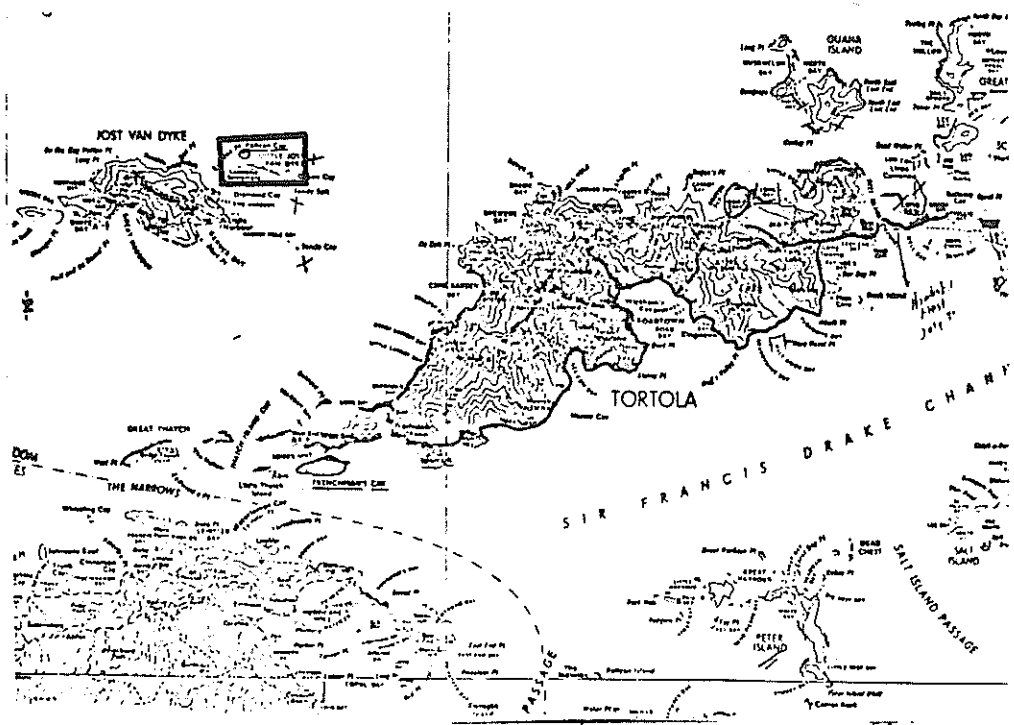
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Little Reef Bay Beach	.3	UNKNOWN	
2. Deadman Bay Beach	.8	E. and Cm.	June July, Aug. Sept. Oct.
3. Sprat Bay Beach	.6	UNKNOWN	
4. Stoney Bay Beach	.9	UNKNOWN	
5. Sand Pierrer Bay Beach	.6	UNKNOWN	
6.			
7.			
8.			
9.			
10.			

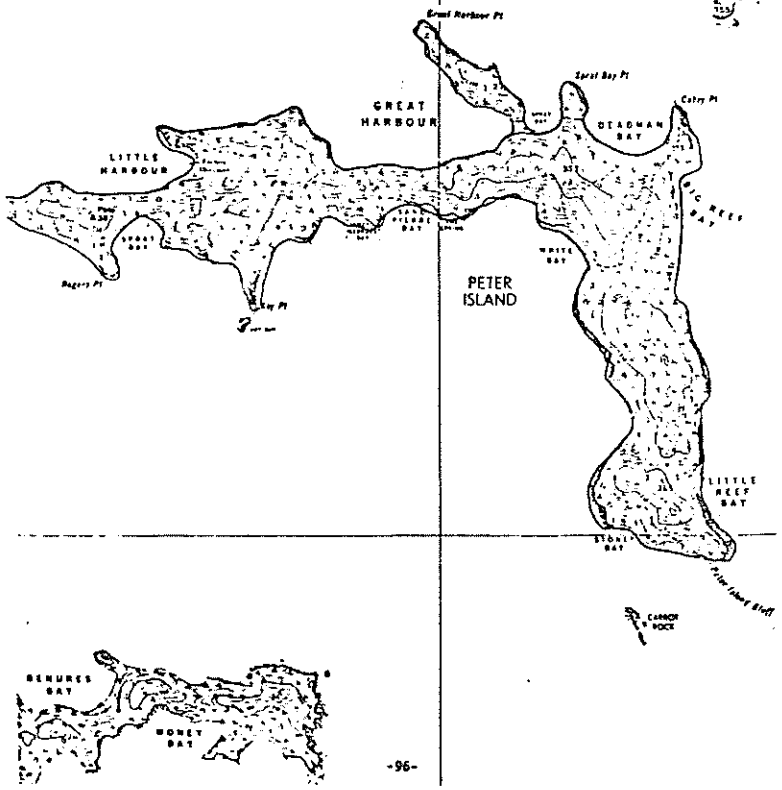
TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

PETER IS. 19.2 KM





SUPLEMENT TO TABLE 3

NAME OF BEACH Deadman Bay Beach ISLAND Peter Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White to tan sands--coarse to fine grains.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Fishermen and Divers report nesting on this beach.

NAME OF BEACH Sand Pierre Bay Beach ISLAND Peter Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No data obtained on this beach during 1981 survey but Putney reports nesting on this beach --refer to appendix.

SUPLEMENT TO TABLE 3

NAME OF BEACH Opuntis Pt. to Asbestos Pt Beach ISLAND Prickly Pear

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No nests observed on this beach, but fishermen repot nesting sometimes occurs--species nesting are is unknown. Putney also reports nesting on Island Resource Map--refer to appendix.

NAME OF BEACH Bandy Point Beach ISLAND Prickly Pear

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Fishermen report nesting on this beach.

NAME OF BEACH Vixen point Beach ISLAND Prickly Pear

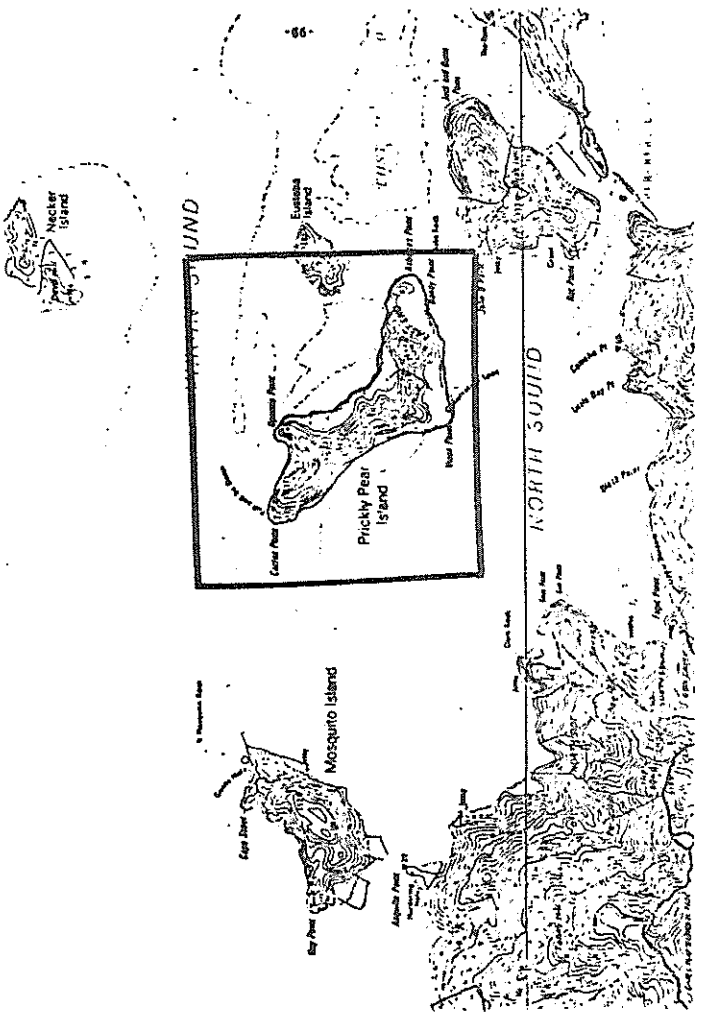
TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE to LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL UNKNOWN

COMMENTS: No information for this beach



NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Opuntis Pt. to Asbestos Pt. Beach	1.6	Cm and E.	
2.	1.8	UNKNOWN	
3. Bandy Point Beach	1.4	UNKNOWN	
4. Vixen Point Beach	.9	UNKNOWN	
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta C
Chelonia mydas C
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi L
Lepidochelys olivacea L

PRICKLY PEAR 5.1 KM

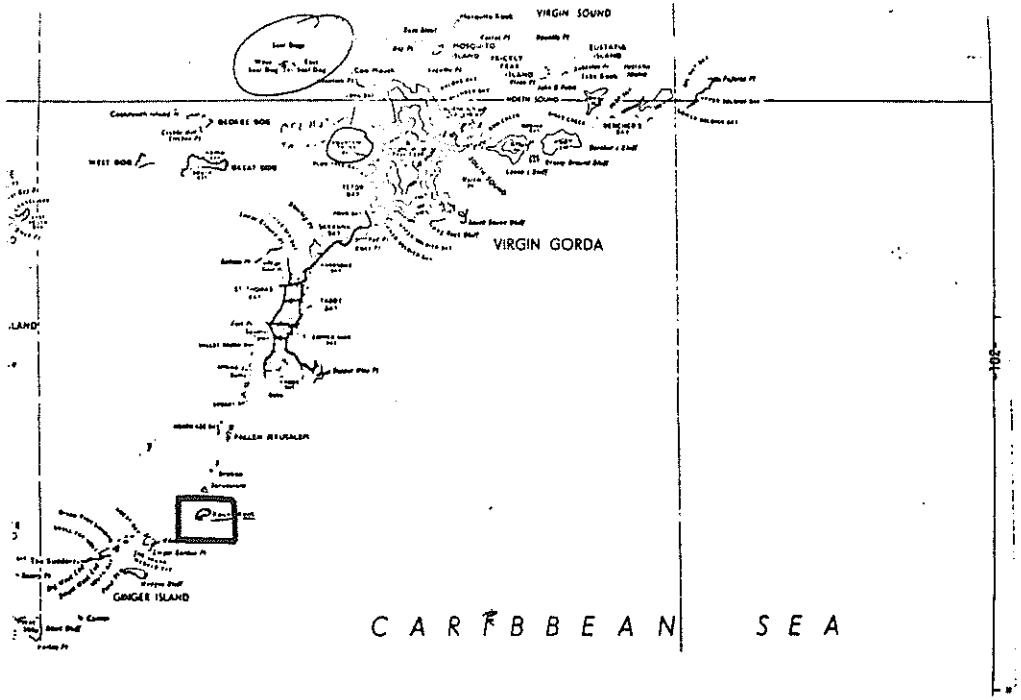
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Beach Suitable for Nesting.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ROUND ROCK .3 KM



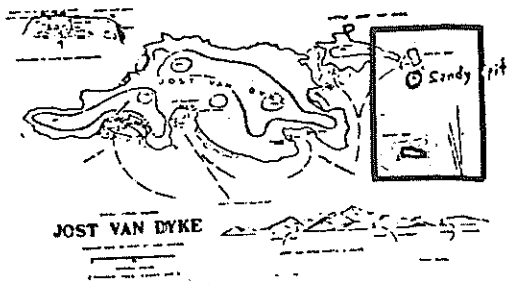
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Sandy Spit Beach	.05	E., and Cm.	June, July, Aug., Sept. & Oct.
2. Sandy Cay Beach	.70	E., and Cm.	June, July, Aug., Sept. & Oct.
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SANDY SPIT .1 KM &SANDY CAY .8 KM



SUPLEMENT TO TABLE 3

NAME OF BEACH Sandy Spit Beach ISLAND Sandy Spit

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine to Moderate Grains, White sandy Beach, With small carbonate Component.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although there is no development human activity is heavy because this is a favorite anchorage for boats. This island represents one of major nesting areas in B.V.

NAME OF BEACH Sandy Cay Beach ISLAND Sandy Cay

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine to medium grains, white sandy beach.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Island represents one of major nesting beaches for E. and Cm. Problem because this small island is highly impacted by frequent visitors coming by sail and motor boat.

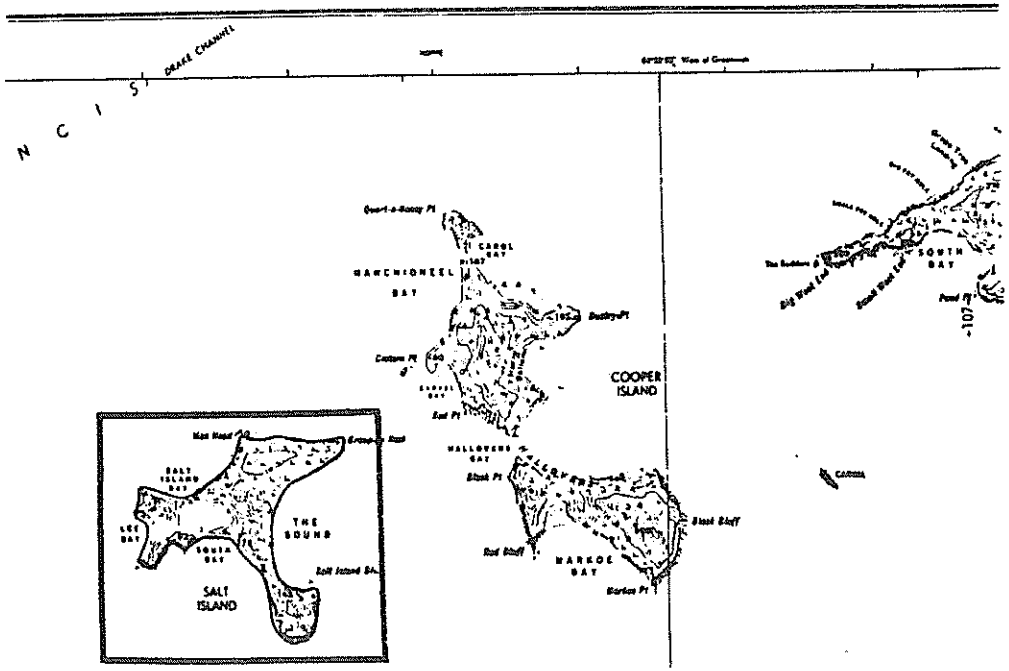
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. South Bay Beach	.2	Unknown	
2. Salt Island Bay Bch.	.3	Unknown	
3. Salt Island Bay Bch	.2	Unknown	
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

SALT ISLAND 4.8 KM

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

ISLAND BRITISH

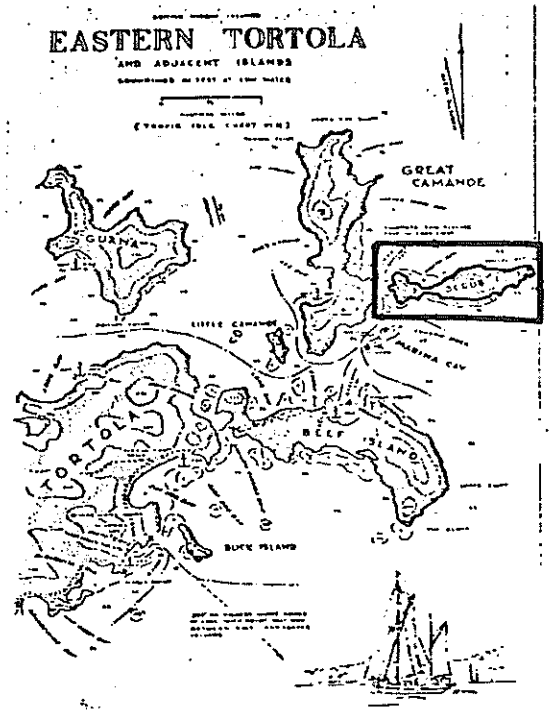


NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Southeast Beach	.2	Unknown	?
2. North Bay Beach	.3	Unknown	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

SCRUB ISLAND -5.8 KM

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo



NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. No Beaches Suitable for Nesting.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SEAL DOG ISLANDS : 1.0 KM

SUPLEMENT TO TABLE 3

NAME OF BEACH Southeast Beach ISLAND Scrub Island

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although no nests were surveyed, beach could provide suitable nesting habitat.

NAME OF BEACH North Bay Beach ISLAND Scrub Is.

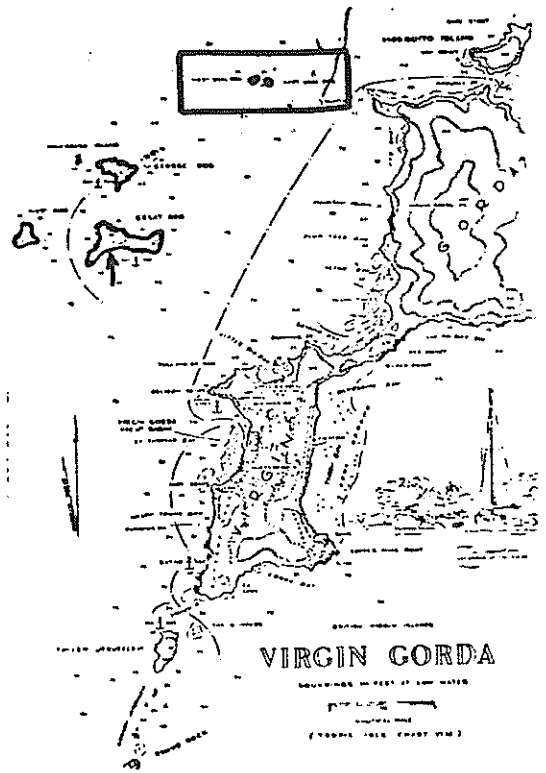
TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Unknown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No data collected on this beach, but Putney reports nesting on this beach--refer to appendix.



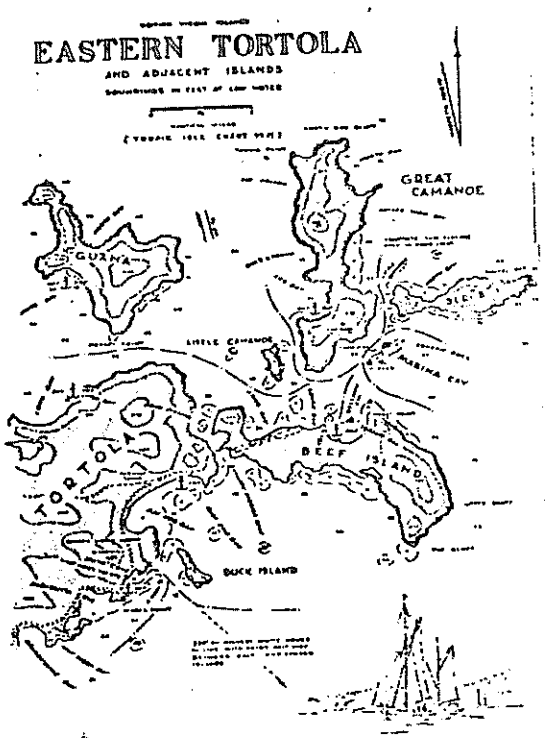
NAME OF BEACH	LERGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Sandy Point Beach	.2	?	
2. Sea Cow Bay Beach	.6	?	
3. Brandywine Beach	.6	E., Cm(?)	June, July, Aug., Sept., Oct.
4. Halfmoon Bay Beach	.8	?	June, July, Aug., Sept., Oct.
5. Hodges Bay Beach	.8	E., Cm	June, July, Aug., Sept., Oct.
6. Little Bay Beach	.5	E., Cm, D.	June, July, Aug., Sept., Oct.
7. Long Bay Beach	1.4	E., Cm, D.	June, July, Aug. Sept. , Oct.
8. Josia's Bay Beach	.9	E., Cm, D.	June, July, Aug., Sept. Oct.
9. Cooten Bay Beach	.6	E., Cm, D.	June, July, Aug., Sept. Oct.
10. Trunk Bay Beach	.8	E., Cm, D.	June, July, Aug., Sept. Oct.

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TORTOLA -69.6 KM



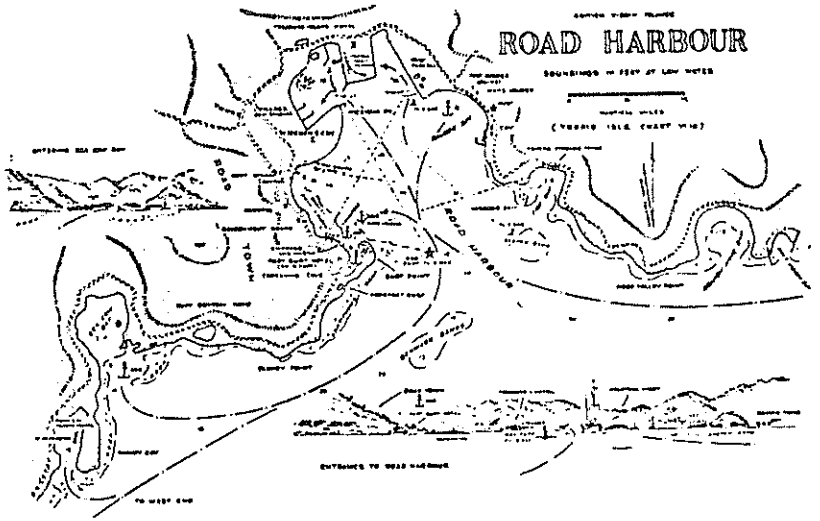
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Cooper Bay Beach	.7	E., Cm, D.	June, July, Aug., Sept. Oct.
2. Lower Bay Beach	1.2	E., Cm, D.	June, July, Aug., Sept.Oct.
3. Cane Garden Bay Beach	1.8	?	
4. Long Bay Beach, West.	2.2	?	
5.			
6.			
7.			
8.			
9.			
10.			

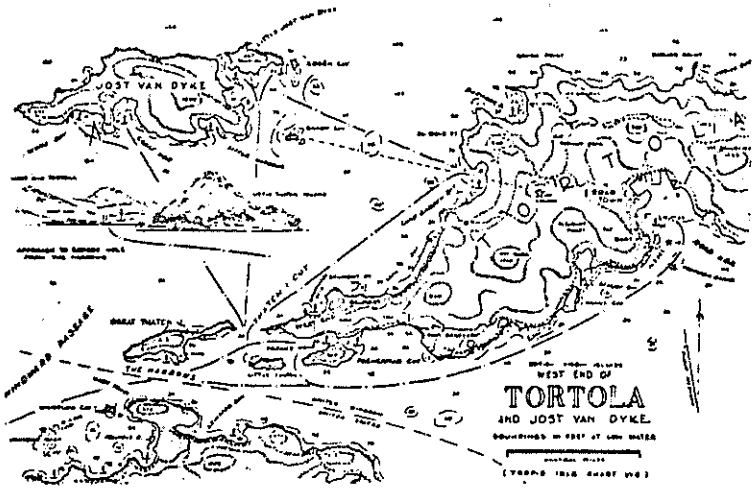
TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

TORTOLA BEACHES CONTINUED.....

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo





SUPLEMENT TO TABLE 3

NAME OF BEACH Sandy Point Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine grain sand (White to tan) with some shell

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Development and heavy predestrain traffic severly impacts this beach for turtle nesting.

NAME OF BEACH Sea Cow Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Lt. to moderate grains, well-rounded.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Incidental nesting at most. Highly impacted beach do to development

NAME OF BEACH Brandywine Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Fine grain beach, tan color, some shell and coral fragments represe

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Fisherman comment that a turtle nest is occassionally observed but very rare, Beach fringed with coral reef. Putney reports nesting on this beach--refer to appendix.

-119-

SUPLEMENT TO TABLE 3

NAME OF BEACH Long Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Mod. to heavily coarse grains, with high quartz componet represe

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Leatherbacks as well as greens and hawksbill are known to nest on this beach. Putney reports nesting on this beach--refer to appendix.

NAME OF BEACH Josia's Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, with fine to coarse grains. Sand mining on this beach causing a major erosion problem.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Once considered to be one of majore leatherback nesting beaches in Caribbean, b poaching animals mainly for oil has reduced the number of turtles on this beach significant Greens and Hawksbills known to also use this beach for nesting. Putney reports nesting on this beach--refer to map in appendix.

NAME OF BEACH Cooten Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Mod. to coarse grains with steep beach profile. Sand mining present a major problem.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Once a popular leatherback nesting beach, but no longer the case due to poachin

SUPLEMENT TO TABLE 3

NAME OF BEACH Rodgers Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Poorly sorted, fine grain beach with high carbonate component.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Beach used to be a major nesting beach, but heavy predestrain traffic has reduced turtle nesting significantly according to fishermen's reports.

NAME OF BEACH Halfmoon Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Lt. to fine, poorly sorted sediments.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Although there are some reports that turtles used this beach for nesting, it is uncertain to what extent, if any.

NAME OF BEACH Little Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Medium to coarse grains, high quartz component (White Beach).

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: This beach used to be heavily frequnted by leatherbacks, but it is uncertain at present how important this beach is for leatherback nesting. Greens and Hawksbills also ne

-120-

SUPLEMENT TO TABLE 3

NAME OF BEACH Trunk Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Medium to Coarse Gains (White to tan). High quartz corponent.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Once a major nesting beach for leatherbacks. However poaching and other types of human impacts have reduced nesting on this beach signifcantly.

NAME OF BEACH Cooper Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Medium to Coarse grains (well sorted, white).

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Fishermen report nesting on this beach used to be very common.

NAME OF BEACH Lower Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Medium to coarse grains.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL ?

COMMENTS: Hawksbills, greens and leatherbacks have been reported to nest on this beach.

SUPLEMENT TO TABLE 3

NAME OF BEACH Cane Garden Bay Beach ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Medium to fine grain sediment withsome gravel .

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: It is unkown to what extent nesting takes place on this beach. Putney reports nesting on this beach--refer to appendix.

NAME OF BEACH Long Bay Beach, West Tortola ISLAND Tortola

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Lt. to medium grain sediments. (tan in coloration).

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: It is unkown to what extent nesting takes place on this beach.

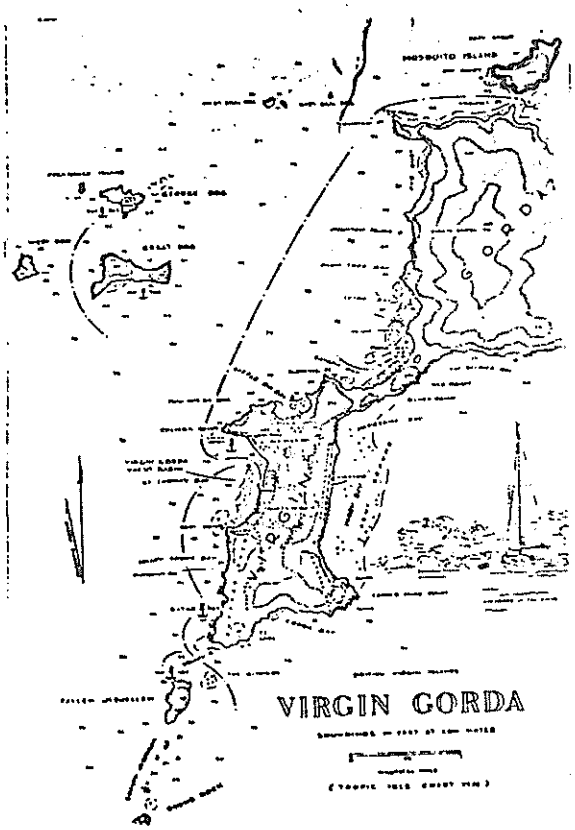
NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. S.E. Beach	1.2	E., Cm.	June, July, Aug., Sept. Oct.
2. St. Thomas Bay Beach	1.3	E., Cm	June, July, Aug., Sept. Oct.
3. Savana Bay to Tetor Bay Bch.	1.1	No Nesting	
4. Trunk Bay to Tetor Bay Bch.	1.0	E., Cm and D(?)	June, July, Aug., Sept, Oct.
5. Gorda Sound Beach	.4	E., Cm.	June, July, Aug., Sept. Oct.
6. Biras Hill Beach	.3	No Nesting	
7. Berchers Bay Beach	.9	No Nesting	
8. Handsome Bay Beach	1.8	No Nesting	
9. Copper Mine Bay to Taddy Bay Bch.	1.4	No Nesting	
10. Crook Bay Beach	11	No Nesting	

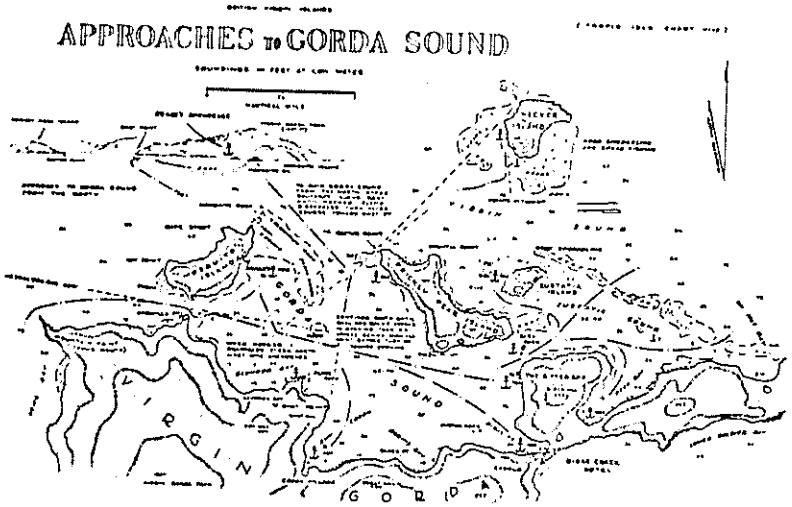
TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

VIRGIN GORDA 51.6 KM

Species Abbreviations:

Carolla carella	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo





SUPLEMENT TO TABLE 3

NAME OF BEACH Trunk Bay to Tetor Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE to LOW

SAND CHARACTERISTICS: White to tan, coarse to fine grains

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Nesting status is unknown for this beach, although some fishermen report that leatherbacks sometimes will nest on this beach. This could not be confirmed.

NAME OF BEACH Gorda Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL or None

COMMENTS: Unlikely that this beach is used for nesting.

NAME OF BEACH Biras Hill Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: No Data

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Nesting status is unknown for this beach, but it is believed to be incidental at most.

SUPLEMENT TO TABLE 3

NAME OF BEACH Berchers Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: gravel and shingles

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No nesting takes place on this beach

NAME OF BEACH Handsome Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: graveland shingles

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No nesting takes place on this beach.

NAME OF BEACH Copper Mine Bay to Teddy Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Gravel

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Air strip adjacent to this beach. Likely that this is no nesting on th beach.

SUPLEMENT TO TABLE 3

NAME OF BEACH S.E. Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, other characteristics are unkown

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Status in regards to nesting is unknown. However residents say turtles are rarely ,if ever seen on this beach.

NAME OF BEACH St. Thomas Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, coarse to fine grains

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: Ideal nesting beach, but extensive development probably severly restricts nesti

NAME OF BEACH Savana Bay to Tetor Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: White, coarse to fine grains.

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (More than 5) Regular (1 - 5) INCIDENTAL

COMMENTS: Nesting status for this beach is unkown, but is thought to be minimal at most.

SUPLEMENT TO TABLE 3

NAME OF BEACH Crook Bay Beach ISLAND Virgin Gorda

TYPE OF ENERGY BEACH (CIRCLE): HIGH MODERATE LOW

SAND CHARACTERISTICS: Gravel and sand

HUMAN DEVELOPMENT CHARACTERISTICS (CIRCLE): NONE LIGHT MODERATE HEAVY

NESTING DENSITY (CIRCLE): MAJOR (more than 5) REGULAR (1 - 5) INCIDENTAL

COMMENTS: No nesting takes place on this beach. Putney reports neting on this beach--refer to appendix.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)[a]	MONTHS OF RECORDED NESTING
1. No beaches suitable	for nesting.		
2.			
3.			
4.			
5.			
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10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

WEST DOG IS. .5 KM

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

3-104

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
	Anegada, Pomato Point to West End Beach		1		4			5
	Anegada, West End to Cow Wreck Beach				3			3
	Anegada, Loblolly Point to East Point		1		3			4
	Beef Island, Long Bay Beach		3		1			4
	Beef Island, Little Bay Beach				3			3
	Jost Van Dyke, Whale Bay Beach		3					3
	Little Camana		3		17			3
	Necker Island, West End Beach		2		17			2
	Sandy Cay, N.W. Beach		1		4			5
	Sandy Spit, West Beach		2		1			3

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
	Scrub Island				1			1
	Tortola, Little Bay		1					1
	Virgin Gorda, St. Thomas Beach		2		17			2

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta		?				
Chelonia mydas		75 ± 25				
Dermochelys coriacea		2				
Eretmochelys imbricata		50 ± 25				
Lepidochelys kempi		0				
Lepidochelys olivacea		0				

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Estimates for populations of nesting females were made from a combination of data obtained from personnel interviews with local fishermen and divers and from observations made during July's aerial surveys.

The question mark for the estimated population of loggerhead sea turtles is based on the possible misidentification of members of this species. A few fishermen believe they have observed adult loggerhead females during nesting season while most other fishermen say they have not observed this species. One local fishermen from Anegada who has been fishing B.V.I waters for more than 40 years recalls observing loggerhead sea turtles on only two occassions. Both appeared to be adults of undertermined sex.

The population estimate for leatherback (Trunk) sea turtles is based only on interviews as no crawls representing this species could be identified on the beaches during the aerial and beach surveys conducted during the July 1981 survey.

NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Tortola, East End	8 km^2	Cm, E.	Observation and Fishery
2. Virgin Gorda, N.E. End	12 km^2	Cm, E.	Observation
3. Anegada, East Coast	80. km^2	Cm, E, & Cc(?)	Observation, Incidental catch
4. Anegada, West Coast	60 km^2	Cm, E.	Observation
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 7A

OBSERVATIONS OF TURTLES IN FORAGING HABITATS

DATE	SPECIES	SIZE CATEGORY	HABITAT	WATER Depth (M)	DISTANCE FROM SHORE (M)	LOCATION
07/27/81	Cm	Juv.	Shallow Reef	12	150	Fat Hog's Bay (Tortola)
07/29/81	Cm	Adl.	Deep Reef	50	100	Treasure Point (Norman's Is)
07/29/81	Cm	Sub.-Adl.	Deep Reef	50	125	Treasure Point (Norman's Is)
07/29/81	?	Juv.	Shallow Reef	6	300	Pearl Point (Anegada)
07/29/81	Cm	Juv.	Shallow Reef	8	400	Savanna Bay (Virgin Gorda)
07/29/81	?	Juv.	Deep Water	7	1,000	Marer Bay (Cooper Island)
07/30/81	?	Sub-Adl.	Shallow Reef	10	250	Settlement (Anegada)
07/30/81	Cm	Sub-Adl.	Shallow Reef	20	100	S.E. End (Virgin Gorda)
07/30/81	Cm	Sub-Adl.-Adl.?	Shallow Reef	20	100	S.E. End (Virgin Gorda)

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													?
Chelonia mydas	X	X	X	X	X	X	X	X	X	X	X	X	July-August
Dermochelys coriacea	?	?	?	X	X	X	X	?	?	?	?	?	May-June-July
Eretmochelys imbricata	X	X	X	X	X	X	X	X	X	X	X	X	July-August
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Cm,Ei,Dc	Human poaching, feral pigs, crabs, vegetation roots	60%
Hatchlings	Cm,Ei,Dc	Avian and marine predators.	?
Juveniles	Cm,Ei	Human poaching and marine predators	20%
Adults (in water)	Cm,Ei	Human poaching and incidental capture while fishing	?
Nesting females	Cm,Ei,Dc	Human Poaching	20%

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

There is no data available on the subject of natural mortatility. During the July field survey no information of this subject could be obtained except for an isolated observation of a dead green sea turtle observed on the beach just east of the airstrip on Virgin Gorda. Since this animal was observed during an aerial survey, the cause of this animal's demise could not be determined.

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. The Settlement, Anegada	Cm,Ei	Seine Nets & Occasional Harpooning	Sept-June	?
2. Fish Bay, Tortola	Cm,Ei	Seine Nets & Occasional Harpooning	Sept-June	?
3. East End, Tortola	Cm,Ei	Seine Nets & Occasional Harpooning	Sept-June	Mainly Juveniles & Sub-Adults (5-25 Kg)
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta				
Chelonia mydas		600		Testimony from local fishermen
Dermochelys coriacea				
Eretmochelys imbricata		300		Testimony from local fishermen.
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				
Chelonia mydas		100		Testimony from local fishermen
Dermochelys coriacea		2		Testimony from local fishermen
Eretmochelys imbricata		100		Testimony from local fishermen
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

TABLE 15. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

Although foreign fishing vessels are restricted to fish within B.V.I. territorial waters, there are numerous reports from local fishermen that many foreign fishermen violate this restriction. In April 1980 Mr. Klauss, a local piolet observed a Japanese fishing boat trawling about 30 Km off the west coast of Tortola.

Due to the nature of fishing violations by foreign vessels it is impossible to determine the number of turtles they take--either directly or incidentally.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	15	$25,000.00(US	Figure based on estimated catch of turtles and the $00.70 a pound (live weight) price paid for turtles at local B.V.I. markets during 1980 and 1981.
Processing			* Fishermen process their own turtle catch--There are no commercial turtle processing operations in the B.V.I.
Selling	3	$5,000.00(US	During the 1981 Field Survey three shops were observed to have items made from turtles.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: 12,000
2. Estimated number of nesting females: 25
3. Number of turtles caught at sea: 100
4. Other: _____

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

*Refer to appendix describing Sea Turtle laws.

The law of mutural reciprocity applies to the collection of turtles eggs in the BVI. Saldom are eggs sold to markets or consumers. Instead when eggs are collected from a nest by a poacher they are usually redistributed among relatives and close friends with the idea that reciprication will take place when someone else takes a nest. This system not only reduces the changes of arrest but ensure a constant supply of turtle eggs to individuals participating in this type of trade.

The leatherback sea turtle (Trunk Turtle) has a unique position in the B.V.I. economy. This is because many local inhabitants believe oil from leatherback sea turtles has some medicinal value--especially in the cure of respiratory disorders. There are numerous reports where a Heineken Bottle of "Trunk" oil has sold for as much as $20.00 U.S.

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
B.V.I. Ministry of Fisheries	0	1	part-time basis with no enforcement powers.
Police Dept.	0	0	No arrests have ever been made regarding violation of sea turtle protection laws.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
British Virgin Islands Ministry of Fisheries	4	Public Education concerning local sea turtle laws and regulations.
British Virgin Islands Agricultural Dept.	1	NONE
British Virgin Island's Library	2	Public Education.
Island Sun (NewsPaper)	1	Public Information about laws and survival status of sea turtles.

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND LOCATION	AREA Km^2	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Spring Bay (Virgin Gorda)	5.5 acs.	?	None
Devil's Bay (Virgin Gorda)	58.0 acs.	?	None
R.M.S. Rhone	1.25 acs.	Coral Reefs, Historical/ Archaeological	None
Hocker Island	?	Rare Cacti, Bird Sanctuary, Indigenous Wildlife, Coral Reefs.	None

TABLE 19. SANCTUARIES AND REFUGES

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

*Refer to appendix for information on this subject.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
			*No research has been conducted on sea turtles in the B.V.I.

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Eastern Caribbean Natural Area Management Program. "Survey of Conservation Priorities in the Lessar Antilles". Resource Data Maps for the BVI which make note of possible sea turtle nesting areas. Sources for information
2. obtained from interviews and second hand reports. Maps compiled by Allen Putney.

3. LaBastille, B. Birds and Mammals of Anegada, CJS 13, 1973.

ACKNOWLEDGEMENT

I wish to thank Archie Carr for allowing me to go to the British Virgin Islands to collect much of the data which appears in this report. Also I wish to thank Mr. Fred Berry for his encouragement and assistance. Without his help this report could not have been completed. Mr. Robert Creque, the Director of Fisheries for the Government of the British Virgin Island, deserves special thanks. His assistance and kindness while I was in Road Town will always be remembered. I am grateful to Mr. Noel Van der Poel who supplied me with a guide and a boat. Mr. Klaus Weerszke, a pilot with extraordinary ability, made an important contribution to this report by flying me to all the islands within the territory of the British Virgin Islands. I owe special thanks to Allen Putney for sharing his data on turtle nesting beaches which appears on a number of Island Resource Maps in the appendix of this report. Finally, I wish to acknowledge the effort and dedication of the W.A.T.S. technical team. Their belief and commitment to this project will help to ensure the continued survival of the sea turtle over much of the world.

APPENDIX

Eastern Caribbean Natural Area Management Program
c/o West Indies Laboratory, P. O. Box 4010
Christiansted, St. Croix, U. S. Virgin Islands 00820
Telephone: (809) 773-5854

September 4, 1981.

John Fletemeyer,
620 S.E. 5th Ct.,
Fort Lauderdale, Florida 33301.

Dear Mr. Fletemeyer:

I was sorry to have missed you during your recent visit to the BVI. I have only now returned from my vacation and the CCA Annual General Meeting in Santo Domingo, and can now get to your letter of 25 July.

Please find enclosed a compilation of the information I have available on turtle nesting sites in the BVI. But I must caution you that this is all information derived from other sources, which are noted, and this means that considerable error could be involved. Further, there is no criteria of frequency or density of nesting, nor of species, so that the information could include areas where there used to be nesting. Obviously, the only way to be more sure is for on-site verification of each of these sites.

I am sorry that we cannot be more precise but our data do not allow this. This is only one of many pieces of information we have collected for our Data Atlas and planning work, so we have had to merely collect already existing information rather than doing the research to come up with our own information.

I hope this information is of some use to you, but perhaps all this does is quantify our ignorance. I wish you the best in your work.

Sincerely,

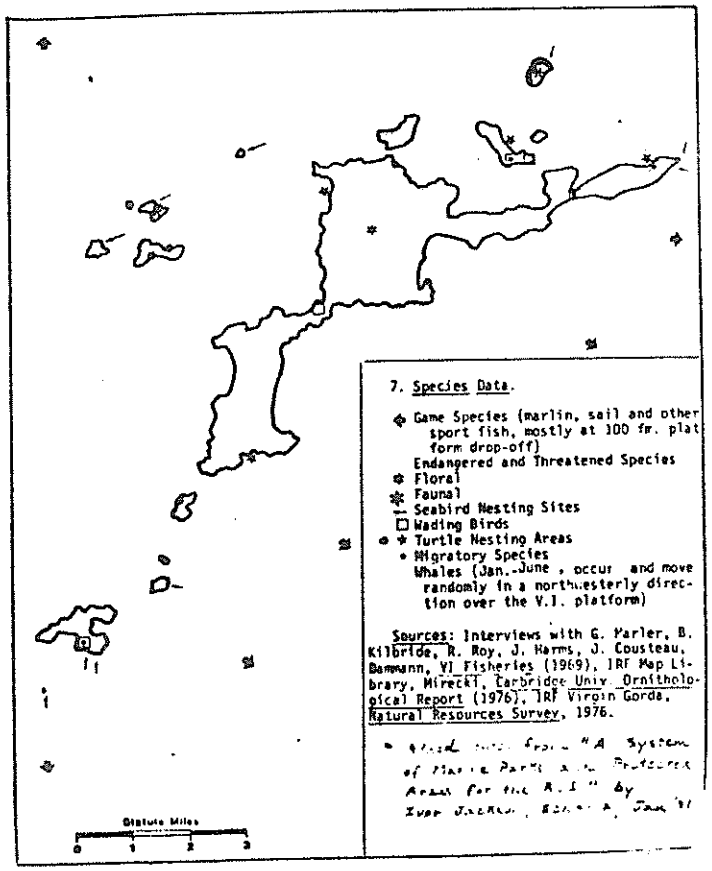
Allen D. Putney

Allen D. Putney
Principal Investigator

c.c.: I. Jackson, BVI
E. Towle, IRF

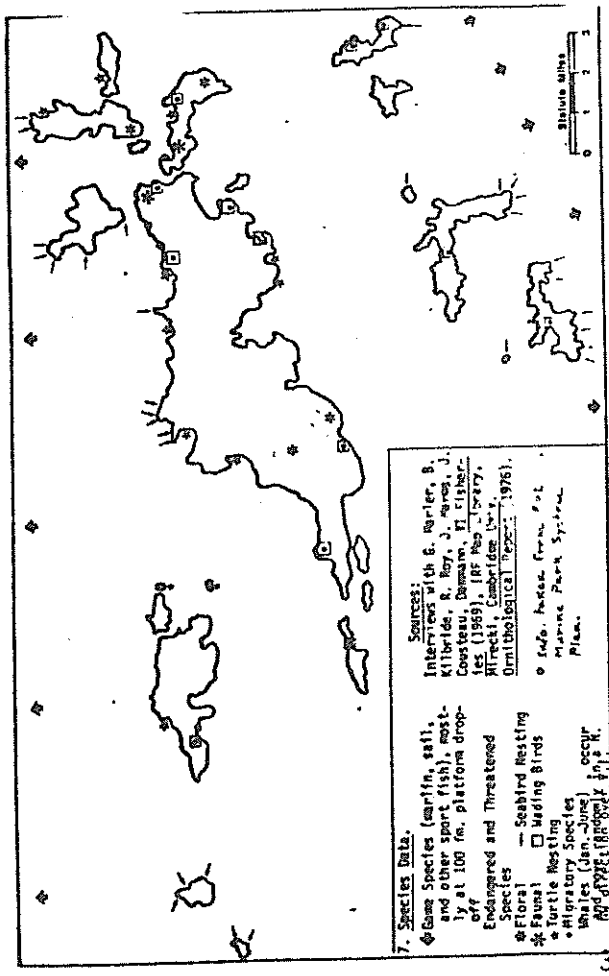
Survey of Conservation Priorities in the Lesser Antilles

RESOURCE DATA MAPS • VIRGIN GORDA



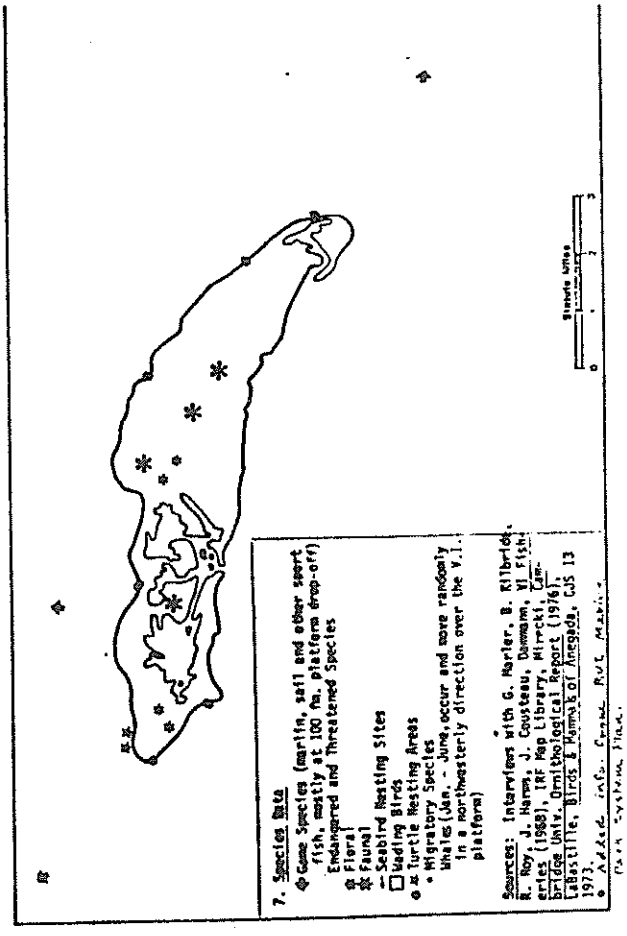
Eastern Caribbean Natural Area Management Program • Survey of Conservation Priorities in the Lesser Antilles

RESOURCE DATA MAPS • TORTOLA



Eastern Caribbean Natural Area Management Program • Survey of Conservation Priorities in the Lesser Antilles

RESOURCE DATA MAPS • ANEGADA



CHAPTER 87.

TURTLES.

(21*st May*, 1959.) 12/1959

1. This Ordinance may be cited as the Turtles Ordinance. Short title

2. In this Ordinance, the term "turtle" means any sea or river turtle save and except trunk turtles Interpretation

3. Any person who— Offences

(*a*) catches or takes, or attempts to catch or take, or causes to be caught or taken any turtle between such dates as the Administrator in Council may, by notice published in the *Gazette* appoint; or

(*b*) notwithstanding the provisions of paragraph (*a*) at any time catches or takes or attempts to catch or take, or causes to be caught or taken, any turtle which is under twenty pounds in weight, or

(*c*) slaughters any turtle or buys, sells, exposes for sale or has in his possession the whole or any portion of the meat of such turtle, between such dates as the Administrator in Council may, by notice published in the *Gazette* appoint; or

(*d*) takes, or attempts to take, or causes to be taken, any turtle eggs (including the eggs of trunk turtles) between such dates as the Administrator in Council may, by notice published in the *Gazette* appoint; or

(*e*) buys, sells, exposes for sale, or has in his possession any turtle eggs (including the eggs of trunk turtles) between such dates as the Administrator in Council may, by notice published in the *Gazette* appoint,

shall be guilty of an offence against this Ordinance, and on summary conviction, shall be liable to a fine not exceeding one hundred dollars.

Power of arrest. **4.** If any police officer shall have reasonable grounds for believing that any person is committing or attempting to commit an offence against this Ordinance he may arrest such person without a warrant.

Forfeiture of turtles, &c. **5.** Any police officer may seize any turtle or part thereof or any turtle eggs (including the eggs of trunk turtles) found in the possession of any person between such dates as the Administrator in Council may, by notice published in the *Gazette* appoint and upon the conviction of such person the articles so seized shall be forfeited

Forfeiture of vessels &c. **6.** Any net, instrument or thing which any police officer has reasonable grounds for believing is being or has been used for or in connection with the commission of any offence against this Ordinance shall be seized by such officer, and any magistrate may, upon the conviction of any person for an offence against this Ordinance in connection with which such net, instrument or thing was seized, order such net, instrument or thing to be forfeited

Disposal of fines **7.** Upon any conviction under this Ordinance the magistrate may order that a part of any fine imposed not exceeding a moiety be paid to any person whose information led to the conviction

NATIONAL PARKS, MARINE PARKS AND PROTECTED AREAS

NAME	CATEGORY OF PARK OR RESERVE	GROSS AREA	DATE ESTABLISHED	PRINCIPAL FEATURES
Virgin Gorda Peak	Forestry	265 acs.	June 6, 1974	Forest Reserve
Fallen Jerusalem	Forestry	30 acs.	June 6, 1974	Forest Reserve
West Dog Island	Forestry	24 acs.	June,6 1974	Bird Sanctuary
Sage Mountain (Tortola)	Forestry	92 acs.	1964	Xerophytic Rain Forest
Road Ghaut Island	Forestry	34 acs.	June, 6 1977	Forestry
Flamingo Pond (Anegada)	Wildlife Sanctuary	1,147 acs.	September, 1 1977	Bird Sanctuary
Valley, Virgin Gorda	Historic	36 acs.	November 16, 1976	Timber Forts
Queen Elizabeth II Park (Tortola)	Recreational	0.7 acs.	June 12, 1974	Recreational
Spring Bay (Virgin Gorda)	Recreational	9.5 acs.	1964	Beach
Devils Bay (Virgin Gorda)	Soil Conservation	58 acs.	1964	Beach

NAME	CATEGORY OF PARK OR RESERVE	GROSS AREA	DATE ESTABLISHED	PRINCIPAL FEATURES
Botanical Garden (Tortola)	Recreational/ Educational	2.87 acs.	March, 1979	Recreational/ Educational
Fat Hogs Bay Pond	Protected Areas	12 acs.	March, 1979	Bird Sanctuary
H.M.S. Rhone (1867)	Marine Park	1.246 sq.mls.	8 December, 1980	Coral Reefs Historical/ Archaeological
Necker Island	Protected Area	-	-	Rare Cacti, Bird Sanctuary, Coral Reefs

I Assent

J.A. Davidson
Governor
18 October 1979

VIRGIN ISLANDS

No. 18 of 1979

An Ordinance to provide for the protection, regulation and control of products of the sea in the waters of, and adjacent to, the Virgin Islands, and for matters connected therewith or incidental thereto.

[Gazetted 1 November 1979]

ENACTED by the Legislature of the Virgin Islands.

Short title.

1. This Ordinance may be cited as the Fisheries Ordinance, 1979.

Interpretation.

2. In this Ordinance, unless the context otherwise requires:-

"belonger" has the meaning ascribed thereto by the Virgin Islands (constitution) Order, 1976;

"court" means Magistrate's court;

"export" includes placing in any ship, boat or vessel or aircraft for conveyance outside the Territory;

"exclusive fishing zone" means the territorial waters of the Virgin Islands together with the zone contiguous to the said waters which was proclaimed as a fisheries zone for the Virgin Islands by proclamation made by the Governor on the 9th day March, 1977;

S.R. & O. No. 4 of 1977.

"fish" means fish of any kind found in the sea and includes lobsters, crawfish, crabs, shrimps, prawns, oysters, mussels, cockles and any other kind of shell fish;

"fishing boat" includes any vessel of whatever size used by any person in fishing;

"foreign fishing boat" means a fishing boat owned and operated by a person not deemed to be a belonger or a fishing boat owned and operated by a person not resident in the Territory;

"functions" includes powers and duties;

"licence" means a licence issued by the Minister;

"marine product" means fish, turtle, sponge, corals and any other natural product of the sea;

"protected area" means an area declared by the Minister to be a protected area under section 4;

"taking" with reference to a marine product includes capturing, killing and destroying;

"vessel" includes any ship or boat or any other description of vessel used in navigation and any description of aircraft.

Fisheries inspectors.

3. (1) Every officer of the revenue, every peace officer, every officer of the Department of Agriculture and Fisheries, and any other officer appointed for the purpose by the Minister by instrument in writing shall be a fisheries inspector for the purposes of this Ordinance and shall have and may exercise the functions assigned to a fisheries inspector by or under this Ordinance.

(2) The Minister may appoint the Chief Agricultural Officer or a senior officer of that Department to be the Chief Fisheries Inspector.

Power to declare protected areas.

4. (1) The Minister may by order declare any area of the waters within the exclusive fishing zone whether alone or together with any area of land up to high water mark adjacent to such waters to be a protected area for the purposes of this Ordinance -

Provided that when the Minister proposes to make any order under this section he shall publish notice of his intentions in the Official Gazette and in a newspaper published within the Territory giving interested persons the opportunity of submitting objections in writing within twenty-one days of the date of such publication and shall not proceed to make any such Order until all such objections, if any, have been duly considered.

(2) Any order made under this section may prohibit the taking within the protected area of marine products, or of any marine products specified in the order, by any person otherwise than under the authority of and in accordance with the terms and conditions of a licence in that behalf granted to that person for the purpose.

(3) Any person who takes any marine product in a protected area in contravention of the provisions of any order made under this section in respect of such area or of any term or condition attached to a licence granted for the purpose shall be guilty of an offence and liable upon summary conviction to a fine not exceeding seven hundred and fifty dollars or to imprisonment for a term not exceeding one year or to both such fine and imprisonment and any vessel used for the commission of the offence shall be liable to forfeiture.

(4) Where any person is found within a protected area in possession of any marine product the taking of which within that area is prohibited by an order made under this section he shall be deemed, until the contrary is proved, to have taken that marine product within that area.

Taking, and certain methods of taking, marine products may be prohibited.

5. (1) The Minister may by order prohibit the taking:-

(a) of any species or kind of marine product specified in the order (whether by reference to size or weight or otherwise) absolutely or during such period or periods as may be so specified;

(b) of any marine product by any method specified in the order; and

(c) of any marine product by the use of any engine, dredge, trap or device,

anywhere within the exclusive fishing zone and whether within a protected area or otherwise.

(2) Any person who takes any marine product in contravention of the provisions of an order made under this section, and the Master or other person in charge of any vessel who suffers or permits the vessel or any person belonging to the vessel to be employed in so taking or to so take any marine product, shall each be guilty of an offence and liable upon summary conviction to a fine not exceeding five hundred dollars or to imprisonment for a term not exceeding one year, or to both such fine and imprisonment, and the marine product so taken and any vessel used in such taking shall be liable to forfeiture.

Restriction on export.

6. (1) No person shall export any marine product from the Territory otherwise than under the authority of, and in accordance with the terms and conditions of a licence in that behalf granted to that person for the purpose.

(2) Any person who exports any marine product in contravention of the provisions of this section or of any term or condition attached to a licence granted thereunder shall be guilty of an offence and liable upon summary conviction to a fine not exceeding five hundred dollars or to imprisonment for a term not exceeding one year or to both such fine and imprisonment.

Fishing boats.

7. (1) Where any person on board a foreign fishing boat takes any marine product within the exclusive fishing zone then that person and also the Master or other person in charge of the boat shall each be guilty of an offence and liable, upon summary conviction, to a fine not exceeding ten thousand dollars or to imprisonment for a term not exceeding one year or to both such fine and imprisonment, and the marine product so taken and the boat used in such taking shall be liable to forfeiture.

(2) Where any marine product is found on board any foreign fishing boat within the exclusive fishing zone or where any marine product is landed, or placed in any crawl from any fishing boat at any creek, inland or bay within the Territory, such marine product shall be deemed, until the contrary be proved, to have been taken within the exclusive fishing zone by a person on board such fishing boat.

(3) Notwithstanding anything to the contrary, a taking by a person on board a foreign fishing boat shall be deemed not to be in contravention of subsection (1) of this section if such taking was made:-

for scientific research purposes under the authority, of, and in accordance with the terms and conditions of a licence in that behalf granted to the person operating the boat.

Powers of seizure, arrest, etc.

8. (1) A fisheries inspector may at any time stop, go on board and search any fishing boat within the exclusive fishing zone, and if he has reason to suspect that any person on board such boat has contravened any of the provisions of this Ordinance, may without summons, warrant or other process seize the boat and detain it and any person found on board.

(2) A fisheries inspector may at any time without summons, warrant or other process seize and detain any vessel or thing which is liable to forfeiture under this Ordinance or which he has reasonable grounds to believe is so liable.

(3) Any fisheries inspector and any person whom he may call to his assistance may arrest and detain without warrant any person who such inspector has reason to suspect has committed or permitted the commission of any offence against this Ordinance.

(4) Any person who resists or obstructs any fisheries inspector in the exercise of any of his powers conferred by this section shall be guilty of an offence and liable upon summary conviction to a fine not exceeding one thousand dollars, and such person may be detained by the fisheries inspector.

(5) Where any vessel or thing is seized or detained or any person is detained under this section by a fisheries inspector, the inspector shall take such vessel, thing or person as soon as may be to the nearest or most convenient place in the Territory and there deliver it or him into the custody of the most senior police officer.

Persons in custody to be brought before

9. Where on delivering any person into the custody of a police officer in accordance with the provisions of section 8:-

I Assent

J. A. Davidson

Governor

11 June, 1979

VIRGIN ISLANDS

No. 8 of 1979

An Ordinance to make provision for the establishment of Marine Parks and Protected Areas and for purposes connected therewith and incidental thereto

[Gazetted 21 June 1979]

ENACTED by the Legislature of the Virgin Islands.

Short title and commencement.

1. This Ordinance may be cited as the Marine Parks and Protected Areas Ordinance, 1979.

Interpretation.

2. In this Ordinance unless the context otherwise requires –

"fish" means fish of any kind found in the sea and includes corals, crabs, lobsters, shrimps, prawns, turtles, mussels, cockles, oysters, shells and any species of other marine fauna and includes any eggs or any part of such fish as aforesaid;

"fishing implement" means any net, line, hook float, barrel, buoy, cage, trap, spear gun or other instrument, engine or implement used or intended to be used for the purpose of fishing;

"flora and fauna" means the plant and animal both living and non-living constituents of a marine park or protected area;

"floor of the sea" means the soil and the subsoil of the sea off the coasts of the Territory between low water mark and so far out to sea as is deemed by international law to be within the territorial control of the Territory;

"foreshore" or "seashore" is that portion of the lands of the Territory which lies between the low water mark of the sea and the line of vegetation found thereon;

"marine park" means any area so designated by the Governor under section 4;

"a protected area" means any area so designated by the Governor under section 4;

"trust" means the National Parks Trust constituted under section 3 of the National Parks Ordinance, No. 29 of 1961;

"wreck" means sunken boats and ships and derelicts, or any part of them abandoned by their owners and by the Receiver of Wrecks found in the territorial waters of the British Virgin Islands.

Management of a Marine Park or Protected Area. No. 29/1961.

3. The National Parks Trust constituted under section 3 of the National Parks Ordinance will be responsible for the supervision and management of any Marine Park or Protected Area designated under section 4 of this Ordinance.

Establishment of a Marine Park or a Protected Area.

4. (1) The Governor in Council may by Proclamation published in the Gazette, declare any area to be a Marine Park or Protected Area if part of the area is a sub-marine area within the territorial sea of the British Virgin Islands and the remaining portion can be adjoining land or swamp area that forms within the sub-marine area a single ecological entity or complementary ecological units.

(2) A Proclamation relating to a Protected area shall state the classification thereof – that is to say whether it is a Marine area, nature conservancy area, scientific area, historical area, educational area, resource area or multiple use management area.

(3) If the Governor in Council shall agree to such a proposal under subsections (1) and (2) with or without modifications, then the Trust shall –

(a) publish the fact of such agreement in the Gazette; and

(b) serve on each owner of a property contained within the Marine Park or Protected Area as modified, if so modified, advising such owner of such approval and of his rights under section 5.

(4) For the avoidance of doubt, it is hereby declared that a sub-marine area referred to in subsection (1) hereof shall include the foreshore and the floor of the sea.

Appeal against inclusion of property in a Marine Park or Protected Area.

5. (1) Within three months of the service of the owner of a Notice provided for in subsection 3(b), the owner may appeal to the Governor in Council against the inclusion of his property in the Marine Park or Protected Area.

(2) The Governor in Council may make determination on such appeal at a special meeting convened of the Executive Council to hear the appeal and may allow the appeal in whole or in part, or dismiss the appeal.

Magistrate's court or released.

(a) the fisheries inspector makes a complaint to such officer that such person has committed an offence against this Ordinance, the police officer shall as soon as may be cause such person to be brought before a magistrate's court to be dealt with according to law; or

(b) the fisheries inspector does not make any such complaint, the police officer shall forthwith release such person.

Detention of vessels, etc.

10. (1) Where any vessel or thing is delivered into the custody of a police officer at any place by a fisheries inspector in accordance with the provisions of section 9, such vessel or thing shall be detained in the custody of the Chief of Police at that place or at such other place as the Chief of Police may direct until the same shall be forfeited or released in accordance with the provisions of this section.

(2) Any vessel or thing detained under the provisions of subsection (1) of this section shall be released upon demand to the owner or his duly accredited agent:-

(a) within the period of seven days next following the date of delivery of the vessel or thing to the police officer, if no proceedings are instituted within this period against the owner or the Master or other person in charge of the vessel or thing in respect of an offence against this Ordinance; or

(b) in any case where such proceedings are instituted as aforesaid upon the final determination of such proceedings, where the vessel or thing is not liable or ordered to be forfeited under the provisions of this Ordinance, or where a fine has been imposed by the Court in such proceedings upon the payment of such fine within the time prescribed by the Court for such payment.

(3) Any vessel or thing detained under the provisions of subsection (1) of this section shall be subject to a lien in favour of the Crown for the amount of any fine imposed by the Court upon the owner or the Master or other person in charge thereof in any proceedings in respect of an offence against this Ordinance, and if such fine shall not have been paid by the due date for payment thereof the Registrar may, subject as in this subsection provided, after first serving upon the owner or the Master or other person in charge of the vessel or thing, a notice in writing of his intention so to do, sell the vessel or thing by public auction after the lapse of fourteen days of the service of such notice and deduct the amount of the fine or fines unpaid and the expenses incurred in selling the vessel or thing from the proceeds of the sale and pay the balance to the Accountant General to be held by the Accountant General and paid by him to such person as shall satisfy him that he is entitled thereto:

Offences in a Marine Park or Protected Area.

6. (1) No person shall –

(a) spear fish in the sea forming part of a Marine Park or Protected Area;

(b) remove any object or wilfully damage or impair the growth of any flora and fauna, except in accordance with regulations made under this Ordinance; or

(c) no person may go into or alight upon a Marine Park or Counsel, aid or abet any other person so to do for reward, except in accordance with regulations made under this Ordinance.

(2) Any person who contravenes the provisions of this section shall be guilty of an offence, and be liable upon conviction on indictment to a fine of one thousand dollars and to imprisonment for one year and on summary conviction to a fine of five hundred dollars and to imprisonment of six months.

Duties of the Trust

7. It shall be the duty of the Trust to –

(a) preserve and enhance the natural beauty of the Marine Park or Protected Area;

(b) control the facilities for the enjoyment by the public of the Marine Parks and Protected Areas;

(c) promote scientific study and research in a Marine Park or a Protected Area; and

(d) employ such persons as may be necessary for the management of a Marine Park or Protected Area and for the carrying out of regulations under section 8 of this Ordinance, or any other provision in this Ordinance.

Regulations.

8. (1) The Governor in Council may make regulations for the purpose of giving effect to this Ordinance, and in particular, may by such regulations provide for all or any of the following matters –

(a) the protection of the flora and fauna and the establishment of offences in connection therewith;

(b) the care, control and management of the Marine Parks and Protected Areas, including the search, seizure and arrest of any person, fishing implement, vessel or carrier;

(c) the regulation of the use and enjoyment of Marine Parks and Protected Areas;

(d) the regulation of the use of parking and refreshment facilities;

(e) the licensing of boats and craft employed in the transportation of persons visiting Marine Parks and Protected Areas and the licensing of any guides required by such visitors;

(f) the ensuring of public rights of way over private property to allow access to Marine Parks and Protected Areas;

(g) the permitting of entry to Marine Parks and Protected Areas upon such terms and conditions as may be imposed by the Governor in Council;

(h) the charging of fees for any of the services provided in Marine Parks and Protected Areas;

(i) the seizure and confiscation of any flora and fauna or wreck or any part thereof taken in contravention of this Ordinance or any regulation made thereunder and of any vessel or carrier upon which the same may be found together with any fishing implement found on such vessel or carrier;

(j) the payment of all sums for carrying this Ordinance into effect;

(k) the fines and penalties for any offence created by any regulation up to a maximum of one thousand dollars or to a term of imprisonment not exceeding one year or to both such fine and imprisonment;

(l) the anchoring of boats in a Marine Park or Protected Area.

Protection of Wild Birds. Cap. 98.

9. The Wild Birds Protection Ordinance shall apply to the protection of wild birds in a Marine Park or Protected Area.

Financial Provision.

10. (1) The Governor in Council may authorize the payment to the Trust, out of moneys provided by the Legislative Council for that purpose, of such sums as the Trust may require for the furtherance of the objects of this Ordinance.

(2) The Trust shall have the power to borrow money in such amounts, from such sources and in such manner as the Legislative Council may approve.

No. 20/1961.

(3) Section 9(3) of the National Parks Ordinance, 1961, shall apply to this Ordinance and shall be read and construed as if it was enacted herein.

Map of Marine Parks and Protected Areas to be lodged with Chief Surveyor and to be receivable in evidence.

11. A map shall be deposited with the Chief Surveyor delineating the Marine Parks and Protected Areas designated by the Governor in Council and shall be receivable in evidence and shall be prima facie evidence of the boundaries of the Marine Park or Protected Area to which it relates.

Crown Bound.

12. This Ordinance shall bind the Crown.

Passed the Legislative Council this 31st day of May, 1979.

Sgd. I. Dawson
Speaker.

Sgd. M. G. Borde
Clerk of the Legislative Council.

Printed at the Government Office, Road Town, Tortola, British Virgin Islands by A. Weston, a Government Printer - by Authority.

(Price: 40c

Provided that if within the period of fourteen days next following the date of service of a notice under this subsection upon the owner, Master or other person in charge of a vessel or thing, such owner, Master or other person pays to the Court the amount of any fine or fines unpaid, and pays to the Registrar the amount of any expenses incurred by the Registrar in respect of the proposed sale, the Minister shall not offer such vessel or thing for sale but shall release the vessel or thing to such owner, Master or other person.

(4) No action shall lie at the suit of any person against the Accountant General in respect of the payment by him in good faith of any moneys under subsection (3) of this section to any person appearing to him to be entitled to the same.

Trial of offences.

11. (1) Where any offence against any of the provisions of this Ordinance or of any rule made thereunder is committed within the exclusive fishing zone then, of the purposes of the jurisdiction of any court in the Territory, that offence shall be deemed to have been committed at the place in the Territory where the offender is found or to which he is first brought after the commission of the offence.

(2) The jurisdiction under subsection (1) of this section shall be in addition to and not in derogation of any jurisdiction or power of any court under any other enactment.

Rules.

12. The Minister may make rules for the better carrying out of the provisions of this Ordinance and in particular, and without prejudice to the generality of the foregoing, for all or any of the following purposes:-

(a) providing for the issue of licences, their terms and conditions, and for the transfer, amendment and revocation of licences;

(b) prescribing the forms to be used for any of the purposes of this Ordinance;

(c) prescribing the fees to be charged in respect of the issue of any licence or the transfer or amendment of any licence;

(d) prescribing the size and type of construction of any trap, net or seine and prohibiting the use for the purpose of taking any marine product of any trap, net or seine other than a trap, net or seine of the prescribed size of mesh;

(e) regulating the size, type, quantity, quality or species of any marine product which may be in the possession of any person;

(f) providing for the regulation of the sale of any marine product to the public and for the inspection, grading, packing and storage of any marine product intended for human consumption whether within or outside the Territory; and

(g) prescribing anything to be prescribed under the provisions of this Ordinance.

Penalty for possession.

13. Any person, whether holding a licence or not, found in possession of any article prohibited to be used, or any marine product prohibited to be taken under an Order or rule issued or made under this Ordinance and failing to give a satisfactory explanation of such possession shall be guilty of an offence and liable upon summary conviction to a fine not exceeding eight hundred dollars or to imprisonment for a term not exceeding one year or to both such fine and imprisonment.

14. The provisions of this Ordinance with the exception of sections 4 and 5 shall not apply to belongers or persons resident in the Territory on the date on which this Ordinance is published in the Gazette.

Passed the Legislative Council this 27th day of September, 1979.

I. Dawson
Speaker.

Joshua Smith
Ag. Clerk of the Legislative Council.

Printed at the Government Office, Road Town, Tortola, British Virgin Islands by A. Weston, a Government Printer - by Authority.

(Price: 65 cents)

The Symposium on Sea Turtles Research in the Western Central Atlantic (Populations and Socioeconomics)

BRITISH VIRGIN ISLANDS:

Question 1

Species of sea turtles that occur in your area and local names used for species found.

Answer

Green Turtle	Chelonia mydas
Hawks bill	Eretmochelys imbricata
Leatherback	Dermochelys coriacea
Loggerhead	Caretta caretta

Question 2

Seasonality and ecology of the species of turtle found in your area.

Answer

The peak of the nesting season in the British Virgin Islands occurs around mid July. There are occasional reports of some nesting activities as late as December and sometimes before July.

Question 3

The size of the turtle species seen in your area.

Answer

The sizes of turtles occuring in British Virgin Islands waters range from juveniles to adults weighing approximately 250 pounds; leatherbacks however, are not very numerous and the few sightings are usually of adults.

Question 4

The average number of each species of turtle seen in your area each month.

Answer

The average number of each species seen monthly are:

Green Turtles Loggerhead Turtles Hawks bill Turtles	variable (about 20-35 members of these 3 species included.)
Leatherback Turtles	Negligible (maybe 12 per annum.)

Question 5

The kind of ocean bottom over which each of the species of turtles are normally seen.

- 2 -

Answer 5

Green turtles are usually seen in areas with turtle grass - Thalassia testidium - bottoms; Hawks bill and Loggerhead turtles are normally observed over rocky and coral reef bottoms, while the leather back turtle is normally seen over both sandy and rocky bottoms.

Question 6

Whether any turtles nest in your area and if so which kinds, at what seasons, and the size of nesting populations.

Answer

All four species nest on beaches in the British Virgin Islands: the nesting populations that have been observed were an inhabited islands but there is also some evidence that they lay on some of the offshore cays.

Question 7

Changes in population levels of turtles in your area over the last 50 years.

Answer

Over the past 50 years turtle populations in the British Virgin Islands have declined; loggerheads seem to be the ones that suffered most. It is however, very difficult to put numbers on this since no catch records were kept.

Question 8

The exploitation of turtles in your area.

Answer

There is a small turtle fishery in the British Virgin Islands for 10 months of the year; although the number of fishermen catching turtles has declined over the years one suspects the practice, in the past, of humans molesting clutches of eggs contributed to the population decline.

There is a 2 month moratorium on the catching of turtle in the British Virgin Islands, from July 1st until August 31st, and the taki of eggs is prohibited all year round.

Question 9

Your turtle laws and regulations and enforcement.

Answer

The Turtles Ordinance, 1959. Endangered Animals and Plants Ordinance 1976. Fisheries Ordinance 1979 Marine Parks and Protected Area Ordinance 1979.

Loggerhead
Green Turtle
Leatherback.

- 3 -

Question 10

Any government turtle management programs which may be in effect or in the planning stages.

Answer

The British Virgin Islands Government is evaluating certain areas of its coastal zone with the intention of declaring certain areas as Marine Parks and Protected Areas.

Question 11

Any turtle research projects which may be in progress or planned.

Answer

There are no turtle research projects in progress neither are there any planned for the near future.

Question 12

Any additional information that you may have on turtles.

Answer

We have no further information at this point on turtles.

and expressed Government's commitment to the formation of Cooperatives.

On 8 June, the Seminar was declared open in Road Town by Mr Stanley Gordon, Permanent Secretary, Ministry of Natural Resources and Public Health on behalf of the Honourable Chief Minister at Methodist Church Hall. He expressed gratitude for the assistance of the ILO/DANIDA International Development Agency and reiterated Government's commitment to the formation of Co-operatives.

Ministry of Natural Resources & Public Health
Road Town

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TURTLES (PROTECTION) NOTICE

The public is hereby reminded that under the Turtles (Protection) Notice made under Section 3 of the Turtles Ordinance Chapter 87 the period between 1 July and 31 August in every year, both days inclusive, is the CLOSED SEASON for the catching of turtles.

It is therefore, unlawful for any person to:

a) catch or take, or attempt to catch or take or cause to be caught or taken any turtle; or

b) slaughter any turtle or buy, sell, expose for sale or have in his possession the whole or any portion of the meat of such turtle; or

c) take or attempt to take, or cause to be taken, any turtle eggs (including the eggs of trunk turtles),

c) buy, sell, expose for sale, or have in his possession any turtle eggs (including the eggs of trunk turtles),

during the period between 1 July, 1978 and 31 August, 1978.

Agricultural Department
Road Town

.....

SAGE MOUNTAIN NATIONAL PARK

The Rotary Club of Tortola has kindly agreed to undertake the following project at Sage Mountain National Park:

a) To erect an interpretive board in the vicinity of the area used as a Car Park. The board would show existing trails, points of interest, etc;

b) To erect directional signs on the trails leading, for example, to the xerophytic forest and to the Peak; and

c) To establish the botanical names of trees that are of special significance.

The above National Parks Development Project is being done in observance of World Environment Day (5 June) which was sponsored by the United Nations Environment Programme.

The National Parks Trust is highly appreciative of Rotary's contribution and expresses the hope that other organizations in the Territory will take advantage of the opportunity to continually address themselves to environmental matters.

Ministry of Natural Resources & Public Health
Road Town

CHIEF MINISTER'S OFFICE

TORTOLA

BRITISH VIRGIN ISLANDS 15 June, 1978

VIRGIN ISLANDS

STATUTORY RULES AND ORDERS

1977, No. 4

Proclamation dated the 9th day of March, 1977 Establishing a Fisheries Zone Contiguous to the Territorial Sea of the Virgin Islands.

[Gazetted 10th March 1977]

BY THE GOVERNOR OF THE VIRGIN ISLANDS

A P R O C L A M A T I O N

h.h. Wallace
Governor

I, WALTER WILKINSON WALLACE, Commander of the Most Excellent Order of the British Empire, upon whom has been conferred the decoration of the Distinguished Service Cross, Governor of the Virgin Islands, acting in pursuance of instructions given by Her Majesty through a Secretary of State, do hereby proclaim and declare that -

1. There is established for the Virgin Islands a fisheries zone contiguous to the territorial sea of the Virgin Islands.

2. The said fisheries zone has as its inner boundary the outer limits of the territorial sea of the Virgin Islands and as its seaward boundary a line drawn so that each point on the line is two hundred nautical miles from the nearest point on the low-water line on the coast or other baseline from which the territorial sea is measured or, unless another line is declared by Proclamation, the median line where this is less than 200 nautical miles from the baseline. The median line is a line every point of which is equidistant from the nearest points of the baseline of the Virgin Islands and the corresponding baselines of other countries or territories.

3. Her Majesty will exercise the same jurisdiction in respect of fisheries in the said fisheries zone as She has in respect of fisheries in the territorial waters of the Virgin Islands subject to such provisions as may hereafter be made by law for the control and regulation of fishing within the said zone.

GIVEN under my hand at the Governor's Office, Road Town, Tortola, this 9th day of March, 1977 and in the twenty-sixth year of Her Majesty's reign.

GOD SAVE THE QUEEN!

Printed at the Government Office, Road Town, Tortola, British Virgin Islands by A. Boston, a Government Printer - by Authority.
(Price: 15 cents)

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1 GAZ.

TURTLES

GREEN TURTLES PROTECTED BY LAW

As of July 28th, 1978, Green sea turtles (Chelonia mydas) have been placed on the threatened Marine Mammals list under the Federal Endangered Species Act. Federal law now prohibits the capture, pulling or transporting of these marine animals. If by accident a turtle is taken or caught, it should be handled with care and immediately returned to the sea.

To aid in enforcement of this new law, the BVI is asking the help from Virgin Islanders. Anyone seeing persons taking these turtles or the sighting of turtle nets is asked to call the Bureau of Fish and Wildlife at 775-0470. A turtle net has a larger mesh size than fish nets.

Your cooperation will be greatly appreciated.

LEATHERBACK TURTLE ON ST. THOMAS:

For the first time in many years the leatherback, or trunk, turtle was found May 5th, 1978 nesting on Magens Bay beach near the popular beaches entrance. Discovered by patrolling DPCA enforcement officers on May 5th, 1978 the single nest site was roped off for most of the day while DPW staff biologists, worked via telephone with FWS endangered species special agents in Puerto Rico and Atlanta to decide what to do with the nest.

Because of the high density public use of the Magens Bay facility it was decided that the eggs must be removed by incubated artificially. Using techniques described by the well known turtle biogist William Rainey, presently of University of California Berkeley, the eggs were located on the afternoon of May 5th and taken in a special incubating box to the Island Resources Foundation (IRF) Red Hook, St. Thomas. IRF was chosen by DPW St. Thomas and Fish Atlanta staff since they have successfully incubated a great many orphaned nest of Green Turtles in the past, and had at hand the proper facilities.

Representative of IOCARIBE Technical Team in the Territory to Research on Sea Turtles

Mr. John Fletemyr, a Marine Biologist, recently arrived in the Territory to assist the Ministry of Natural Resources and Environment in a habitat inventory of turtle nesting sites; and in the preparation of a National Report on the status of turtles to be presented at the Western Atlantic Turtle Symposium (WATS) in San José, Costa Rica in July 1981).

2. The Symposium has the following objectives:-

To develop a data base for each species of turtles by:-

(a) conducting aerial and beach surveys for sea turtle nesting in selected areas;

(b) compiling data on sea turtle populations and status of stocks;

(c) review conservation and management options; and

(d) promote international cooperation in scientific studies of sea turtles.

3. The Symposium is sponsored by the Intergovernmental Oceanographic Commission Association for the Caribbean and Adjacent Regions (IOCARIBE) and supported by the Western Central Atlantic Fisheries Commission (WECAFC).

4. Mr. Fletemyr is part of a Technical Team assigned to the British Virgin Islands to facilitate research on the status of turtles and to compile a National Report for the British Virgin Islands.

Ministry of Natural Resources and Environment
Road Town, Tortola.

31st July, 1981

B.V.I. High School - Evening Classes

A special ten (10) Week Course in Marketing is being offered at the B.V.I. High School on Tuesdays 6.00 to 8.00 p.m. in Block A.

The course will be conducted by Mr James Macpherson who recently retired as a Marketing and Advertising Executive in the United States. He is still active as a consultant to businesses in the United States and instructs at a Michigan Community College.

This course is specially designed for owners and operators of small businesses in the British Virgin Islands. Subjects will include a comprehensive study of the marketing process, how to start and manage a small business, financial record keeping, personnel management, stock control, pricing, promotion and merchandising. Attention will also be given to the development and execution of print and broadcast advertising, the advertising creative process, budget control and media scheduling.

The fee for the course is $25. Those persons interested in enrolling in this course should register at the B.V.I. High School between 21 and 23 January, 1980 during working hours.

B.V.I. High School,
Road Town.

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Removal of Sand from Protected Beaches

The Beach Protection Ordinance, No. 5 of 1962, as amended, provides that it shall not be lawful for any person to dig, take or carry away any sand, stones, shingle or gravel from any protected beach or sea shore, except in accordance with a written permit.

The general public is reminded that sand extraction from beaches, damages our only coastal resource and aggravates the erosion problem particularly in fragile areas such as Cane Garden Bay. The continued pilferage does not reflect good conservation practices expected of a developing country.

Any one found removing sand illegally from any of the Territory's beaches will be dealt with in the manner prescribed by law.

Ministry of Natural Resources
and Environment,
Road Town.

GOVERNMENT INFORMATION SERVICE

5/80

NEWS RELEASE

Town and Country Planner

Mr Ivor Jackson, Planning Consultant has recently completed a two-year assignment as Town and Country Planner with the BVI Government. Mr Jackson also served as Vice-Chairman of the Land Development Control Authority.

His term of duty has been of infinite value to physical planning and controlled development in the British Virgin Islands and this Government is very appreciative of the contribution that he has made.

Mr Ira Smith, Architect, Public Works Department has been appointed as Architect/Planner with responsibility for Town Planning within the Chief Minister's Office.

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Public Information Programmes

Effective February 4, 1980 Government will reactivate public information programmes on radio station ZBVI on a regular basis. The aim of this service is to keep the public informed of approved plans and projects as well as methods and procedures to be adopted by the public in seeking to avail themselves of all government facilities. Programmes of a general education nature will also be aired from time to time.

The public is invited to direct any queries and comments pertaining to the programmes to Public Information Service, c/o Chief Minister's Office.

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Census 1980

The last population Census was conducted here in the BVI in April of 1970. At that time the Territory's population was 10,030. Since then the Territory has undergone several changes. The population has grown, several people have moved from one place to another placing demands on social services, public utilities etc. The population Census is designed to provide the information needed to assess these changes as well as to supply the necessary data on which Government can base plans affecting the economic and social status of the population.

May 12, 1980 has been declared as Census Day for the Commonwealth Caribbean. On this day there will be a complete count of the population of the BVI. Trained enumerators will visit every building in the Territory in order to interview members of households and record the necessary information on Questionnaires. Questions asked will relate to population, age structure, educational attainment, labour force, housing and other socio-economic characteristics. Under the Census Laws of the BVI every one employed in the census exercise will be required to take an oath of secrecy and not to divulge any information collected in the Census. Also all c[illegible]

/published.....

MINISTRY OF NATURAL RESOURCES & ENVIRONMENT
GOVERNMENT OF THE BRITISH VIRGIN ISLANDS.
TORTOLA.

Our Ref. ENV. 19/1/002
Your Ref.
British Virgin Islands.
25th July, 1981

Dear Sir,

The Symposium on Sea Turtles Research in the Eastern Central Atlantic (Population and Environment)

I belatedly refer to your letter AGP/FIS/2 of 4th June, 1980.

2. I now enclose two copies on the status of Turtles in British Virgin Islands. I would also very much appreciate any assistance the Technical Team could provide in facilitating additional data collection and research that could aid in the preparation of a National Report.

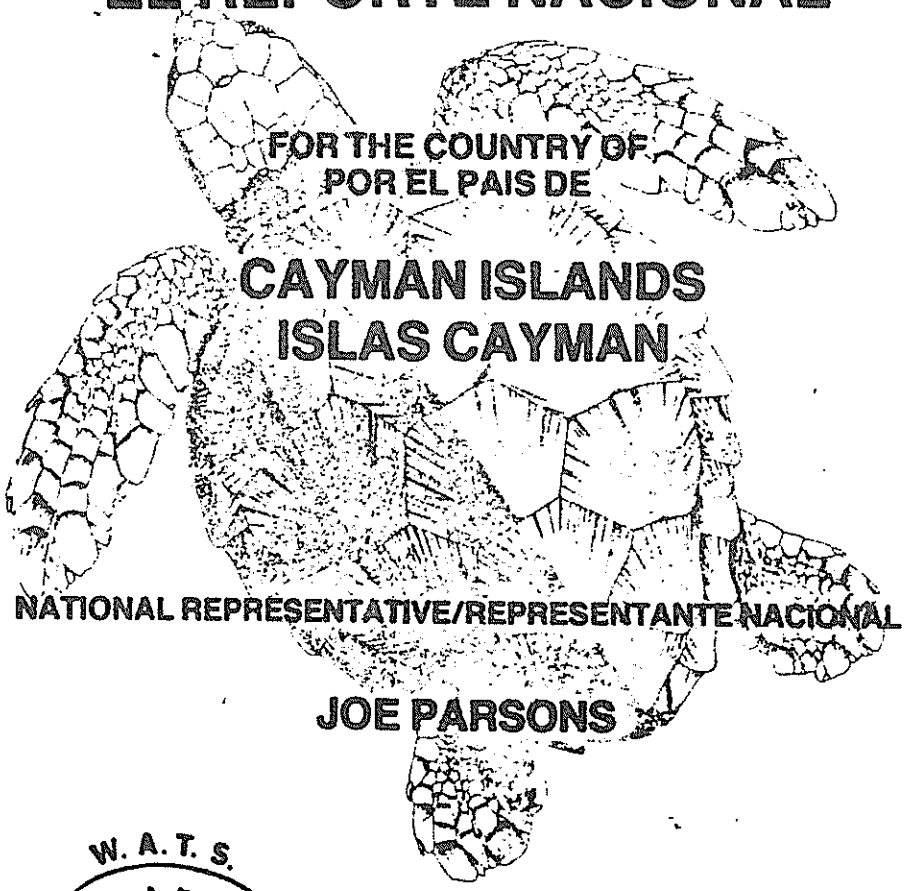
Yours faithfully,

(Robert Creque)
Permanent Secretary.

The Director of Fisheries
Ministry of Agriculture & Fisheries
P.O. Box N3028
Nassau Bahamas.

cc: Mr. Larry H. Ogren
Fishery Biologist (Research)
U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
3500 Delwood Beach Road
Panama City, Florida 32407.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

CAYMAN ISLANDS
ISLAS CAYMAN

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

JOE PARSONS

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

CAYMAN ISLANDS

NATIONAL REPORT PRESENTED BY -

JOE PARSONS
The National Representative

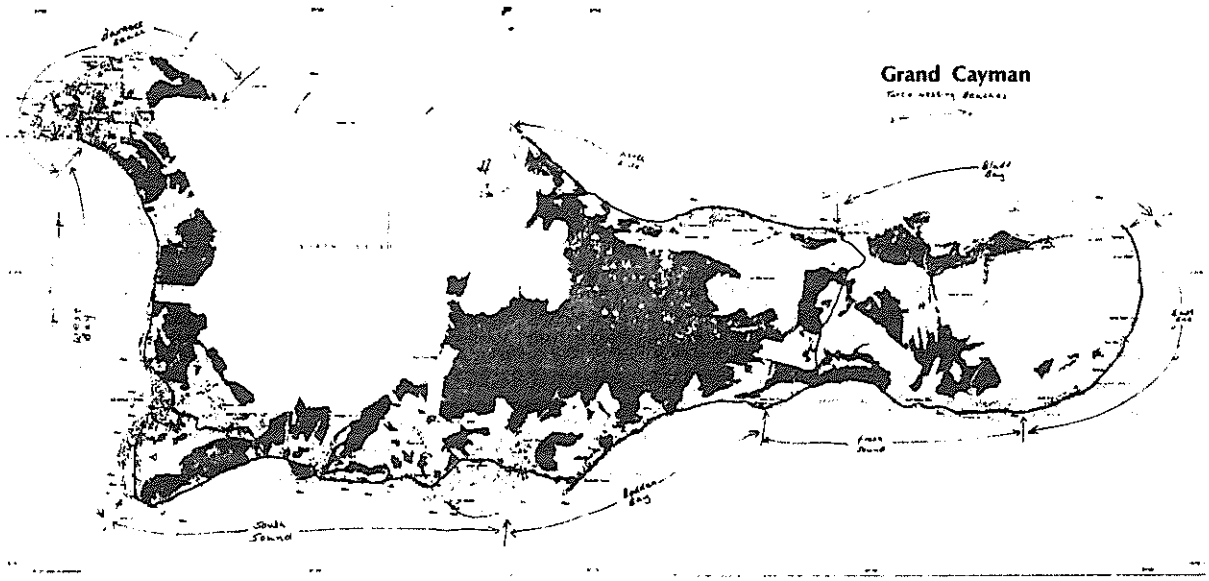
Address: MINISTRY OF AGRICULTURE, LANDS
AND NATURAL RESOURCES, GOVERNMENT
ADMINISTRATION BUILDING, CAYMAN ISLANDS

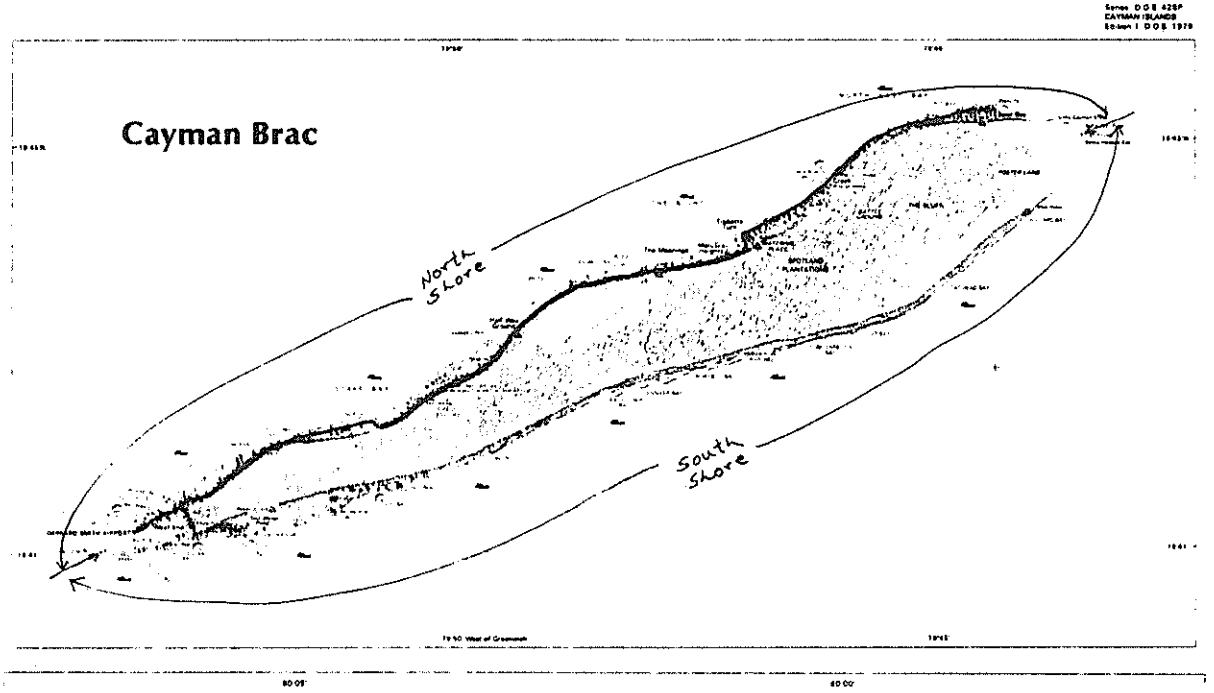
NATIONAL REPORT PREPARED BY

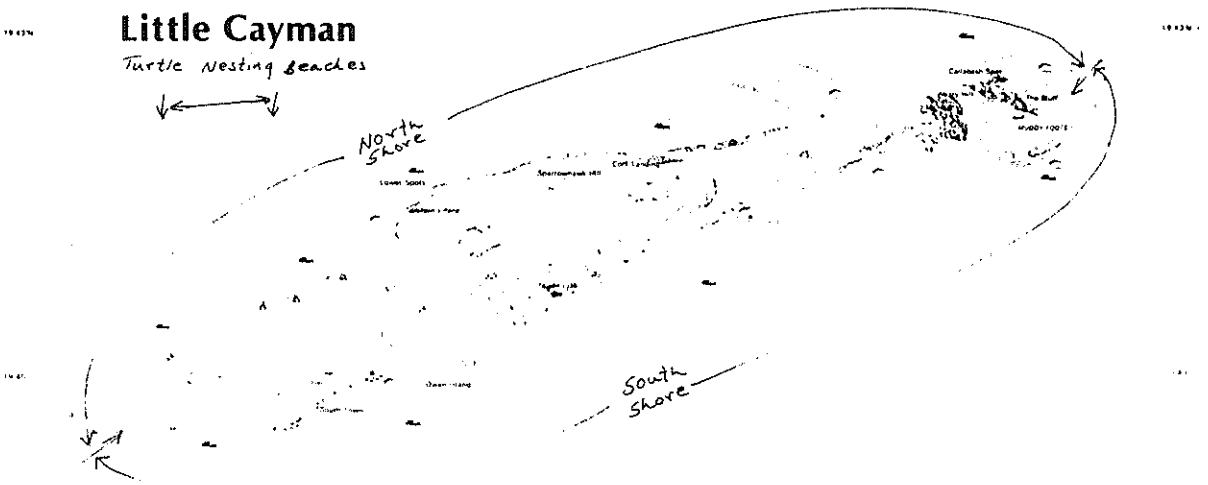
JOE PARSONS - FISHERIES OFFICER

DATE SUBMITTED: 29 NOVEMBER 1982

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.


Grand Cayman
South Sound


Cayman Brac
North Shore
South Shore


Little Cayman
Turtle Nesting Beaches
North Shore
South Shore

Country _____

Length of Coastline* . . . . . 204 Km

Km^2 of Continental Shelf Area . . . . . 255 Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 4.8 Km

Extended Economic Zone . . . . . N/A Km

Fisheries Jurisdiction . . . . . N/A Km

Other (Describe) _____ . . . N/A Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	28.5	23.9	52.4
A. High Energy	18.5	6.3	24.8
B. Low Energy	10.0	17.6	27.6
2. Reef (exposed)	0.0	5.4	5.4
3. Rocks	45.3	14.0	59.3
4. Cliffs	32.7	14.0	46.7
5. Vegetation (Total)	36.0	4.4	40.4
A. Vines	-	-	-
B. Grasses	-	-	-
C. Mangroves	36.0	4.4	40.4
D. Coconut Trees	-	-	-
E. Other Trees or Shrubs	-	-	-
F. Marshes	-	-	-
6. Mouths of lagoons, rivers, canals	-	-	-
7. Total Shoreline	142.5	61.7	204

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. RUM POINT	5.0		
2. NORTH SIDE	10.7		
3. BLUFF BAY	4.0		
4. EAST END	5.7		
5. FRANK SOUND	3.8		
6. BODDEN BAY	8.0	C C,	JUNE
7. SOUTH SOUND	3.2		
8. WEST BAY	7.2		
9. BARKERS BEACH	3.6		
10. SOUTH SHORE CAYMAN BRAC	10		

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. CAYMAN BRAC NORTH SHORE	12.0		
2. LITTLE CAYMAN SOUTH SHORE	16.4		
3. LITTLE CAYMAN NORTH SHORE	13.2		
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

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Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Beach 1. Land Reclamation, dredged sand. Fine particle sand and whole and broken shell - low profile - grass and beach vines to within 3 feet of water in most places - some artificial lighting.

Beach 2. Mostly low profile high energy - drift material and sea grass - white sand and broken coral rubbles - sea grape and other vegetation background - not much artificial light.

Beach 3. As above (Beach 2).

Beach 4. As Beach 2 and 3 but with more artificial light and approximately 75% developed.

Beach 5. As above - approximately 20% developed.

Beach 7. Mostly small-white sand and drift material and sea grass - low profile cove beaches with cliffs or heavy vegetation background - some artificial lighting - fine particles.

Beach 8. Low profile - white sand - highly developed-much artificial lighting - fine particles.

Beach 9. Low profile - white sand - fine particles - drift material and sea grass - not much development or artificial light - sea grape and other vegetation background.

Beach 10. As beach 9.

Beach 11. As above.

Beach 12. As above.

Beach 13. As above

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. North Sound	75	CM & E	Observation
2. Shelf area other than North Sound	180	CM & E	Observation
3.			
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. GEORGE TOWN HARBOUR	CM E & CC	NETS	YEAR ROUND	35/2386 CM 1.5/73 E
2.				
3.				
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION 1978	1976	1974	
Caretta caretta	-	-	-			7	PORT LANDING RECORDS
Chelonia mydas	170	915	329	521	166	508	PORT LANDING RECORDS
Dermochelys coriacea	-	-	-	-	-	-	PORT LANDING RECORDS
Eretmochelys imbricata	1	7	-	7	55	94	PORT LANDING RECORDS
Lepidochelys kempi	-	-	-	-	-	-	-
Lepidochelys olivacea	-	-	-	-	-	-	-

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION 1979	1978	1977
No. of eggs							
Meat (Kg)							
Shell No./Wt.	--	682 kg	-	-	-	454 kg	91 kg.
Skins No./Wt.							
Stuffed Juveniles							
Other							

SPECIES ERETMOCHELYS IMBRICATA

TABLE 19.___ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
PORTFOLIO OF AGRICULTURE LANDS AND NATURAL RESOURCES GOV. ADMIN. BLDG. GRAND CAYMAN.			
CAYMAN ISLANDS POLICE			

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

CAYMAN ISLANDS

1) The Marine Conservation (Turtle Protection) Regulations, 1978.

PURPOSE:

To protect female turtles and turtle eggs during the nesting season of May to September.

2) The Endangered Species Protection and Propagation Law, 1978 (Law 21 of 1978)
Section 4., Paragraph (2)

PURPOSE:

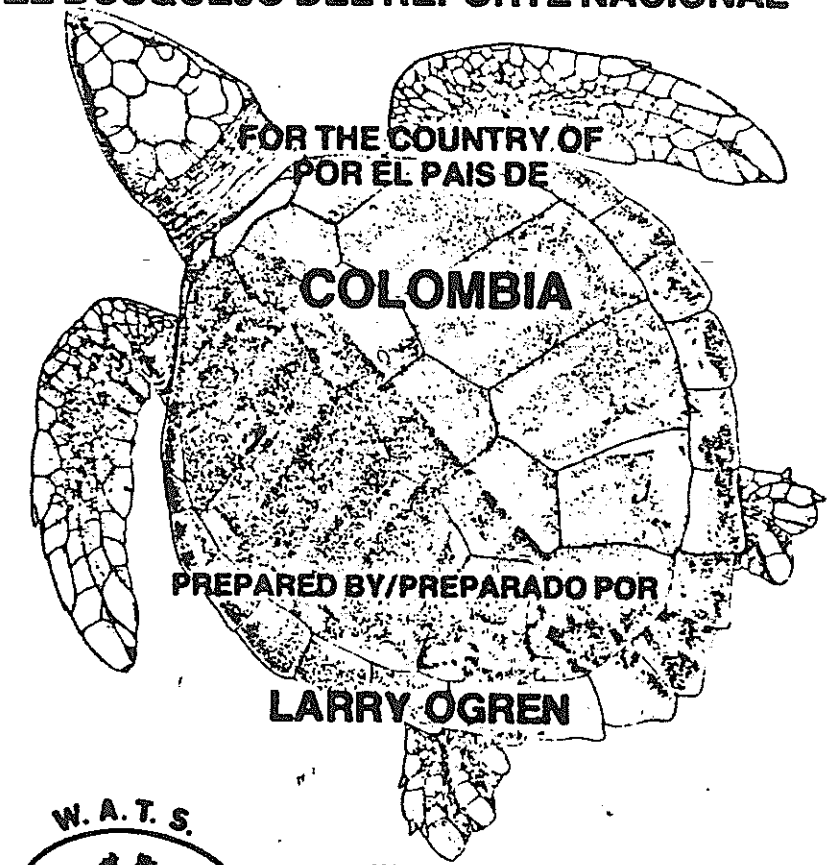
To allow the traditional fishing of turtles, within the fishery limits of the Cayman Islands, for consumption by persons within the Islands while preventing trade in endangered species. (Subject to the limitations of the Turtle Protection Regulations).

SUPPLEMENTARY TO TABLE 20

REGULATORY AUTHORITY

The Portfolio of Agriculture, Lands and Natural Resources is responsible for the formulation of regulations for subjects covered in the Portfolio which include the Marine Regulations. Surveillance and enforcement are primarily the responsibility of the Cayman Islands Police with the help of volunteer fishery inspectors. The limited manpower and vessels available for marine patrols severely limits the extent of surveillance. This is greatly reflected in the fishing activities. The fishing vessels clear port for the "High Seas", consequently, it is impossible to determine that they do not fish in violation of other countries Exclusive Economic Zones.

THE DRAFT NATIONAL REPORT
EL BOSQUEJO DEL REPORTE NACIONAL



W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

DRAFT

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

DRAFT NATIONAL REPORT FOR THE COUNTRY OF

COLOMBIA

NATIONAL REPORT PRESENTED FOR

Dr. Jorge Hernandez
The National Representative

Address: Jefe de Division de Fauna
INDERENA
Diagonal 34 N°5618, Piso 4
Bogota, D.E., COLOMBIA

DRAFT NATIONAL REPORT PREPARED BY

Larry Ogren

DATE SUBMITTED: July 17, 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

MARINE SHORELINE CHARACTERISTICS*	KM OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total) ca. > 50% of SHORELINE			780
A. High Energy ca. 75%			
B. Low Energy ca. 25%			
2. Reef (exposed)			
3. Rocks } BOTH TYPES OCCUR			
4. Cliffs } FREQUENTLY ALL ALONG COAST			
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves			
D. Coconut Trees } ALL TYPES ARE			
E. Other Trees or Shrubs } PRESENT ON OR			
F. Marshes } BEHIND BEACHES			
6. Mouths of lagoons, rivers, canals			
7. Total Shoreline			1560 *

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* COASTLINE DISTANCE (FAO TERM)

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. PLAYAS ACANDI	4	Dc	MARCH - JULY
2. LA PLAYONA	12	Dc	MARCH - JULY
3. RIO PIEDRAS — RIO DON DIEGO +3 KM	25	Cc	APRIL - AUGUST
4. RIO PALOMINO — PUEBLO DIBULLO	28	Cc	APRIL - AUGUST
5. PLAYA BLANCA * ISLA BARU	3	Ei	—
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

* FISHERMAN'S REPORT NEVER SURVEYED

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

PLAYAS ACANDI. DELTAIC SANDS DEPOSITED BY RIVER. FINE-GRAINED DARK SAND. SMALL TOWN LOCATED A FEW HUNDRED YARDS BEHIND BEACH. RIVER BISECTS BEACH. ROAD BEHIND BEACH. SCATTERED COCONUT TREES.

LA PLAYONA SOUTH OF ABOVE BEACH, SEPARATED BY SMALL PROMINTORY - HIGH POINT OF LAND (PUNTA TOLA). SIMILAR BEACH CHARACTERISTICS

BEACHES No. 3 & No. 4. HIGH ENERGY BEACHES. AREAS OF COARSE GRAINS/SOME COBBLES MIXED WITH BIOGENIC SEDIMENTS. SUBJECT TO EROSION AND TRUNCATE SCULPTING DURING THE YEAR WITH DRASTIC CHANGES IN BEACH WIDTH. TYPICAL FLORA OF BEACH PLANTS COMMON TO CIRCUM-CARIBBEAN LITTORAL (IPOMOEA, SESUVIUM), LAGUNCULARIA, COCCOLOBA, COCOS H/BISCUS)

SECTION OF BEACH No. 3 BETWEEN RIOS BURITACA AND DON DIEGO (7.5 KM) ESTABLISHED AS A SEA TURTLE RESERVE IN 1966 BY C.V.M. (PREDECESSOR AGENCY TO INDERENA). NAMED THE "BURITACA RESERVE".

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	> 2	300	1966, 1967, 1970
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH BURITACA [1]
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

[1] 7.5 KM SECTION OF RIO PIEDRAS - RIO DON DIEGO + 3 KM BETWEEN RIO BURITACA AND RIO DON DIEGO.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	Dc	E	Lk	Lo	NO I. D.
6/15/83	CARTAGENA — PUERTO LOPEZ (EAST)	?	?	0	0	/	/	1
6/16/83	CARTAGENA — ACANDI (WEST)	0	3	18	0	/	/	/
10/3/80	PUNTA GARITA - PUNTA SAN BERNARDO (INCLUDING ISLAS DEL ROSARIOS AND ISLAS SAN BERNARDO)	0	0	0	0	/	/	/

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

AERIAL SURVEY FLIGHT PLAN

CARTAGENA, COLOMBIA I
3 OCTUBRE 1980
AIRPORT: CARTAGENA INTERNATIONAL AIRPORT
TYPE OF FLIGHT: PRIVATE CHARTER
AIRCRAFT: PIPER WARRIOR (SINGLE ENGINE, LOW-WING, 4-PLACE)
PILOT: FERNANDO BOCANEGRA M.
OBSERVERS: LARRY OGREN (NMFS), FERNANDO DUQUE G. (INDERENA), KATHRINE DUNLOP (PEACE CORPS).
AIR SPEED: 110 KTS
ALTITUDE: 100 - 125 FT
FLIGHT PLAN: NORTH TO PUNTA GARITA (c. 30 MILES)
SOUTH TO PUNTA SAN BERNARDO (c. 50 MILES)
CIRCLE { ISLA CASCAJO; ISLAS DEL ROSARIO; ISLAS DE SAN BERNARDO
FLIGHT HRS: 0709 — 1030 HRS; 1 HR ON THE GROUND AT PUNTA SAN BERNARDO
FLIGHT TIME: 2 HRS. 20 MINS.

SEA TURTLE AERIAL SURVEY

Flight page 1 of 1

Ground truth survey made No
Zone Record form on file

FLIGHT DATA RECORDS

OBSERVER 1 OGREN
OBSERVER 2 PICON
OBSERVER 3 DUQUE
RECORDER OGREN
PILOT GARCIA
AIRCRAFT AERO COMMANDER

COUNTRY COLOMBIA STATE CARIBBEAN COAST
ZONES SEE GEOGRAPHICAL FEATURES
DATE 6/15-16/83 TIME: S 0700 E 1300 & 1100
Weather: Current FAIR 24hrs. SCATTERED SHOWERS Sea State CALM — No Visibility CLEAR
Temperature: Beach Air — Surf — AROUND
CAPS

ZONE Description	ZONE No.	TIME	CRAWLS Fresh* Nest	Fresh* Fals	OLD	TOTAL	SPEC-IES	TURT-LES	FLIGHT DATA	SHORELINE DATA (& other)
LAGUNA DE NAVIO QUEBRADO		6/16 0850	1			1	?		SEE ATTACH.	BARRIER BEACH STRAND NORTH OF LAGOON
PUNTA CARIBANA - PUEBLO MULATOS		6/16 0953			1	1	?/Cm		"	UNINHABITED BEACH W/COCAL
PUNTA CARIBANA - PUNTA ARENAS		6/16 0859	2			2	Cm		"	REMOTE BEACH BETWEEN POINTS
PLAYAS ACANDI		6/16 0925	18			18	Dc		"	BEACH AT RIVER MOUTH AND IN FRONT OF TOWN OF ACANDI

* FRESH CRAWLS = RECENT CRAWLS

CARTAGENA, COLOMBIA II
15 JUNE 1983
AIRPORT: CARTAGENA INTERNATIONAL AIRPORT
TYPE OF FLIGHT: NAVAL RESERVE / AIR SEA RESCUE CHARTER FLIGHT (PATRULLA AERONAVAL)
AIRCRAFT: AERO COMMANDER (ROCKWELL) (TWIN-ENGINE, HIGH WING, 8-PLACE)
PILOT: JOSE MIGUEL GARCIA
CO-PILOT: FERNANDO ZAPATA
OBSERVERS: LARRY OGREN (NMFS), JORGE PICON (FWS), FERNANDO DUQUE G. (INDERENA)
AIR SPEED: 140 - 145 KTS
ALTITUDE: 480 - 500 FT
FLIGHT PLAN: NORTH TO GUAJIRA PENINSULA - EAST TO VENEZUELAN BORDER ALONG ENTIRE COASTLINE. FLY DIRECTLY BACK TO CARTAGENA
FLIGHT HRS: 0700 - 1300 HRS
FLIGHT TIME: 6 HRS

CARTAGENA, COLOMBIA II
16 JUNE 1983
(SAME AS 15 JUNE FLIGHT)
OBSERVERS: ADD, EDWARD LASSER (BIOLOGY TEACHER)
FLIGHT PLAN: SOUTH ALONG COASTLINE, ACROSS GOLFO URABA NORTH OF RIO ATRATO DELTA, TO PANAMANIAN BORDER. FLY DIRECTLY BACK OVER ISLA FUERTE AND ISLA TORTUGUILLA
FLIGHT HRS: 0710 - 1109 HRS
FLIGHT TIME: 4 HRS

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

- PLAYAS ACANDI, MARCH 1982
  DURING ONE WEEK OF BEACH PATROLS BY TV FILM PRODUCER, 28 NESTING EMERGENCES OF Dc WERE OBSERVED ON ~1 MILE SECTION OF BEACH

SPECIES \ YEAR	1983 projected	1982	1981	1980	1979	1978
Caretta caretta						
Chelonia mydas						
Dermochelys coriacea		100 [1]				
Eretmochelys imbricata						
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

[1] DATE OF PUBLICATION; DATA/OBSERVATIONS FROM CA. 1977-78
ROSS, J.P. (1982)

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. PUNTA SAN BERNARDO — PUNTA DE LA GARITA (APPROXIMATELY)	—	Cm (13 TAG RETURNS)	TAG RETURNS OF TURTLES FROM THE TORTUGUERO, C.R. ROOKERY, 1956-76.
2. RIO PIEDRAS — PUNTA MANJAURE (APPROXIMATELY)	—	Cm (14 TAG RETURNS)	SAME AS ABOVE
3. ALTA GUAJIRA PENINSULA	—	Cm (18 TAG RETURNS)	SAME AS ABOVE
4. ISLAS DEL ROSARIO	—	Cm, Cc, E,	FISHERMEN'S REPORTS
5. ISLAS SAN BERNARDO	—	Cm, Cc, E,	FISHERMEN'S REPORTS
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	AUGUST-SEPTEMBER* (JULY)
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	ALL MONTHS
Lepidochelys kempi						'							N.A. (RARE)
Lepidochelys olivacea													N.A. (RARE)

TABLE 8 - ___ TURTLE SPECIES PRESENT IN FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

* BASED ON ARTISANAL FISHERY AT PUNTA CANOAS

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. Abbreviations)	COMMENTS
PUNTA CANOAS 10°35'N 75°30'W	6/4/83	N.A.	AREA OF TURTLE FISHERY (ARTISANAL) WHERE Cm, Cc ARE FREQUENTLY CAUGHT. FISHERMEN STATE THAT TURTLES ARE ON A "PASEO" OR TRANSITING THE AREA. FLAT, SANDY-SILT BOTTOM.

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Cc	EROSION (POSSIBLY MOST SIGNIFICANT)	—
Hatchlings			
Juveniles			
Adults (in water)			
Nesting females			

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; diseases; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

* NO QUANTITATIVE DATA IS AVAILABLE FOR DETERMINING THE DEGREE OF NATURAL MORTALITY EXCEPT TO SAY NO REMARKABLE LOSES OF TURTLES OR EGGS OCCUR WHERE NESTING STILL TAKES PLACE. A POSSIBLE EXCEPTION TO THIS GENERALIZATION WOULD BE DUE TO BEACH EROSION.

NAME OF PORT OR SITE	SPECIES LANDED Use abbrev)	FISHING GEAR USED *	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
PUNTA CANOAS — 1. BOQUILLA	Cm, Ei Cc	SET NETS (LARGE-MESHED, TURTLE)		
ISLA TIERRA BOMBA — 2. CARTAGENA	Cm, Ei Cc	SET NETS (LARGE-MESHED, TURTLE)		
PUERTO DE VERRUGA 3. GOLFO DE MORROSQUILLO	Cm, Cc Ei	SET NETS (LARGE-MESHED, TURTLE)		
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

* OFFSHORE REEFS — TURTLES CAPTURED BY DIVING

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES	HATCHERY OPERATIONS: EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES: NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1972 MENTION WAS MADE OF EARLY HEADSTART ATTEMPTS WITH Cc FROM BURITACA. NOT SUCCESSFUL — EFFORT ABANDONED. NO REPORT LOCATED.

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS

This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc. Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
INDERENA Boca Grande, Cartagena Centro Investigaciones Pesqueras	1 Temp. Not Full Time Duty	Preliminary efforts to re-implement turtle conservation efforts. Some information on artisanal fisheries investigation included comments on turtle nets.
INVEMAR Punta de Betin Santa Marta	1 Temp. Not Full Time Duty	Preliminary survey of past sea turtle investigations & reports (literature survey). Formerly institution of significant sea
INVEMAR'S * Predecessor: Instituto Colombo-Aleman, Punta de Betin Santa Marta	1 Full Time plus ? Assistants	Turtle research 1966 — ca 1972 (Reinhard Kaufmann)

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

* HISTORICAL RECORD; FIRST SIGNIFICANT SEA TURTLE RESEARCH ACTIVITY.

NATIONAL PARKS NAME AND LOCATION	AREA km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Los Corales del Rosario - Parque Nacional Natural SW Cartagena	—	UW park, corals, reef fishes, turtle grass habitats, turtles, extensive, unique.	Insufficient
Salamanca * near Barranquilla, west of Santa Marta	—	Narrow barrier beach with mangrove forest (extensive) and migratory waterfowl pop.	Insufficient
Tayrona * east of Santa Marta	—	Archeological; geographic (unusual); natural flora and fauna, relatively undisturbed	Insufficient
Buritaca ** east of Tayrona at Parks eastern boundary	—	Sea turtle nesting beach; formerly hosted Cm, Cc, Ei, Dc. Nesting infrequent today.	Not patrolled (insufficient nesting activity to continue intensive coverage of previous years)

TABLE 19. SANCTUARIES AND REFUGES

* NOT SPECIFICALLY DESIGNATED AS A TURTLE REFUGE, BUT DO PROVIDE NESTING AND FORAGE HABITAT FOR THEM.

** FOR THE SPECIFIC PURPOSE TO PROTECT NESTING TURTLES.

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
INDERENA	—	—	ENFORCEMENT DIFFICULTIES EXIST. CLANDESTINE CAPTURE AND SALE OF SEA TURTLES EXISTS, POACHING OF NESTING FEMALES/EGGS REMAINED TO BE COMMON OCCURRENCE — WHERE TURTLES STILL ENABLE TO NEST. IN GENERAL, ENFORCEMENT EFFORT IS NOT ADEQUATE.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

MINISTRY OF AGRICULTURE NATIONAL DECREE No. 1681 OF AUGUST 4, 1978.

- A TOTAL MANAGEMENT OF ALL AQUATIC BIOLOGICAL RESOURCES
- PROTECTION AND DEVELOPMENT OF AQUATIC BIOLOGICAL RESOURCE AND THEIR ENVIRONMENT
- THE MANAGEMENT AND ADMINISTRATION OF ABOVE RESOURCES, INCLUDING THOSE MARINE AND CONTINENTAL, ARE CONFERRED TO THE INSTITUTO NACIONAL DE LOS RECURSOS NATURALES RENOVABLES Y DEL AMBIENTE (INDERENA)
- INDERENA WILL CONTROL AND WILL ISSUE PERMITS FOR IMPORTATION AND EXPORTATION OF ALL SPECIES OR PRODUCTS FROM ANY AQUATIC BIOLOGICAL SPECIES.

* LEGISLATIVE HISTORY:
THE ABOVE LAW IMPLEMENTS AND AMENDS PREVIOUS COLOMBIAN LAWS DEALING WITH THE PROTECTION OF THE AQUATIC BIOLOGICAL RESOURCES

- NATIONAL DECREE No. 2811 OF 1974
- NATIONAL DECREE No. 23 OF 1973
- NATIONAL DECREE No. 376 OF 1957

** SPECIFIC REGS RE SEA TURTLES IN PROMULGATED ARTICLES

PROJECT TITLE *	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
——	1966	1967	CORPORACION AUTONOMA REGIONAL DE LOS VALLES DEL MAGDALENA Y DEL SINU (C.V.M.). DR. REINHARD KAUFMANN
——	1968	1971	INDERENA, DR. REINHARD KAUFMANN (INSTITUTO COLOMBO-ALEMAN, PUNTA DE BETIN, SANTA MARTA
OPERACION TORTUGA	1972	1972	INDERENA; CRAIG E. TUFTS (PEACE CORPS PROGRAM)
OPERACION TORTUGA	1973	1973	INDERENA. — — — — —
OPERACION TORTUGA*	1974	1975	INDERENA, E. RAMIREZ (PROYECTO PARQUES NACIONALES Y VIDA SILVESTRE, BARRANQUILLA)

* PROJECT TERMINATED. INSUFFICIENT NUMBERS OF TURTLES NESTING TO SUPPORT RESEARCH GOALS.

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

* TURTLE PROJECTS IMPLEMENTED BY GOV'T COMMISSION JOINED (C.V.M.) STUDY.
STUDY BY DR. FEDERICO MEDEM (1962)

PROGRAMA PARA LA PROTECCION Y CONSERVACION DE LA TORTUGA DERMOCHELYS CORIACEA EN LAS COSTAS DEL NOROESTE DE COLOMBIA	1980	CORPORACION REGIONAL DE DESERROLLO DE URABA, CENTRO DE INVESTIGACIONES MARINAS DE URABA (CIMUR), [1] SR. ENRIQUE NEGRET CORDOBA

[1] A PROPOSAL TO CONDUCT SEA TURTLE INVESTIGATIONS IN GOLFO URABA, SPECIFICALLY AT THE LEATHERBACK TURTLE "ROOKERY" AT ACANDI, WAS SUBMITTED TO THE IUCN BY INDERENA, THE SUPERVISORY AGENCY. TO OUR KNOWLEDGE (OGREN) THIS WORK WAS NOT IMPLEMENTED AND NO INVESTIGATION IS BEING CONDUCTED AT THIS TIME.

TABLE 21. NATIONAL RESEARCH PROJECTS (CONT.)

(SEE ATTACHMENT)

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. LA TORTUGA CON CAPARAZON DE CUERO (DERMOCHELYS CORIACEA). UNPUBLISHED REPORT BY ENRIQUE NEGRET C.)
2. CINUR-CORPOURABA. 1979. 5p
3. CARR, MEYLAN, MORTIMER, BJORNDAL & CARR. 1992
4. SURVEYS OF SEA TURTLE POPULATIONS AND HABITATS IN THE WESTERN ATLANTIC. NOAA TECH. MEM. NMFS-SEFC-91. 89ff
5. COLOMBIA'S OUTER ISLAND POSSESSIONS
6. (SAN ANDRES, GENERAL AREA; PROVIDENCIA; ESE CAYS;
7. ALBUQUERQUE CAYS; SERRANA BANK; QUITASUEÑO
8. BANK; RONCADOR CAY) ARE DISCUSSED ON PAGES 67-72. INTERVIEWS WITH TURTLE FISHERMEN, DECLINES IN CATCHES (ESPECIALLY E; ARE DISCUSSED.

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THE NATIONAL REPORT
EL REPORTE NACIONAL

FOR THE COUNTRY OF
POR EL PAIS DE

COSTA RICA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

EDUARDO BRAVO P.

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

COSTA RICA

NATIONAL REPORT PRESENTED BY

Ing. Eduardo Bravo P.
The National Representative

Address: Dir. General de Recursos
Pesqueros y Vida Sivestre
Ministerio de Agricultura
San José, COSTA RICA

NATIONAL REPORT PREPARED BY

DATE SUBMITTED: January 8, 1981

Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, S UNDP, Apartado 4540, San Jose, Costa Rica.

País	Costa Rica
Longitud de la Costa	215.75 Km
Km^2 del Area Marítima *	18000 Km^2
Extensión de la Jurisdicción Marina:	
Mar Territorial	22.72 Km
Zona Económica Intensiva	[illegible] Km^2
Jurisdicción de la Pesquería	370.4 Km

* Comprende la zona jurisdiccional marítima. No se ha establecido el área de la plataforma continental, por no existir tratados que definan los límites marítimos para Costa Rica y sus países vecinos. (Oficina de Cálculos del Instituto Geográfico Nacional).

INTRODUCCION

La costa Atlántica de Costa Rica se extiende desde Punta Castilla (10°56'06''N y 83°40'00''W) hasta la Boca del Río Sixaola (9°34'18''N y 82°34'06''W), con una extensión de 215,75 Km aproximadamente.

El puerto principal del litoral Atlántico es Puerto Limón, partiendo del cual se puede dividir dicha costa en dos sectores: un sector septentrional al norte de Limón hasta la frontera con Nicaragua; y un sector meridional que va hasta el Río Sixaola, frontera con Panamá (Battistini y Bergoeing, 196[illegible]).

Entre el Puerto de Limón y el Río Sixaola, separados por 82.5 Km, la costa presenta irregularidades. Partiendo de Punta Cahuita se comienzan a observar formaciones ~~[illegible]~~ arenales hasta Punta Mona, ubicada a una distancia de 9.5 Km de la Boca del Río Sixaola. A esta sección meridional de la costa, llega un número muy reducido de tortugas marinas a desovar, por lo que no se cuenta con información científica sobre este tema en esta zona del Caribe costarricense.

Partiendo de Puerto Limón a Punta Castilla, se observa un panorama muy distinto de la costa, esta es recta y angosta, siendo el sector de mayor extensión (133.25 Km aproximadamente). Es una zona poco poblada, encontrándose pequeños caseríos en las desembocaduras de los ríos Matina, Pacuare, Parismina, Tortuguero y Colorado, los cuales se encuentran del Puerto de Limón a 20 Km, 36 Km, 48 Km, 78.5 Km y 106.5 Km respectivamente. Entre la boca del Río Tortuguero y la del Parismina encontramos el área de desove más importante en Costa Rica, para la tortuga verde (Chelonia mydas), y una de las zonas de anidamiento principales en el Caribe, de dicha especie. El período de anidamiento va de Julio a setiembre, esencialmente, (Carr, Carr y Meylan, 1978). Por tal motivo y

-3- (Caribean Conservation C.)

con el deseo de profundizar más acerca del conocimiento de esta especie marina se ha instalado cerca del poblado Tortuguero, la ESTACION DE INVESTIGACION DE LA TORTUGA VERDE (Green Turtle Research Station), dirigida por el Dr. Archie Carr de la Universidad de Florida y otros investigadores, quienes vienen estudiando esta especie prioritariamente desde 1955, siendo este el único grupo científico que estudia las tortugas marinas en el Caribe costarricense.

A la costa Atlántica llegan principalmente tres especies de tortugas marinas a desovar: Tortuga Verde (Chelonia mydas) Carr, Carr y Meylan (1978), Tortuga Canal (Eretmochelys [illegible]) Carr y Ogren (195[illegible]) y la Tortuga Cuerpo [illegible] (Eretmochelys imbricata) Carr, Hirth y Ogren (1966), encontrándose en estas costas únicamente en sus épocas de desove por no haber alimento suficiente para mantener poblaciones considerables de las mismas durante todo el año, (Carr, comunicación personal).

Se hace necesario indicar que las tablas: 7,8,9,13,17 y 21 no fueron consideradas por no contarse con la información requerida; la que a continuación se comenta:

TABLA 7. Inventario de áreas de alimentación.

No se completó dicha tabla por no existir en la costa Atlántica zonas de alimentación permanentes y definidas.

TABLA 8. Especies de tortugas en las áreas de forrajeo.

TABLA 9. Tortugas fuera de las áreas de forrajeo.

No se llenaron estas tablas puesto que la costa Atlántica del país sirve únicamente como sitio de reproducción y desove para las tortugas marinas. Carr, A. y L. Ogren (195[illegible]), Carr, A., M.H. Carr y A.B. Meylan (1978), Carr, A., H. Hirth y L. Ogren (19[illegible]).

TABLA 13. Capturas incidentales de tortugas.

No se ha registrado este tipo de información por ser la pesca en el Caribe [illegible] artesanal.

-4-

TABLA 14. Capturas efectuadas por pescadores extranjeros.

El Ministerio de Agricultura y Ganadería por medio de la oficina regional de pesca en Limón, no se ha asentado ningún hecho de esta índole.

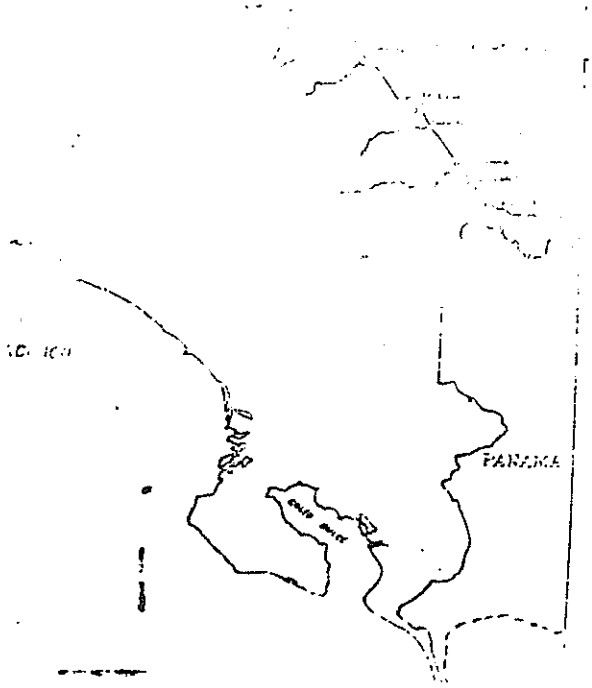
TABLA 17. Operaciones de maricultura que utilizan tortugas.

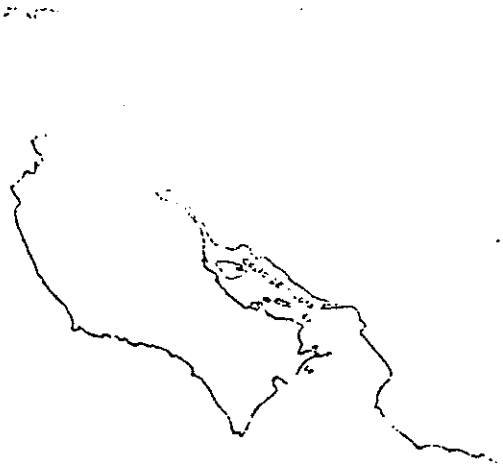
El país, hasta el momento, no cuenta con este tipo de empresas dedicadas a esta actividad.

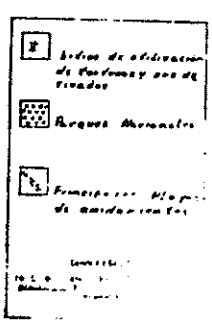
TABLA 21. Proyectos nacionales de investigación.

El financiamiento para proyectos de investigación sobre tortugas marinas en la costa Atlántica ha venido de instituciones extranjeras, en su mayor parte.

Figura 1. Mapa del país indicando playas de anidamiento, sitios de utilización de la tortuga y sus derivados, y Parques Nacionales.







-7-

CARACTERISTICAS DE LA COSTA MARINA	[illegible]		
	[illegible]	[illegible]	TOTAL
1. Playa Arenosa (total)	164	19.75	183.75
2. Arrecife (expuesto)	14.25	3.75	18
3. Rocas	-	6.75	6.75
4. Precipicios	-	-	-
5. Vegetación (total) (i)	178.75	23.5	201.75
A. [illegible]	178.75	23.5	201.75
B. [illegible]	178.75	23.5	201.75
C. [illegible] (ii)	-	-	-
D. [illegible]	178.75	23.5	201.75
E. [illegible]	-	-	-
F. [illegible] (iii)	-	-	-
6. [illegible] de [illegible], ríos y canales	7.75	-	7.75
TOTAL DE COSTA (iv)	185.50	30.25	215.75

(?) Forma en que se calculó empíricamente

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA

OBSERVACIONES:

El Sector Septentrional del litoral Atlántico es sumamente uniforme, angosto y lineal a todo lo largo de la costa, esta constituido por cordones flanqueantes, de suelos arenosos y con vegetación típica de ciénagas o pantanos. El Sector Meridional por lo contrario es muy irregular; gran cantidad de zonas rocosas y formaciones coralinas. (Bettinger; Bergoeing, 1980).

(i) Por no existir un trabajo detallado de la vegetación y su distribución por distancias, se asumió que ésta era uniforme para enredaderas, [illegible] y palmeras, en [illegible] de la costa.

(ii) [illegible]

Cálculo: Los datos de las [illegible] distancias se obtuvieron empíricamente, [illegible]

-8-

se mucho del mismo por lo que no se pudo encontrar el dato exacto de su longitud u otra información.

(iii) Se encuentran en el sector septentrional una serie de canales naturales y artificiales interconectados entre sí; dando a la zona un ambiente típico de pantano. Se forman extensas áreas que dan al mar, separadas de tierra firme por los canales. Estas zonas de tierra o cordones flanqueantes, Battistini y Bergesing (1980), pueden tener de unos cuantos metros de ancho hasta un Km aproximadamente.

(iv) Se eliminó los kilómetros de vegetación, puesto que van paralelos a la parte arenosa y de arrecife. (*) Revisar (M^3)

NOTA: Todas las distancias fueron tomadas de los mapas del Instituto Geográfico Nacional, escala 1:50.000.

-9-

TIPOS DE HABITAT DE FONDO	Km^2 DEL HABITAT	
	DENTRO DE 25 m. HACIA LA PLAYA	ZONA ALEJADA (25 m)
1. Arena	4.60	4.60
2. Barro (i)	-	-
3. Rocas	0.17	0.17
4. Vegetación sumergida	0.45	0.[illegible]
5. Arrecifes (total) (ii)	0.45	0.45
A. De barrera (iii)	0.45	0.45
B. En parche	-	-

Tabla 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO.

(i) No se han realizado trabajos para determinar el tipo de fondo; por lo que se desconoce en que áreas del fondo hay barro.

Las desembocaduras de los ríos acumulan gran cantidad de barro. Asumiendo que no se presenten corrientes internas, que lo depositen más allá de los 50m de la playa. El área de habitat de barro en las desembocaduras sería 0.18 Km^2.

(ii) Se tomó el área de arrecifes en base a la distribución y localización que se encuentra en los mapas del Instituto Geográfico Nacional, escala 1:50.000.

(iii) El arrecife de barrera localizado en el Parque Nacional de Cahuita posee una región de 6 Km^2. Partiendo del cual se encuentran formaciones coralinas hasta Punta Mona, pertenecientes a dos formaciones geológicas: formación Portete y formación Puerto Viejo (Battistini y Bergesing, 1980).

-10-

NOMBRE DE LA PLAYA	LONGITUD EN Km.	ESPECIES ANIDANDO	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Zona de estudio Tortuguero	8.5	C. mydas E. imbricata	Julio a setiembre mayo a noviembre
Zona de estudio Tortuguero-Boca del Río Parismina	27	C. mydas E. imbricata E. nombrada	Julio a setiembre mayo a noviembre abril a junio
Boca del Río Parismina-Boca del Río Matina.	28	C. mydas E. coriacea	Julio a setiembre abril a junio

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.

COMENTARIOS Y DESCRIPCIONES:

Debido a que las playas con mayores números de arribadas de tortugas marinas no poseen nombres específicos, y por lo muy homogéneo de la costa Atlántica, se ha seccionado la misma para su mejor comprensión en zonas delimitadas por bocas de ríos o por poblados.

Se le dió el nombre de "Zona de Estudio Tortuguero" a la parte de la costa comprendida desde la Boca del Río Tortuguero, hasta 8.5 Km dirección S.E. (hacia la Boca del Río Parismina). Es esta el área de estudio intenso de la tortuga verde (Chelonia mydas) por parte de estudiantes y profesores de la Universidad de Florida, dirigidos por el Dr. Archie Carr.

La "Zona de Estudio Tortuguero" es sitio de constantes estudios en la tortuga verde (C. mydas), ya que a esta zona llega un número representativo de la población de esta tortuga que arriba a playas contorniceadas a desovar, (Carr, comunicación personal).

El color de la arena va de un gris oliva a un café grisáceo cuando esta [illegible]

[illegible]

NOMBRE CIENTIFICO	NOMBRE VULGAR
Iporo [illegible]	Churristato de playa.
[illegible]	Verdolaga de playa.
[illegible] virginicus	Junco o junquillo de playa.
[illegible] Lanco	Lanco.
Coccoloba uvifera	Papaturro.
Cocos nucifera	Cocoteros.

playa, y en la zona de vegetación fue de 6.1. No es suelo salino. Y el 65% de las partículas de arena se encuentran en el ámbito de 0.25 mm. a 0.1 mm. (Hirth, 1963).

Hirth (1963), estableció que la playa se encuentra cubierta por plantas rastreras y arbustos resistentes a suelos salinos y arenosos, tales como Ipomea pes-caprae, Sesuvium portulacastrum y Sporobulus virginicus, luego se pueden encontrar detrás de la playa especies tales como: Cryptobalanus icaco, Coccoloba uvifera y por último la sección de árboles entre los que predominan los cocoteros (Cocos nucifera).

De los 8.5 Km. de longitud que comprende la zona de estudio, un kilómetro pertenece al poblado de Tortuguero. La luz artificial es muy escasa, ya que no hay energía eléctrica en la zona, con excepción de aquellos pocos lugares que poseen plantas propias. Con respecto al resto de las zonas de desove, no se tiene información del tipo de vegetación y estructura de la playa, que entre otras razones tales como el alto costo que representa el estudiar y recorrer constantemente todos esos 39 Km restantes, es también muy difícil el acceso a la mayor parte de esa zona.

Por reconocimientos aéreos se observó que los cocoteros (Cocos nucifera) son los árboles predominantes en estas otras playas, además se ven acompañados por plantas rastreras y zacates, cubriendo parte de la zona arenosa, también se pueden observar una gran cantidad de troncos y ramas, que han sido depositados por el mar en la costa.

Falta mencionar un detalle importante, el cual es que la vegetación, principalmente plantas rastreras, zacates, arbustos, etc., no permanecen inviolables en la costa, ya que son muy frecuentes las tormentas, fuertes lluvias y altas mareas, las cuales cambian el panorama de la vegetación costera de un día para otro, (Carr, comunicación personal).

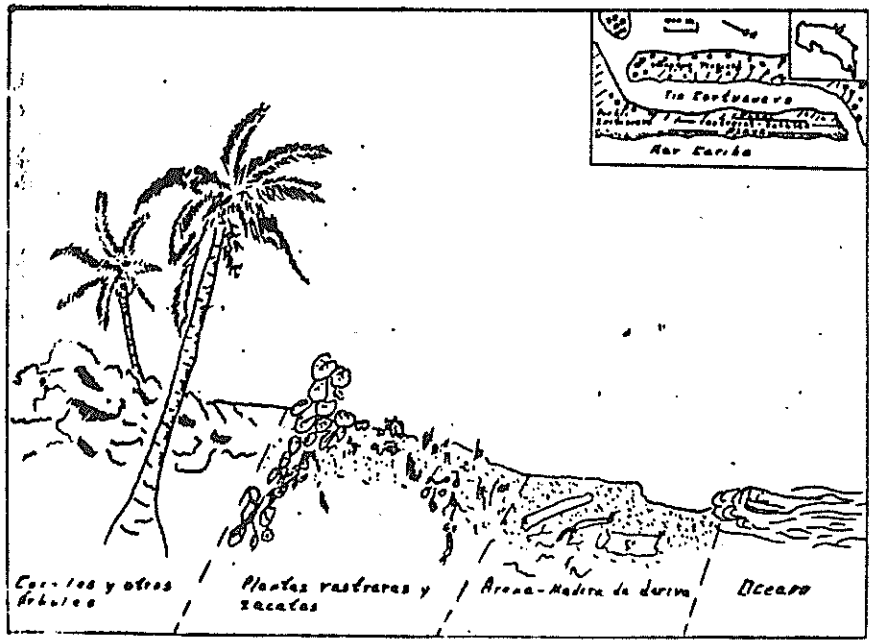


Figura 2. Perfil de playa (Fowler, 1979) y ubicación geográfica (Hirth 1963) de la Zona de Estudio - Tortuguero.

-14-

(CCC Informe Director Tercero 80-81).

AÑO	NUMERO DE NIDOS		RES DE RECOLECCION DE DATOS
	NIDOS/MES PROMEDIO $\bar{X}$	NIDOS/TEMPORADA	
1978	1531	4592	13 de julio-14 de set.
1979	246	738	10 de julio-14 de set.
1980	1722	5166	12 de julio-15 de set.
1981	594	1783	13 de julio-15 de set.
1982	1333	3999	12 de julio-15 de set.

(?) Cómo se obtuvieron estos números - Origen de la información

Tabla [illegible]

NOMBRE DE LA PLAYA: ZONA DE ESTUDIO TORTUGUERO

ESPECIE: Chelonia mydas

COMENTARIOS:

A esta playa llegan a desovar el 14.8% de las tortugas de toda la zona de anidamiento para la especie C. mydas. Según los datos obtenidos en la misma y por reconocimientos periódicos de la parte restante de la costa, se encontró que aproximadamente el 82.5% de las tortugas verdes desovan entre la Zona de Estudio Tortuguero y la Boca del Río Pariamina. (Carr, Carr y Keylan 1978).

Nota:

Los datos del año [illegible] al 82 fueron obtenidos del informe presentado por la Caribbean Conservation Corporation al M.A.G., y los años 81 y 82 se tomaron de los registros que existen en la Estación de Investigación de la Fo[illegible].

[illegible]

FECHA	PLAYAS INTERMEDIAS	Km DE LA PLAYA	# DE NIDADAS DE ANIDACION
* 25-10-81	Río Nivacla-Punta Mona	9.5	1
	Punta Mona-Punta Manzanillo	5	1
	Punta Manzanillo-Puerto Viejo	13	-
	Puerto Viejo-Punta Cahuita	13.5	1
	Punta Cahuita-Río Yanaro	30	-
* 6-4-82	Main-Matina	16	69
	Matina-Pacuare	16	31
	Pacuare-Parismina	12	[illegible]
	Parismina-Jalova	6.5	20
	Jalova-Pueblo Tortuguero	24	120
	Pueblo Tort.-Boca del Tort.	5	11
* 25	[illegible]	[illegible]	129
	Matina-Pacuare	16	87
	Pacuare-Parismina	12	34
	Parismina-Jalova	6.5	15
	Jalova-Pueblo Tortuguero	24	96
	Pueblo Tort.-Boca del Tort.	5	12
* 14-9-82	Main-Matina	16	5
	Matina-Pacuare	16	17
	Pacuare-Parismina	12	19
	Parismina-Jalova	6.5	20
	Jalova-Pueblo del Tort.	24	1775
	Pueblo de Tort.-Boca del Tort.	5	157
	Boca del Tort.-Barra del Colorado	23	8

* Ver [illegible]: Notas de monitoreo sobre reconocimiento terrestre de tortugas marinas. → Edit elevation de la información.

TABLA [illegible]. [illegible]

(?) Pueblo por especie (?)

AÑO / [illegible]	1982	1981	1980	1979	1978	1977
Chelonia mydas	-	4232	22932	2993	21879	2149

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS REPRODUCTORAS.

[illegible] (Asumiendo que este modelo [illegible]) para [illegible] (1977).

(nido)?

AÑO	Nº DE REMIGRACIONES	Nº DE NUEVAS	Nº DE ENCUENTROS
1977	101	227	696
1978	524	1744	4599
1979	104	220	738
1980	728	1754	5166
1981	144	310	1011
1982	-	-	3000

Sacado de inf. de CCC (80-81) + Escuela de Golfo

TABLA 6b. [illegible] DE TORTUGAS VERDE EN LA [illegible] DE TORTUGUERO.

** Representa las tortugas que llegan a anidar por primera vez.

Carr, Carr & Meylan 1978 pp. 38.

A. Porcentaje de tortugas que desovan más de una vez durante la temporada:

$$\%R = \frac{\#\text{ de encuentros} - (\text{Remigraciones} + \text{Nuevas})}{\#\text{ de Encuentros}} \times 100$$

Para # de encuentros, remigraciones y nuevas ver tabla 6b.

B. Efectividad en el muestreo de tortugas = 70%.

Tortugas anidando en la Zona de Estudio Tortuguero (T.Z.E.):

$$T.Z.E. = \frac{\text{\# de Encuentros}}{0.7}$$

C. Número real de tortugas que anidan en la Zona de Estudio Tortuguero (Tr.Z.E.):

$$Tr.Z.E. = T.Z.E. - \frac{T.Z.E. \times \%T}{100}$$

D. Tr.Z.E. representa el 14.8% de toda la zona de anidamiento, entonces:

$$\text{Población total de hembras desovando} = \frac{Tr.Z.E.}{14.8} \times 100$$

NOTA:

-Se asume que la efectividad de la gente que trabaja en el muestreo de tortugas sigue siendo del 70% y que la Zona de Estudio Tortuguero mantiene el 14.8% del total de anidamiento (Carr, Carr y Meylan, 1978).

-No se pudo tabular el año 1982 por no contar con los números de remigraciones y nuevas todavía.

Hirth (1980).

ESPECIE	DIAMETRO BASAL PROMEDIO DE HUELLAS ANIDADAS (m)	DIAMETRO DE NIDADA (m)	NIDADA (# huevos por nido)	PROFUNDIDAD NIDADA (cm)	TIEMPO DE INCUBACION (días)
C. mydas	100.1 (69.2-117.5)	45.7 (41.1-50.1)	110 (18-193)	12.1	55.6 (48-70)
E. imbricata	87.1 (78.0-91.6)	28 (25.5-30)	141.1 (83-204)	10	57.7 (54.2-60.5)
D. coriacea	—	53.7 (50.7-59)	85 (63-101)	—	65 (61-70)

TABLA [illegible]. [illegible] (?)

(*) [illegible] ENTRE LA BOCA DEL RIO TORTUGUERO Y LA BOCA RIO PARISMINA.

Nota: → Edit elevation original.

Hirth (1980), tabuló la anterior información en base a trabajos realizados sobre 21 tortugas verdes (C. mydas), 8 tortugas carey (E. imbricata) y 7 cueros (D. coriacea).

Los valores promedios se encuentran seguidos por los ámbitos entre paréntesis.

(Alternativa no aplicada)

(Limón)

ZONA DE ESTUDIO TORTUGUERO.	C. mydas	Perturbación por depredadores	37.7% (?)
ZONA DE ESTUDIO TORTUGUERO-BOCA DEL PARISMINA.	C. mydas	Perturbación por depredadores	25.8% (?)

TABLA 10. [illegible] (Fonseca, 1982)

[illegible]:

Los [illegible] constituyen actualmente [illegible], Fonseca (1982).

1. Zona de Estudio Tortuguero, hallándose que un 37.7% de los nidos son perturbados por depredadores.

2. Zona de Estudio Tortuguero - Boca del Parismina, hallándose un 25.8%.

Una vez perturbado el nido, los huevos restantes se pierden al ser lavados por el agua, o pueden en diferentes estados de desarrollo.

En Tortuguero los principales depredadores son perros, que encuentran los nidos en la noche, cuatir, que lo hacen durante el día y buitres, cangrejos y hormigas que depredan huevos y/o recién nacidos. } Depred. la dote

Los perros son los mayores responsables de la destrucción de nidos, siendo un animal doméstico. Llega a destruir hasta un tercio de los huevos depositados en la Zona de Estudio Tortuguero, concentrándose en una verdadera plaga.

El porcentaje de huevos que no llegan a desarrollarse (sin intervención de depredadores), en tres playas evaluadas en la Zona de Estudio Tortuguero, es [illegible].

El promedio de huevos por nido para C. mydas, es de [illegible].

(MAG)

[illegible]	[illegible]	EJIDO DE PENCA [illegible]	[illegible]	[illegible]
Cieneguita (Cooperpenca)	C. mydas	Botes y [illegible]	Junio Julio Agosto	215 tort. 34245.5 Kg

TABLA 11. [illegible]

NOTA:

Los pesos y números de tortugas fueron tomados del informe presentado por la Oficina de [illegible] en 1982.

* Es la única procesadora autorizada para el destace de tortugas.

(MAG)

[illegible]	1982	1981	1980	[illegible]
C. mydas	1597 ind 121.884 Kg	600 ind 49.200 Kg	57* ind 57.451 Kg	El decrecimiento se manifiesta en el número de individuos. Se estima que el peso promedio por tortuga es de 100 Kg.

TABLA 12. [illegible]

NOTA

Se observa un alarmante descenso de tortugas para 1982 con respecto a los años anteriores. No puede ser explicado tal suceso, ya que no se ha contado un descenso de los datos del 80 y 81. Se anexa documento con el informe completo para 1982, presentado al Departamento de Pesca del Ministerio de Agricultura y Ganadería por su oficina regional en Limón.

[illegible]	1982	1981	1980	[illegible]	[illegible]
Carne (Kg)	62760	24150	28177	₡50/Kg.	La tortuga 100 Kg promedio de tortuga. El 25% es carne.
Número total de tortugas	1547	600	576		Datos de guías [illegible]

ENTREVISTA: [illegible]

TABLA [illegible]

NOTA:

Los únicos subproductos que se utilizan de la tortuga según la Cooperativa Cooperpenca son:

- Carne: Se toma la venta, aletas y carne. 44 huevos (X)
- Huevos: Una tortuga tiene alrededor de [illegible] huevos blancos y [illegible] de huevos corriolles (no comerciables). (Sin cáscara) 48 huevos
- Aceite: Se obtiene un litro por tortuga. 3.5 lts. (4 litros) (2)

Los demás subproductos son derechazos. Siendo la carne el de mayor interés y venta, es del único que se tienen datos cuantitativos.

Para 1982 se reportan 700 tortugas, 70% hembras, a los cuales se les [illegible] un precio en el mercado de ₡750 a ₡1000/tortuga para las hembras y de ₡500 a ₡700/tortuga para los machos.

ACTIVIDAD	TOTAL ANUAL DE PERSONAL	INGRESO ANUAL APROXIMADO (EN COLONES)	OBSERVACIONES
PESCA	57	₡684.000	(*) Tres pescadores con autorización realizan 4 viajes al mes.
PROCESAMIENTO	9	₡51.840	Se trabaja con contrato durante la temporada. El sueldo es por mes en ₡ 1.440/día.
VENTA	7	₡4.000	Se comercializan 5 toneladas a nivel de la Terminal Pesquera de Limón.

TABLA 16. ESTADO ACTUAL DE LA TORTUGA V. (M) (M²) Autorizados

NOTA:

La mayor venta de carne de tortuga se da en Limón durante la temporada de anidamiento de la tortuga verde (junio-octubre), siendo permitida la captura de tortugas marinas únicamente durante estos 5 meses. En las demás provincias es sumamente reducido el consumo de carne y en la capital son escasos los restaurantes que venden carne de tortuga.

(*) La oficina de pesca en Limón autorizó permisos a 19 botes para dedicarse a la captura de tortugas durante la temporada 1981 (junio-octubre). Se estima que un bote deja de ganancia ₡10.000/mes por repartirse entre sus tres tripulantes y algunos gastos en el motor del bote.

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	Nº DE FUNCIONARIOS (APROX.)	ACTIVIDADES DE ESPECIALIDAD
ASTOA Apdo. 81790 San José.	2	Tramitación de denuncias sobre comercio de huevos y carne.
PARQUES NACIONALES	15	Protección de la zona de refugio. Asistencia a la investigación. Actividades educativas.
DIRECCION DE INVESTIGACION Y EXTENSION AGROPECUARIA Ing. Guillermo Cruz B. Apdo. 7260 Cargo Servicio Tobacco Control. San José.	6	Protección de tortugas durante el refugio. Creación de un Centro de Información de Tortugas. Asistencia a la investigación en el cuido de tortugas. Participación en la [illegible] por vivero e investigación.
M.A.G. Dirección Gral. de Recursos Pesqueros y Acuicultura. Apartado 1384.	4	Protección y vigilancia. Regular el aprovechamiento y el número de capturas durante la temporada de arribos.

TABLA 18. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE PREOCUPAN DE LA CONSERVACION - MANEJO- UTILIZACION DE LA TORTUGA.

NOMBRE Y LUGAR	AREA (ha.)	RAZONES PARA SU PROTECCION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY.
Parque Nacional Tortuguero	18900	Zona de anidamiento para tortugas marinas. Protección de fauna y flora.	a Vigilancia: 16 personas. a Efectividad aceptable de mejora.
Parque Nacional de Cahuita	1600	Arrecife coralino. Protección de especies acuíferas y terrestres y su medio ambiente.	a Vigilancia: 11 personas. a Efectividad adecuada.

TABLA 19. SANTUARIOS Y REFUGIOS.

COMENTARIOS:

El Parque Nacional Tortuguero se creó en 1975 y fue ampliado en 1980. El 90% de su territorio es propiedad del Estado. Para 1981 contó con un presupuesto de ₡ 321.433.oo. Se encuentra a 70 Km de Puerto Limón dirección N.O. Se ubica dentro de la zona de vida, "Bosque Tropical Húmedo". ₡ (M²)

El Parque Nacional de Cahuita fue establecido en 1970 y ampliado en 1978. La mayor parte de su territorio es propiedad privada. Contó para 1981 con ₡ 37.568.oo de presupuesto. Se localiza a 25 Km S.E. del Puerto de Limón. Posee un "Bosque Tropical Húmedo".

NOMBRE Y DIRECCION DE LA ORGANIZACION.	PRESUPUESTO ANUAL ASIGNADO A TORTUGAS	Nº DE PERSONAS MAS ASIGNADAS A TORTUGAS	CANTIDAD Y TIPO GENERAL DE EQUIPO NIVEL DE MOVILIDAD TO DE PATRULLAJE.
M.A.G. Dirección Gral. de Recursos Pesqueros y Acuicultura. Apartado 1384.	₡300.000	Cuatro	Insuficiente. No se cuenta con presupuesto adecuado para vigilancia constante.
Ministerio de Seguridad Pública.		Treinta	Hacen que hacer.

TABLA 20. [illegible]

M.A.G. Dirección Puede ser suprimido perfectamente.

MANEJO Y COMERCIALIZACION DE LA TORTUGA MARINA:

La Convención sobre El Comercio Internacional de Especies Amenazadas de Fauna y Flora Silvestres, vigente a partir del 26 de Junio de 1970, en la cual Costa Rica conjuntamente con otras países fueron firmantes con el fin de proteger especies silvestres con peligro de extinción; por medio de regulaciones a la exportación de dichas especies. Encontrándose entre estas, las tres especies de tortugas marinas que llegan a desovar al Caribe costarricense.

El manejo y explotación de la tortuga verde, se encuentra regulado por el Decreto Ejecutivo Nº 0 del 28 may. 1953, el cual regula la expedición de permisos para la pesca de tortugas marinas, así como su exportación. Ver Anexo #2.

Las tortugas marinas se encuentran también protegidas por la ley Nº 190 del 28 set. 1948 (Ley de Pesca y Caza Marítimas), la cual expresa en el artículo Nº 28: [illegible] de las que efectúe la pesca, a Nº de las prohibiciones [illegible] general contenida en esta ley, ejecutar los siguientes actos: b) Cazar las tortugas capturadas y comerciar con la [illegible].

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ANEXO #1. Hojas de registro sobre reconocimientos aéreos de tortugas marinas.

Ground truth survey made ____
Zone Record form on file ____

OBSERVER 1 David Carr
OBSERVER 2 Willem Hamberg
RECORDER Peggy Carr
PILOT Jose Hall
AIRCRAFT Skymaster

COUNTRY COSTA RICA STATE LIMON
ZONES Rio Sixaola - Rio Banano
DATE 10/25/81 TIME:S 16:05 E 16:34
Weather:Current Clear 24hrs. Occ. showers Sea State Calm Visibility ____
Temperature: Beach Air ____ Surf ____

ZONE - Description	ZONE No.	TIME	CRAWLS Fresh Nest	CRAWLS Fresh Fals	CRAWLS OLD	CRAWLS TOTAL	SPEC -IES	TURT -LES	FLIGHT DATA	SHORELINE DATA (& other)
Rio Sixaola - Punta Mona		16:05 16:10			1	1			200-250' 110 knots	
Punta Mona - Punta Manzanilla		16:10 16:12			1	1			"	Beautiful scalloped beach
Punta Manzanilla Puerto Viejo		16:12 16:15			0	0			"	Broad scalloped coco lined beach
Puerto Viejo - Home Creek		16:15 16:18			1	1			"	"
Home Cree Pta. Cahuita		16:18 16:21				0			"	" reef around pt.
Pta. Cahuita Village Cahuita		16:21 16:23				0				shallow beach near Cahuita
Village Cahuita - Rio Tuba		16:23 16:26				0			"	broad beach, reef in front near Ca
Rio Tuba Rio Estrella		16:26 16:27				0			"	Broad beach, no reef
Rio Estrella Rio Negro		16:27 16:30				0			150'-200' 110 knots	"
Rio Negro Rio Bananito		16:30 16:31				0			"	"
Rio Bananito Rio Vizcaya		16:31 16:32				0			"	"
Rio Vizcaya Rio Banano		16:32 16:34				0			"	"

SEA TURTLE AERIAL SURVEY

FLIGHT DATA RECORDS

Ground truth survey made ____
Zone Record form on file ____

OBSERVER 1 Peggy Carr
OBSERVER 2 ____
RECORDER David Carr
PILOT SAGRA
AIRCRAFT CESSNA 206

COUNTRY COSTA RICA STATE LIMON
ZONES Port Moin Boca Tortuguero
DATE 6 Apr. 82 TIME:S 10:35 E 12:45
Weather:Current Clear, 24hrs. Clear Sea State ____ Visibility ____
Temperature: Beach Air ____ Surf ____

ZONE Description	ZONE No.	TIME	CRAWLS Fresh Nest	CRAWLS Fresh Fals	CRAWLS OLD	CRAWLS TOTAL	SPEC -IES	TURT -LES	FLIGHT DATA	SHORELINE DATA (& oth
Port Moin/ Boca Matina[1]						67				
Boca Matina/ Boca Pacuare						71				
Boca Pacuare/ Boca Parismina						58				
Boca Parismina/ Jalova						28				
Jalova/ Tortuguero Vil.[2]						170				
Tortuguero Village/ Boca Tortuguero						11				
TOTAL						405				

[1] Information from a Limon resident indicates that this zone is subject to regular and systematic egg poaching by people living adjacent to the beach. Furthermore, he revealed that they carry the eggs to Guapiles by railroad where their ultimate disposition is unknown.

[2] This zone corresponds to the boundary of Tortuguero National Park.

NOTE: The survey team was surprised by the large quantity of tracks. The count included many old tracks due to lack of rain for atleast a week. Rough estimate is that 70 percent were leatherback tracks. The balance were [illegible] and green turtles.

SEA TURTLE AERIAL SURVEY

Flight page ___ of ___

FLIGHT DATA RECORDS

Ground truth survey made ___
Zone Record form on file ___

OBSERVER 1 Peggy Carr
OBSERVER 2 ___

COUNTRY Costa Rica STATE Limon
ZONES Moin Tortuguero
DATE 28-4-62 TIME: S 13:33 E 14:00

RECORDER David Carr
PILOT RACSA - Norman Brown
AIRCRAFT CESSNA 206

Weather: Current Overcast 24hrs. Rain Sea State ___ Visibility ___
Temperature: Beach Air ___ Surf ___

ZONE Description	ZONE No.	TIME	TRAILS Fresh Nests	Fresh Falls	OLD	TOTAL	SPEC -IES	TURT -LES	FLIGHT DATA	SHORELINE DATA (& othe
Moin/Matina[1]						178				
Matina/Pacuare						82				
Pacuare/Parismina						34				
Parismina/Jalova						15				
Jalova/Village of Tortuguero						96				
Village of Tortuguero/Boca						13				
TOTAL[2]						418				
[1] Observer counted all tracks regardless of age. Subsequent zones, observer counted fresh trails										
[2] Leatherback accounted for almost all of the tracks										

RECONOCIMIENTO AEREO DE TORTUGAS MARINAS

REGISTRO DE LOS DATOS DE VUELO

Reconocimiento de Verificación Terrestres
Efectuados: ___

OBSERVADOR: Willem Roosenburg
REGISTRADOR: Arnoldo Moreno
PILOTO: Ray Donohoe
AERONAVE: Cessna 172

PAIS: Costa Rica PROVINCIA: Limón
RUTA: De Moín a Barra del Colorado
FECHA: 14-9-62 TIEMPO (S): 12:52 (E): 14:46
CLIMA: Actual Nublado 24 Hrs. Pocas nubes ESTADO DEL MAR: Brisa Ligera
VISIBILIDAD: Buena
TEMPERATURA: Aire en la Playa: 21 C - 26 C. Superficie: 22 C.

DESCRIPCION DE LA ZONA	HORA	Nº DE PISTAS	PLAYA Km.	DATOS DE VUELO	DATOS DE LA COSTA
MOIN - MATINA	12:59 1:04	5	16	150 pies 90 millas	[illegible] del aire 24 C. Playa arenosa de alta energía. Cocoteros, hierbas. Poco uso humano.
MATINA - PACUARE	1:04- 1:11	17	15	150 pies 90 millas	"
PACUARE - PARISMINA	1:12- 1:17	19	12	150 pies 90 millas	"
PARISMINA - JALOVA	1:17 1:20	20	6.5	150 pies 90 millas	Playa arenosa de alta energía. Cocoteros, vegetación indeterminada. Madera de deriva. Poco apreciable uso humano.
JALOVA - PUEBLO TORTUGUERO	1:20- 1:37	1775	24	200 pies 70 millas	"
PUEBLO TORTUGUERO - BOCA DEL TORTUGUERO	1:37- 1:40	157	5	200 pies 70 millas	Playa arenosa de alta energía. Cocoteros, hierbas, plantas pratenses. Poco uso humano. Madera de deriva.
BOCA DEL TORTUGUERO - BARRA DEL COLORADO	1:40- 1:43	7	23	150 pies 90 millas	[illegible] del aire 22 C. Playa arenosa de alta energía. Cocoteros, vegetación indeterminada. Poco uso humano.

Nota: [illegible]

y correspondiente y la inscripción a que se refiere el artículo 8º del Decreto Ley Nº. 190 del 28 de setiembre de 1948

Artículo 2º El permiso de pesca para la tortuga verde será extendido solamente por el lapso de la temporada de su arribo a nuestras costas, junio, julio y agosto, y caduca al fin de la misma.

Artículo 3º. (Modificado por el Decreto Ejecutivo Nº. 15 del 4 de junio de 1969) Queda prohibida la captura de tortugas con fines comerciales en la playa desde ésta, hasta cinco kilómetros mar adentro; medido desde la línea de la pleamar ordinaria.

Artículo 4º Sólo se permitirá el desembarque de las capturas cuando la proporción de hembras no sobrepase el 80% del total

Artículo 5º. El concesionario informará a la Inspección de Pesca de Limón, de las cantidades de tortugas capturadas en cada viaje y de los lugares donde ha realizado la pesca.

Artículo 6º. (Modificado por el Decreto Ejecutivo Nº. 15 del 4 de junio de 1969). Las tortugas capturadas deben sacrificarse en el lapso de las 24 horas después del desembarque en condiciones higiénicas apropiadas. El Ministerio de Agricultura y Ganadería no concederá permisos para la pesca comercial de tortugas a los pescadores que operen en lugares donde no haya facilidades de destace y aprovechamiento inmediatos.

Artículo 7º La exportación de tortugas queda sujeta a los requisitos siguientes:

a) Aprobación del Ministerio de Agricultura y Ganadería para cada embarque al extranjero de tortuga procesada o viva.
b) Aprobación del Ministerio de Agricultura y Ganadería para cada embarque al extranjero de caparazones u otra clase de productos;

110

c) La exportación de tortugas [illegible] será autorizada solamente cuando la demanda de ellas en el mercado nacional haya sido satisfecha.

d) Las solicitudes de permisos de exportación deben presentarse ante la Oficina de Pesca y Vida Silvestre del Ministerio de Agricultura y Ganadería, en papel sellado de la décima clase (₡1.00) especificando las calidades de ley del solicitante, el tipo de producto, el destino y el valor respectivo.

Artículo 8º (Modificado por el Decreto Ejecutivo Nº 15 del 4 de junio de 1969). La exportación de calipes queda prohibida. Se permitirá hacerlo solamente a las plantas establecidas con debido permiso del Ministerio de Agricultura y Ganadería para el destace de tortugas, siempre y cuando provenga de las tortugas procesadas íntegramente por las plantas y previa comprobación de que las cantidades que se desea exportar son proporcionales al número de tortugas procesadas.

Asimismo queda prohibido el comercio interior del calipes que no provenga de aquellas tortugas pescadas y procesadas según el presente Reglamento.

Dado en la Casa Presidencial, San José, a los veinticuatro días del mes de mayo de mil novecientos sesenta y tres.

FRANCISCO J. ORLICH

El Ministro de Agricultura y Ganadería

ELIAS SOLEY CARRASCO

"La Gaceta" Nº [illegible] de [illegible] de 1963

ANEXO #2. Decreto Ejecutivo Nº 9 del 24 may. 1963. Se regula la expedición de permisos para la pesca de tortugas marinas, así como su exportación.

Nº. 9

EL PRESIDENTE CONSTITUCIONAL
DE LA REPUBLICA

y

EL MINISTRO DE AGRICULTURA Y GANADERIA

Considerando:

1º. Que las tortugas marinas que arriban a nuestras costas constituyen parte muy valiosa de nuestros recursos naturales.

2º. Que la tortuga verde (chilone mydas) arriba tres meses al año a nuestras costas y es objeto de pesca intensiva en ciertos lugares del Caribe y muy apetecida como alimento de alta calidad en mercados extranjeros y nacionales.

3º. Que la actividad pesquera en la costa del atlántico progresa rápidamente constituyéndose en fuente importante de trabajo.

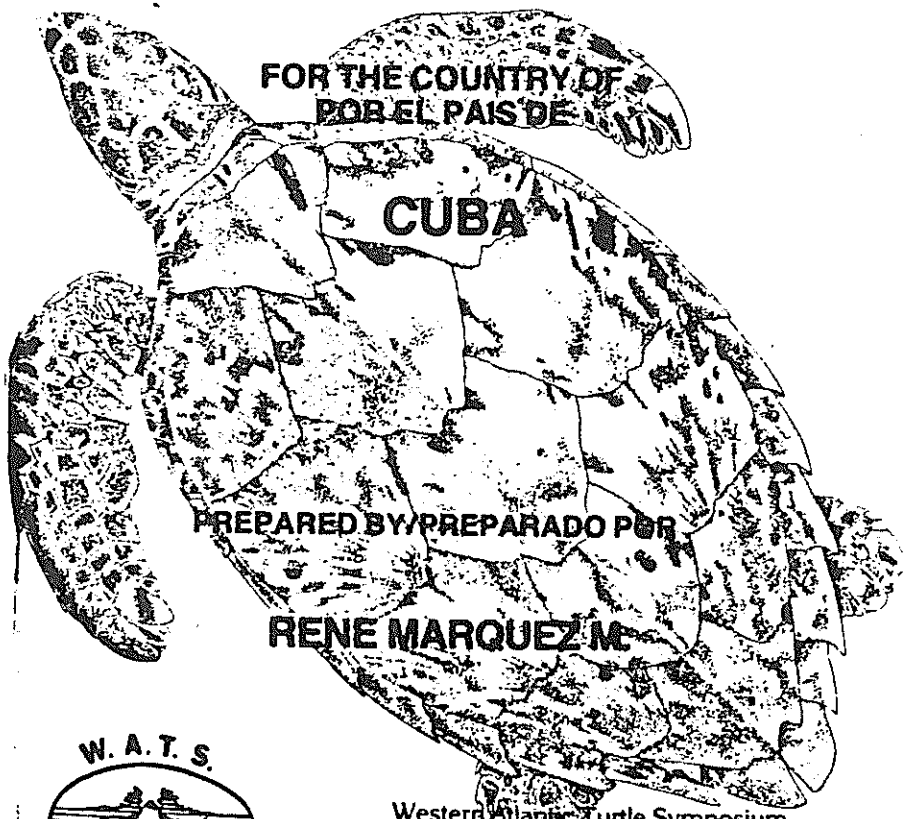
4º. Que para robustecer las pesquerías se hace necesario el aprovechamiento de los diversos recursos pesqueros.

Por tanto,

DECRETAN:

Artículo 1º. Los permisos para la pesca de tortugas marinas serán expedidos por el Ministerio de Agricultura y Ganadería, previa la solicitud escrita en papel sellado

THE AD HOC DATA REPORT
EL REPORTE DE DATOS AD HOC



W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W A T S

S T A O

WESTERN ATLANTIC TURTLE SYMPOSIUM
SAN JOSE, COSTA RICA
July 1983

AD HOC DATA REPORT
FOR THE COUNTRY OF
CUBA

Prepared by: R. Márquez M.
Apartado Postal 695
Manzanillo, Col.
28200
MEXICO

Submitted: June, 1983

INTRODUCCION

Cuba es la mayor y más importante de las Islas del Archipiélago Caribeño y forma parte del grupo de las Antillas Mayores, su posición geográfica en la puerta del Golfo de México determina la presencia de importantes corrientes marinas que le proporcionan características peculiares a la fauna y flora marinas.

Su litoral mide cerca de 3575 km, y en la mayor parte de él quedan enclavados un sin número de cayos, isletas e islas,- en cuyas playas se favorece notablemente la anidación de -- tortugas marinas.

Las ensenadas, arrecifes y bajerios están poblados abundantemente de pastos marinos e históricamente contribuyeron a la presencia estacional de "flotillas" migratorias, particularmente de tortuga blanca (Chelonia mydas) y tortuga de carey (Eretmochelys imbricata); no obstante lo anterior, -- en la actualidad aún subsisten algunos sitios que pueden -- considerarse importantes para la anidación o alimentación - de tortugas marinas y es en ellos donde se continúa desarrollando la pesquería de estas especies.

técnicos y científicos que han estudiado a las tortugas marinas de Cuba y desarrollado trabajos de conservación a diferentes niveles, desde hace más de una década y que oficialmente- existe un programa de investigación, conservación y administración de tortugas marinas en el Departamento de Cría Experimental del Ministerio de la Industria Pesquera, se considera de gran utilidad la elaboración de un informe detallado y- actualizado, por el personal del Departamento mencionado.

METODOS

La información que se recabó durante dos visitas (1975 y 1981) de carácter técnico, ha sido utilizada para preparar el presente trabajo, pero debe tomarse con las reservas que el caso amerita, dado que, como antes se señala adolece de datos suficientes para cumplir con los objetivos que ahora se persigue, sin embargo en estas ocasiones se trabajó con las personas encargadas de los programas de tortugas marinas en Cuba y, también se visitaron los lugares más importantes, por lo que- puede ser considerado como una pauta para el trabajo futuro- del área.

La información que se presenta en este "Ad Hoc Data Report" debe considerarse parcial y de carácter no oficial, y así - claramente es manifestado por el autor, sin embargo, al integrarla con los demás "Reportes Nacionales" de otros países de la Región, plantea un panorama más apropiado de la - situación de las tortugas marinas en el Caribe Occidental.

La pesquería de tortugas marinas, en Cuba y en general en -- las Antillas ha sido una pesquería históricamente de subsistencia, con excepción de la tortuga de carey, no obstante a- fines del siglo pasado y hasta hace unas cuantas décadas, la captura tuvo un auge que llevó a la situación actual a todas las tortugas marinas del área y que obliga ahora a tomar una serie de decisiones prácticas que permitan la recuperación - de las poblaciones de las tortugas marinas en el Caribe.

El siguiente informe preparado para STAO presenta algunas -- apreciaciones superficiales, porque no se tuvo acceso a la - información actualizada de la situación de las poblaciones y la abundancia de tortugas en las playas de anidación y - - - áreas de alimentación. Teniendo en cuenta que hay grupos - -

La moderna división política de Cuba presenta 14 provincias- y una de ellas es la Isla de la Juventud (antes Isla de Pinos).

La situación geográfica de la Isla, precisamente a la altura- del Trópico de Cáncer, a la entrada del Golfo de México y su- amplia plataforma marina, bordeada en su mayor parte de: bajos, cayos, arrecifes coralinos y extensos pastizales marinos favorecen ampliamente la presencia de tortugas marinas. También puede decirse que en casi todas las playas arenosas se - presenta en mayor o menor grado la anidación de tortugas marinas. Varias zonas destacan tanto por la presencia de tortugas como por las zonas de anidación y son: el Golfo de Batabanó, el Archipiélago de los Canarreos, el Suroeste de Isla Pinos y los Jardines de la Reina, al Sur del Golfo de Ana María.

Con los resultados de las dos visitas efectuadas a Cuba fué - posible llenar algunas de las tablas del cuestionario de STAO, no obstante pocos datos cuantitativos están disponibles, por- lo que así son consignadas dichas apreciaciones y una marca ✓ sirve para indicar el carácter positivo de la respuesta, una- línea ——— indica que la situación es negativa o ausente y el

espacio en blanco implica que se desconoce la respuesta.

Para facilitar el desarrollo del informe, el llenado de las tablas se efectuó según la división política de Cuba, por - provincias, algunas de ellas tienen litorales al norte y al sur y en estos casos, las características comparativas de - una costa y otra son muy contrastantes, lo que esto también se refleja en la presencia y abundancia de las diferentes - especies de tortugas.

País CUBA

Longitud de la Costa* ..... 3,575 km

Km² de la Plataforma Continental..... km

Extensión de la Jurisdicción Marina:

Mar Territorial..... km

Zona Económica Extendida..... km

Jurisdicción de la Pesquería..... km

Otras (describalas)..... km

Tabla 1. INVENTARIO GEOGRAFICO

Ver Figura 1

* La longitud de la costa es una medida de la frontera nacional hacia el mar de un país; por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

PROVINCIA MATANZAS

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa-Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares *	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos	✓	✓	
F. Ciénegas (pantanos)	✓	✓	
6. Bocas de lagunas, ríos y canales			✓
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

PROVINCIA LA HABANA

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa-Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares *	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos		✓	
F. Ciénegas (pantanos)			✓
6. Bocas de lagunas, ríos y canales			✓
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

PROVINCIA VILLA CLARA

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa-Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares *	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos		✓	
F. Ciénegas (pantanos)	✓		
6. Bocas de lagunas, ríos y canales			✓
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

Provincia Cien Fuegos

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)	—	—	
3. Rocas			✓
4. Precipicios			✓
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares •			✓
D. Palmeras			✓
E. Otros árboles o arbustos			✓
F. Ciénegas (pantanos)	—	—	
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

Provincia Sancti Spiritus

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares •	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos		✓	
F. Ciénegas (pantanos)	✓		
6. Rocas de lagunas, ríos y canales		✓	✓
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

Provincia Ciego de Avila

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓		
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares •	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos		✓	
F. Ciénegas (pantanos)	✓		
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

Provincia Camagüey

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓		
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares •	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos			✓
F. Ciénegas (pantanos)			✓
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

PROVINCIA: LAS TUNAS

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓		
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos			✓
F. Ciénegas (pantanos)	✓	✓	
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

PROVINCIA: GRANMA

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			✓
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares	✓		
D. Palmeras		✓	
E. Otros árboles o arbustos			✓
F. Ciénegas (pantanos)	✓	✓	
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

PROVINCIA: HOLGUIN

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos			✓
F. Ciénegas (pantanos)			✓
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

PROVINCIA: SANTIAGO DE CUBA

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			✓
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares	✓	✓	
D. Palmeras	✓	✓	
E. Otros árboles o arbustos	✓	✓	
F. Ciénegas (pantanos)			
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos Aéreos)

** Desarrollo humano (Ver Manual)

Provincia: Guantanamo

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)			✓
3. Rocas			✓
4. Precipicios			✓
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares	✓	✓	
D. Palmeras		✓	
E. Otros árboles o arbustos	✓	✓	
F. Ciénegas (pantanos)	✓	✓	
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

Isla de la Juventud

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)			
A. ALTA ENERGIA	✓	✓	
B. BAJA ENERGIA	✓	✓	
2. Arrecife (expuesto)	✓	✓	
3. Rocas		✓	
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			✓
B. Zacates			✓
C. Manglares	✓	✓	
D. Palmeras	✓	✓	
E. Otros árboles o arbustos			✓
F. Ciénegas (pantanos)			✓
6. Bocas de lagunas, ríos y canales	✓	✓	
Total de costa			

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

Provincia Pinar del Rio

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas	✓	
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera	✓	✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

Provincia - La Habana

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera	✓	✓
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA - MATANZAS

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera	✓	✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA: VILLA CLARA

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera	✓	✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA: CIEN FUEGOS

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	—	
3. Rocas	✓	✓
4. Vegetación sumergida	✓	
5. Arrecifes (Total)	—	
A. De barrera	—	
B. En Parche	—	
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA: SANCTISPIRITUS

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera	✓	✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

Provincia: Ciego de Avila

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera	✓	✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

Provincia: Las Tunas

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	✓
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

Provincia: Camagüey

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	✓
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

Provincia: Granma

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	✓
3. Rocas		✓
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA : HOLGUIN

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro		✓
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA : SANTIAGO DE CUBA

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	—	
3. Rocas	✓	✓
4. Vegetación sumergida	✓	
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

PROVINCIA : GUANTANAMO

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	
3. Rocas	✓	✓
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

ISLA DE LA JUVENTUD

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa	Zona Alejada (75m)
1. Arena	✓	✓
2. Barro	✓	✓
3. Rocas		
4. Vegetación sumergida	✓	✓
5. Arrecifes (Total)		
A. De barrera		✓
B. En Parche		✓
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

✓ = PRESENTE, NO CUANTIFICADO

— = AUSENTE

BLANCO = DESCONOCIDO

Provincia Pinar del Rio

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
CAYOS DE SAN FELIPE		Ei, Cc, Cm	ABRIL - AGOSTO

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia La Habana

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
BARACOA		Cc. (muy escasa)	MAYO - AGOSTO
VARIAS PLAYAS EN EL SUR		Cc, Cm (escasas)	?
CAYOS EN EL GOLFO BATABANO		Cc, Cm (escasas)	?

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Matanzas

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
VARADERO		Cc (muy escasa)	ABRIL - JULIO
CAYOS DEL NORTE		? ✓	
CAYOS DEL SUR		Cm (escasa)	MAYO - AGOSTO

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Sabctispiritus

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
CASILDA - TUNAS DE ZAZA		Ei (escasa)	?

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Ciego de Avila

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Cayo Coco		Cc (escasa)	
Cayos Doce Leguas		Cm	Mayo-Agosto

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Camagüey

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Cayo Romano y			
otros		Cc (escasa)	
Cayo Cabeza del			
Este		Cm	Mayo-Agosto
Cayo Boca Raca		Ei, Cm, Cc	Abril-Mayo

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Las Tunas

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Playas del Norte		Ei (escasa)	
		posiblemente anidan	
		otras especies	

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Granma

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Varias playas		no se conocen	
arenosas		registros	

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Holguin

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Playas de Gibara		Ei, Cc (escasas)	
o Guarda la Vaca			
otras playas		no hay registros	

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Santiago de Cuba

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Playas arenosas		no hay registros	
		disponibles	

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Provincia Guantanamo

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Playas arenosas		no hay registros	

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Isla de la Juventud

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Playa Larga		Cm, Ei, Cc	Abril - Agosto
Cayo Largo del Sur		Cm, Ei, Cc	Abril - Agosto
otros cayos		Cm, Ei	Abril - Agosto
otras playas			
arenosas de la Isla		No hay registros	disponibles

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

CUBA

ESPECIES	NUMERO DE NIDOS: Nidos/Mes Promedio	NUMERO DE NIDOS: Nidos/Temporada (Estimación)	MES DE RECOLECCION DE DATOS
Caretta caretta			COMUN EN EL NORTE
Chelonia mydas			COMUN EN EL SUR Y EN LOS CAYOS
Dermochelys coriacea		?	NO HAY REGISTROS DE ANIDACION
Eretmochelys imbricata			ANIDA SOLITARIA EN LA MAYORIA DE LAS PLAYAS
Lepidochelys kempi		NO ANIDA	INDIVIDUOS FUERA DE SU AREA DE DISTRIBUCION
Lepidochelys olivacea		NO ANIDA	INDIVIDUOS FUERA DE SU AREA DE DISTRIBUCION

TABLA 4. CENSO DE NIDOS POR PLAYA EVALUACION GENERAL - DETALLES DESCONOCIDOS

nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

CUBA

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO: Cc	Cm	D	E	Lk	Lo	NO+ I. D.
	NO SE REALIZARON VUELOS DE RECONOCIMIENTO Y SE DESCONOCE QUE HAYAN SIDO EFECTUADOS EN EL PASADO							

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

[illegible] AREA (a indicar coordenadas)	AREA Aprox. (km²)	ESPECIES ALIMENTADOS (use abreviaciones) cantidad aproximada	NATURALEZA DE LA EVIDENCIA (observación, pesquería, pesca incidental)
PINAR DEL RIO a) CAYOS SN. FELIPE b) ARCH. COLORADOS		Cm, Ei, Cc Cc, Ei	PESQUERIA
LA HABANA a) GOLFO DE BATABANÓ		Cc, Cm	PESQUERIA, PASTIZALES
MATANZAS a) CAYERIAS DEL NORTE b) CAYERIAS DEL SUR		Cc Cm	PESQUERIA
VILLA CLARA a) ARCH. DE SABANA		Cc	PESQUERIA
CIEGO DE AVILA - CAMAGÜEY a) GOLFO DE ANA MARIA		Cm, Ei, Cc	PESQUERIA, PASTIZALES

TABLA 7. INVENTARIO DE AREAS DE FORRAJEO

Abreviaciones para cada especie:

[illegible]	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
[illegible] imbricata	E
[illegible]	Lk
[illegible] olivacea	Lo

ESPECIES \ MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta													
Chelonia mydas ✓													NO HAY DATOS
Dermochelys coriacea													
Eretmochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.1 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO.
Favor de completar una de estas tablas para cada Area identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

CAYOS SN. FELIPE - PINAR DEL RIO

ESPECIES / MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta													
Chelonia mydas	✓												NO HAY DATOS
Dermochelys coriacea													
Fretomochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.2 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada Area identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

CABO SN. ANTONIO - PINAR DEL RIO

ESPECIES / MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta					✓	✓	✓	✓					
Chelonia mydas						✓	✓	✓	✓				
Dermochelys coriacea													
Fretomochelys imbricata	✓				✓	✓	✓	✓	✓			✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.3 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada Area identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

GOLFO DE BATABANÓ

ESPECIES / MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta													
Chelonia mydas	✓												NO HAY DATOS
Dermochelys coriacea													
Fretomochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.4 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada Area identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

GOLFO CAZONES - BAHIA DE COCHINOS

ESPECIES / MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta													
Chelonia mydas	✓												NO HAY DATOS
Dermochelys coriacea													
Fretomochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.5 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada Area identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

CIENFUEGOS

ESPECIES \ MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta					✓	✓	✓	✓					
Chelonia mydas						✓	✓	✓	✓				
Dermochelys coriacea													
Eretmochelys imbricata	✓				✓	✓	✓	✓	✓			✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.6 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada área identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

ARCHIPIELAGO DE LOS CANARREOS

ESPECIES \ MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta					✓	✓	✓	✓					
Chelonia mydas						✓	✓	✓	✓				
Dermochelys coriacea													
Eretmochelys imbricata	✓				✓	✓	✓	✓	✓			✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.7 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada área identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

GOLFO DE ANA MARIA

JARDINES DE LA REINA

ESPECIES \ MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta					✓	✓	✓	✓					
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata	✓				✓	✓	✓	✓				✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.8 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada área identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

GIBARA - GUARDA LA VACA, HOLGUIN

ESPECIES \ MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta					✓	✓	✓	✓					
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLA 8.9 ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO. Favor de completar una de estas tablas para cada área identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

CAYO FRANCES, VILLA CLARA

CUBA

LOCALIDAD (Indique latitud y longitud)	FECHA	ESPECIES Y CARACTERES ESTIM. (Abreviaciones)	COMENTARIOS
BAHIA VITA, ORIENTE.	-	Lo (1) (ADULTO)	AGUAYO (1953)
SUR DE CIENFUEGOS.	08/1969	Lo (1) (JUVENIL)	VARONA (1974), CAPTURADA VIVA, DEPOSITADA EN EL MUSEO "FELIPE POEY", LA HABANA.
VARIOS LUGARES DE CUBA.	ESTIMADA	D	INFORMAN LOS PESCADORES DE CAPTURARLA OCASIONALMENTE.

TABLA 9. TORTUGAS FUERA DE LAS AREAS DE FORRAJEO. Favor de proveer cualquier información disponible sobre la incidencia de tortugas fuera del área de forrajeo.

Abreviaciones para las Especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Cuba

UNIDAD DE CICLO DE VIDA	ESPECIES (abrevi)	CAUSAS DE MORTALIDAD	PORCENTAJE DE MORTALIDAD (por unidad
Nidos/huevos			
Recién nacidos			
Juvenile.			
Adulto (en el mar)			
Hembra [illegible]			

TABLA 10. MORTALIDAD NATURAL

DESCONOCIDA

NOMBRE DEL PUERTO O LUGAR DE LLEGADA	ESPECIES CAPTURADAS (use abrev)	EQUIPO DE PESCA UTILIZADO	MESES DE ARRIBOS	NUMEROS Y PESOS (estimación)
NUEVITAS	Cm Cc Ei	REDES DE DIFERENTE LONGITUD, DESDE 15 BRAZAS HASTA 100-150 BRAZAS. MALLA DE 36 pg (68-TIRADA). 5 BRAZAS DE CALADO.	OCTUBRE A MAYO VEDA: JULIO A SEPTIEMBRE.	REGISTRO EN TONELADAS
1. SANTA CRUZ	Cm Cc Ei			
2. CASILDA	Cm Cc Ei			
BATABANÓ	Cm El Cc			
3. PUNTA DEL ESTE	Cm Ei Cc			
4. LA COLONIA	Ei Cm			
COJIMAR	Ei			
5. MATANZAS	Cm Ei Cc			
CAIBARIEN	Cc Cm El			
6.				
NUEVITAS	Cc Cm Ei			
7. GIBARA	Cm Cc Ei			
8.				

TABLA 11. PUNTOS DE LLEGADA PARA TORTUGAS Y SUS PRODUCTOS.

Abreviaciones de las especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES \ AÑO	1978	1977	1976	METODO USADO PARA LA DETERMINACION
Caretta caretta	284	295	298	ESTADISTICA OFICIAL
Chelonia mydas	329	321	331	✓
Dermochelys coriacea				
Eretmochelys imbricata	202	201	205	✓
Lepidochelys kempi	—	—	—	
Lepidochelys olivacea	—	—	—	

TABLA 12. TOTAL ANUAL DE CAPTURAS DE TORTUGAS EN NUMEROS Y PESOS (N/Kg). No incluya las tortugas capturadas incidentalmente en otro tipo de operación (e.g. pesca del camarón). ADOPTADA EN TONELADAS METRICAS

ESPECIES \ AÑO	1982	1981	1980	TIPO DE ACTIVIDAD PESQUERA Y METODO DE ESTIMACION
Caretta caretta				★
Chelonia mydas				★
Dermochelys coriacea				
Eretmochelys imbricata				★
Lepidochelys kempi				
Lepidochelys olivacea				

TABLA 13. Estimación de la Captura Incidental de Tortugas. Dar estimaciones en números y/o pesos.

★ INGRESA A LA ESTADISTICA OFICIAL (VER TABLA 12)

ESPECIES \ AÑO	1982	1981	1980	TIPO DE ACTIVIDAD PESQUERA Y METODO EMPLEADO PARA HACER LA ESTIMACION
Caretta caretta				★
Chelonia mydas				★
Dermochelys coriacea				
Eretmochelys imbricata				★
Lepidochelys kempi				
Lepidochelys olivacea				

TABLA 14. CAPTURA ESTIMADA DE TORTUGAS POR PESCADORES EXTRANJEROS. De números y/o pesos estimados.

★ DESCONOCIDA

PRODUCTOS DE LA TORTUGA	AÑO 1982	1981	1980	MERCADO ACTUAL Precio/unid.	METODO DE COLECTA DE LOS DATOS
No. de huevos					PROHIBIDO SU COMERCIO
Carne (Kg)					
Caparazones (Concha número/peso					
Pieles número/peso					
Juveniles Disecados					
Número total de tortugas					

ESPECIES SE DESCONOCE ESTA INFORMACION

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

NOMBRE Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
MINISTERIO DE LA IND PESQUERA DEPARTAMENTO DE CRIA EXPERIMENTAL			

TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

Country: Commonwealth of Dominica, West Indies

Length of Coastline* ..... 1625 Km

Km² of Continental Shelf Area ..... * see Appendix C of report for map. Km

Seaward Extent of Jurisdictions: *

Territorial Sea ..... 12 Km

Extended Economic Zone ..... 200 Km

Fisheries Jurisdiction ..... 200 Km

Other (Describe) _____ ..... Km

TABLE 1. GEOGRAPHIC INVENTORY

* The above jurisdictions are under negl with neighboring islands.

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	19.5		19.5
A. High Energy	9		9
B. Low Energy	10.5		10.5
2. Reef (exposed)	—	—	—
3. Rocks	75	—	75
4. Cliffs	68	—	68
5. Vegetation (Total)	—	—	—
A. Vines	—	—	—
B. Grasses		—	—
C. Mangroves			
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, rivers, canals			
7. Total Shoreline	162.5		162.5

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Toucari Bay Bch	0.4	E (1 Cm, 1981)	Sept (1 month)
2. Petite Baie	1.9	E	April (1 month)
3. Batali Estate Bch.	0.25	E, D, Cm	Apr-Oct. (6 months)
4. Salisbury Bch.	0.25	E, D, Cm	Apr-Oct (6 months)
5. Mero Bch.	0.7	Cm (?)	Aug (1 month)
6. Rockaway Bch	0.25	E	June (1 month)
7. Rosalie Bay	0.45	D (?)	Sept (1 month)
8. Londonderry Bch	1.75	D	April (1 month)
9. Woodford Hill Bay	1.38	D	June (1 month)
0.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Toucari Bay Beach

Grey, semi-fine sand; lo energy; clean of debris; offshore reefs and sea grass beds; bordered by almond trees (Terminalia tappa) and coconut palms (Cocos nucifera); next to village of Toucari river outlet.

Petite Baie Beach (south of Prince Rupert Bay)

Grey - Light colored sand; semi-fine; Long, narrow beach; Lo-energy; clean of debris, bordered by almond trees and coconut palms; river outlet, offshore reef (to the south) and sea grass beds; new construction of condominiums occurring on beach front; Sand mining occurs here

Batali Estate Beach

Grey, semi-fine sand; lo-energy; clean of debris; bordered by almond trees and coconut palms; wide, short beach; Sand mining

Salisbury Beach

Grey semi fine coarse sand, Lo energy, clean of debris; bordered partially in the north by steep cliff and dry scrub vegetation, and in the south by almond trees & coconut palms All the nests were found at the base of the cliff The beach (partially) occasionally washes away to cobble, River outlet, Sand mining

Mero Beach

Same as Toucari Bay. In the south the beach is known as Castaways since it is bordered there by the Castaways Hotel In the north it is bordered by the village of Mero In this area, the beach opens up wide; there is less vegetation in this area; Sand mining common here

(continued)

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Rockaway Beh.
Grey, semi-fine sand; short beach north of the city of Roseau; is frequently often by bathers; no vegetation at beach side, to the south are almond trees; bordered by a main road and a disco club; Lo-energy beach; clean of debris; Much of this beach washed away in recent years leaving cobble.

Rosalie Bay Beach
Coarse black sand; hi energy; littered with debris (driftwood, etc.); steep slope; intermittent cobble; beach occurs in the southern portion; bordered by coconut palms and a low growing succulent vine (unidentified) with pink tubular flowers known locally as "potatoe vine"; river outlets.

Londonderry Beach
Light colored coarse sand; hi eneggy; steep slope; littered with debris; palmtrees, almond trees, and succulent vine; sand mining occurs here; river outlet; Long, wide beach.

Woodford Hill Bay
White coarse sand; hi energy; some debris; bordered by almond and coconut palms; mangroves in the eastern portion of beach; river outlet; mild-steep slope; offshore reefs.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		1	April, 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH Petite Baie Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH Toucari Bay Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas		1	Sept 30, 1982
Dermochelys coriacea		1	Aug 25, 1982
Eretmochelys imbricata		2	Aug 25/Sept 30, '82
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 3 NESTING CENSUS FOR BEACH Batali Estate Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		2	Aug/Sept, 1982
Dermochelys coriacea		1	Aug. 1982
Eretmochelys imbricata		1	Oct. 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 4 NESTING CENSUS FOR BEACH Salisbury Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		1 (?)	Aug. 1982
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5 NESTING CENSUS FOR BEACH Mero Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		1	June, 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH Rockaway Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		1 ?	Sept. 1982
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7 NESTING CENSUS FOR BEACH Rosalie Bay Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea		1	April, 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH Londonderry Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea		1	June, 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH Woodford Hill Bay
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use Abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Toucari Bay	reef; sea grass beds	E, Cm	Observation; fishermen reports
2. Salisbury (St. David Bay)	reef; sea grass beds	E, Cm	" "
3. Castle Bruce	reef	E, Cm	" "
4. Hampstead Beh.	reef; sea grass beds	E, Cm	" "
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	?	Bethell Estate (Oct.) - Due to sand mining of the beach, a nest was uncovered. Lizards attacked it; but a fisherman saved what he could (less than half) and reburied the	
Hatchlings			
Juveniles			
Adults (in water)	Dc	One Leatherback was reported to be beached on the rocks in a decayed state at Pt. Rounde (southof Portsmouth) in April of 1982	
Nesting females			

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 19. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

Foreign fishermen are known to fish in Dominican waters. Often off the east coast, they are reported to fish at night with lights on their boats. It is impossible to estimate their numbers or the amount they catch.

A man from Martinique, Mr. Albert, regularly visited Dominica buying hawksbill shells from the fishermen. He would give them tangle nets, buy the shells, and let the fishermen keep the meat. He would pay ECC $15-20.00/lb. for the shells. The shells averaged between 2-3 lbs.

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs				—	
Meat (Kg)				ECC $2.50 per lb,	fishermen interviews
Shell No./Wt.				—	
Skins No./Wt.					
Stuffed Juveniles					
Other					

SPECIES Cm

TABLE 15. 1 OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs				—	
Meat (Kg)				ECC $2.50 per lb	fishermen interviews
Shell No./Wt.				ECC $15-20.00 per lb.	" "
Skins No./Wt.					
Stuffed Juveniles					
Other					

SPECIES Em

TABLE 15. 2 OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs				—	
Meat (Kg)				ECC $2.50 per lb.	fishermen interviews
Shell No./Wt.					
Skins No./Wt.					
Stuffed Juveniles					
Other					

SPECIES D

TABLE 15. 3 OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TABLE 15. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

Skins or stuffed juveniles are not of importance in Dominica at this time. Crafts people do not utilize Hawksbill shell in their work. Mostly, it is the local consumption of meat and eggs, with the Hawksbill shell often being sold to Martinique or Guadaloupe.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: _____
2. Estimated number of nesting females: _____
3. Number of turtles caught at sea: _____
4. Other: _____

None of the above can be estimated. Many of the fishermen exploit all of the above when they can, but none depend totally on it for a livelihood.

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Dominica Conservation Association National Parks Office Victoria Street Roseau, Dominica West Indies	±25	Support of conservation programs throughout the Island. None presently concerned with turtles specifically.

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
PROPOSED ONLY Douglas Bay / Toucari Bay		this area is included within the development plan for the Cabrits Historic National Park and Marine area. Protection of turtles is a side benefit.	None presently

TABLE 19. SANCTUARIES AND REFUGES

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Forestry and Wildlife Division Protection Unit Ministry of Agriculture Botanic Gardens Roseau, Dominica	NONE	NONE	Basically non-existant

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Wildlife Law
14 June 1976 (Ninth Schedule, Section 21)

EIGHTH SCHEDULE (Section 47)

1. The taking, hunting, trapping, pursuing or attempting to take, hunt or trap any bird or mammal is prohibited at all times except during that period when an open season is specifically provided for

2. Agouti (*Dasyprocta antillensis*) may be hunted and taken from the first day of September through the last day of February.

3 Manicou (*Didelphys marsupialis*) may be hunted and taken from the first day of September through the last day of February

4 Birds of the following groups and species may be hunted and taken from the first day of September through the last day of February.

A	Green Heron	(*Butorides virescens*)
B	Ducks and Geese	All members of the family *Anatidae*
C	Coots	All members of the genus *Fulica*
D.	Doves and Pigeons	All members of the family *Columbidae*
E.	Mangrove Coo-cuckoo	(*Coccyzus minor*)
F.	Tropical mockingbird	(*Mimus gilvus*)
G.	Scaley-breasted Thrasher	(*Margarops fuscus*)
H.	Pearly-eyed Thrasher	(*Margarops fuscatus*)
I.	Trembler	(*Cinclocerthia ruficauda*)
J.	Red-legged Thrush	(*Mimocichla plumbea*)
K.	Lesser Antillean Bullfinch	(*Loxigilla noctis*)
L.	Streaked Saltator	(*Saltator albicollis*)

NINTH SCHEDULE (Section 21)

Regulations for the Taking of Turtles.

1. In this regulation the word "Turtle" shall be deemed not to include the Tortoise or Land Turtle—*Geochelone carbonaria*

2. No person shall:—
   (a) catch or take or attempt to catch or take any turtle between the 1st day of June and the 30th day of September, both dates inclusive.
   (b) catch or take or attempt to catch or take any turtle which is under twenty pounds in weight.
   (c) disturb any turtle nest or eggs or take any turtle eggs, or take or attempt to take any turtle laying eggs or on the shore engaged in nesting activities.

Passed in the House of Assembly, this 14th day of June, 1976.

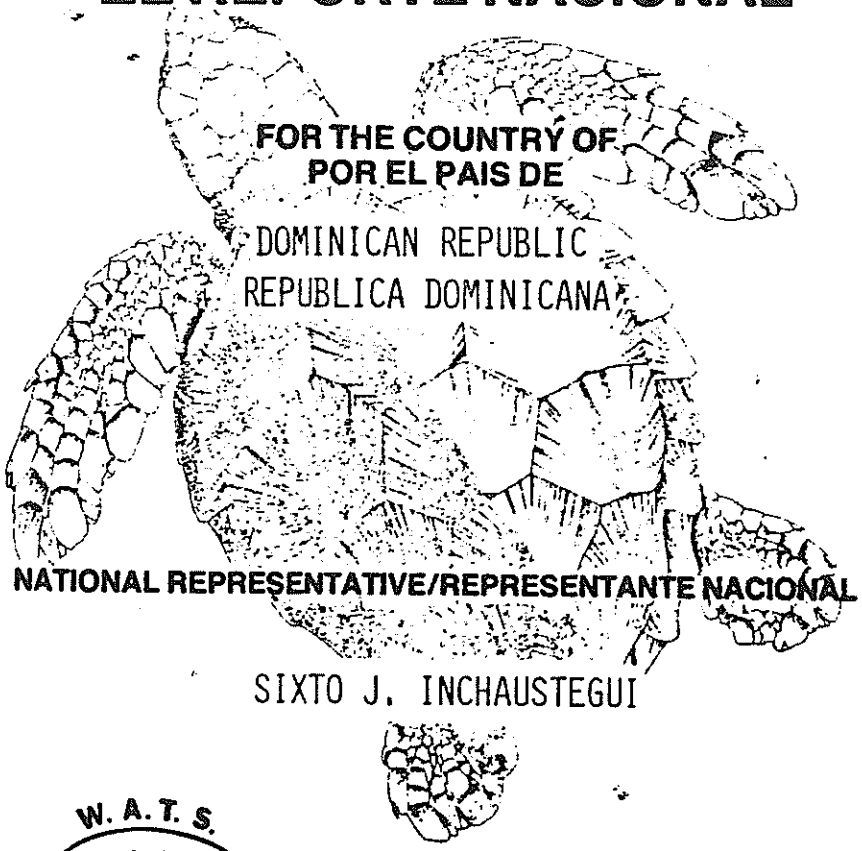
MARIE DAVIS PIERRE
Clerk of the House of Assembly.

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Survey and Preliminary Census of Marine Turtle Populations in the Western Atlantic; Dr. A.F.
2. Carr, Principal Investigator.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

DOMINICAN REPUBLIC
REPUBLICA DOMINICANA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

SIXTO J. INCHAUSTEGUI

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE

Republica Dominicana

REPORTE NACIONAL PRESENTADO POR

Sixto J. Incháustegui

El Representante Nacional

Dirección: Museo Nacional de Historia Natural

Plaza de la Cultura

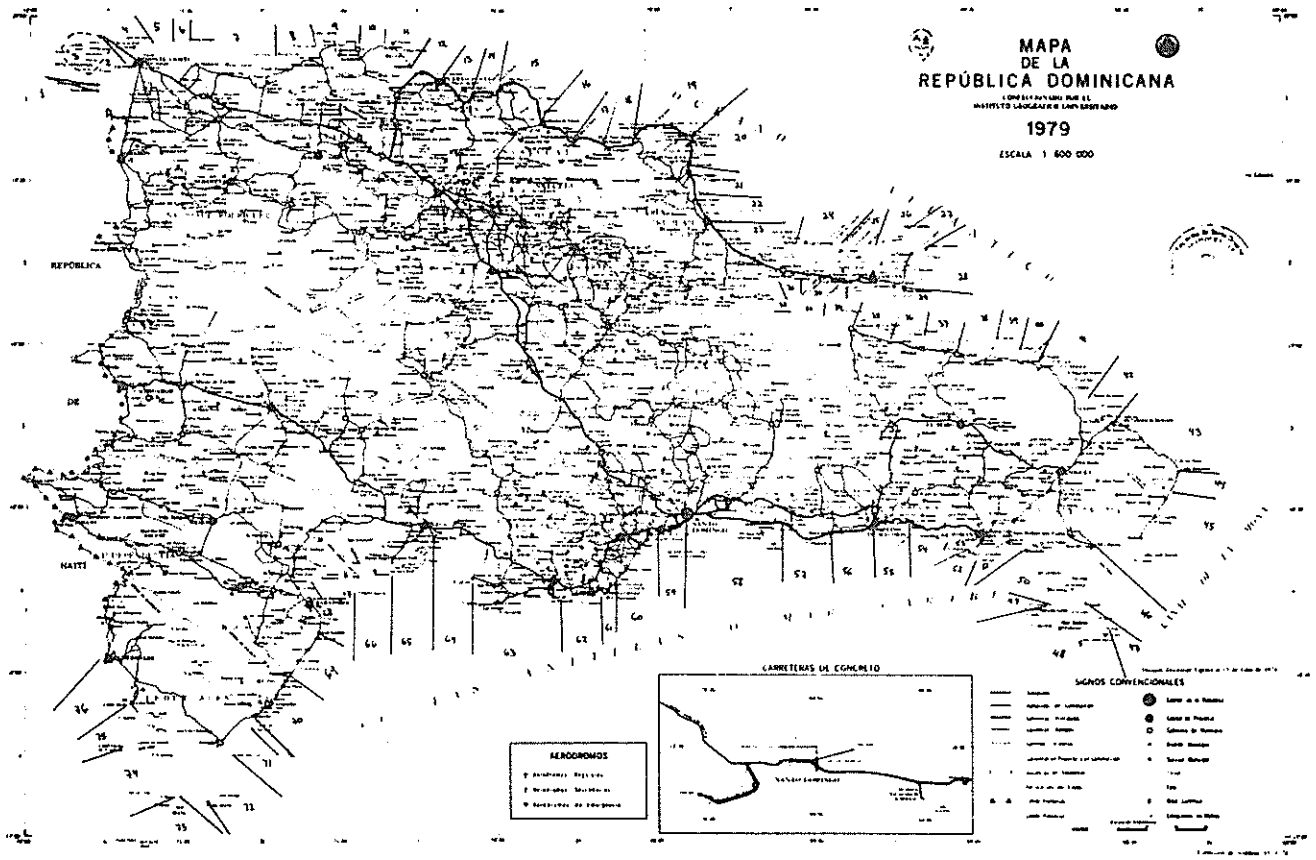
Santo Domingo, Rep. Dom.

REPORTE NACIONAL PREPARADO POR

Sixto J. Incháustegui

FECHA EN QUE SE PRESENTO: 18-VII-83

Favor enviar antes del 1º de diciembre de 1982, al Secretario Asistente de COI para IOCARIBE, c/d UNDP, Apartado 4540, San José, Costa Rica.


MAPA
DE LA
REPÚBLICA DOMINICANA
1979
ESCALA 1 600 000
REPÚBLICA
HAITI
AEROPUERTOS
CARRETERAS DE CONCRETO
SIGNOS CONVENCIONALES

País República Dominicana

Longitud de la Costa*..... 1,575 Km

Km² de la Plataforma Continental..... 9,484 Km

Extensión de la Jurisdicción Marina:

Mar Territorial..... la Asta 11 Km de la costa Km

Zona Económica Extendida..... 238,250 Km²

Jurisdicción de la Pesquería..... 238,250 Km²

Otros (descríbalas) Banco de la Plata ..... 3,740 Km²

Banco de la Navidad 778 Km²

Tabla 1. INVENTARIO GEOGRAFICO

Ver mapas anexos.

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país; por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO (para información suplementaria)

Favor proveer información adicional sobre cada playa de anidamiento identificada en la Tabla 3. Incluya información sobre el color de la arena, tamaño de la partícula, perfil de la playa, vegetación superior en la playa, iluminación artificial, etc.

Ver anexo con información adicional sobre algunas zonas utilizadas por las tortugas marinas. (Región Noroeste, Noreste y Suroeste).

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
S.16. Sosua-Boca Yagica		5 NIDOS	26 JUNIO
S.18. Punta Gorda-R. San Juan			
S.25. Río Limón-Puerto del Valle (Playa Honda)		3 NIDOS	26 JUNIO
S.27. Cabo Cabrón-Cabo Samaná (P. Rincón-P. Ibeno)		1 NIDO	26 JUNIO
S.39. Punta Gorda-Punta Limón		1 NIDO	26 JUNIO
S.40. Punta Limón-Boca Nigüión (Playa Bezbacoa)		4 (+1) NIDOS	26 JUNIO
S.41. Boca Nigüión-Boca Maimón (Playa de Muñecos)		2+3 NIDOS	25, 26 JUNIO
S.43. Punta Macao-Cabo Engaño		4 NIDOS	30 ABRIL
S.48. Isla Saona		1 NIDO	25 ABRIL
S.62. Río Nizaíto-Río Bani		3 (+1) NIDOS	30 ABRIL

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

PARA LAS SECCIONES, VER MAPA ANEXO, ESC. 1:600,000

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretomochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
S.71. Puerto Bello-Cabo San Luis (Playa San Luis)		7	30 ABRIL
S.72. Cabo San Luis-Cabo Beata (Playa Mosquea)		5	30 ABRIL

(*) Todos los datos de 1980. Todas las especies sin identificar.

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretomochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	NO+ I. D.
26-VI-80	S. 15 · SOMA - BOCA DEL BÁSICA S. 18. PUNTA GORDA - RÍO SAN JUAN							5
26-VI-80	S. 25. RÍO LIMÓN - PUERTO DEL VALLE (PLAYA HONDA)							3
26-VI-80	S. 27. CABO CABEZÓN - CABO SAMANÁ. (ENTRE P. RINCÓN Y P. DE IRENE).							1
26-VI-80	S. 39. PUNTA GORDA - PUNTA LIMÓN							1
26-VI-80	S. 40. PUNTA LIMÓN - BOCA NISIBÓN (P. BARBACOA)							4(4)
25, 26-VI-80	S. 41. BOCA NISIBÓN - BOCA HAINÓN (PLAYA DE LOS MUERTOS)							243
25-VI-80	S. 48. ISLA SAONA							1
30-VI-80	S. 62. RÍO NIZAITO - RÍO BANÍ							341
30-VI-80	S. 71. PUERTO BELLO - CABO SAN LUIS (PLAYA SAN LUIS)							7
30-VI-80	S. 72. CABO SAN LUIS - CABO BEATA (PLAYA MOSQUEA)							5

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no Identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
(página suplementaria)

Favor de describir brevemente los métodos empleados para efectuar las estimaciones de la Tabla 6.

SON DATOS APROXIMADOS, ESTIMADOS POR EXTRAPOLACIÓN DE INFORMACIÓN OBTENIDA A TRAVÉS DE ENCUESTAS CON PESCADORES, OBSERVACIONES DE VUELOS AEREOS Y VERIFICACIONES EN PLAYAS.

(VUELOS OTTENWALDER - INCHÁUSTEGUI. VER OTTENWALDER, J.A. 1980).

ESPECIES \ AÑO	1982	1981	1980	1979	1978	1977
Caretta caretta			60 (30-90)			
Chelonia mydas			260 (160-360)			
Dermochelys coriacea			380 (260-560)			
Eretmochelys imbricata			420 (240-600)			
Lepidochelys kempi			—			
Lepidochelys olivacea			—			

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
Resuma el número estimado de hembras desovando de acuerdo a los años indicados y describa los métodos usados para efectuar estas estimaciones en la próxima página.

	NOMBRE DEL AREA (o indicar coordenadas)	AREA APROX. (Km²)	ESPECIES ALIMENTANDOSE (use abreviaciones) cantidad aproximada	NATURALEZA DE LA EVIDENCIA (observación, pesquería, pesca incidental)
1.	S. 5a 7. BAHÍA DE IGUEROS - PUNTA ROCIA		Cm (3)	
	S. 29. PUNTA BALA DE LOS COROZOS.		Ei (2) Si* (1)	VUELO AEREO - AGO. - JULIO - 1980 " " 26-VI-80
2.	S. 47. BAHÍA CATALINITA		Ei (1)	" " 8-VII-80
	S. 48. ISLA SAONA		De (1)	" " 8-VII-80
3.	S. 52. ISLA CATALINA		De (1)	" " 8-VII-80
	S. 66. PUERTO VIEJO - PUNTA MARTÍN GARCÍA		Si (9)	" " 30-IV-80
4.	S. 67. P. MARTÍN GARCÍA - BOCA BADIE DEL SUR		Cm (1)	" " 30-IV-80
	S. 70. OJEDA - ENRIQUILLO		Cm (1)	" " 30-IV-80
5.	S. 71. PUERTO BELLO - CABO SAN LUIS		Si (1)	" " 30-IV-80
	S. 73. ISLA BEATA		Si (1) Ei (1)	" " 30-IV-80
6.	S. 74. CABO BEATA - CABO FALSO		Si (1)	" " 30-IV-80

TABLA 7. INVENTARIO DE AREAS DE FORRAJEO Si = Sin identificar.

PARA LAS SECCIONES, VER MAPA ANEXO ESC. 1:600,000

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 10. MORTALIDAD NATURAL

(página suplementaria para información biológica adicional).

Favor de recortar abajo, y en páginas adicionales si se requiere, datos disponibles, como tamaño de hembras, machos adultos y recién nacidas (largo, ancho, peso), número de huevos por nidada, horas de postura, condiciones del nacimiento, etc.

CHELONIA MYDAS

HUEVOS POR NIDADA 104.5 (82-123) n=2 ambos

HUEVOS (n=92) 44 MM 93.5 G.

HEMBRAS ADULTAS 96 CM LONG. (94-98) n=2

FRECUENCIA DE REANIDAMIENTO - 12 DIAS - n=1

ERETMOCHELYS IMBRICATA

HUEVOS POR NIDADA 126 (102-105) n=2 nidos

RECIEN NACIDAS 42.6 MM 17.86 n=3

HEMBRA ADULTA 80 CM LONG n=1

DERMOCHELYS CORIACEA.

HORA DE ANIDAMIENTOS - 1900 A 0100 (n=13)

HUEVOS POR NIDADA - 98.9 (67-113) n=7

HUEVOS NORMALES - 67.9%/NIDO - 56.6 MM

HUEVOS IRREGULARES. - 36 MM

HEMBRAS ADULTAS - 155.6 CM (146-169) n=11

RECIEN NACIDAS 59.7 MM (56.6-63.6) n=50
42.36 (35-52) n=50

FRECUENCIA REANIDAMIENTO 7 - 11.3 DIAS
(3 HEMBRAS).

DESEMBARCOS ANUALES DE TORTUGAS MARINAS EN LA REP. DOM., EXPRESADOS EN TONELADAS.

1970	1971	1972	1973	1974	1975	1976	1977	1978
3				5	66	45	47	128

FUENTE: DESARROLLO PESQUERO EN LA REP. DOM.
INFORME FINAL PREPARADO POR
Fisheries Development Limited. 434 pp. 1980.
INDOTEC. SANTO DOMINGO. REP. DOM.

PRODUCTOS DE LA TORTUGA	AÑO 1982	1981	1980	MERCADO ACTUAL Precio/unid.	METODO DE COLECTA DE LOS DATOS
No. de huevos					
Carne (Kg)	51,707	142,717		R.D.$ 5.62 por kilo, en 1983	CAPTURA ANUAL Y MEMORIA ANUAL DEL DPTO. DE RECURSOS PESQUEROS. SECRETARIA DE AGRICULTURA
Caparazones (Concha) número/peso				R.D.$ 99.00 por kilo, en 1983	PRECIO/UNIDAD: INSTITUTO DE DESARROLLO Y CREDITO COOPERATIVO (VER ANEXO).
Pieles número/peso					
Juveniles Disecados					
Número total de tortugas					

ESPECIES LAS ESTADISTICAS SE RECOPILAN EN CONJUNTO, SIN SEPARARLAS POR ESPECIES. TORTUGA VERDE Y CAREY PRINCIPALMENTE, CAGUAMA EN MENOR GRADO.

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

TABLA 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS. (página suplementaria)

Favor de suplir cualquier dato adicional sobre productos de tortugas en su país. Incluya productos elaborados como los derivados del caparazón (concha), etc., si tales datos se poseen.

CAPTURA DE GUEGUENSOS, EN KILOS, PARA 1981.
MEMORIA ANUAL DEL DEPARTAMENTO DE RECURSOS PESQUEROS, SECRETARIA DE ESTADO DE AGRICULTURA.

ENERO	5851
FEB.	4181
MARZO	9166
ABRIL	15085
MAYO	5425
JUNIO	19930
JULIO	7645
AGOSTO	11512
SEPTIEMBRE	7727
OCTUBRE	23469
NOVIEMBRE	31917
DICIEMBRE	32878
	169,786

ESTOS DATOS INCLUYEN (1981):

TORTUGAS DE AGUA DULCE	27,069
TORTUGAS MARINAS	142,717
TOTAL	169,786

NO SON DATOS PRECISOS, SOLAMENTE PUEDEN INDICAR TENDENCIAS EN AUMENTO DE LA CAPTURA EN ALGUNOS MESES. DE MARZO A JUNIO AUMENTA LA CAPTURA DE TORTUGAS DE AGUA DULCE Y DISMINUYE CONSIDERABLEMENTE EN LOS MESES DE OCTUBRE A ENERO.

1982 → 51,707 KILOS

EL CENTRO DOMINICANO DE PROMOCION DE EXPORTACIONES (CEDOPEX) REPORTA LAS SIGUIENTES EXPORTACIONES DE CARNE DE TORTUGAS MARINAS:

	KG	POR
1981	—	—
1982	2,898	R.D.$3,500

ACTIVIDAD	TOTAL ANUAL DE PERSONAS	INGRESO ANUAL ESTIMADO	COMENTARIOS
PESCA			NO HAB PERSONAS QUE DEPENDAN EXCLUSIVAMENTE DE LAS TORTUGAS MARINAS. NO SE DISPONE DE DATOS CONCRETOS EN ESTAS TRES CATEGORIAS
PROCESAMIENTO			
VENTA			

TABLA 16. EMPLEO QUE DEPENDE DE LAS TORTUGAS.

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	NO. DE MIEMBROS ACTIVS	ACTIVIDADES EN DESARROLLO
MUSEO NACIONAL DE HISTORIA NAT. PLAZA DE LA CULTURA SANTO DOMINGO REP. DOM.		- STATUS, DISTRIBUCIÓN Y CONSERVACIÓN DE LAS TORTUGAS MARINAS EN LA REP. DOM. - EXHIBICIÓN SOBRE TORTUGAS - EDUCACIÓN AMBIENTAL
PARQUE ZOOLÓGICO NACIONAL ARROYO SALADO SANTO DOMINGO REP. DOM.		EDUCACIÓN AMBIENTAL
CENTRO DE INVESTIGACIONES DE BIOLOGIA MARINA. UNIVERSIDAD AUTONOMA DE SANTO DOMINGO. STO. DGO., REP. DOM.		EDUCACIÓN AMBIENTAL
DIRECCIÓN NACIONAL DE PARQUES CASA DE BASTIDAS, CALLES DAMAS STO. DGO. DPTO. RECURSOS PESQUEROS SEC. DE AGRICULTURA CENTRO DE LOS HEROES, STO. DGO.		- PROTECCIÓN DE PLAYAS EN PARQUE NACIONAL DEL ESTE - EDUCACIÓN AMBIENTAL - ENCARGADO DE LAS LEGISLACIONES NACIONALES SOBRE TORTUGAS MARINAS.

TABLA 18. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE PREOCUPAN DE LA CONSERVACION/MANEJO/UTILIZACION DE LA TORTUGA

NOMBRE Y LUGAR	AREA km^2	RAZONES PARA SU PROTECCION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY
PARQUE DEL ESTE EXTREMO SURESTE DEL PAÍS, INCLUYENDO ISLA SAONA.	420	MULTIPLES. INCLUYE PLAYAS DE ANIDAMIENTO DE CAREY Y TORTUGA VERDE Y AGUAS DE POCA PROF.	FALTA DE RECURSOS SUFICIENTES PARA HACER CUMPLIR A CABALIDAD LA LEY.

TABLA 19. SANTUARIOS Y REFUGIOS

NUMERO Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
DPTO. DE RECURSOS PESQUEROS SECRETARIA DE AGRICULTURA CENTRO DE LOS HEROES. SANTO DOMINGO, REP. DOM.			SE HACEN SOMETIMIENTOS OCASIONALES DE LOS INFRACTORES A LAS LEGISLACIONES VIGENTES, PERO EXISTE POCO INTERÉS DE HACER CUMPLIRLAS
CENTRO DOMINICANO DE PROMOCIÓN DE EXPORTACIONES. AV. 27 DE FEBRERO STO. DGO., REP. DOM.			REGULA TODAS LAS EXPORTACIONES DEL PAÍS, INCLUYENDO LOS PRODUCTOS DE TORTUGAS. SE LIMITA A CUMPLIR LAS REGULACIONES VIGENTES.
DIRECCIÓN NACIONAL DE PARQUES. CASA DE BASTIDAS. CALLE LAS DAMAS. STO. DGO., REP. DOM.			REGULA LOS PARQUES NACIONALES Y SU FAUNA ASOCIADA. EL PARQUE DEL ESTE ES EL ÚNICO ACTUALMENTE QUE INCLUYE PLAYAS.

TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

TABLA 20. AUTORIDAD REGULADORA
(página suplementaria)

Favor de citar la legislación federal, regional y local concerniente al manejo y la conservación de la tortuga. Indique el título, la fecha y la intención declarada.

DECRETO NUM. 600, DEL PRESIDENTE DE LA REPÚBLICA. 26 DE FEBRERO DE 1976.
PROHIBE LA CAPTURA DE CAREYES O TORTUGAS EN AGUAS TERRITORIALES DOMINICANAS CON UN TAMAÑO MENOR A 50 CMS. DE LONGITUD DE CARAPACHO.
LA PENA APLICADA OSCILA ENTRE RD$ 6.00 Y RD$ 100.00.

DECRETO NUM. 1580. 20 DE AGOSTO DE 1977.

ESTABLECE LA OBLIGACIÓN DE OBTENER UNA CERTIFICACIÓN DEL DPTO. DE RECURSOS PESQUEROS, DE LA SECRETARIA DE ESTADO DE AGRICULTURA PARA LA EXPORTACIÓN DE CAREYES.

VEDA PERMANENTE EN LA RECOLECCIÓN Y COMERCIALIZACIÓN DEL HUEVO DE LA TORTUGA Y EL CAREY.

VEDA DURANTE LOS MESES DE MAYO, JULIO, SEPTIEMBRE Y OCTUBRE, PARA LA MATANZA, PESCA O APRESAMIENTO DEL CAREY.

TITULO DEL PROYECTO	FECHAS		NOMBRE Y DIRECCION DE LA INSTITUCION Y DEL INVESTIGADOR PRINCIPAL
	INICIO	TERMINO	
Status, Distribución y Conservación de las Tortugas Marinas en la Rep. Dom.	Marzo 1980		José Alberto Ottenwalder Museo Nacional de Historia Natural Plaza de la Cultura Sto. Dgo., Rep. Dom.

TABLA 21. PROYECTOS NACIONALES DE INVESTIGACION

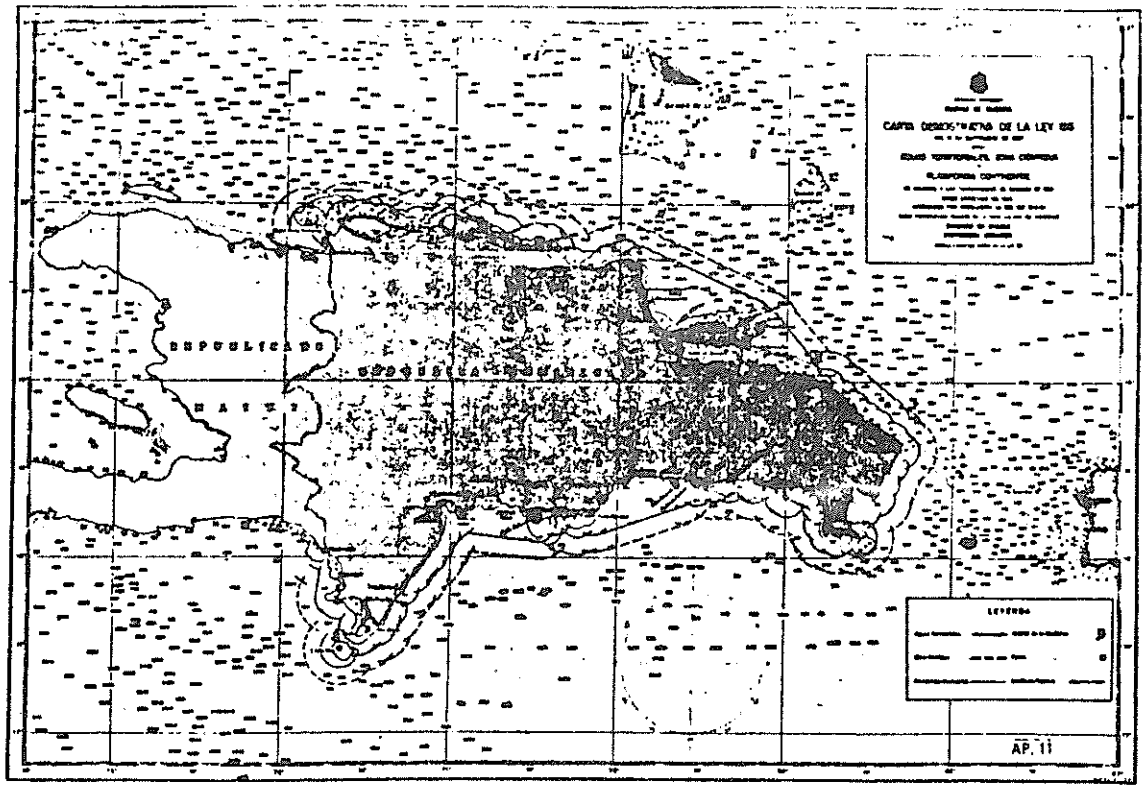
Cite las actividades sobre investigación de tortugas financiadas por su país.

REPORTES Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

1. Ottenwalder, José Alberto. 1982. Estudio preliminar
2. sobre el status, distribución y biología reproductiva
3. de las tortugas marinas en la Rep. Dom.
4. Con fondos parciales del Museo Nacional de Historia Natural, de Santo Domingo.

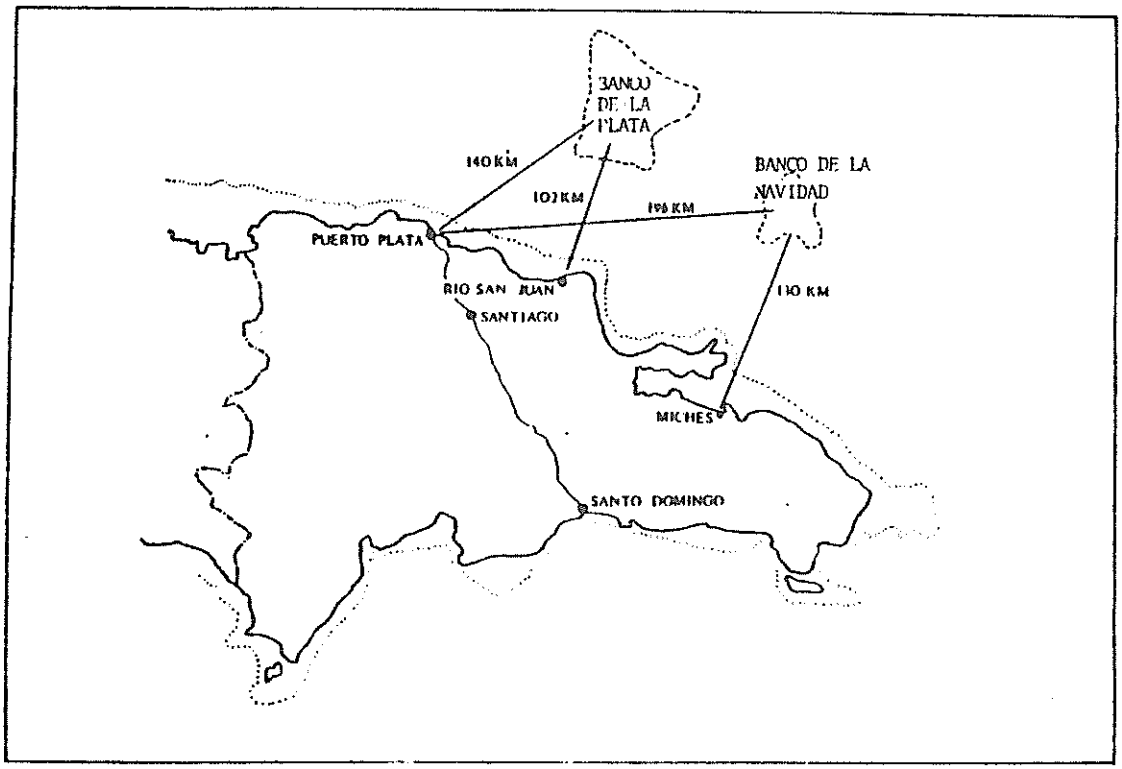
ANEXO A TABLA NO. 1



Nota.– La Línea de Aguas Territoriales y Zona Contigua se delimita por ARCOS de 6 mn. desde los puntos más salientes de la costa.
Las aguas interiores de las BAHIAS son aguas territoriales nacionales, según la convención de Ginebra, que admite una doble clase de bahía 1) "B. Geográfica", cuando la profundidad de la Bahía es mayor que la anchura de la boca. Y 2) "B. Históricas" –o asimiladas, a efectos de la ingestión internacional–, cuando se usaron históricamente como aguas nacionales. Así p. ej. las Bs. de Santo Domingo y Ocna, que no son Bahías en sentido geográfico estricto.

A-15

Dominican Republic

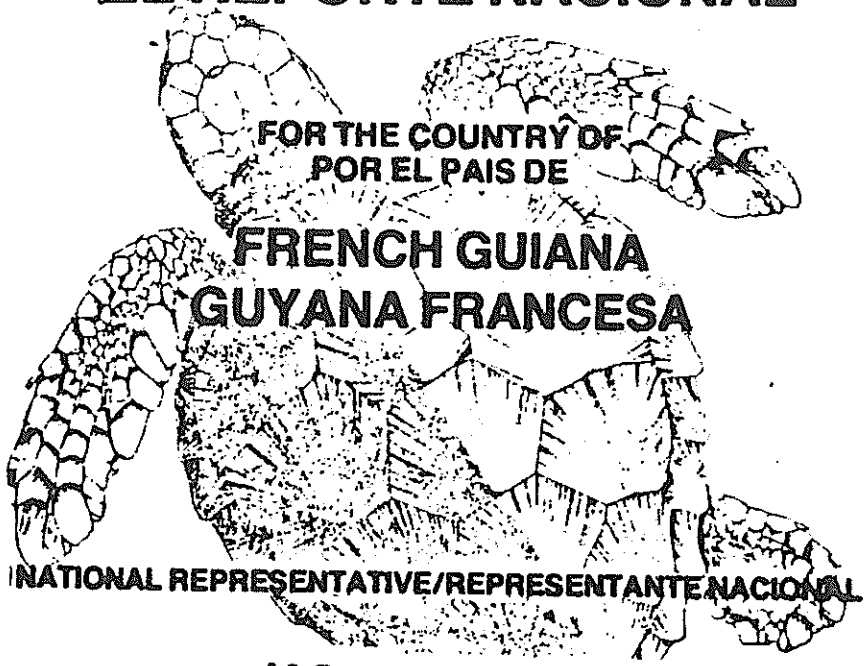


S18

ANEXO A TABLA NO. 1. AGUAS TERRITORIALES. FUENTE: INDOTEC, 1980. DESARROLLO PESQUERO EN LA REP. DOM.

Dominican Republic

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

FRENCH GUIANA
GUYANA FRANCESA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

JACQUES FRETEY

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF
GUYANE FRANÇAISE

NATIONAL REPORT PRESENTED BY

Jacques FRETEY
The National Representative

Address: laboratoire de Zoologie (Reptiles et Amphibiens), Muséum national d'Histoire naturelle, 25 rue Cuvier 75005 Paris FRANCE

NATIONAL REPORT PREPARED BY

Jacques FRETEY

DATE SUBMITTED: 1 May 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country GUYANE FRANÇAISE

Length of Coastline* ..... 450 Km

Km² of Continental Shelf Area ..... ___ Km

Seaward Extent of Jurisdictions:

Territorial Sea ..... 21,6 Km

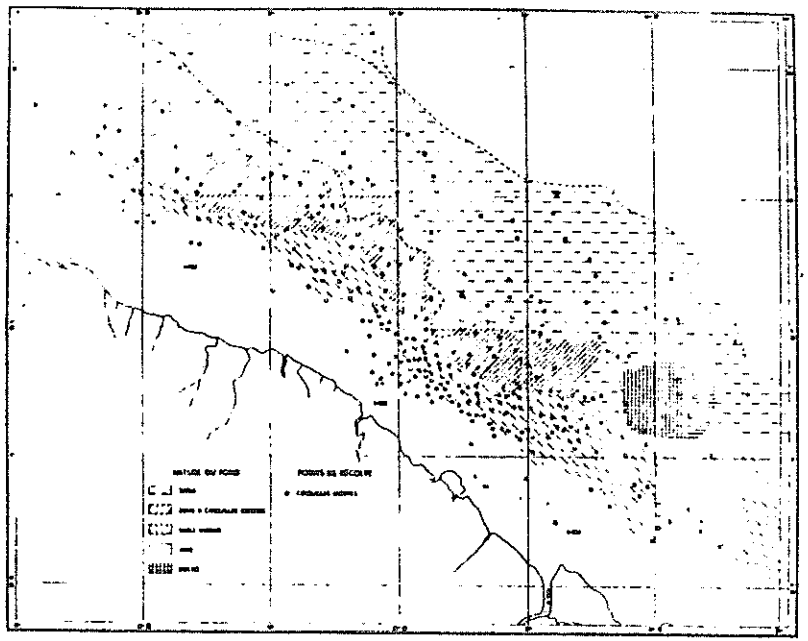
Extended Economic Zone ..... 360 Km

Fisheries Jurisdiction ..... 360 Km

Other (Describe) _____ ... ___ Km

BLE 1. GEOGRAPHIC INVENTORY

Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.



Répartition générale des fonds

Extrait de: Le plateau continental guyanais. DURAND, J., Cahiers de l'OCEANOR, 1959, 3:1-93, figs.

CHARACTERISTICS*	KM OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	26 Km	6 Km	32 Km
A. High Energy			
B. Low Energy			
2. Roof (exposed)			
3. Rocks			
4. Cliffs			
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves	≈ 220 Km		≈ 220 Km
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes	20 Km		20 Km
6. Mouths of lagoons, rivers, canals			
7. Total Shoreline			

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand		
2. Mud		
3. Rocks		
4. Submerged Vegetation		
5. Reefs (Total)		
A. Fringing Reefs		
B. Patch Reefs		
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

voir photocopie Durand (1959)

NAME OF BEACH	LENGTH IN km	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Montjoly	4	D Lo	juin
2. Sinnamary-Kawanabo	?	D	mars
3. Organabo	3,5	D Lo Cm	juillet
4. Arataye	3,7	Cm Lo Ce?	juillet
5. Farez	4	D Lo Cm	avril à juillet
6. Pointe Isère	4	D Lo Cm E Cc	avril à août
7. Kawana	3,1	D Lo	mars à août
8. Awara-Bois Tombé	2	D Cm	juin à août
9. Les Hattes-Yalimapo	2	D Cm Lo	mars à août
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Voir FRETEY (1980.b) et SCHULZ (1971).

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	moy. = 12 / max. = 46	480	avril 1977
Dermochelys coriacea	moy. = 40 / max. = 187	7515	juin 1977
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	0 à 2	—*	juin 1977

TABLE 4 - 5 NESTING CENSUS FOR BEACH FAREZ
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

*estimation difficile en raison de l'irrégularité des pontes

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	moy. = 8 / max. = 15	300	avril 1977
Dermochelys coriacea	moy. = 45 / max. = 60	4428	juin 1977
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	1 à 4	—*	juin 1977

TABLE 4 - 6 NESTING CENSUS FOR BEACH POINTE ISERE
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	moy. = 1,5 / max. = 5	72	avril 1977
Dermochelys coriacea	moy. = 98 / max. = 206	9572	juin 1977
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	moy. = 3 / max. = 6	—*	juillet 1979

TABLE 4 - 7 NESTING CENSUS FOR BEACH KAWANA
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	moy. = 1,5 / max. = 7	100	mai 1979
Dermochelys coriacea	moy. = 65 / max. = 82	2796	juin 1979
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	moy. = 2 / max. = 3	—*	juillet 1979

TABLE 4 - 8 NESTING CENSUS FOR BEACH AWARA
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	moy. = 5 / max. = 18		
Dermochelys coriacea	moy. = 151 / max. = 226		
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	moy. = 0,3 / max. = 5		

TABLE 4 - 9 NESTING CENSUS FOR BEACH LES HATTES YA : LIMA : PO
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	38	—*	juillet 1978
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	13	—*	juillet 1978

TABLE 4 - 3 NESTING CENSUS FOR BEACH ORGANABO
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta						
Chelonia mydas				112 ♀	83 ♀	120 ♀
Dermochelys coriacea				9712 ≥ 5197 ♀	5933 ≥ 3607 ♀	4851 ≥ 6932 ♀
Eretmochelys imbricata						
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

BLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Plusieurs méthodes :

① - Comptage du nombre total de traces chaque matin sur les plages proches du camp. Le nombre total est ensuite divisé par le nombre de retours probables (5 retours, 6 retours, 7 retours).

② - Comptage des traces 1 fois/semaine, 1 fois/15j, 1 fois/30 jours sur les plages éloignées.

③ - marquage de toutes les ♀ rencontrées à terre.

Voir Fretey & Lescure (1979).

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Dc Cm Lo	érosion; crabe Ocypode quadrata; Rattus crabier Procyon cancrivorus; chiens indiens	
Hatchlings	Dc Cm Lo	crabe Ocypode quadrata; Urubu Coragyps atratus brasiliensis; Héron violet Nyctiocorax violaceus cayennensis	
Juveniles	Dc Cm Lo	// // //	
Adults (in water)	Dc Cm Lo	Requins; Hommes (Pêcheurs)	
Nesting females	Dc Cm Lo	bois morts; Hommes; Jaguar Panthera onca; soleil.	

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

JBLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

Voir Fretey (1977)
Fretey & Lescure (1981)

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs:_____
2. Estimated number of nesting females: _____
3. Number of turtles caught at sea:_____
4. Other: _____

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

Les tortues marines font partie des traditions coutumières alimentaires des Indiens Kalina-Galibi. Sur 2 villages (Awara et Yalimapo) seules 4 famil- les mangent régulièrement de la viande de tortue. Les tortues sont capturées involontairement par les filets de pêche.
On peut estimer à environ 30 000 le nombre d'oeufs de D.c. et Lem., et L.o. collectés par an par ces Indiens.

FRENCH GUIANA

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea	9359	3604	3608	2 mois	0			
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1982

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

FRENCH GUIANA

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea	5339	2239	2239	nouveau né	0			
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1981

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Laboratoire de Zoologie (Reptiles et Amphibiens) 25, rue Cuvier 75005 Paris FRANCE	2 chercheurs + 2 Indiens	- Etudes embryologiques et éthologiques - surveillance des plages, sauvetage des oeufs par incubation en écloserie
Greenpeace 3, rue de la bûcherie 75005 Paris FRANCE		gestion de l'écloserie
W.W.F. 19, rue de la Cure 75016 Paris FRANCE		gestion de l'écloserie
F.F.S.P.N. 57, rue Cuvier 75005 Paris FRANCE		gestion de l'écloserie

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Les Hattes Yalimapo	≃ 15 Km²	plage de ponte de D.c. la plus importante pour l'océan Atlantique (danger d'érosion, tourisme)	protection relativement efficace (arrêté préfectoral)
Kawana, Pointe Isère, Farez, Organabo, Les Hattes	≃ 111,5 Km²	projet de réserve naturale nationale (cf. Fretey, 1982)	réserve non officielle en raison de projets agricoles (riciculture).

TABLE 19. SANCTUARIES AND REFUGES

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEM
Préfecture de Cayenne	néant	néant	

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments an Ministeries, Police, Coast Guard, etc.)

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
	avril 1983	août 1983	Jean LESCURE Laboratoire Reptiles Amphibiens MNHNP 25, rue Cuvier 75005 Paris FRANCE
Suivi de Tortues luths par système ARGOS à partir de leur site de ponte guyanais	avril 1983	avril 1984	Jacques FRETEY Laboratoire Reptiles Amphibiens MNHNP 25, rue Cuvier 75005 Paris FRANCE
Sauvetage d'œufs de D. coriacea en Guyane française	avril 1983	sept. 1983	Jacques FRETEY Greenpeace 3, rue de la Bûcherie. 75005 Paris FRANCE W.W.F. 16, rue de la Cure. 75005 Paris FRANCE

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

GUYANE addenda

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Actuellement :

- arrêté n° 813 1D/2B du 15 avril 1978. Capture et destruction des adultes toutes espèces interdites entre le 1er avril et le 31 août - Interdiction de collecter, d'avoir en stocks, de vendre, d'acheter, colporter des œufs (renvoi à arrêté n° 172 1D/2B du 31 janvier 1975)
- arrêté n° 2312 1D/2B du 27 novembre 1982. Protection du site de ponte des Hattes. Protection intégrale des tortues et des œufs.
- arrêté n° 2708 1D/2B du 30 octobre 1981. Tortue luth intégralement protégée.

Projets :

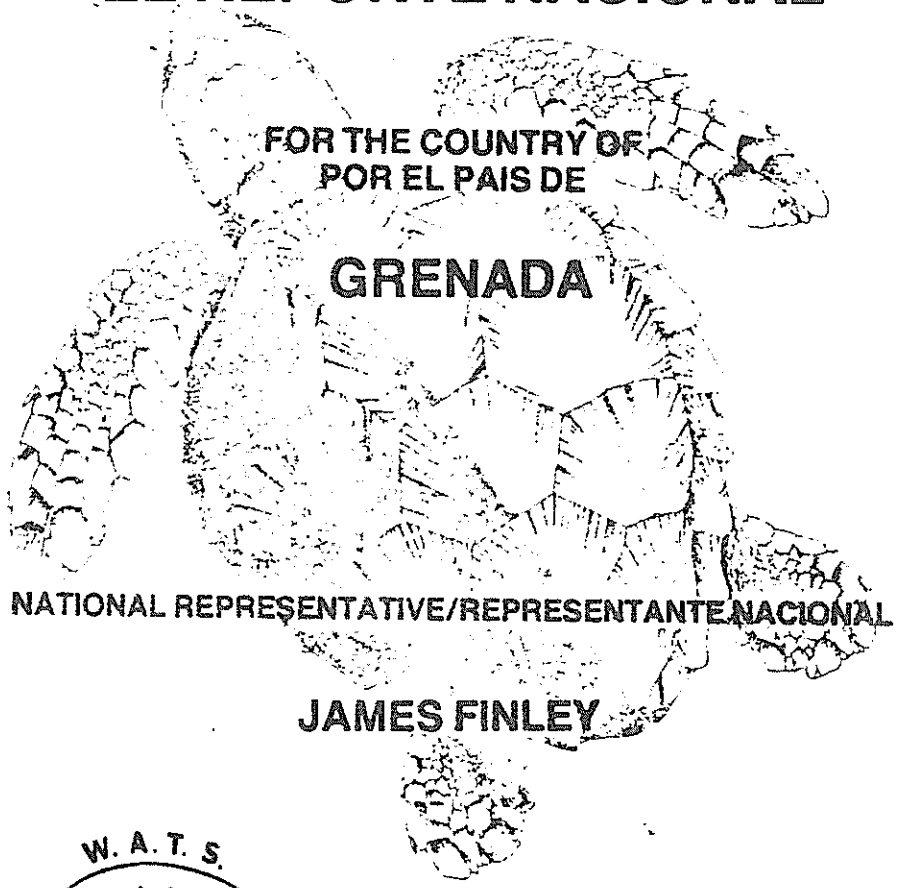
- arrêté préfectoral protégeant intégralement tortues adultes toutes espèces, œufs et sites de ponte (projet Fretey, septembre 1979). Demande non suivie.
- arrêté ministériel (voir à Martinique)

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. PRITCHARD, P.C.H., 1971 - Sea turtles in French Guiana. IUCN, 31: 38-40.
2. SCHULZ, J.P., 1971. - Nesting beaches of sea turtles in west French Guiana. Proceed. Koninkl. Nederl. Akad. van Wetensch., 74 (4): 396-408.
3. FRETEY, J., 1977. - Causes de mortalité des Tortues luths adultes (D. coriacea) sur le littoral guyanais. Cour Nat., 52: 257-266.
4. FRETEY, J., 1977. - Mensurations de Tortues luths femelles adultes, Dermochelys coriacea (Linné) en Guyane française. Bull. Soc. Zool. Fr., 103 (4): 518-523.
5. FRETEY, J., & J. LESCURE, 1979. - Rapport sur l'étude de la protection des tortues marines en Guyane française. Minist. Envir., miméogr., 1-56.
6. FRETEY, J., 1980a. Les pontes de la Tortue luth Dermochelys coriacea en Guyane française. Terre & Vie, 34 (4): 649-654.
7. FRETEY, J., 1980b. - Délimitation des plages de nidification des Tortues marines en Guyane française. C.R. Soc. Biogéogr., 496: 173-191.
8. FRETEY, J., & J. LESCURE, 1981. - Prédation des tortues marines par les oiseaux en Guyane française. L'Oiseau, 51 (2): 139-145.
9.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

GRENADA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

JAMES FINLEY

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

Grenada

NATIONAL REPORT PRESENTED BY

James Finlay
The National Representative

Address: Fisheries Division, Ministry of
Industrial Development & Fisheries
Belmont, St. George's Grenada.

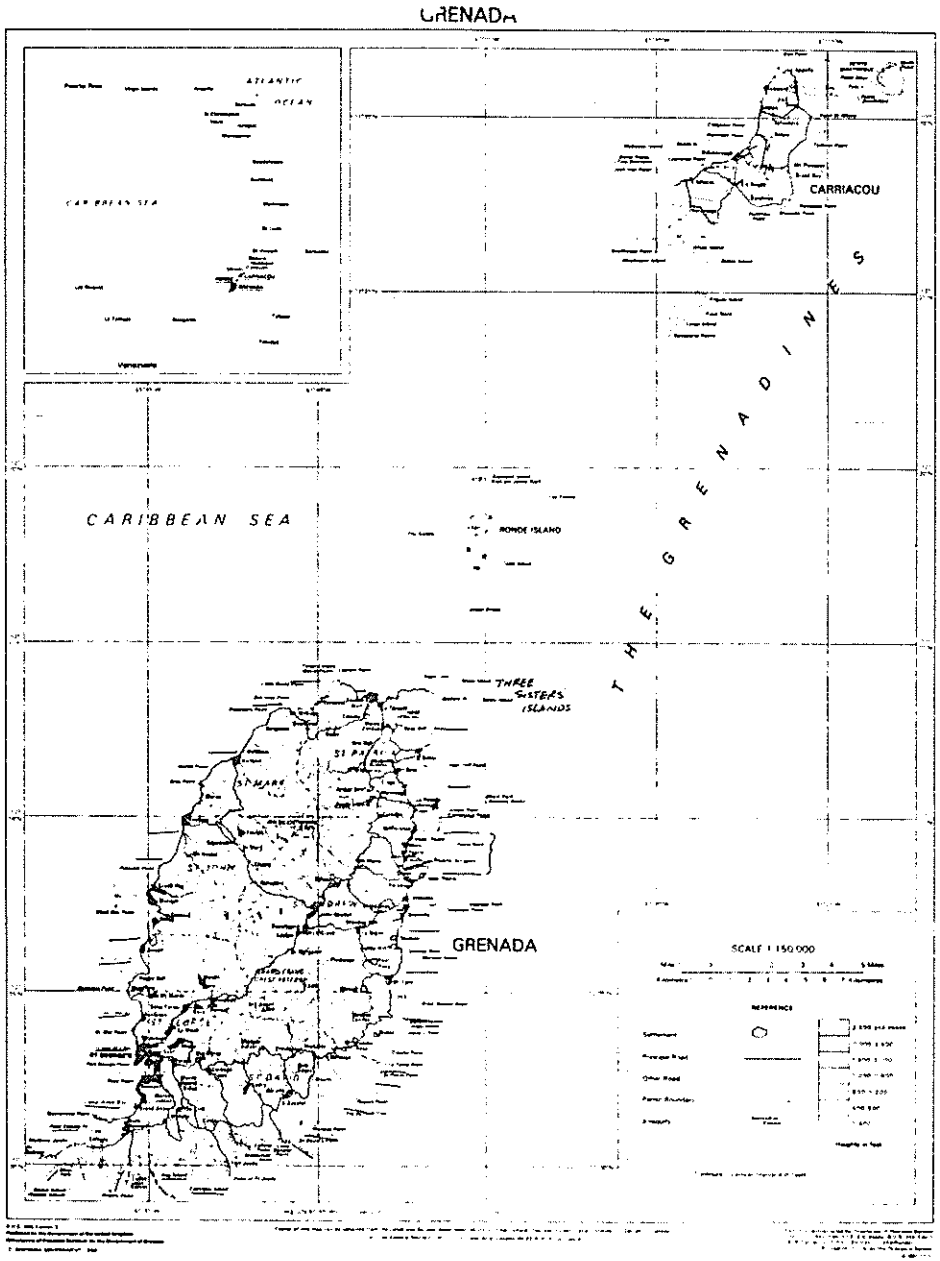
NATIONAL REPORT PREPARED BY

James Finlay (Assisted by Paul Williams)
Fisheries Division, Ministry of Industrial
Development and Fisheries

DATE SUBMITTED: 15th. February 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

THE GRENADINES


GRENADA
ATLANTIC OCEAN
CARIBBEAN SEA
CARRIACOU
THE GRENADINES
RONDE ISLAND
THREE SISTERS ISLANDS
GRENADA
SCALE 1:150,000

INTRODUCTION:

The Sea Turtle Socio-economic and Nesting Survey, Study of Grenada (including Isle De Ronde & Isle De Caille) began about March 1982 and continued until December 1982. It was an extensive rather than intensive study. The purpose of this study was to collect information and prepare a national report on Grenada for the Western Atlantic Turtle Symposium (W.A.T.S.) to be held in July 1983 in San Jose, Costa Rica. (For Grenada even after the report is submitted data collection will continue). The following objectives guided the study and indicate the scope of investigation undertaken.

(a) Record the type of shoreline about the island of Grenada. The purpose being to indicate the actual and potential sea turtle nesting beaches. This data will be valuable baseline work for subsequent studies, and also to document the kinds and amounts of shoreline throughout the Islands.

(b) Record the areas in which turtle sightings are frequently made by fishermen and other persons visiting the beaches; record data on concentrated and dispersed nesting locations.

(c) Compile data of any kind that may indicate the status of sea turtle populations in Grenada.

(d) Review the present conservation and management programs related to sea turtles.

(e) Determine the socio-economic importance of sea turtles.

(f) Make recommendations to help promote the survival status of sea turtle populations inhabiting the territorial waters of the Grenada group.

BACKGROUND:

General Geographical Description of Grenada Group:

Grenada is an independent, English speaking East Caribbean State consisting of Grenada, Carriacou and Petit Martinique, Isle De Ronde and a number of small islet. It is the southernmost island of the East Caribbean Chain, lying between 12° and 13° North and 61° and 62° West (See map references).

The island group have a population of approximately 110,000 (1970 census) The citizens have very strong contacts with the sea and shoreline . The islands are volcanic in origion with evidences of sandstone and shales in many areas. For the main island, Grenada, there is

substantial runoff, which together with other factors, has generated much shoreline sand. Grenada is very much less [illegible] an oceanic island, than Barbados only about 100 miles away. The vegetation is tropical continental with certain varieties which reveal the dry season/rainy season character of the climate.

COASTLINE AND OFFSHORE AREAS:

The coastline of the Grenada group is a pattern of sandy bays and rocky points. There is much more sandy shore than rock and cliff shoreline. Grenada is notably affected by the North East Trade Winds and hence the North and Eastern shoreline experience high energy swells almost constantly. Hence the beaches to the leeward sides of the islands have a moderately sloping beach profile and well vegetated 10 or 50 meters above the high tide mark.

The Windward beaches have gentler profile in high tide swash. However, in areas as characterized by Conference Bay, sand dunes spread along the profile of the beach up to 20 meters from the tide mark. The shorter beaches occur in areas along the windward coast where the rocky points are frequent. Here the beaches are less rough.

On Grenada the colour of sand on beaches varies. [illegible]

Generally the leeside beaches have blacksand probably due to the substantial run off from rivers. The white sand occurs in the beaches from Grand Mal to Point Saline. The Windward beaches are generally white with the occasional admixture of white and black sand. Mangrove swamps occur in areas to the South East but sand mud beaches can be found at these locations.

Isle De Ronde and island of about 1.5 square miles has white sand to the south and black sand to the west. Isle De Caille another 0.5 square miles island only .5 km away has black sand pervading the beaches.

The offshore areas of Grenada etc. consist of a submarine shelf of approximately 400 sq. miles of bottom varying from 0-20 fathoms. Most of this area consists of active and dead coral-line surfaces. Large expansion of sea grass beds and soft coral occur at various locations. References are given of known vegetation types, on map.

Since the 1940's various persons where concerned that Sea Turtle may be overfished in Grenada. This concern was generated from the observation made that the nests of the turtles were being over-exploited. A programme was launched in the late 1950's to generate more recruitment. The principal and most visible threat to the turtle is that of trammel nets which are set on the reefs especially at times of nesting. The fishermen who engage in turtle fishing do not engage in turtle fishing exclusively. Another method of fishing is by spear-fishing.

Divers will shoot turtles while spear-fishing. Persons show strong preferences for various types of turtle. The hawks bill and green turtles are the choice for meat but the loggerhead and leatherbacks are often rejected because of the "fr@shy" fat. The hawks bill and green turtles are also prized for their backs, however, there is a marked preference for the hawksbills back.

By a survey conducted through the 1981 period, it is estimated that about 1000 turtles are caught annually. Those turtles more than 50 pounds, the number is probably 300 with the remainder being juveniles.

There are so many beaches that are becoming less and less secluded hence fishing pressure on eggs have been serious. The fishing pressure by divers is not serious but the threat by trammel (turtle) nets is a serious one. Despite this, through personal observations and interviews of divers and net owners juveniles are spotted at a rate of at least 4 - 6 or 7 a day on reefs.

STATUS OF KNOWLEDGE OF SEA TURTLES:

No known objective and scientific observations have been made of Sea Turtle populations in Grenada. At Carriacou some work has apparently been done in the past.

The concerns of fisheries up to lately had been the responsibility of the Agriculture Ministry. Little serious action had been

taken by way of conserving these species. Fisheries in Grenada is multispecies in nature and principally artisanal. Legislation was past in 1957 in an effort to protect turtles, however, since turtles can be landed on any beach on the island, it has been difficult to monitor or control the exploitation of these species. Hence, knowledge of the present state of sea turtles populations is drawn from observations made by local trammel fishermen, divers and boys who hunt the turtles and their eggs.

The divers and fishermen reveal that although there are principal nestings at secluded beaches and on the offshore uninhabited islands, there were no concentrated nesting sites. The turtles observed making crawls and actual nestings were those of the green and hawksbill turtles. Records were drawn from interviews with the three categories of turtles predators. Divers were the most helpful. A local diver in the southern part of Grenada observes green and hawksbill turtles frequently. He reports that out of nesting season juveniles of these species are observed feeding all along the grass beds which are prevalent in this area. There are many small secluded beaches in the area, he reports that whenever the turtles are found basking above the grass beds in the day time then be sure they will come in at night.

Leather-back turtles are the most infrequent and are more often

seen out at sea by fishermen. The turtles fishermen report that these are most frequent in the "rainy seasson" when the water is less salt. The logger head turtles have never been reported as nesting on beaches. The fishermen either catch them in dive; . or in the ne t. Even when caught near to shore they have not been found to have eggs. Only once did a fisherman report having seen eggs in a loggerhead female. Notably the fishermen do not catch male loggerheads.

Through repeated interviews and probings the fishermen have indicated that only four types of turtles are observed in Grenada. These are Green Hawksbill loggerhead and leather-back. Reliable and keen divers have reported that turtles having the appearance of "flatback" are often caught on the offshore islands to the north of the Grenada island. The fishermen have said that they always call them a cousion to the green turtles.

To the north of the Grenada island where there are a number of offshore islands, there are significant populations of turtles. Divers interviewed have indicated that Hawksbill and Green Turtles concentrate in different areas depending on the bottom types. He reports that the Hawksbills feed on sponges and soft coral and occur principally along the London Bridge channel area. The Green-Turtles which eat sea-grass frequent the grass beds

between the three sisters islands and further north of Isle De Ronde. The Leatherback though not very frequent around the island make a favourite nesting site on the Levera Beach in rainy season June - July. Only the females of leatherbacks are observed.

In the southern offshore area of Grenada, Green and Hawksbills are prevalent. Green turtles are especially prevalent around Hog Island where there are extensive areas of sea grass beds. Two fishermen reported that Green Turtles lay when larger than 80lbs and Hawksbill lay when larger 50/60 lbs. However, one reported that he had observed eggs in a 30/lb hawksbill turtle. They also reported that hawksbill are quite predictable since they lay in 15 days cycles several times a season and according to the moon, when fresh tracks are observed the fishermen know when to return for the subsequent crawl. They report also that hawksbills lay furthest up the beach even under bushes in the highest sand.

Fishermen report that April, May is the principal mating time, when the turtles are seen chasing each other and even disregarding divers. On the southern portion of Grenada, a diver reports that October, November and December are the prevalent feeding times for the the Hawksbill Turtles.

Another seine-net fishermen diver reports that the juveniles are prevalent feeding on the "wawet" seaweed (moss) in the early parts of the year when the mosses are blooming.

N.B. On the Leeward side of the Grenada island where seine net fishing is practiced turtle nestings are rare and although occassionally nets draw in small juveniles, the turtles are not frequent in this area.

METHODS

With limited time and resources available for such a survey in Grenada, the nature of the research was very narrow. The study involved:-

a. Visits to most beaches which were actual and potential nesting sites of turtles;

b. Researching Government records of turtle management and most importantly interviews and discussion with turtles fishermen, local men and divers;

c. Observations of catches of turtles brought at the landing sites;

The ordinance survey mapwas used extensively for back up studies on the locations for beaches in perspective. These maps were used also for translating data, collected in the field, to the smaller scale maps.

NAME OF BAY OF ISLAND	APPROXIMATE LENGTH OF COASTLINE(km)	APPROXIMATE LENGTH OF SUITABLE BEACH (METRES)
BLACK BAY	0.7	300
MARIGOT	0.7	0
GRAND ROY	0.7	300
DOTHAN	1.0	700
PLAMISTE	2.0	1,000
GOUYAVE	1.0	200
MILET	1.3	300
MARAN	1.1	100
MT. EDRECOMBE	1.2	0
ST. MARKS	3.2	400
CRAYFISH BAY	1.5	100
DUQUESNE	1.7	[illegible]
DAVID	3.6	300
SAUTEURS	2.0	2,000
IRVINE	2.5	150
LEVERA BAY	1.8	800
GRENADA (Pathway)	3.8	1,500
ANTOINE	2.5	2,250
CONFERENCE/GREAT RIVER	6.9	6,150
GRENVILLE BAY	4.5	1,500
ST. ANDREWS	3.3	250
GREAT BACOLET	3.5	1,250
MENERE	2.1	250
CROCHU HARBOUR	1.6	250
LA TANTE	1.2	100
GAL BY	1.3	500
REQUIN	1.9	700
LA PETIT TOUT	4.4	300
LA SAGESSE	1.9	800
ST. DAVIDS	1.5	0
LITTLE BACOLET	1.1	500
PETIT PACAYE	1.4	200
WESTERHALL	3.5	100
CALIVIGNY HARBOUR	2.8	0
CALIVIGNY ISLAND	3.0	400
WOBURN BAY	6.0	0
HOG ISLAND	3.7	500
MT. HARTMAN	3.5	0

-10-

RECOMMENDATIONS:

The fundings of the survey were limited but yielded much valuable information on the status of the sea turtles about Grenada. The following recommendations should be considered:-

1. Expend much effort in enforcing the regulations for the protection of turtles especially in the close season.

2. Mount a campaign against the use of turtle nets on reefs during close season.

3. Establish the presently secluded beaches of the out islands as sanctuaries for nesting turtles.

NAME OF BAY OF ISLAND	APPROXIMATE LENGTH OF COASTLINE (km)	APPROXIMATE LENGTH OF SUITABLE BEACH (METRES)
LANCE AUX EPINES) PRICKLY BAY)	4.5	800
TRUE BLUE BAYS	2.4	600
BAGADI	1.1	200
HARDY BAY	1.0	0
GRAND BAY	1.2	600
CATO BAY	0.4	400
BLACK BAY	0.4	150
PT. SALINE TO) [illegible] PTS)	4.0	600
BERME BOUGE	1.5	600
GRAND ANSE	3.9	2300
MARTINS	0.6	0
ST. GEORGE'S	1.9	100
GRAND MAL	2.6	1000
BRAGON	1.3	400
BEAUSEJOUR	3.2	500
HALIFAX	2.5	50
THREE SISTERS ISLANDS	6.0	2000
ISLE DE RONDE	5.5	700
ISLE DE CAMBLE	2.0	300
LAGOON (CITY) HARBOUR	2.0	300
Total		

FIG.

TABLE OF CONTENTS

SECTION	PAGES
Introduction	1
Background	2
Coastline and offshore areas	3
History of Sea Turtle in Grenada	4
Status of knowledge of Sea Turtles	5
Methods	9
Recommendations	10
TAB.1 Summary of Coastline	11
TAB.2 Graphic Inventory	12
TAB.3 Marine Habitat Inventory	15
TAB.4 Coastal Habitat Inventory	16
TAB.5 Nesting Beach Inventory	17
TAB.6 Supplementary Data	21
TAB.7 Estimated Populations Nesting Females	35
TAB.8 Species Present on Foraging Areas	36
TAB.9 Landing Sites	37
TAB.10 Total Annual Landings	38
TAB 11 Employment Dependent on Turtles	39
TAB 12 Employment Dependent on Turtles	40
Wild Life Protection Ordinance	41
Annexes	
Supplementary Maps/ Survey Grenada Carriacou and Petit Martinique	
Others	

TABLE 1

Summary of total coastline of islands and cays location in Grenada Group (not including Carriacou, Petit Martinique, and Sandy Island) and estimation of total length of beaches suitable for sea turtle nesting. Estimates made from actual visits to majority of beaches and by using ordinance survey maps.

For estimating lengths of bays an allotment of half distance between two adjoining bays is used as limitation. For estimating small inlet whole coast is estimated.

14.

Country GRENADA

Length of Coastline* ..... ___ Km

Km² of Continental Shelf Area ..... 2780 Km²

Seaward Extent of Jurisdictions:

Territorial Sea ..... 12 miles

Extended Economic Zone ..... 200 miles

Fisheries Jurisdiction ..... 200 miles

Other (Describe) _____ ... ___ Km

TABLE 2. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	?	?
2. Mud	?	?
3. Rocks	?	?
4. Submerged Vegetation	?	?
5. Reefs (Total)	250 Km²	?
A. Fringing Reefs	20 Km²	?
B. Patch Reefs	60 Km²	?
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	29.5	5.1	36.6
A. High Energy	14.9	1.0	15.9
B. Low Energy	14.6	4.1	18.7
2. Reef (exposed)	4.0	0.0	4.0
3. Rocks	70.3	10.0	80.3
4. Cliffs	24.5	3.5	28.0
5. Vegetation (Total)	108.0	15.5	123.5
A. Vines	?	?	?
B. Grasses	?	?	?
C. Mangroves	7.0	0.0	7.0
D. Coconut Trees	~~100~~ ?	~~15~~ ?	~~115~~ ?
E. Other Trees or Shrubs	100.0	15.5	115.5
F. Marshes	1.0	0.0	1.0
6. Mouths of lagoons, rivers, canals	15.0	1.5	16.5
7. Total Shoreline	143.3	22.1	165.4

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aprial Survey)
** Human development or use (Sea MANUAL)

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. PALMISTE BAY	2.0	Cm Cc D	May, Jun, July Aug.
2. ST. MARK BAY. (ISLE DE CHALLE)	1.0	Cm	Jun. July
3. SOUTH BAY (ISLE DE CHALLE)	0.5	E	April, May, Jun, July, Aug.
4. NORTH BAY	0.5	E Cm	" " " " "
5. BACOLET BAY	1.0	E Cm Cc	April, May, Jun, July, Aug.
6. ST. DAVIDS BAYS	8.0	E, Cm Cc D	" " " " "
7. POINT SALINES BAYS (SOUTH EAST)	2.0	E, Cm Cm	" " " " "
8. POINT SALINES BAYS (N-E)	1.5	E, Cm Cc	" " " " "
9. DUQUESNE BAY	0.5	E, Cm;	May, Jun; July Aug
10. LA SEUIS BAY	.	E, Cm, D	" " " "

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. DAVID BAY	1.0	Cm, E, D	April — Sept
2. IRVING BAY	1.5	E, D	April — Aug
3. RATHAN BAY	0.5	Cm, E D	April — Aug.
4. LEVERA BEACH	1.5	Cm, E, D	April — Sept.
5. CONFERENCE BEACH GREAT RIVER	5.8	Cm, E, D, Cc	April — Sept
6. SANDY ISLAND	2.0	Cm, E	April — Aug.
7. NORTH BAY (ISLE DE RONDE)	1.0	Cm E	April — Aug.
8. HALF MOON BAY (ISLE DE RONDE)	1.0	Cm E	April — Aug
9. GRENADA BAY (BATHWAY)	2.0	Cm E D	April — Sept.
10. ANTOINE BAY	1.5	Cm E D	April — Sept

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. BAYS: POINT SALINE TO QUARANTINE POINT	15	E Cm(all sizes)	divers observations interviews.
2. GLOVER ISLAND 11°59' N 60°46' W	20	E Cm(all sizes)	divers observations interviews
3. GRAND MAL BAY	5	Juv and SubA E, Cm. D(occasionally)	divers, Seine fishermen interviews
4. WOBURN/HOG ISLAND	15	all sizes, SubA E Cm Cc	divers netsetters interviews.
5. LA TANTE BAY GALBY BAY CAROHU BAY	15	E, Cm, SubA Cc D, (occassionally)	divers, netsetters interviews.
6. GREAT BACOLET BAY	10	E, Cm SubA Cc D (occassionally)	divers, netsetters interviews.

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km²)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
ISLE DE RONDE			
1. ISLE DE CALLE	25	E Cm, all sizes	divers, netsetters interviews
THREE SISTERS			
2. LEVERA	15	all sizes, except for E, Cm; Cc	divers, netsetters fisherman Interviews
DAVID BAY			
3.	10	all sizes E, Cm	divers, Seine net fisherman (interviews)
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species abbreviations:
Chelonia mydas Cm
Caretta caretta Cc
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH NORTH GRENADA 3 SISTERS ISLANDS ISLAND GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS WHITE CARBONATE and SILICATE SANDS

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: Most regular nesting areas for all four species of turtles which are observed about the island.

NAME OF BEACH ISLE DE RONDE ISLAND OUT ISLAND OF GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS WHITE CARBONATE/SILICATE SAND ON NORTH EAST and BLACK VOLCANIC ON NORTH WEST

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: A very regular nesting area for turtles of all the species. This area has foraging areas that are significant.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH FAT JUDY AND WESTERHALL BAYS ISLAND GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS WHITE CARBONATE SAND WITH MODERATE PROPORTION OF SILICON.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: Very much fragmented by Green and Hawksbill turtle.

NAME OF BEACH DEGRA, GRAND, CATO BLACK BAYS ISLAND

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS WELL SORTED CARBONATE ORANGE and WHITE SAND. HIGH PROPORTION OF SILICON.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: EXPOSED BAYS BUT MUCH FREQUENTED TURTLES; HAWKSBILL, GREEN, LOGGERHEADS.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH HOG ISLAND CALIVIGNY ISLAND ISLAND GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS WHITE CARBONATE SAND WELL SORTED OCCASIONALLY

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: A very regular turtle nesting site: even in mangore mud/sand areas turtles are known to nest.

NAME OF BEACH PRICKLEY BAY TRUE BLUE BAY ISLAND GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS VARIETY OF CARBONATE SAND. FINE TO COARSE GRAINED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: SITES FREQUENTED BY HAWKSBILL AND GREEN TURTLES.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: LA SAGESSE TO PETIT BACAYE BAYS ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: CARBONATE SAND WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: GOOD FORAGING OFFSHORE MUCH VEGESTATION ON SHORELINE

NAME OF BEACH: LA SAGESSE, LITTLE BACULET PETIT BACAYE ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: WHITE CARBONATE SAND COARSE TO FINE: WELL GRADED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: Low energy beaches hemmed in by Rocky points, very much frequented by hawksbill and green turtles.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: ANTOINE BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: VOLCANIC WELL SORTED SAND.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR REGULAR ✓

INCIDENTAL

GENERAL COMMENTS: Green and Hawksbill nesting area. much vegetation onshore; coconut trees mangroves

NAME OF BEACH: CONFERENCE GREAT ANER ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: SAND DUNES, GENTLY SLOPING CLASSIC: HIGH ENERGY BEACH: CARBONATE SAND

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: SIGNIFICANT RUNOFFS INTO BAY BY RIVERS 1 SIGNIFICANT NESTING SITE, OFFSHORE FORAGING COMMON

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: GREAT BACOLET ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: ADMIXTURE OF VOLCANIC /CARBONATE SAND

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: A SECLUDED BEACH MUCH VEGETATION MUCH FORAGING AREA OFFSHORE, STREAM RUNS INTO BAY.

NAME OF BEACH: CROCHU TO PETIT CARUT BAYS ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: GALBY (BLACK SAND) OTHER BEACHES CARBONATE WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR

INCIDENTAL

GENERAL COMMENTS: SMALL BAYS WITH STREAMS RUNNING INTO THEM. SIGNIFICANT FORAGING OFFSHORE FOR GREEN and HAWKSBILLS, LOGGERHEADS ARE OCCASIONAL.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: ST. MARKS BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: Volcanic black sand well sorted

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR REGULAR

INCIDENTAL ✓

GENERAL COMMENTS: Hawksbill and green turtles occasionally nest on the beach however human impact is significant

NAME OF BEACH: DUQUESNE BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: VOLCANIC WITH CARBONATE SAND, WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR REGULAR

INCIDENTAL ✓

GENERAL COMMENTS: Hawksbill and green turtle nesting beach profile: steeply sloping frequently occasionally gently sloping w/ high swells

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: DAVID BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH, MODERATE, LOW*

DESCRIPTION OF SAND CHARACTERISTICS: Black volcanic sandy beach with vines and coconut trees, Stream runs into bay

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT*, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR ✓

INCIDENTAL:

GENERAL COMMENTS: HAWKSBILLS AND GREEN TURTLES NESTING FORAGING AREAS OUTSIDE REACH

NAME OF BEACH: SAUTEURS BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH*, MODERATE*, LOW

DESCRIPTION OF SAND CHARACTERISTICS: PRINCIPALLY CARBONATE SAND. HOWEVER AN ADMIXTURE OF VOLCANIC/CARBONATE EXISTS

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE*, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR ✓

INCIDENTAL:

GENERAL COMMENTS: HUMAN IMPACT ON PARTS OF THE BEACH SIGNIFICANT. HOWEVER OFFSHORE IS A GOOD FORAGING AREA.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: PALMISTE BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH, MODERATE*, LOW*

DESCRIPTION OF SAND CHARACTERISTICS: fine volcanic sand with occasionally coarse sections of sand

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY*

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR ✓

INCIDENTAL:

GENERAL COMMENTS: occasionally heavy or high energy swells affect the beach; beach is used as source of sand. gently sloping profile

NAME OF BEACH: GRUYAVE BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH, MODERATE* LOW

DESCRIPTION OF SAND CHARACTERISTICS: Volcanic and carbonate admixture fine to medium grains well sorted.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY*

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR .....

INCIDENTAL ✓

GENERAL COMMENTS: Human impact on this beach area is very heavy. profile of the beach is steep low energy swells often with occasional high energy swells.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: LEVERA BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH*, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: COARSE TO FINE CARBONATE SAND. MUCH HIGH ENERGY SWELLS WITH RAPID CURRENT MOVEMENT

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT*, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ ..... REGULAR .....

INCIDENTAL:

GENERAL COMMENTS: A MAJOR NESTING AREA FOR ALL FOUR (4) SPECIES OF TURTLES. FORAGING AREAS OFFSHORE ARE SIGNIFICANT.

NAME OF BEACH: (BATHWAY) GRENADA BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH*, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: WELL SORTED CARBONATE SAND. SAND MOVEMENT IS FREQUENT

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT*, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR ✓

INCIDENTAL:

GENERAL COMMENTS: REACH HAS FRINGING REEF CLOSE TO SHORE AT CERTAIN POINTS

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: BEANSEFOUR ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH, MODERATE, LOW*

DESCRIPTION OF SAND CHARACTERISTICS: BLACK, VOLCANIC SAND. WELL SORTED AND OFTEN FINE

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE*, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR .....

INCIDENTAL ✓

GENERAL COMMENTS: BEACH ON QUICKLY GROWING BAY. SEA ENCROACHING ON THE LAND, SOURCE OF SAND FOR COMMERCIAL PURPOSES.

NAME OF BEACH: BLACK BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle): HIGH, MODERATE* LOW

DESCRIPTION OF SAND CHARACTERISTICS: BLACK, VOLCANIC. WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT*, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR ✓

INCIDENTAL:

GENERAL COMMENTS: Low energy/moderate energy beach. moderate profile with much vegetation. Hawksbill and green turtle nesting site.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: DRAGON BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: BEACH PROFILE MODERATELY STEEP COARSE TO FINE WELL SORTED SAND, BLACK WITH WHITE

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR .....

INCIDENTAL: ✓

GENERAL COMMENTS: IMPACT OF HUMAN ACTIVITY, SEINE NETS ETC HAVE LIMITED TURTLE NESTING

NAME OF BEACH: GRAND ROY BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: BLACK VOLCANIC SAND WELL SORTED, MOSTLY FINE, PROFILE MODERATELY SLOPING

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR .....

INCIDENTAL: ✓

GENERAL COMMENTS: Moderate energy beach with gently sloping profile only occasional nesting reported

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: GRAND MAL BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: CARBONATE WHITE SAND WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR .....

INCIDENTAL: ✓

GENERAL COMMENTS: Beach broken occasionally by rocks. Low energy, seine nets frequently fish in this location. Hawksbill and green turtles nest on this beach. occasionally, feeding offshore by turtles is frequent

NAME OF BEACH: DOTHAN BAY ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: VOLCANIC MIXED WITH CARBONATE SAND BEACH GENTLY SLOPING FINE SAND

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR .....

INCIDENTAL: ✓

GENERAL COMMENTS: BEACH FREQUENTLY USED BY SEINE-NET FISHERMEN, BEACH BROKEN BY ROCKS OCCASIONALLY.

SUPPLEMENTARY DATA ON BEACHES

NAME OF BEACH: POINT SALINES TO PETIT GABRITE POINT ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE, LOW

DESCRIPTION OF SAND CHARACTERISTICS: CARBONATE, MEDIUM GRAIN, WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ✓ REGULAR .....

INCIDENTAL:

GENERAL COMMENTS: A FREQUENT NESTING SITE FOR HAWKSBILL AND GREEN TURTLES

NAME OF BEACH: MORNE ROUGE QUANTINE ISLAND: GRENADA

ENERGY CLASSIFICATION OF BEACH (Circle) HIGH, MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: WHITE, CARBONATE, WELL SORTED

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE, LIGHT, MODERATE, HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR ..... REGULAR ✓

INCIDENTAL:

GENERAL COMMENTS: SHALLOW APPROACH TO THE BEACH. Hawksbill and green turtle nesting

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta	100 ± 25	Figures not significantly different				
Chelonia mydas	200 ± 50					
Dermochelys coriacea	25 ± 10					
Eretmochelys imbricata	>500					
Lepidochelys kempi						
Leipdochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta						X	X	X	X	X	X	X	Aug (ad) (ad + juv)
Chelonia mydas	X	X	X	X	X	X	X	X	X	X	X	X	April — June
Dermochelys coriacea						X	X						(adults only) June / July
Eretmochelys imbricata	X	X	X	X	X	X	X	X	X	X	X	X	Dec, all year May — Aug (ad)
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. SAUTEURS	E, Cm	Nets and spears	all year	Estimate
2. GRENVILLE	E, Cm	" " "	"	"
3. CALLISTE	E, Cm, Cc	" " "	"	"
4. BACOLET	E, Cm, Cc	" " "	"	"
5. WOBURN	E Cm	" " "	"	"
6. CALIVIGNY	E Cm	NETS AND SPEARS	"	"
7.			"	
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	Kg 1982	Kg 1981	Kg 1980	METHOD OF DETERMINATION
Caretta caretta	30-50	30-50	30-50	MARKET FIGURES, obs., interviews
	1500	1500	1500	
Chelonia mydas	100-150	100-150	100-150	" " " "
	2500	2500	2500	
Dermochelys coriacea	5-10	5-10	5-10	" " " "
	1000	1000	1000	
Eretmochelys imbricata	100-200	100-200	100-200	" " " "
	5000	5000	5000	
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	50 ± 10	$[illegible],000 – $25000	income based on $0.90 lb⁻¹ (live WT) obtained for turtles at local market.
Processing	—	—	Fishermen process their catch
Selling	—	—	Fishermen sell their catch on most occasions.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

MARKET PRICES FOR TURTLE PRODUCTS IN GRENADA ARE AS FOLLOWS: LIVE WEIGHT ($0.90, lb⁻¹)

GRENADA

348 *Birds and other Wild Life (Protection of).* [Cap. 36

Provided that the Governor may from time to time by notice in the *Gazette* appoint some other period or periods in lieu of the periods fixed as aforesaid, and after any such appointment the periods so appointed shall be the close season for the purposes of this Ordinance.

Governor may alter the Second Schedule

5. The Governor may from time to time by notice in the *Gazette* declare that, as to any of the wild birds enumerated in the Second Schedule the provisions of section 4 shall cease to apply, and may from time to time vary or cancel any such alterations; and thereupon the provisions of the said section shall cease to apply, or shall again apply (as the case may be), with such variation as by the declaration may be provided; and the Governor may also, by notice as aforesaid, declare as to any bird not enumerated in the said schedule that it shall from the date of the notice be deemed to be included in the said Schedule for such close season as may be named in the notice as applicable to it, and may from time to time alter or amend the notice in the same way as if the bird had been enumerated in the Schedule; and thereupon the bird shall to all intents and purposes be deemed to be included in the Schedule for the close season assigned to it in the said notice.

Killing &c. of birds, fish &c. during the close season therefor, an offence

6. Except as hereinafter mentioned, any person who shall—

(a) kill, wound or take, or attempt to kill, wound or take, any of the wild birds enumerated in the Second Schedule to this Ordinance or any turtle or oysters, during the close season for the same; or

(b) take the eggs or nest of any such bird during the close season for the same, or have in his possession any such bird killed or wounded or taken or any eggs or nest taken during the said season; or

(c) have in his possession any turtle, the eggs of any turtle or any oysters, during the close season for the same,

shall be guilty of an offence against this Ordinance.

TABLE [illegible] EMPLOYMENT DEPENDENT ON TURTLES
([illegible])

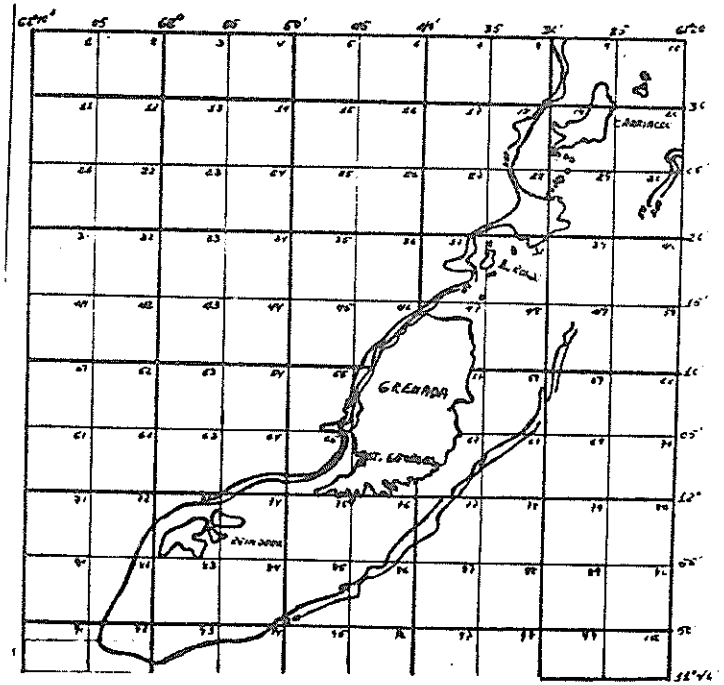
[illegible] to [illegible] products, it is estimated that the [illegible] are taken annually from beaches or at sea for [illegible] use:

[illegible] exploitation

1. Estimated number of eggs: 6,000 – 10 000
2. Estimated number of nesting [illegible]: 100
3. Number of turtles caught at sea: 50 – 75
4. Other: [illegible]

8: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in [illegible] countries according to special rights or privileges [illegible] to certain groups of people. If such special [illegible] turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

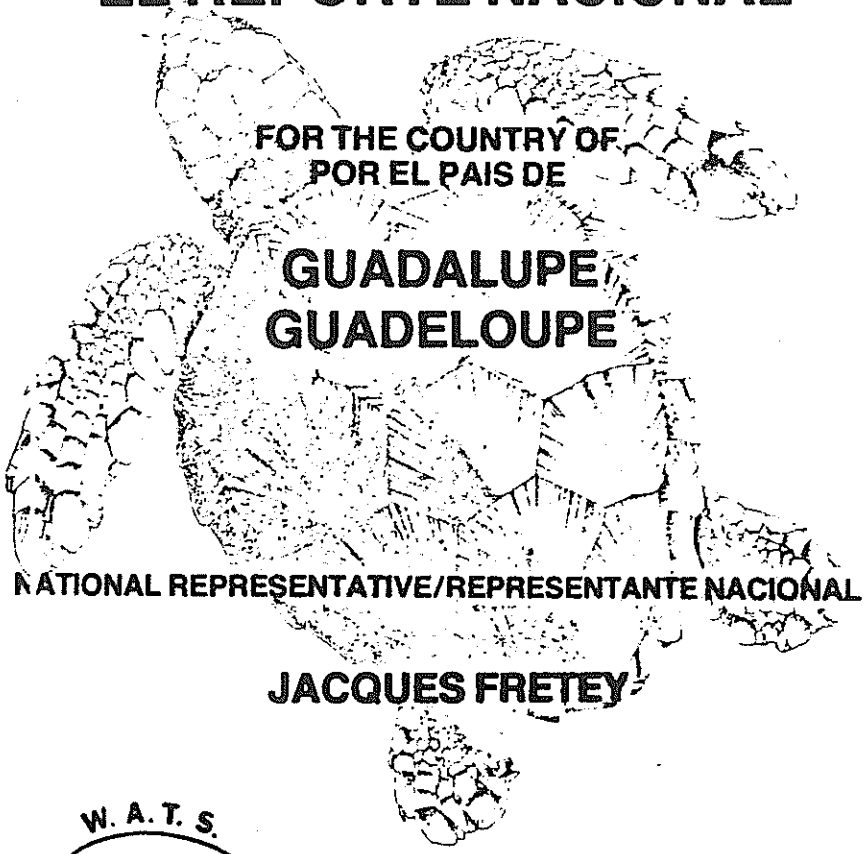


THE GRENADA SHELF – ISOBATH 'FATHOMS

THE NATIONAL REPORT
EL REPORTE NACIONAL

FOR THE COUNTRY OF
POR EL PAIS DE

GUADALUPE
GUADELOUPE



NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

JACQUES FRETEY

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

Guadeloupe et dépendances

NATIONAL REPORT PRESENTED BY

Jacques FRETEY
The National Representative

Address: Laboratoire Reptiles Amphibiens
25, rue Cuvier 75005 Paris
FRANCE

NATIONAL REPORT PREPARED BY

Jacques FRETEY

DATE SUBMITTED: 1er juillet 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country Guadeloupe (+ St Martin et St Barthelemy)

Length of Coastline* ..... ≈ 375 Km

Km² of Continental Shelf Area ..... ___ Km

Seaward Extent of Jurisdictions:

Territorial Sea ..... 21,6 Km

Extended Economic Zone ..... 360 Km

Fisheries Jurisdiction ..... 360 Km

Other (Describe) _____ ... ___ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Ilet à Fajou		C.m., E.	
2. Ilet à Caret		C.m., E.	
3. Plage Ramée		D., C.m., E.	
4. Ilet à Kahouanne		D., C.c., C.m., E.	
5. Grande Anse (vers Deshaie)		C.m., E.	
6. Grande Anse (vers Trois-Rivières)		C.m., E.	
7. Saint Clair		C.c., C.m., E.	
8. Plage Viard		C.c., C.m., E.	
9. Anse Bertrand		C.m., E.	
10. Port Louis		C.m., E.	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11. Saint François		C.m., E.	
12. Ilet de la Petite Terre		C.m., E.	
13. Les Saintes		Cm., E.	
14. Ballet (Marie-Galante)		C.m., E.	
15. La Désirade		C.m., E.	
16.			
17.			
18.			
19.			
20.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Les plages citées ont été répertoriées lors d'une enquête d'Anne et Peter Meylan en décembre 1978.
Nous ne possédons aucun renseignement sur l'existence ou non de plages de ponte à Saint-Martin et Saint-Barthélemy.

La période de ponte sont :

E.B : avril à septembre

C.m. : avril à septembre

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

La prédation n'est pas connue

TABLE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

Une enquête serait à faire sur place auprès des Affaires maritimes.

TABLE 15. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

Les statistiques de pêche indiquent 30 metric tons de tortues marines (toutes espèces) de 1959 à 1976 (y compris St Barthelemy et St Martin). Ces chiffres sont certainement en dessous de la réalité, les contrôles n'étant pas systématiques

J'ai relevé dans Traffic (1979) les chiffres suivants pour les Antilles françaises :

Domestic exports of raw tortoiseshell (kg)

1976	1977	1978
152	236	276

Japan imports of raw tortoiseshell (kg)

1964	1966	1969	1970	1975	1976	1977	1978	1979
193	16	145	265	122	152	236	276	25

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Prison de Basse-Terre	9	travail de l'écaille

TABLE 16. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Actuellement :

. arrêté préfectoral n° 79-6 AD/3/3 du 26 mars 1979 : protection des eaux, protection intégrale de D. coriacea, protection des spécimens de espèces E. imbricata et Ch. mydas de taille inférieure à 60 cm ; capture et vente de E. imbricata et Ch. mydas interdite pour toutes les tailles du 15 mai au 15 septembre.

Projet :

. arrêté préfectoral visant la protection intégrale (Fretey, 1979). demande non suivie

. arrêté ministériel (voir à Martinique)

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Délégation — Régional	—	—	
Secrétariat d'Etat à l'Environnement. Avenue du Gl Leclerc. 92. Neuilly M/S. FRANCE — National	—	—	
Muséum national d'Histoire naturelle 25, rue Cuvier 75005 Paris FRANCE — National			Affaires maritimes
Préfecture de Basse-Terre — Régional			

TABLE 19. SANCTUARIES AND REFUGES

NAME AND LOCATION	AREA (km²)	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Nat. de Fajou		Parc National	

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

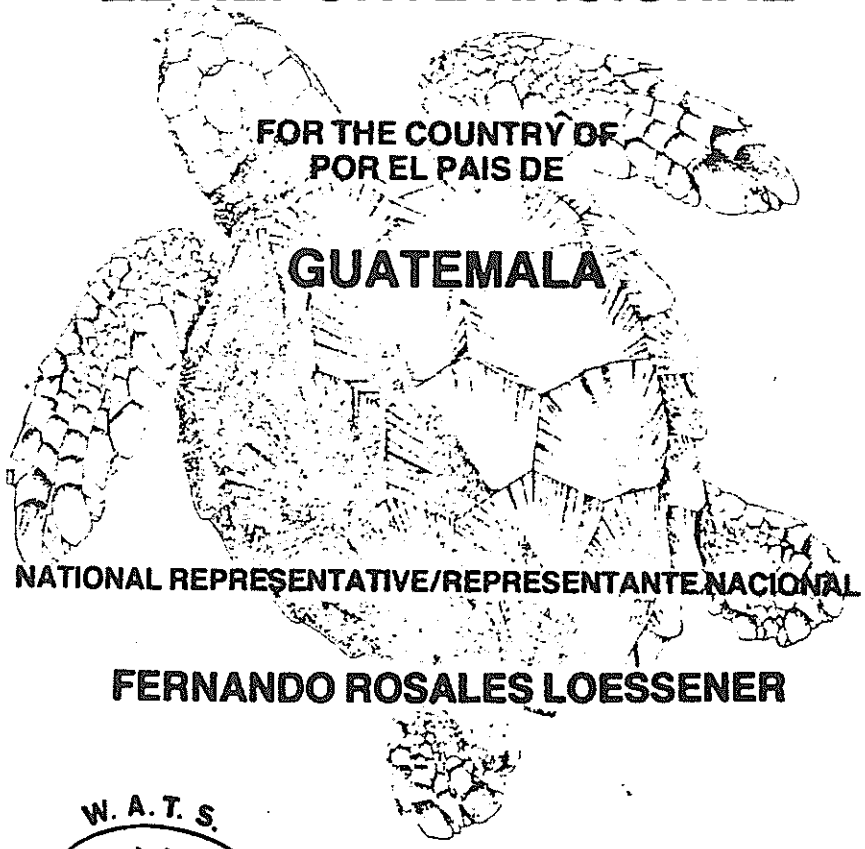
PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Etude des plages de nidification des tortues marines dans les Antilles françaises	84		Jacques FRETEY Muséum national d'Histoire naturelle 25, rue Cuvier 75005 Paris FRANCE

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. CARR, A., A. MEYLAN, J. MORTIMER, K. BJORNDAL and Th. CARR, 1982. — Surveys of sea Turtle popula-
2. tions and habitats in the Western Atlantic. NOAA
3. Techn. Memor., 1-82, figs.
4. KERMARREC, A., 1976. — Le statut des tortues dans
5. les Antilles françaises - Nouv. Agr. Ant.-Guy., 2(2):
6. 99-102
7. FRETEY, J., 1980. — La protection des tortues marines
8. dans les DOM-TOM. Bul. Lions Club Ant.-Guy., 65:
9. 6-9, 17, phs., carks.
10. MACK, D., N. DUPLEIX, and S. WELLS, 1979. — The
sea turtle an animal of divisible parts. Internatio-
11. nal Trade in Sea Turtle Products. Traffic (U.S.A.), special report 1 : 1-85.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

GUATEMALA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

FERNANDO ROSALES LOESSENER

W. A. T. S.
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SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE
GUATEMALA

REPORTE NACIONAL PRESENTADO POR

LIC. FERNANDO ROSALES-LOESSENER

El Representante Nacional

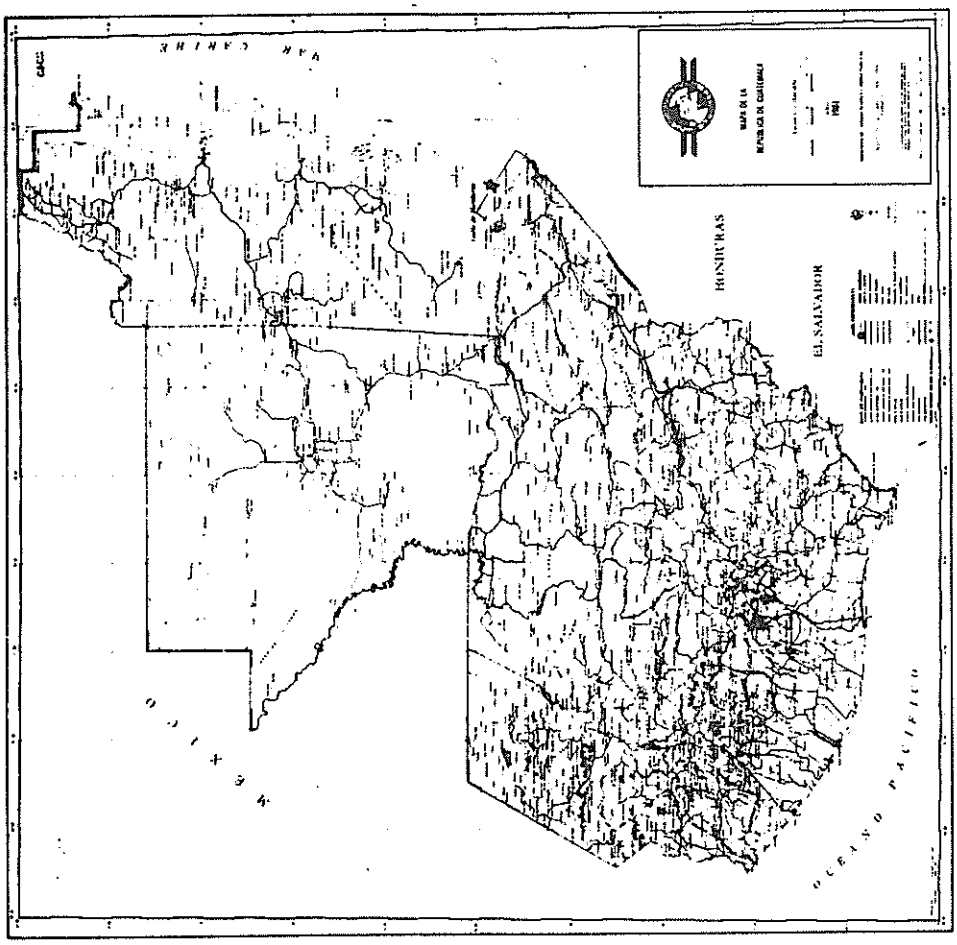
Dirección: Ministerio de Agr. Ganad. y Alimentación
Dirección Gral. de Servicios Pecuarios
Dirección Técnica de Pesca y Acuicultura
Departamento de Acuicultura
Edif. Galerías Reforma, Av. Reforma 8-60 Z. 9
Guatemala, Guatemala.

REPORTE NACIONAL PREPARADO POR

LIC. FERNANDO ROSALES-LOESSENER

FECHA EN QUE SE PRESENTO: DICIEMBRE, 1982.

Favor enviar antes del 1º de diciembre de 1982, al Secretario Asistente de


HONDURAS
EL SALVADOR
OCEANO PACIFICO

País GUATEMALA

Longitud de la Costa*..... 148 Km

Km² de la Plataforma Continental..... 2,100 Km²

Extensión de la Jurisdicción Marina:

Mar Territorial..... 22.22 Km

Zona Económica Extendida..... 370.4 Km

Jurisdicción de la Pesquería..... 370.4 Km

Otras (descríbalas)..... Km

Tabla 1. INVENTARIO GEOGRAFICO

			Km
1. Río Sarstun	Punta Cocolí		11
2. Punta Cocolí	Livingston		10
3. Livingston	Laguneta Verde		15
4. Laguneta Verde	Puerto Barrios		13
5. Puerto Barrios	Punta Morena		18
6. Punta Morena	La Graciosa		17
7. La Graciosa	Punta Manabique		13
8. Punta Manabique	Punta del Cabo		5
9. Punta del Cabo	La Máquina		9
10. La Máquina	San Francisco del Mar		13
11. San Fco. del Mar	Río Motagua		23
	TOTAL		148

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país; por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa)	Zona Alejada (25m)
1. Arena 180 x 0.025 km	2.25	? ?
2. Barro 38 x 0.025 km	0.95	?
3. Rocas	0	0
4. Vegetación sumergida	0	5
5. Arrecifes (Total)	0	0
A. De barrera		
B. En Parche		
6. Otros	0	0

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)	46	4	50
2. Arrecife (expuesto)			0
3. Rocas			0
4. Precipicios			0
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)	22	5	27
B. Zacates	5	0	5
C. Manglares	45	0	45
D. Palmeras			0
E. Otros árboles o arbustos	20	0	20
F. Ciénegas (pantanos)			0
6. Rocas de lagunas, ríos y canales	1	0	1
Total de costa	139	9	148

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Desde Punta del Cabo hasta		Et	Jun. Jul. Ag. Sept. Oct.
la barra del río Motagua	45	D e:	Feb. Mar. Abr.
		Cc	Mar. Abr. May. Jun. Jul.
		Cm	?

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO
(para información suplementaria)

Favor proveer información adicional sobre cada playa de anidamiento identificada en la Tabla 3. Incluya información sobre el color de la arena, tamaño de la partícula, perfil de la playa, vegetación superior en la playa, iluminación artificial, etc.

- No se identificaron las playas de anidación debido a que no se tienen datos fehacientes al respecto.
La playa de punta del Cabo hasta la barra del rio Motagua está formada por un substrato arenoso con un ancho promedio de 10 m, de una inclinación muy tenue de aproximadamente de 3 grados. El color de la arena blanco y de un tamaño de partícula de aproximadamente 0.4 mm. La playa de arena se continua en su parte superior por un área plana, cubierta de diferentes tipos de vegetación rastrera y seguida por una vegetación del tipo arbusto y posterior a esa zona existen grandes extenciones canagosas.
A lo largo de toda la playa tambien existe alguna acumulación de materiales orgánicos (trozos de madera, semillas, ramas, Etc.) procedentes de los bosques y que son arrastrados por la corriente de los rios que desembocan en esa zona.

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
(Página suplementaria)

De cualquier información adicional disponible de los reconocimientos aéreos. Esta información debe incluir verificaciones terrestres si éstas se llevan a cabo.

En fecha del 20.7.82 se realizó con el Sr. F. H. Berry un reconocimiento aereo a lo largo de toda la costa atlántica del país, desde la desembocadura del rio Sarstun hasta la desembocadura del rio Motagua.
Se pudo establecer que las condiciones de playa desde el rio Sarstun hasta la Punta de Manabique no son apropiadas para la actividad de anidación de las tortugas. En esta porción de costa el ancho de la playa es muy reducido o casi inexistente.
La porción que va desde Punta de Manabique hasta la desembocadura del rio Motagua está formado por una playa de arena de aproximadamente 10 m de ancho y con un oleaje más fuerte que el resto de la costa (constituida en su mayor parte por una bahia).

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	No. I. D.
20.7.82	En esta fecha se llevó a cabo un reconocimiento aereo con el Sr. F. H. Berry, observandose solamente un falso nido, de una especie no identificada. (Esta inspección se realizó a lo largo de toda la costa atlántica del país).							

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
(Página suplementaria)

De cualquier información adicional disponible de los reconocimientos aéreos. Esta información debe incluir verificaciones terrestres si éstas se llevan a cabo.

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
(página suplementaria)

Favor de describir brevemente los métodos empleados para efectuar las estimaciones de la Table 6.

NOMBRE DEL AREA (o indicar coordenadas)	AREA APROX. (Km^2)	ESPECIES ALIMENTANDOSE (use abreviaciones) cantidad aproximada	NATURALEZA DE LA EVIDENCIA observación, pesquería, pesca incidental
1. Bahía La Graciosa 08° 33' W-15° 53' N	6x0.5 km 3	C c C m	información proporcionada por pescadores de tortugas de años anteriores a la prohibición de su captura.
2.			
3.			
4.			
5.			
6.			

TABLA 7. INVENTARIO DE AREAS DE FORRAJEO

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES \ MES	E	F	M	A	M	J	J	A	S	O	N	D	MESES DE MAYOR ACTIVIDAD
Caretta caretta	X	X	X	X	-	-	-	-	-	-	-	X	
Chelonia mydas	X	X	X	X	-	-	-	-	-	-	-	X	
Dermochelys coriacea	-	-	-	-	-	-	-	-	-	-	-	-	
Eretmochelys imbricata	-	-	-	-	-	-	-	-	-	-	-	-	
Lepidochelys kempi	-	-	-	-	-	-	-	-	-	-	-	-	
Lepidochelys olivacea	-	-	-	-	-	-	-	-	-	-	-	-	

TABLA 8. ESPECIES DE TORTUGAS EN AREAS DE FORRAJEO.
Favor de completar una de estas tablas para cada área identificada en la Tabla 7. Numere cada tabla igual que en la Tabla 7 (7-1; 7-2; etc.)

LOCALIDAD (indique latitud y longitud)	FECHA	TIPOS ESTIM. (abreviaciones)	COMENTARIOS
Punta del Cabo 08° 35' W - 15° 57' N		E i	Solamente se tiene información verbal de observaciones de Ei durante horas diurnas, proporcionada por buceadores de caracol y langosta del área.

TABLA 9. ENTREVISTA FIJA DE LAS AREAS DE FORRAJEO.
Favor de tratar de obtener información disponible sobre la incidencia de tortugas fuera del área de forrajeo.

Abreviaciones para los tipos:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 10. MORTALIDAD NATURAL

(página suplementaria para información biológica adicional).

Favor de reportar abajo, y en páginas adicionales si se requiere, datos disponibles, como tamaño de hembras, machos adultos y recién nacidas (largo, ancho, peso), número de huevos por nidada, hora de postura, condiciones del nacimiento, etc.

Se conoce muy poco sobre la mortalidad natural de tortugas marinas en nuestra costa atlántica . Aunque es casi seguro que a nivel nidos/huevos , la mortalidad natural es mínima debido a la alta depredación humana que existe. De las tortugas recien nacidas y juveniles que logran escapar del impacto humano no se sabe nada sobre el grado de mortalidad natural.
De acuerdo a informaciones proporcionadas por expescadores de tortugas de la region, se reporta a los tiburones como enemigos número uno de ellas.
En cuanto a hembras desovando es curioso que a pesar de que en años pasados existía un grupo de pescadores de tortugas en las zonas de forrajeo, éstos no lo hacían en las zonas de anidación.

NOMBRE DEL PUERTO O LUGAR DE LLEGADA	ESPECIES CAPTURADAS (use abrev)	EQUIPO DE PESCA UTILIZADO	MESES DE ARRIBOS	NUMEROS Y PESOS (estimación)
1. LIVINGSTON, IZABAL	Cc Cm	Trasmallos	Dic. En. Feb. Mar. Abr.	96 Tortugas/año 3024 Kg.
2.				
3.				
4.				
5.				
6.				
7.				
8.				

TABLA 11. PUNTOS DE LLEGADA PARA TORTUGAS Y SUS PRODUCTOS.

Abreviaciones de las especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys Kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES \ AÑO	1982	1981	1980	METODO USADO PARA LA DETERMINACION
Caretta caretta				
Chelonia mydas				
Dermochelys coriacea				
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLA 12. TOTAL ANUAL DE CAPTURAS DE TORTUGAS EN NUMEROS Y PESOS (N/Kg).
No incluya las tortugas capturadas incidentalmente en otro tipo de operación (e.g. pesca del camarón).

OBSERVACION: La pesca de tortugas marinas en el país existió hasta el año de 1980 a un nivel artesanal o de subsistencia en la población de Livingston. En los años 81 y82 no ha habido actividad pesquera debido a la emisión de ley que prohibe la pesca de tortugas marinas.

TABLA 13. CAPTURA ESTIMADA DE TORTUGA POR PESCADORES EXTRANJEROS.
(página suplementaria)

Favor de describir el tipo de pesca por extranjeros en sus aguas territoriales y de estimaciones para:

1. Número de naves extranjeras capturando tortugas.
2. Número de pescadores extranjeros capturando tortugas.
3. Año en que se hizo la estimación.

En Guatemala no existen flotas de pescadores extranjeros de tortugas marinas.

PRODUCTOS DE LA TORTUGA	AÑO 1982	AÑO 1981	AÑO 1980	MERCADO ACTUAL Precio/unid.	METODO DE COLECTA DE LOS DATOS
No. de huevos	No cuantificable	No cuantificable		(*) Q 2.00/Doc (Por docena)	
Carne (Kg)	0	0			
Carapachos (Concha número/peso	0	0			
Pieles número/peso	0	0			
Juveniles Disecados	0	0			
Número total de tortugas	0	0			

ESPECIES

(*) Q 1.00 = 1.00 US Dolar

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

No existen registros oficiales .

TABLA 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS.
(página suplementaria)

Favor de suplir cualquier dato adicional sobre productos de tortugas en su país. Incluya productos elaborados como los derivados del caraspacho (concha), etc., si tales datos se poseen..

El producto de tortugas de mayor comercialización en el país lo constituyen los huevos, los cuales, a pesar de existir una ley que prohibe su recolección, consumo y comercialización, son vendidos en todo el país.
El consumo de la carne de tortuga marina existió hasta el año de 1980 casi exclusivamente en Livingston, Izabal a nivel local, como un sustituto de la carne de res y de cerdo cuyos precios fueron más elevados que el de la carne de tortuga. Posteriormente en los años de 1981 y 1982 debido a la promulgación de la ley que prohibe la pesca y comercialización de tortugas marinas , no ha habido más pesca de tortugas marinas.

TABLA 16. EMPLEO QUE DEPENDE DE LAS TORTUGAS
(página suplementaria)

Además de los productos que se mercadean, se estima que los siguientes se capturan cada año en las playas o en el mar para utilizarlos como subsistencia.

A: Utilización de Subsistencia

1. Estimación del número de huevos:_____
2. Estimación del número de hembras anidando:_____
3. Número de tortugas capturadas en alta mar:_____
4. Otros:_____

B. Aspectos Sociales

Además de las actividades pesqueras descritas arriba, la utilización de las tortugas puede ser permitida en algunos países de acuerdo a ciertos privilegios y derechos especiales, otorgados a ciertos grupos de personas. Si algún tipo de explotación como la descrita existe, favor de dar detalles (i.e. derechos de playa, tradiciones étnicas, estaciones específicas durante el año, permisos especiales, etc.).

En Guatemala no existen derechos o permisos especiales otorgados para la explotación de las tortugas.

ACTIVIDAD	TOTAL ANUAL DE PERSONAS	INGRESO ANUAL ESTIMADO	COMENTARIOS
PESCA			(*)
PROCESAMIENTO			
VENTA			

TABLA 16. EMPLEO QUE DEPENDE DE LAS TORTUGAS.

(*) Actualmente no existe en el país ninguna actividad de pesca, procesamiento y venta de tortugas marinas.

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	NO. DE MIEMBROS ACTIVOS	ACTIVIDADES EN DESARROLLO
Departamento de Acuicultura DITEPESCA, DIGESEPE Edif. Galerías Reforma Av. Reforma 8-60 Z. 9 GUATEMALA, C. A.	2 (*)	Manejo de 3 tortugarios con fines proteccionistas en la costa del Pacífico. Estudios preliminares sobre las tortugas en la costa del Atlántico. (*) para la costa del atlántico.

TABLA 18. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE PROCUPAN DE LA CONSERVACION/MANEJO/UTILIZACION DE LA TORTUGA

NOMBRE Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
Dirección Técnica de Pesca y Acuicultura, DIGESEPE, Av. Reforma 8-60 Z. 9 Guatemala, C. A.			Velar por el cumplimiento del acuerdo gubernativo que proteje a las tortugas marinas. Niveles de cumplimiento limitados.
Marina de Guerra Nacional			Vigilar para que se dé cumplimiento a la ley que proteje a las tortugas marinas. Niveles de cumplimiento limitados.

GUATEMALA

TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

TITULO DEL PROYECTO	FECHAS		NOMBRE Y DIRECCION DE LA INSTITUCION Y DEL INVESTIGADOR PRINCIPAL
	INICIO	TERMINO	
Programa de protección de las tortugas marinas en la parte sur-oriental de la costa del pacífico de Guatemala.	1976	Continúa	DITEPESCA, DIGESEPE/FAO Av. Reforma, 8-60 Z. 9 Lic. Annik Ramboux (FAO) Lic. Fernando Rosales-Loessener (DITEPESCA)

TABLA 21. PROYECTOS NACIONALES DE INVESTIGACION

Cite las actividades sobre investigación de tortugas financiadas por su país.

GUATEMALA

TABLA 20. AUTORIDAD REGULADORA
(página suplementaria)

Favor de citar la legislación federal, regional y local concerniente al manejo y la conservación de la tortuga. Indique el título, la fecha y la intención declarada.

ACUERDO GUBERNATIVO del 17 de febrero de 1981, en que se prohibe la captura, circulación y comercialización de todas las especies de tortugas marinas que habitan y se reproducen en las costas del país. Publicado en el Diario de Centro América, tomo CCXV; No. 69 del 26 de febrero de 1981.

REPORTES Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

1.

2. DARY-RIVERA, M. 1973. Informe de un viaje de estudio a la estación de cría de Chelonia mydas, de Hawaii, de la División de Fauna de DIRENARE. Universidad de San Carlos de Guatemala, Facultad de Ciencias Químicas y Farmacia, Escuela de Biología. 14 pp.

3.

4. DITEPESCA/FAO. 1982. Acuicultura Experimental, Guatemala. Programa de Protección de las Tortugas Marinas en la Costa Sur-Oriental del Pacífico. Resultados de la Temporada de 1981, basados en el trabajo de A. Ramboux GUA/81/004. Documento de Campo 1.

5. DITEPESCA/FAO. 1982. Acuicultura Experimental, Guatemala. Ptrograma de Protección de las Tortugas Marinas. Análisis Crítico de los Resultados y Recomendaciones, basado en el trabajo de P. Bacon. GUA/81/004. Documento de Campo 3.

6.

7. DITEPESCA/FAO. 1982. Acuicultura Experimental, Guatemala. Programa de Protección de las Tortugas Marinas en la Costa Sur-Oriental del Pacífico. Resultados del Experimento "Head-Starting" y Resultados Parciales de la Temporada de 1982, basado en trabajo de F. Rosales y A. Ramboux. GUA/81/004. Documento de Campo 7.

8.

9. HERNANDEZ-MARQUEZ, J. P. & HERRERA DE LEON, A. R. 1977. Boletín Informativo sobre el proyecto de recuperación de la tortuga marina verde, o "parlama" (Chelonia mydas agassizii Bocourt) . División de Fauna, DIRENARE, DIGESA, Ministerio de Agricultura. Guatemala. 24 pp.

10.

11. RAMBOUX, A. C. 1981. Informe de trabajo: Las Lisas, 5-13 de agosto de 1981. Memorandum a L. F. Martínez, Director Técnico, DITEPESCA. Guatemala. 7 pp.

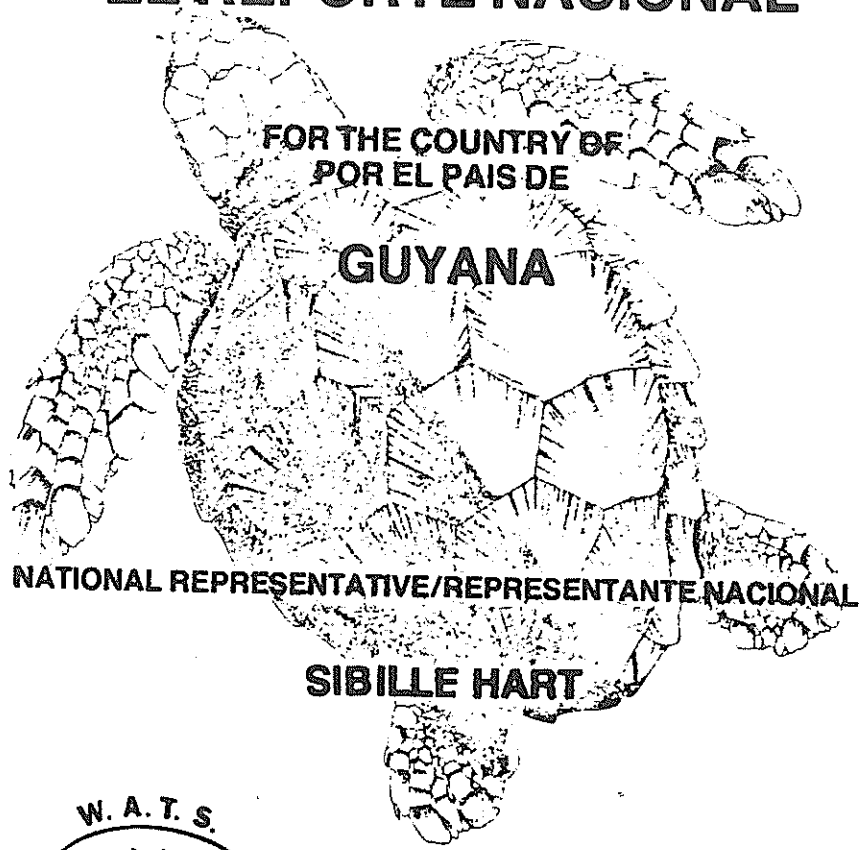
12. ROSALES-LOESSENER, F. 1982. Informe de comisión a la Costa Atlántica, del 27 de mayo al 4 de junio de 1982. DITEPESCA, Ministerio de Agricultura. Guatemala. 2pp.

13. ROSALES-LOESSENER,F. 1982. Informe de dos comisiones sobre los estudios preliminares de las poblaciones de tortugas marinas en la Costa Atlántica de Guatemala. DITEPESCA, Ministerio de Agricultura. Guatemala. 4pp.

14.

15. WHITEHEAD, A. 1979. Informe técnico sobre el programa de recuperación de la Parlama (Chelonia mydas agassizii Bocourt). División de Fauna, DIRENARE, DIGESA, Ministerio de Agricultura,. Guatemala. 16 pp.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

GUYANA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

SIBILLE HART

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

GUYANA

NATIONAL REPORT PRESENTED BY -

Sibille Hart
The National Representative

Address: c/o The Permanent Secretary
Ministry of Fisheries
P.O. Box 1001
Georgetown, GUYANA

NATIONAL REPORT PREPARED BY

Henry A. Reichart with data supplied by
Peter C.H. Pritchard and K. Mohadin.

DATE SUBMITTED: 11 July 1983

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

GUYANA
NORTHEAST SHEET
GUYANA
NORTH-WEST SHEET
A T L A N T I C O C E A N

INTRODUCTION

Although the appropriate Government officials of the Republic of Guyana have been approached on several occasions with an invitation to participate in the Western Atlantic Turtle Symposium (WATS), to this date no official acceptance has been received, nor has a National Report been submitted. Therefore, in order to provide regional continuity for the WATS data base, this Ad Hoc Data Report has been prepared and submitted instead.

BACKGROUND

The Republic of Guyana is located on the north (Atlantic) coast of South America. The country is bordered in the northwest by Venezuela, in the west and south by Brazil, and in the east by Surinam. Guyana has a surface area of 83,000 square miles (215,000 km^2). The 1976 population estimate of 750,000 inhabitants is here assumed to have remained the same for 1983. Roughly 90% of the population is located in a narrow belt along the coast, and most of these people live in and around the capital of Georgetown, and the towns and villages east from there to the border with Surinam.

The climate is tropical with temperatures in the coastal lowlands ranging between 74° - 83° F (22° - 24° C). The Atlantic coastline runs in a generally northwest direction - approximately 45° west of north.
The currently known sea turtle nesting beaches are confined to the coastal region west of Georgetown, while the eastern coastal part of Guyana is mostly reclaimed swamplands, which is now extensively cultivated.
Broad mudflats are situated in front of these latter areas, making the sandy beaches there practically inaccessible for nesting sea turtles.

METHODS

Information concerning Guyana's sea turtle resources is scant, and the authors have had to rely primarily on outdated publications, incidental reports, and fleeting observations from short, recent visits and aerial surveys made in 1982 and 1983. It is firmly established that four species of sea turtles are known to nest in Guyana, namely: Chelonia mydas, Dermochelys coriacea, Eretmochelys imbricata and Lepidochelys olivacea, but no quantitative data could be found to arrive at some population parameter estimate for any of these species.

CONCLUSION

The lack of hard data in this report focuses attention on the fact that sea turtles are largely ignored by fisheries and conservation officials in Guyana. However, they are not ignored by the local people on the beaches. Pritchard (1969) reports heavy slaughter of nesting females on practically all beaches he visited in Guyana and a near 100% harvest of eggs when located. That this practice continues unabated is evident from the aerial surveys conducted in 1982 and 1983 when dug-up nests and the remains of numerous slaughtered sea turtles were to be seen on the beaches.

It appears from this physical evidence that sea turtles are still common on Guyana beaches even though the current rate of exploitation cannot be but detrimental to the nesting populations there.
It is highly unlikely that the Guyana sea turtles form distinct populations and although apparently no Surinam-tagged turtle has ever been seen nesting in Guyana, the concept of nestsite-fixity has not been studied enough to assure that this over-exploitation of sea turtles in Guyana does not adversely affect other nesting populations in the area or region.
It is therefore imperative that Guyana be stimulated and (if need be) be provided with funds and personnel to initiate and maintain a sound sea turtle conservation program in order to secure the safety of the Guyana nesting populations and to provide quantitative data on these populations.

AD HOC REPORT FORM FOR WESTERN ATLANTIC TURTLE SYMPOSIUM (WATS)
A SYMPOSIUM ON SEA TURTLE RESEARCH IN THE WESTERN CENTRAL ATLANTIC (POPULATIONS AND SOCIOECONOMICS) - SPONSORED BY IOCARIBE - TO BE HELD IN JULY 198 IN SAN JOSE, COSTA RICA

AD HOC REPORT: (Country Name) GUYANA

Name & Address of person completing this Report

H.A. REICHART
36 OXFORD
MILL VALLEY
CALIF 94941
USA

SECTION I

BACKGROUND INFORMATION

a. Geographical Description

1. Area of country unit ...215,000.....kms^2
2. Boundaries ...8°31'...N...4°3.25'...N...(Greatest N/S Latitude).
   ...57°25'...W...61°25'...W...(Greatest E/W Longitude).
3. Approximate length of coastline(Marine)320.km.
   .. Type of shoreline
   a. Sand beach .....160. km
      (High energy .....60. km)
      (low energy .....100. km)
   b. Rocks/reefs ..... km
   c. Cliffs ..... km
   d. Vegetation .....120. km
      (mangroves .....85. km)
      (marshes .....35. km)
   e. Development .....17.5. km
   f. Other (_____)..... km
4. Approximate area of nearshore and shelf habitat ..... km^2
   .. type of habitat
   a. Reefs ..... ha
   b. Grass beds ..... ha
   c. Sand bottom ..... ha
   d. Mud bottom ..... ha
   e. Other (_____) ..... ha
5. Limits of territorial sea .....km (nautical miles).

TABLE 1 & 2

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. SHELL BEACH	6	Cm | Dc | Ei | Lo	Cm → MARCH-AUGUST Dc → MAY-JULY Ei → JUNE-AUGUST Lo → APRIL-JULY
2. WAINI PT BEACHES	~≤ 15	Cm | Dc | Ei | Lo	
3. PAPAYA BEACH			ADDITIONAL
4. FATHER'S BEACH			COMMENTS
5. TURTLE BEACH			ON SECOND
6. TIGER ISLAND BEACH			SHEET
7. ZEELANDIA BEACH			
8. DAUNTLESS PT BEACH			
9. MANAICA-MAHAICONY BEACH			
10. 63 BEACH			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

~ = approx.
E = few tens of small separate beaches.

Species Abbreviations:
Caretta caretta
Chelonia mydas
Dermochelys coriacea
Eretmochelys imbricata
Lepidochelys kempi
Lepidochelys olivacea

TABLE 3 - ADDITIONAL INFORMATION

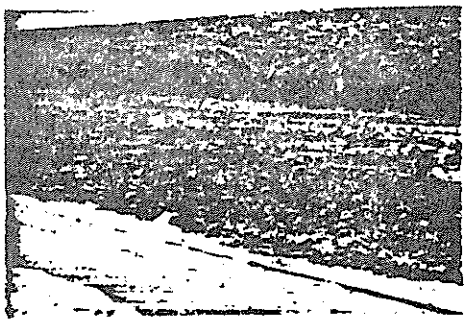
The major nesting beaches in Guyana are located in the northeast of the country, roughly in the region where the Waini River runs parallel to the coastline - about 10 km inland (see aerial survey map).
The most conspicuous one of these is Shell Beach, which is composed of pure shell-sand. The remaining beaches are relatively short stretches of sand alternated with mangrove forest, mostly in erosion from the sea. Many of these beaches have local names, such as: Waini Point Beach, Papaya Beach, Father's Beach and Turtle Beach, but many other beach names could not be found. Eastward from the mouth of the Pomeroon River no more nesting beaches were seen until the mouth of the Essequibo River, where several of the islands have suitable nesting beaches, such as: Tiger Island Beach, Zeelandia Beach and Dauntless Point Beach. Although there are local reports of turtles nesting there, no such evidence was seen during the survey flights. In Pritchard (1969) mention was made of a nesting beach for leatherbacks at Punta Playa, the northernmost tip of Guyana. Although the area was not closely surveyed in 1976 and 1982 a distant view from a plane did not disclose a sandy beach there.

Apparently on some beaches in east Guyana nesting has occurred in the past, but during occasional surveys conducted between 1976 and 1982 not a single turtle track was ever seen here. Interviews with local people also indicated that turtles apparently no longer nest here.

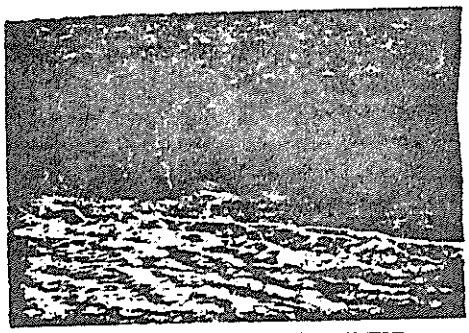
The following are photographs of parts of the Guyana coastline.
All photos taken in 1980 by P.C.H. Pritchard.

SHELL BEACH

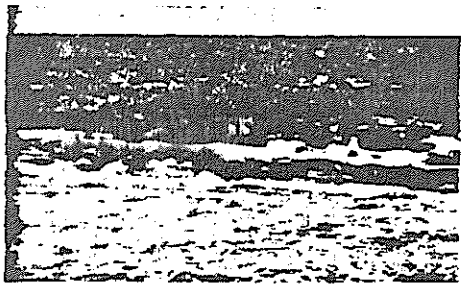
COCONUT CULTIVATION COAST IN EROSION



SHELL BEACH

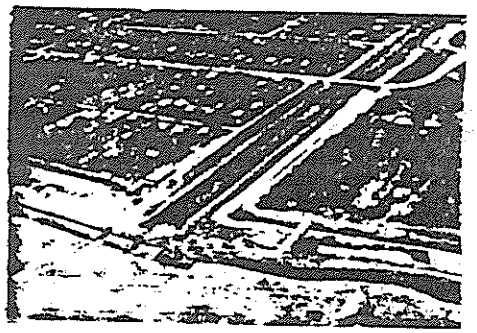


MIXED NATURAL FOREST COAST IN ACCRETION

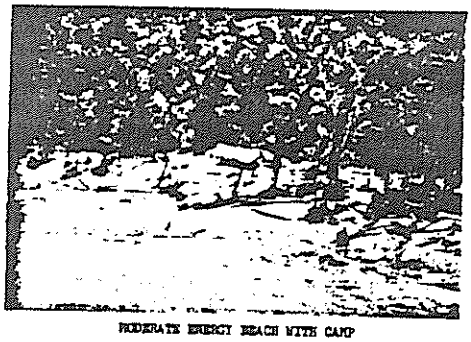


SWAMP COAST IN EROSION

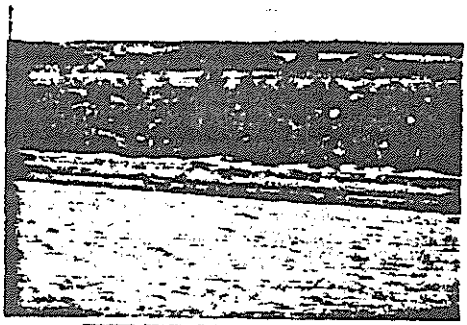
SUITABLE NESTING BEACH WITH ABANDONED CAMPS



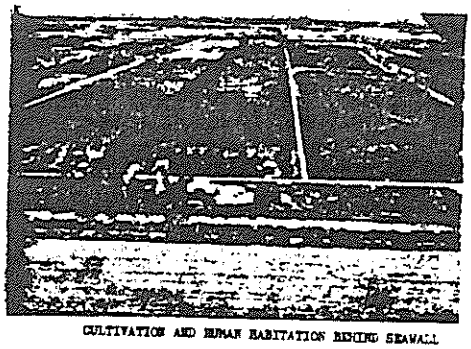
RAPPEL SEAWALL AND HUMAN HABITATION



MODERATE ENERGY BEACH WITH CAMP



NESTING BEACH AT CULTIVATED AREA • NEST DUG UP



CULTIVATION AND HUMAN HABITATION BEHIND SEAWALL

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	5-6	—	APRIL 1967 SHELL BEACH
Dermochelys coriacea	—	—	—
Eretmochelys imbricata	12 NESTS IN A 3-WEEK PERIOD	—	AUGUST 1967 SHELL BEACH
Lepidochelys kempi			
Lepidochelys olivacea	—	—	

Sea Turtle Aerial Survey

TABLE 4 - ___ NESTING CENSUS FOR GUYANA BEACHES 0001

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
9 SEPT 1982	SEE ATTACHED MAP							
15 JUNE 1983	SEE ATTACHED SUMMARY OF OBSERVATIONS BY P.C.H. PRITCHARD							

TABLE 9. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SUMMARY OF OBSERVATIONS MADE ON AERIAL SURVEY OF NORTH-WESTERN GUYANA, JUNE 15 1983

Peter C. H. Pritchard

Flew coast from Pizarro, Trinidad, to Timehri, Guyana. Altitude averaged 400 feet, speed 100 knots. Observations identified by precise time they were made.

11.27.30 a.m. Passed Waini Point (mouth of Waini River)
Beach begins in less than 1 mile.
11.28 Two-three turtle tests. Much beach morning-glory.
11.29.30 Beach mostly swamped at high tide.
11.30.55 Beach continues, with mud flats. Small camp on beach.
11.32.30 Village (several huts). One leatherback carcass.
11.33.10 Grove of very young coconut palms.
11.34. Two camps with people in them. Thirteen leatherback carcasses seen, all empty shells with plastron and contents removed. One green turtle carcass.
11.35 One leatherback nest.
11.35.40 End of beach.
Started section with edoring trees and mud and flooded forest.
11.36.27 Three spoonbills.
11.37 Huge fishing weir deployed from coast. Mud flats. Beach begins.
11.38.30 Small camp.
11.39.10 Six spoonbills.
11.39.40. Passing Shell Beach. Apparently not necessarily eroded, but rather heavily and almost completely grown over with vines.
11.40.04 Mouth of small creek, passing behind Shell Beach.
11.40.26 Old leatherback track.
11.40.41 Camp, with six people.
11.41.22 Creek mouth, temporary end of beach.
11.41.42 Small beach, one leatherback nest.
11.42 Beach begins. Very flat, much morning glory.
11.43.08 Fresh leatherback nest. Beach continues. Bore variably shaded by trees or covered with vines.
11.46 Mature coconut grove.
11.46.41 Small camp.
11.47.07. Another small camp.
11.47.30 End of beach.
Eroding mangrove shoreline.
11.48.35 Exposed mud bank. Inland totally flat, forested.
11.50.35 Beach begins, with extensive mud flat. Mostly very narrow beach, with freshwater washovers from flooded forest.
11.52.30. Large group of scarlet ibis. Circled for 15 seconds.
11.54.30 Huge wooden platform washed up on beach.
11.55.40 Young coconut grove
11.56.10 Camp and boat in coconut.
11.56.20 Second camp, and old leatherback nest.
11.57.04 Flooded area, with coconut palms planted on dyked ridges.
11.57.30 End of beach. Savanna visible half a mile inland.
11.58.30 Beach begins, extensive mud flat.
12.01 Very young coconut grove
12.01.30 End of beach. Savanna reaches very close to shore.
12.03.10 Old camp, very small
12.03.40 Another old camp. Savanna reaches right to coast.
Beach and young coconut grove.
12.05 End of beach.
12.06 New beach begins. Boat on beach. One turtle track (green?). Savanna still about 200 meters inland.
12.09 Swamp behind beach, with outflow to sea.
12.10 Creek mouth. Huge savanna area inland, with Mauritia palms. One scarlet ibis.
12.13 Young coconut grove, many small parrots. Ten scarlet ibis. Flooded mud flats, mangroves.
12.15.30 Three scarlet ibis.
12.16.50 Groves of coconut and Mauritia palms. Drainage ditches and several camps.
12.18.10 More coconut groves, mud flats, and camps.
12.22.30 Mouth of Pomeroon river.

No more beaches were found east of the Pomeroon. Several huge "fishing weirs" were seen.

12.27.05 Two scarlet ibis
12.27.53 Twelve scarlet ibis. Cultivation inland
12.30 About fifty scarlet ibis. Six spoonbill. Twenty more ibis.
12.31.18 Thirteen more spoonbill
12.32.40 Two frigate birds plus four spoonbill
12.33-45 Drainage canal from Pomeroon River, straight, with control structure. Three ibis, five spoonbill. No beach at all.
12.36.30 Big rice paddies.
12.37 et. seq. Stabilised (riprap) coast.

Good beaches were seen on the eastern side of Tiger Island, which appeared virtually undeveloped unlike the other Essequibo Island and also on the northern and north-eastern side of Leguan Island (Dauntless Point), the more eastern beach having a better approach, with less mud flat. One possible nest was seen on Tiger Island.

Arrived Timehri Airport 1.15 p.m.

Sea turtle Aerial Survey

Country: Guyana
Date: 9 Sept. 1982

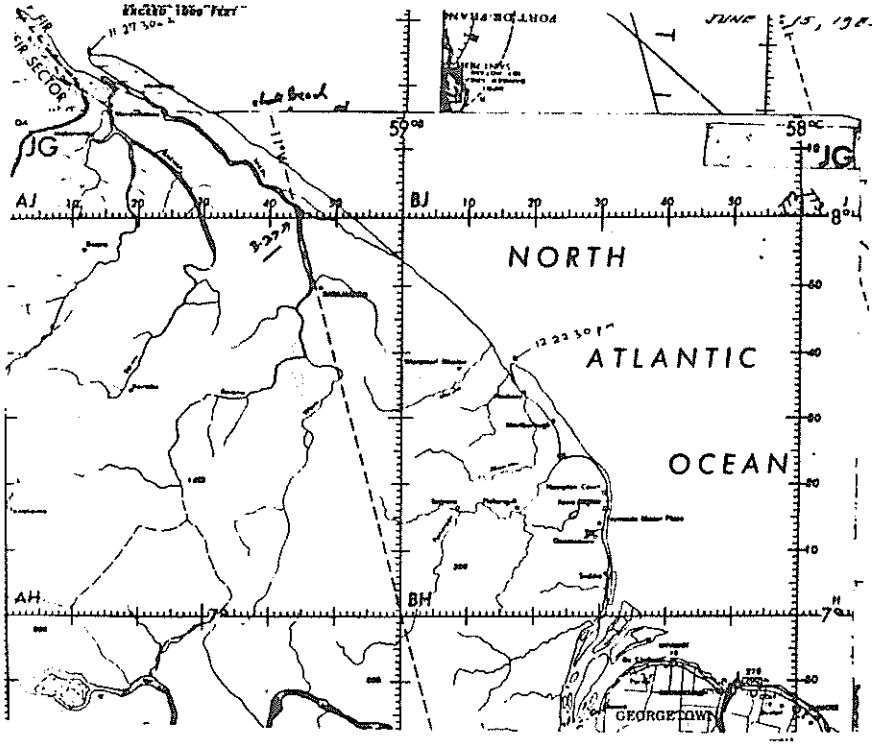
Observer 1: K. Mohadin
Observer 2: Louis Autar
Observer 3: H.A. Reichart
Pilot: Rudy Aaron
Aircraft: Cessna 206
visibility: clear.

The survey was made at an altitude of 250 feet approx 300 feet offshore and at an airspeed of 100 miles per hour.
The flight was made so that the observer could see the coastline on his right.
During the flight fresh turtle tracks were counted, beach vegetation and other characteristics were recorded.

Results.
Sea turtle crawls were only recorded on the far west coast of Guyana where the beaches seem to be most suitable for turtle nesting.
One fisherman camp was observed about 16 km east of the Waini River. In the vicinity of this camp about 26 sea turtle shells were seen, from appearance assumed to be hawksbill.
No other camp which could possibly have served as a guard station has been observed.
From this one aerial survey it appears that most of the turtles nesting on this beach are being slaughtered by fishermen and that probably all eggs are harvested.

The Eastern half of the Guyana Coast is populated and it is unlikely that sea turtles are nesting here. Indeed, no turtle crawls were observed in this area during this survey.

The beach can be characterized as a low to moderate energy beach.



REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Pritchard, Peter C.H. 1969. Sea Turtles of the Guianas. Bulletin of the Florida State Museum, Biological Sciences, Vol. 13 No. 2 pp. 85-140.

2.

TABLE 20. REGULATORY AUTHORITY

a). Ministry of Fisheries
39 Brickdam
P.O. Box 1001
Georgetown
Guyana

Telephone: 64398 or 71536

Mr. Reuben Charles
Chief Fisheries Officer

Apparently they have jurisdiction over sea turtles.

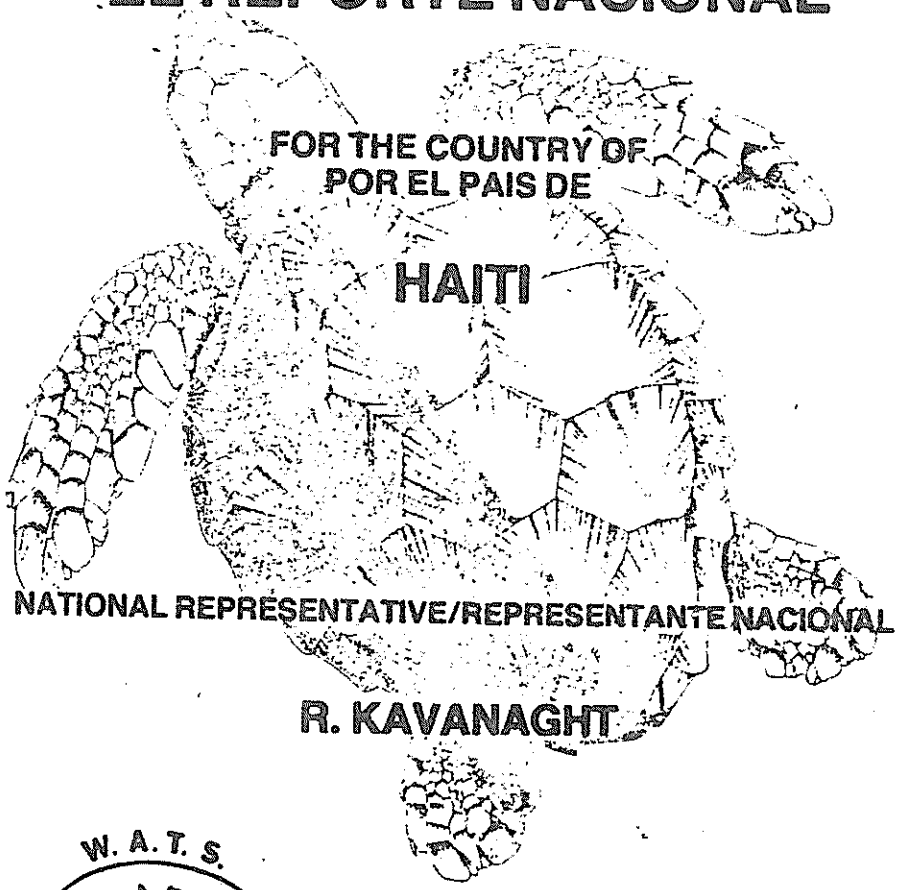
b). National Science Research Council Guyana
Environmental Research & Information Unit
44 Pere Street
Kitty
Georgetown
Guyana

Telephone: 53829 or 53822 or 62153

Professor J.J. Miles
Coordinator ERIU

Apparently they have only an advisory capacity.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

HAITI

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

R. KAVANAGHT

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

HAÏTI

NATIONAL REPORT PRESENTED BY

RONY KAVANAGHT
The National Representative

Address: SERVICE DES PECHES
DARNDR DAMIEN
PORT-AU-PRINCE HAÏTI (W.I)

NATIONAL REPORT PREPARED BY

STAFF SERVICE DES PECHES
Agricultural Département

DATE SUBMITTED: 30 November 1982

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country HAÏTI

Length of Coastline* . . . . . 1535 Km

Km² of Continental Shelf Area . . . . . 5000 Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . ___ Km

Extended Economic Zone . . . . . ___ Km

Fisheries Jurisdiction . . . . . ___ Km

Other (Describe) _____ . . . ___ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Anse à Pitre - Belle Anse	27	Cc, E, Cm	May 1981
2. Cayes-Jacmel - Lagrange	5	Cc, Cm	July 1981
3. Hoyette - Côte de fer	2,5	Cm, E	July 1981
4. Côte de fer - Miroilles	5	Cm, Cc	July, August
5. Les Cayes - St Jean	10	E, Cc	August, September
6. Anse du Diable	4	Cc	July August
7. Pte à Gravois - Port Salut	5	E, Cc	August 1981
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Baie de Cavacol -	6	Cm	July - August
2. Petite Anse	2	Cc, Cm	July - August
3. Anse a Chou Chou -	2	E, Cm	July - August
4. Fond Lagrange	4	Cm, Cc	July - August
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
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Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km²)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Cap Jacmel to Lagrand I.	10	Cm, Cc	fishery
2. Côte de fer to Miroilles f.	7	Cm, Cc	fishery
3. Pte à Gravois Port Salut	10	E, Cc	Observation
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta					✓	✓	✓	✓	✓				July - August
Chelonia mydas					✓	✓	✓	✓	✓				July - August
Dermochelys coriacea													
Eretmochelys imbricata					✓	✓	✓	✓	✓				July - August
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS. Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Cotes de fer	Cm, Cc	nets	Jul - Aug	
2. Corridon	Cc	trammels	Jun - Jul	
3. Raymond les bains	Cm, E	Nets	Jul - Aug	
4. Port - Salut	E, Cc	Nets, trammels	Jul - Aug	
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta	328.-	382,02	72,45	Exportation of Carapace
Chelonia mydas	250.2	128.-	50.-	" "
Dermochelys coriacea				
Eretmochelys imbricata	241.6	70,20	64.45	" "
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg) Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

NAME AND LOCATION	AREA Km^2	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Mayette - Fouquet		over exploitation	Cost Guard

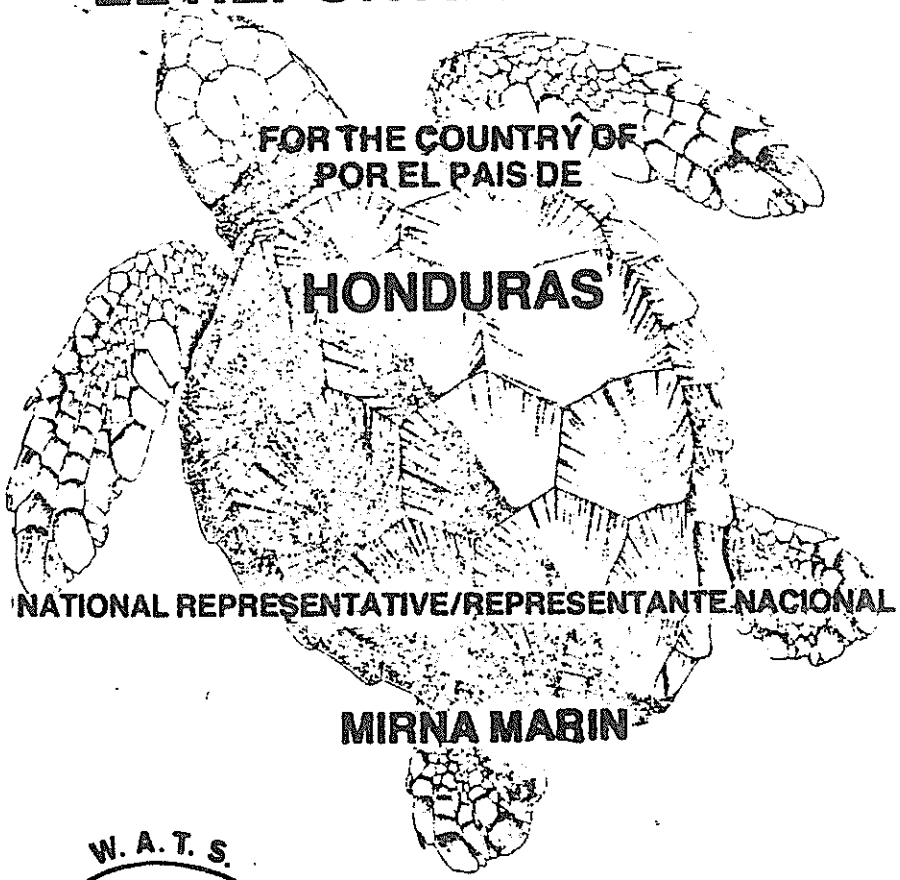
TABLE 19. SANCTUARIES AND REFUGES

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
DARNDR Damien Port-au-Prince HAÏTI		2	

HAITI

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

HONDURAS

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

MIRNA MARIN

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

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W. A. T. S.
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SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE

Honduras

REPORTE NACIONAL PRESENTADO POR

Mirna Marin

El Representante Nacional

Dirección: Recursos Naturales Renovables

Bo. Guacarique Casa # 1534

Comayagüela, Honduras C.A.

REPORTE NACIONAL PREPARADO POR

Mario Espinal

FECHA EN QUE SE PRESENTO: 29/12/82

Favor enviar antes del 1° de diciembre de 1982, al Secretario Asistente de COI para IOCARIBE, c/d UNDP, Apartado 4540, San José, Costa Rica.

País Honduras

Longitud de la Costa*..... 693 Km

Km² de la Plataforma Continental..... 370.4 Km

Extensión de la Jurisdicción Marina:

Mar Territorial..... 22.24 Km

Zona Económica Extendida..... 368 Km

Jurisdicción de la Pesquería..... 370.4 Km

Otras (describalas)_____..... Km

Tabla 1. INVENTARIO GEOGRAFICO

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país; por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

CARACTERISTICAS DE LA COSTA MARINA*		Km de Costa		
		SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)	DND$			
2. Arrecife (expuesto)				94 Km.
3. Rocas				6 Km
4. Precipicios				4 Km.
5. Vegetación (Total)	DND			
A. Enredaderas (matas rastreras)	DND			
B. Zacates	"			
C. Manglares	"			
D. Palmeras	"			
E. Otros árboles o arbustos	"			
F. Ciénegas (pantanos)	"			
6. Bocas de lagunas, ríos y canales	"			
Total de costa				693

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

$ DND = Dato no disponible

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarollo humano (Ver Manual)

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Ceiba		D	Abril
Rio Sico		no determinada	Julio
Boca laguna de Brus		Cc	Julio
Boca laguna tata		"	"
Rio Cruta		"	"
Isla de utila		no determinada	"
Isla de Guanaja		"	"

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Ceiba		D	Abril
Trionos		Cc	Julio
Rio Sico		Cc	"
Boca laguna de Brus		Cc	"
Boca laguna tata		Cc	"
Rio Cruta		Cc	"
Isla de utila		no determinada	"
Isla de Guanaja		no determinada	"

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	NO* I. D.
7/82	Ceiba			1				
8/7/82	Zelona							1
8/7/82	Rio Sico							1
8/7/82	Boca Laguna de Brus							1
8/7/82	Boca laguna Tata							2
8/7/82	Rio Cruta							1
10/7/82	Isla de utila							1
10/7/82	Isla de Guanaja							2

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
(Página suplementaria)

De cualquier información adicional disponible de los reconocimientos aéreos. Esta información debe incluir verificaciones terrestres si éstos se llevan a cabo.

no se registró mayor cantidad de nidos observados por carecer de información sobre temporada exacta de anidamientos en el Atlántico de Hondyras..

La totalidad de observaciones aéreas no pudieron ser verificadas en tierra por la falta de pistas de aterrizaje en las areas donde se observaron nidos..

LOCALIDAD (Indicar latitud y longitud)	FECHA	ESPECIES (Abreviaciones)	COMENTARIOS
Lat. 16° 07' 78" Long. 86° 41' 39"	12/7/82	EI (1)	En el interior del estomago de un tiburón capturado por barco de investigación
Lat. 15° 49' 14" Long. 87° 22' 37"	29/8/82	EI (1)	Capturada accidentalmente con red de Fondo por barco de investigación PEMREE IV

TABLA 9. TORTUGAS FUERA DE LAS AREAS DE FORRAJEO.
Favor de proveer cualquier información disponible sobre la incidencia de tortugas fuera del área de forrajeo.

Abreviaciones para las Especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	EI
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 13. CAPTURA ESTIMADA DE TORTUGA POR PESCADORES EXTRANJEROS. DND
(página suplementaria)

Favor de describir el tipo de pesca por extranjeros en sus aguas territoriales y de estimaciones para:

1. Número de naves extranjeras capturando tortugas.
2. Número de pescadores extranjeros capturando tortugas.
3. Año en que se hizo la estimación.

DND:
En Honduras no se realizan este tipo de Labores, y de llevarse a Cabo seria totalmente ilegal

ESPECIES	OPERACIONES DE INCUBACION					TORTUGAS EN CAUTIVERIO		
	HUEVOS COLECTOS.	CANTIDADES NACIDAS	No. TORTUGUITAS LIBERADAS.	FECHA DE LIBERACION	No. MUERTOS	JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea	26,713	10,739	10,738	2-3 hrs. de nacidos	--	--	--	--

HONDURAS

AÑO 1982 (Pacifico)

TABLA 17. MARICULTURA DE TORTUGA

Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, experimentos de mejoramiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

ESPECIES	OPERACIONES DE INCUBACION					TORTUGAS EN CAUTIVERIO		
	HUEVOS COLECTOS.	CANTIDADES NACIDAS	No. TORTUGUITAS LIBERADAS.	FECHA DE LIBERACION	No. MUERTOS	JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea	23,791	13,068	13,068	1-2 hrs. de nacidos	--	--	--	--

HONDURAS

AÑO 1981 (Pacifico)

TABLA 17. MARICULTURA DE TORTUGA

Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, experimentos de mejoramiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	NO. DE MIEMBROS ACTIVOS	ACTIVIDADES EN DESARROLLO
Dirección General de Recursos Naturales Renovables RENARE	8	Concientización con Ayudas Audiovisuales Sobre la Conservación de las tortugas Marinas
Asociación Hondureña de Ecologia AHE	100	Concientización a través de Folletos y Boletinas informativos.-

TABLA 18. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE PREOCUPAN DE LA CONSERVACION/MANEJO/UTILIZACION DE LA TORTUGA

NOMBRE Y LUGAR	AREA Km²	RAZONES PARA SU PROTECCION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY

TABLA 19. SANTUARIOS Y REFUGIOS DND

* No existe en el pais ningún refugio ó Santuario para tortugas Marinas.-

NOMBRE Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
RENARE, casa # 1534 Comayagüela, Honduras CA	$2000	8	
Fuerza Naval Estado Mayor de las FFAA	-o-	?	

HONDURAS

TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

TITULO DEL PROYECTO	FECHAS		NOMBRE Y DIRECCION DE LA INSTITUCION Y DEL INVESTIGADOR PRINCIPAL
	INICIO	TERMINO	
Algunas observaciones sobre Lepidochelys olivacea en el pacifico de Honduras	5/9/75	5/11/75	RENARE, Honduras CA Enoc Burgos, Dora Elisa Perez
Proteccion tortuga Marina	1/8/80	10/10/80	RENARE Jorge Varela
Anidamiento Semi-artificial de tortuga Marina en el Golfo de Fonseca	17/8/82	6/9/82	RENARE Mario Espinal, Liz Cruz, Carlos Soto

TABLA 21. PROYECTOS NACIONALES DE INVESTIGACION

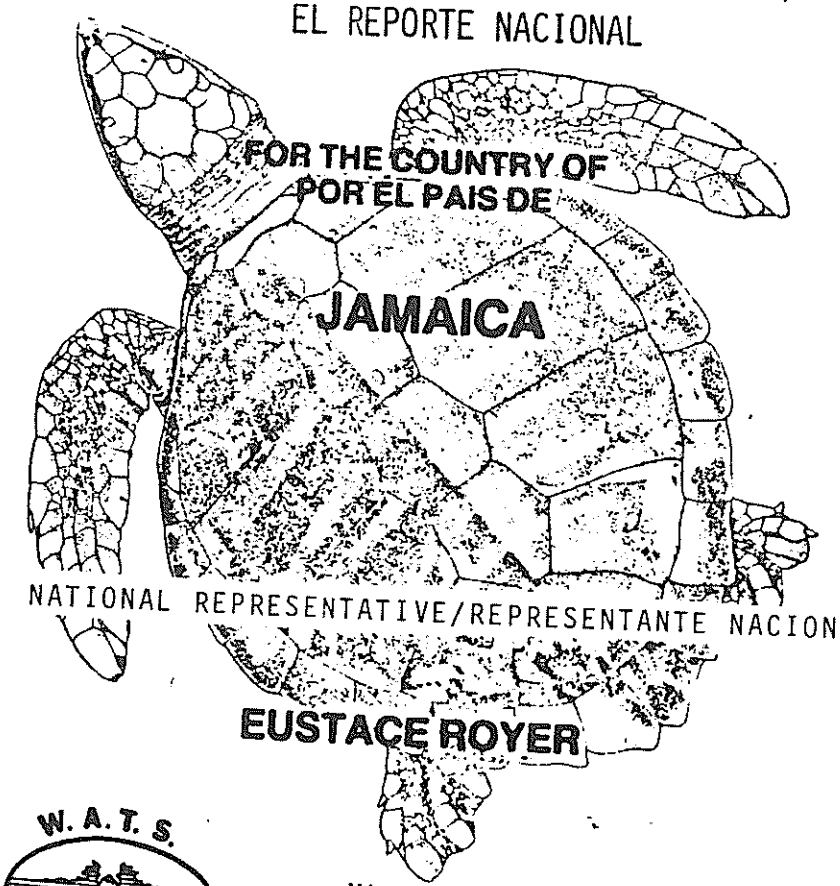
Cite las actividades sobre investigación de tortugas financiadas por su país.

REPORTES Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

1. Observaciones sobre la tortuga L. olivacea en la costa Pacifica de Honduras, Por Enoc Burgos 1975
2. Protección tortuga Marina, Por Jorge Varela 1980
3. El proyecto para la protección de la tortuga golfina en la costa Sur de Honduras, M. Donovan, C. Hinatik 1981
4. Recomendaciones para el proyecto de la tortuga golfina (L. olivacea), C. Hinatik, 1982. -
5.

THE **NATIONAL REPORT**
EL REPORTE NACIONAL



W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

JAMAICA

NATIONAL REPORT PRESENTED BY

EUSTACE ROYER
The National Representative

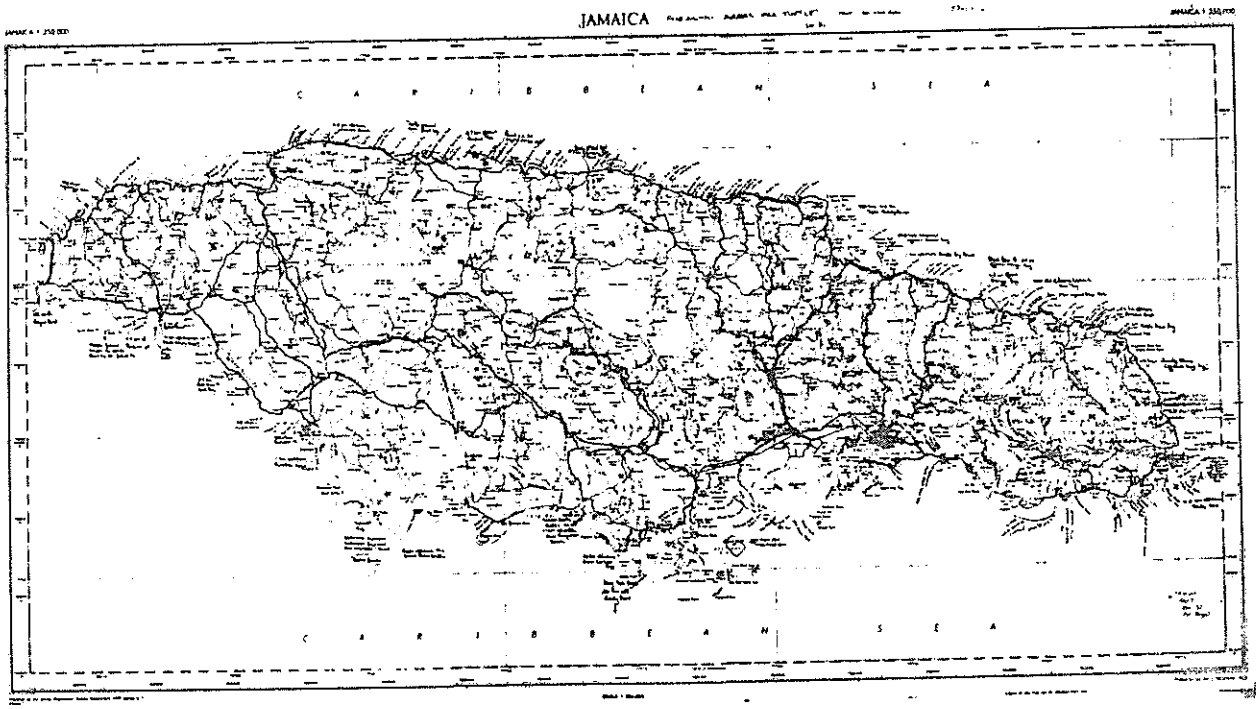
Address: FISHERIES DIVISION
MINISTRY OF AGRICULTURE
P.O. BOX 470 KINGSTON JAMAICA

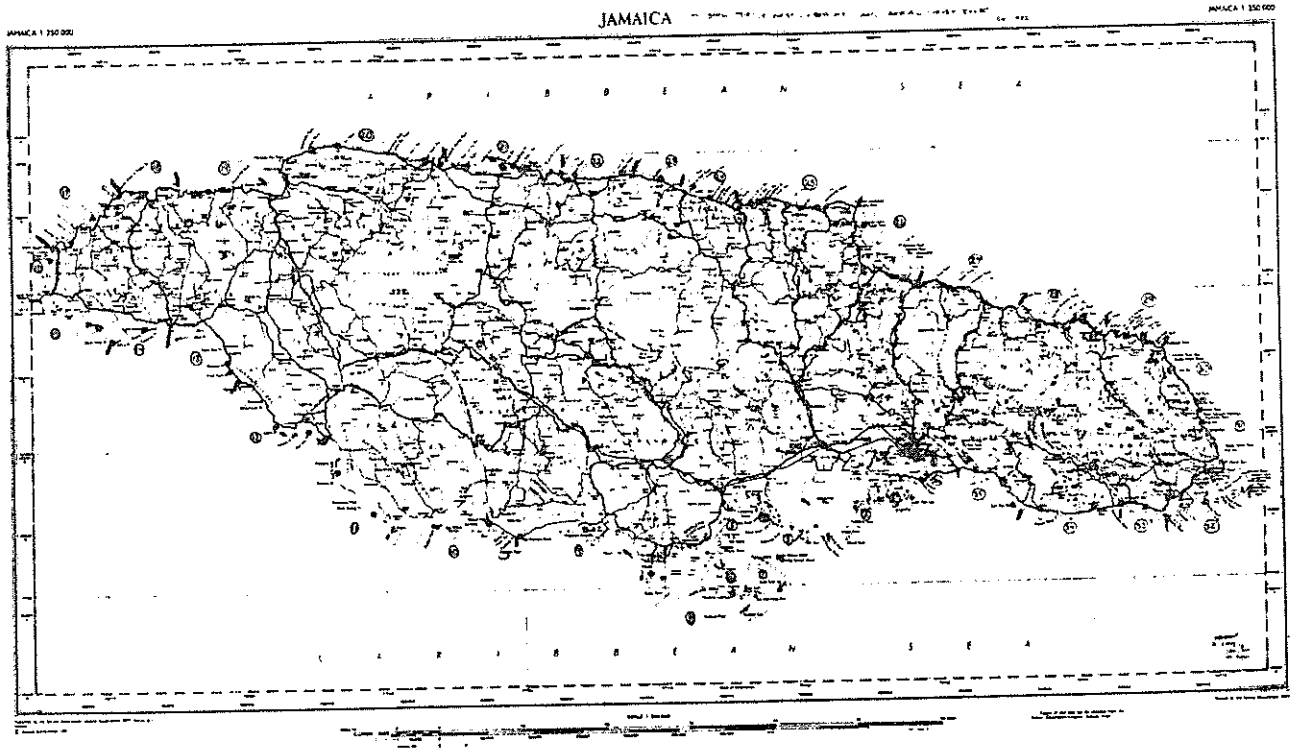
NATIONAL REPORT PREPARED BY

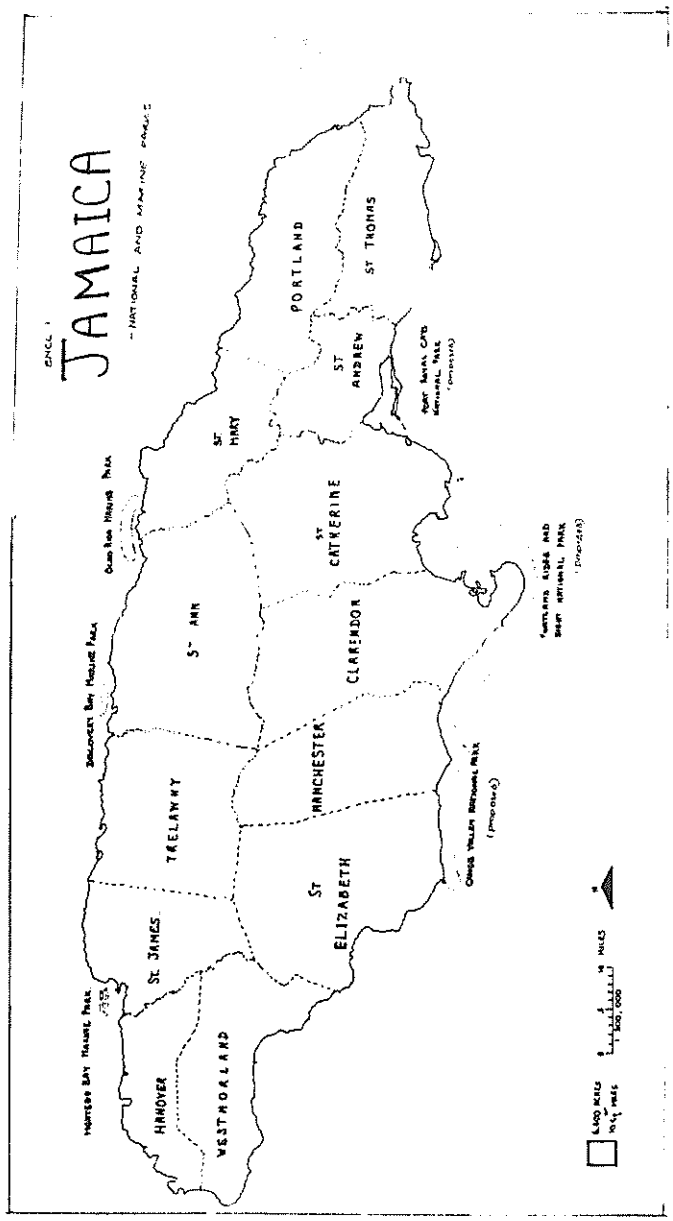
Rhema Kerr
NRCD, 53½ Molynes Road, Kingston 10, Jamaica

DATE SUBMITTED: 18 December 1982

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.


JAMAICA
CARIBBEAN SEA


JAMAICA
CARIBBEAN SEA


JAMAICA
PORTLAND
ST THOMAS
ST ANDREW
ST MARY
ST CATHERINE
ST ANN
CLARENDON
MANCHESTER
TRELAWNY
ST ELIZABETH
ST JAMES
HANOVER
WESTMORLAND

(draft) National Report of :

Jamaica

Report Prepared by :

Rhana Farr

c/o NRCD
53½ Molynes Road
Kingston 10
Jamaica.

Submitted : 18th December 1982.

TABLE No 1

Country	-	Jamaica
Length of Coastline	-	560 km
End of Continental shelf area	-	[illegible]

Seaward Extent of Jurisdiction

Territorial Sea	-	19.2 km
Extended Economic Zone	-	none fixed
Fisheries Jurisdiction	-	[illegible] km beyond territorial waters

TABLE 2

MARINE SHORELINE CHARACTERISTICS	Km of Shoreline		
	[illegible]	[illegible]	TOTAL
1. Sand Beach (Total)			[illegible]
A. High Energy			[illegible]
B. Low Energy			[illegible]
2. Reefs (exposed)	NOT AVAILABLE	NOT AVAILABLE	[illegible]
3. Rocks			[illegible]
4. Cliffs			[illegible]
5. Vegetation (Total)			NOT AVAILABLE
A. Vines			
B. Grasses			
C. Mangroves			100.1 km
D. Coconut Trees			NOT AVAILABLE
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, river canals.			
7. Total Shoreline	[illegible]	[illegible]	[illegible]

TABLE 2A – MARINE HABITATS INVENTORY OF BOTTOM TYPES

– DATA NOT AVAILABLE

TABLE 3

Gun Cay	5 m		✓				Mid May – October
Eastern Cay	5.46 m		✓				
Lime Cay	300		✓				Mid May – October
South Cay			✓		✓		
Lowrie Bay			✓				
Manatee Bay	80.5 m		✓		✓		June, February – June
Glequer Bay			✓		✓		
Three Sandy Bay	40 m		✓				May
Salt Island Cay	4.5 m		✓				Mid May – October
Long Pond			✓				" "
Big Portland Cay	30 m		✓		✓		Feb – June
Little Portland Cay	13.5 m		✓		✓		June
Bare Bush Cay	20 m		✓		✓		June
Pelican Cay	30 m		✓				Feb – June
Peake Bay			✓				Aug – Nov
Pigeon Island	30 m		✓				June
Miller Bay			✓		✓		Aug – Nov.
Needle Cay			✓		✓		

Beau Champ	50 m		✓				June – Dec
Gutz River	1247.5 m		✓				May – Sept
Mackhans Bay	40 m		✓				Jan – Sept
Old Wanans Point	40 m		✓				May – Sept
Calabash Bay	402.5 m		✓				–
Malcolm Point	15 m		✓	✓			–
Luana Beach	402.5 m		✓				June – Dec
Sand Hill	40 m		✓	✓			–
Buchinstown	60 m		✓				–
Parker's Bay			✓				–
Long Bay	2040 m		✓				May – Sept
Jack's Hole			✓				
Brighton Beach			✓	✓			
Crab Pond Point			✓				
Tan-Tan Bay			✓				–
Sabbita Beach			✓				
Hope Wharf	60 m		✓		✓		
Robin's Point			✓				–

St John's Point	60.5 m		✓				–
Little Bay	1207.5 m		✓				–
Mary's Beach	60 m		✓				June – October
White Sands Beach			✓				
Pampy's Beach			✓				
Little Bay			✓		✓		–
Long Bay			✓				March – Sept
Lances Bay	20 m		✓				Feb – Dec
Green Island			✓				Aug – October
Johnston Beach			✓		✓		March – Nov
Barbican Beach	60 m		✓				March – Sept
Maagre Bay			✓				–
Salt House Beach			✓				March – Sept
Tryall Beach			✓				March – Sept
Black Bay			✓				March – Sept
Hope Well Beach			✓		✓		March – Sept
Hebbinden			✓				–
Old House Point			✓		✓		

Success Beach			✓				–
Red House Beach			✓				March – Sept
Rear Hall Beach			✓				
Drew Hall Beach			✓		✓		
Billy Clarke Beach			✓		✓		
Shark Bay			✓		✓		
Pat Chung Beach	20m		✓				March – Nov
Pear Tree Bottom			✓				
Dustin Kitchen			✓				March – Sept
Rocky Wood Point			✓				–
Half Moon Bay			✓				March – Nov
Rush Cove			✓				March – Sept
Spring Bay			✓				
[illegible] Bay			✓				March – Sept
Stewart Bay			✓				
Mangrove Point			✓		✓		March – Nov
Thatch Tree			✓				
Bravo Beach	120m		✓				May – Sept

Silver Sand Beach	805m		✓				March – Nov
Queen's Way Beach			✓				Sept – Nov
Apl Wood Beach	402m		✓				Sept – Nov
Salem Beach			✓				
Headquarters			✓		✓		–
Windsor Beach	805m		✓		✓		March – Sept
Drake Hall Beach	80m		✓				Feb – October
Marine Bay	60m		✓				Feb – October
Shaw Park Beach	60m		✓				March – August
Magarterbon Beach	40m		✓				March – August
Rio Nuevo Beach	30m		✓				March – Sept
Golden Head Beach			✓				–
Tower Isle Beach			✓				–
Ladder Bay			✓				March – August
Roaring River			✓				March – August
Salt Bay Cove			✓				Jan – Sept
Shearness Bay	30m		✓				March – Nov
Wag Water Vail			✓				Feb – July

Annatto Bay	44.40m		✓				Feb – July
Buff Bay	80m		✓				April
Orange Bay	805m		✓	✓	✓		April
Hope Beach			✓		✓		March – October
Barros Hole			✓				May – Sept
Horse Wood Beach			✓				May
Windsor Beach	805m		✓				April
Doctor Wood Beach			✓				April – Nov
Spring Garden Beach			✓				March – October
Parsley Gardens			✓				April – October
Hermitage			✓	✓	✓		March – October
Draper's Beach	40m		✓		✓		May – Nov
Fairy Hill	80m		✓				March – October
Sun Sea	44.40m		✓		✓		March – October
Frenchman's Cove	40m		✓		✓		May – Nov
Turtle Cove	20m		✓		✓		May
Long Bay	805m		✓		✓		March – Sept
Turtle Bay			✓		✓		–

Dalvey	805m		✓				August
Holland Bay	120m		✓				August
Rocky Point	402m		✓	✓			May – July
Rocky Cay			✓				Feb – June
Morant Bay			✓		✓		
Dubarry Pen			✓		✓		April – Nov
White Horse	805m		✓				April – Sept
Yallahs	22.20m		✓				April – Nov
Cow Bay			✓				April – Nov
Grant's Pen Beach			✓				
Nose Mbo Beach			✓				

TABLE 4

Summary notes

The information on these tables is based not on actual investigations by NECD team but on reports made by fishermen in the course of replying to the questionnaire (copy enclosed) Thus the nests/night column refers to numbers reportedly seen by fishermen during their work & Nests/season is based on the fishermen's estimates

A ✓ (tick) in relevant box indicates that fishermen reported nesting of this species on the beach in question but were unable to estimate a frequency

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	18

TABLE 4 - NESTING CENSUS FOR BEACH Gun Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	18

TABLE 4 - NESTING CENSUS FOR BEACH Egg Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	-	-
Chelonia mydas	-	-
Dermochelys coriacea	-	-
Eretmochelys imbricata	3	18

TABLE 4 - NESTING CENSUS FOR BEACH Lime Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	18

TABLE 4 - NESTING CENSUS FOR BEACH South 5. (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	7	30

TABLE 4 - NESTING CENSUS FOR BEACH Bougie bay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	5	88

TABLE 4 - NESTING CENSUS FOR BEACH Manatee bay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	5	5

TABLE 4 - NESTING CENSUS FOR BEACH Cocoanut bay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	15	55

TABLE 4 - NESTING CENSUS FOR BEACH Thom sody bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	5	25

TABLE 4 - NESTING CENSUS FOR BEACH Salt island
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	30	90

TABLE 4 - NESTING CENSUS FOR BEACH LONG POND
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	10	126

TABLE 4 - NESTING CENSUS FOR BEACH Big Portland Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	10	105

TABLE 4 - NESTING CENSUS FOR BEACH Bottle Portland Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	10	105

TABLE 4 - NESTING CENSUS FOR BEACH Bare bush Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	30	90

TABLE 4 - NESTING CENSUS FOR BEACH ____ Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	3	70

TABLE 4 - NESTING CENSUS FOR BEACH PEAKE Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	6	25

TABLE 4 - NESTING CENSUS FOR BEACH Pigeon island
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	6	35

TABLE 4 - NESTING CENSUS FOR BEACH Miller bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	5	25

TABLE 4 - NESTING CENSUS FOR BEACH Needle Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	7	80

TABLE 4 - NESTING CENSUS FOR BEACH Brewers Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	7	75

TABLE 4 - NESTING CENSUS FOR BEACH —— S RIVER
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	12	100

TABLE 4 - NESTING CENSUS FOR BEACH Markham Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	70

TABLE 4 - NESTING CENSUS FOR BEACH Old Womens Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	10	80

TABLE 4 - NESTING CENSUS FOR BEACH Calabash Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	✓	✓
Dermochelys coriacea	—	—
Eretmochelys imbricata	9	500

TABLE 4 - NESTING CENSUS FOR BEACH Whitelam Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Lunan beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	✓	✓
Dermochelys coriacea	—	—
Eretmochelys imbricata	8	30

TABLE 4 - NESTING CENSUS FOR BEACH S. Hill
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	12	30

TABLE 4 - NESTING CENSUS FOR BEACH Burchindown
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta		
Chelonia mydas		
Dermochelys coriacea		
Eretmochelys imbricata	12	30

TABLE 4 - NESTING CENSUS FOR BEACH Parker's bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	50

TABLE 4 - NESTING CENSUS FOR BEACH Long Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	200

TABLE 4 - NESTING CENSUS FOR BEACH Jack's Hole
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	
Chelonia mydas	✓	✓
Dermochelys coriacea	—	
Eretmochelys imbricata	2	20

TABLE 4 - NESTING CENSUS FOR BEACH B.G.N. - Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Cm[illegible] nd Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta		
Chelonia mydas		
Dermochelys coriacea		
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Tan-Tan bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	1	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	25

TABLE 4 - NESTING CENSUS FOR BEACH Turtle Cove
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Sabbito Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	60

TABLE 4 - NESTING CENSUS FOR BEACH Hope Wharf (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	7

TABLE 4 - NESTING CENSUS FOR BEACH Turtle Bay (near Innis' Bay) (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	5	40

TABLE 4 - NESTING CENSUS FOR BEACH Delvey (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2 – 3	20

TABLE 4 - NESTING CENSUS FOR BEACH Holland Bay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	✓	✓
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	30

TABLE 4 - NESTING CENSUS FOR BEACH Rocky Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	7	150

TABLE 4 - NESTING CENSUS FOR BEACH ___ Cay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	—
Chelonia mydas		
Dermochelys coriacea		
Eretmochelys imbricata	5	35

TABLE 4 - NESTING CENSUS FOR BEACH Marmot Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	9 —	20

TABLE 4 - NESTING CENSUS FOR BEACH LONG BE
(name)

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	60

TABLE 4 - NESTING CENSUS FOR BEACH Robin's Point
(name)

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	40

TABLE 4 - NESTING CENSUS FOR BEACH St. John's point
(name)

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	20

TABLE 4 - NESTING CENSUS FOR BEACH Little bay
(name)

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	—

TABLE 4 - NESTING CENSUS FOR BEACH _____ beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	—

TABLE 4 - NESTING CENSUS FOR BEACH White Sands Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	—

TABLE 4 - NESTING CENSUS FOR BEACH Pompy's beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	20

TABLE 4 - NESTING CENSUS FOR BEACH Little Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	-
Eretmochelys imbricata	4	50

TABLE 4 - NESTING CENSUS FOR BEACH Long bay
(name)

64

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	40

TABLE 4 - NESTING CENSUS FOR BEACH Lane's bay
(name)

65

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	6	24

TABLE 4 - NESTING CENSUS FOR BEACH 8 Island
(name)

66

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	30

TABLE 4 - NESTING CENSUS FOR BEACH Johnston Beach
(name)

67

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	50

TABLE 4 - NESTING CENSUS FOR BEACH Barbican Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	—

TABLE 4 - NESTING CENSUS FOR BEACH Meagre bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Salt House Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	25

TABLE 4 - NESTING CENSUS FOR BEACH Tryon Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	12

TABLE 4 - NESTING CENSUS FOR BEACH I. bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	12

TABLE 4 - NESTING CENSUS FOR BEACH Hopewell Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	—

TABLE 4 - NESTING CENSUS FOR BEACH Hobiendan
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	5	26

TABLE 4 - NESTING CENSUS FOR BEACH Old House Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	16

TABLE 4 - NESTING CENSUS FOR BEACH Success beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	8	80

TABLE 4 - NESTING CENSUS FOR BEACH Bad House Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	40

TABLE 4 - NESTING CENSUS FOR BEACH [illegible] beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	30

TABLE 4 - NESTING CENSUS FOR BEACH Main Hall Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	25

TABLE 4 - NESTING CENSUS FOR BEACH Billy Clarke beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	16

TABLE 4 - NESTING CENSUS FOR BEACH Shark bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	44	28

TABLE 4 - NESTING CENSUS FOR BEACH Pat Chung
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	—

TABLE 4 - NESTING CENSUS FOR BEACH Pear Tree bottom
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	25

TABLE 4 - NESTING CENSUS FOR BEACH Dew... Kitchen
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	9

TABLE 4 - NESTING CENSUS FOR BEACH Rocky Wand (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	10	25

TABLE 4 - NESTING CENSUS FOR BEACH Half Moon Bay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	7

TABLE 4 - NESTING CENSUS FOR BEACH Bush Cay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Spring bay (name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	8	25

TABLE 4 - NESTING CENSUS FOR BEACH White bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	3	25

TABLE 4 - NESTING CENSUS FOR BEACH art bay.
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	1	30

TABLE 4 - NESTING CENSUS FOR BEACH Monarque Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	–	–
Chelonia mydas	–	–
Dermochelys coriacea	–	–
Eretmochelys imbricata	5	–

TABLE 4 - NESTING CENSUS FOR BEACH Theater Time (in Ellipse)
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	5	20

TABLE 4 - NESTING CENSUS FOR BEACH Bruce Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	—

TABLE 4 - NESTING CENSUS FOR BEACH Silver Sands
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	10

TABLE 4 - NESTING CENSUS FOR BEACH Queens Way beaches
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	10

TABLE 4 - NESTING CENSUS FOR BEACH Ark. Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	1	—

TABLE 4 - NESTING CENSUS FOR BEACH Salem Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	12

TABLE 4 - NESTING CENSUS FOR BEACH Hendry
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	12

TABLE 4 - NESTING CENSUS FOR BEACH Windsor
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	20

TABLE 4 - NESTING CENSUS FOR BEACH Drax Hall
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	12

TABLE 4 - NESTING CENSUS FOR BEACH Manse Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	—	27

TABLE 4 - NESTING CENSUS FOR BEACH Shoal Point
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	—	27

TABLE 4 - NESTING CENSUS FOR BEACH Meganbacken Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	—	27

TABLE 4 - NESTING CENSUS FOR BEACH Rio Grande
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	—	27

TABLE 4 - NESTING CENSUS FOR BEACH Golden Head
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	50

TABLE 4 - NESTING CENSUS FOR BEACH Nine Miles beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	50

TABLE 4 - NESTING CENSUS FOR BEACH Grants Ten beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	20

TABLE 4 - NESTING CENSUS FOR BEACH Cowboy
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	20

TABLE 4 - NESTING CENSUS FOR BEACH Vallah a
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	20

TABLE 4 - NESTING CENSUS FOR BEACH White Horses
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	40

TABLE 4 - NESTING CENSUS FOR BEACH Dub. Pen
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	1	—
Chelonia mydas	—	—
Dermochelys coriacea	—	
Eretmochelys imbricata	2	25

TABLE 4 - NESTING CENSUS FOR BEACH Frenchmans Cove
(name)

112

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	20

TABLE 4 - NESTING CENSUS FOR BEACH San San
(name)

113

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	20

TABLE 4 - NESTING CENSUS FOR BEACH Fairy Hill
(name)

114

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	1	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	25

TABLE 4 - NESTING CENSUS FOR BEACH Drapers Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	✓	✓
Dermochelys coriacea		
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Hermitage

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	5	45

TABLE 4 - NESTING CENSUS FOR BEACH Pt. y GARDENS
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	✓	✓
Chelonia mydas	✓	✓
Dermochelys coriacea		
Eretmochelys imbricata	6	50

TABLE 4 - NESTING CENSUS FOR BEACH Spring Garden Beach
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Deste Woods
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Mud Spit
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	40

TABLE 4 - NESTING CENSUS FOR BEACH Horse Island
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	40

TABLE 4 - NESTING CENSUS FOR BEACH Rescue Hole
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	~	~
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	—	20

TABLE 4 - NESTING CENSUS FOR BEACH H. BEACH
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Orange Gaul
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	40

TABLE 4 - NESTING CENSUS FOR BEACH Hobe Sound
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	4	40

TABLE 4 - NESTING CENSUS FOR BEACH Raccoon Hole
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	—	20

TABLE 4 - NESTING CENSUS FOR BEACH H. BEACH
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Orange Beach
(name)

124

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Ruff Bay
(name)

125

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	12

TABLE 4 - NESTING CENSUS FOR BEACH Annette Bay
(name)

126

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	12

TABLE 4 - NESTING CENSUS FOR BEACH Nag Water Veil beach
(name)

127

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	12

TABLE 4 - NESTING CENSUS FOR BEACH Shearness bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta		
Chelonia mydas		
Dermochelys coriacea		
Eretmochelys imbricata	4	60

TABLE 4 - NESTING CENSUS FOR BEACH Salt Pond Cove
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	2	20

TABLE 4 - NESTING CENSUS FOR BEACH Browning River
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	3	40

TABLE 4 - NESTING CENSUS FOR BEACH Ladder Bay
(name)

SPECIES	NUMBER OF NESTS	
	Nests/Night (Average)	Nests/Season (Estimated)
Caretta caretta	—	—
Chelonia mydas	—	—
Dermochelys coriacea	—	—
Eretmochelys imbricata	-	27

TABLE 4 - NESTING CENSUS FOR BEACH Inner Isle
(name)

DATE	BEACHES SURVEYED	ZONE	NUMBER OF NESTING TRACKS Cc	Cm	D	E	Lk	Lo	NO. I. D.
23.9.81	Coastline east of Hellshire Hills (3 small cays)	2							1
"	Coastline south-west of Old Harbour Bay	5							1
"	Pigeon Cay	9							2
"	Portland Cay	7							3
"	Cays north-east of Portland Cay	9							3
"	Coastline north-west of St. John's Point	15							1
"	Coastline north-east of North Negril Point	17							1
"	Coastline west of Discoboca	25							1
"	Coastline south-east of Port Maria Bay	26							1
"	Coastline east of Yallas River	34							1

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

DATE	BEACHES SURVEYED	ZONE	NUMBER OF NESTING TRACKS Cc	Cm	D	E	Lk	Lo	NO. I. D.
6.10.82	Cays east of Portland Ridge	7							9
"	Pedro Pond	11							1
"	St John's Point	14							1
"	East of Lucea Harbour	18							1
20.9.82	Pedro Cays (Cm cay)								7
"	Morant Cays (Cc cay)								4
"	Morant Cays (SW cay)								3

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

Rec'd by R. Kerr
X F Berry 1-25-83

DATE	BEACHES SURVEYED	NUMBER OF NESTING TRACKS Cc	Cm	D	E	Lk	Lo	NO. I. D.
7.9.82	Rocky Cay (Morant Cay)							5
"	South East Cay (Morant Cay)							2
	" "							1

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

TABLE 6

Nesting Population

(ii) Hawksbills

Number of nest = 4,200

(From estimates given by fishermen in survey carried out September - November 1982)

Average nesting frequency = 3

Number of nesting females = 1,400

Green Turtles

Number of nesting beaches = 20

Estimated Number Nesting Females = 5 X 20 = 100

Logger Head

Number of nesting beaches = 35

Estimated number of Nesting Females

= 6 X 35 = 210

TOTAL 1,710

See encl 2 (Map to show foraging areas)

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
1. Rushy Ca, to Eastern Cay, (within a 16 Km. radius)		E Cm	Incidental catch observation
2. 1.6 Km South of Kingston Harbour off the deep edge for about 8 Km.		E Cc Cm	Incidental catch observation
3. 0.8 Km South from Long Bore Point		E Cm	Incidental catch observation
4. Offshore Pigeon Island		E Cc	Fishery observation
5. King Fish Bank (20 Km off Rocky Point Beach (Clarendon)		E	Fishery observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
6. 4½ Km offshore from Carlisle Bay - Jackson Bay		E Cm	Fishery sightings
7. Ballas (1 Km offshore from Farquhars beach)		E Cc Cm	Incidental catch observation
8. From Old Woman's Point out to Alligator reef		E Cm Cc	Incidental catch observation
9. Offshore Frenchmans' Beach to about 6 Km South.		E	Incidental catch observation
10. Offshore between Calabash Bay and Old Woman's Point. (St. Elizabeth)		E Cc Cm	Incidental catch observation
11. The reef offshore the Great Pedro Bluffs.		E Cc Cm	Incidental catch observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

138

139

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
12. Offshore Pedro Bank (St. Elizabeth)		E	Fishery observation
13. 1 Km offshore Parottee fishing Beach, Parottee (St. Elizabeth)		E Cc	Incidental catch observation
14. Offshore Luana Point		E Cm Cc	Fishery observation
15. Offshore Malcolm's Point (St. Elizabeth)		E Cc	Fishery observation
16. 2 Km South of Black River		E Cm	Incidental catch observation
17. 0.5 Km from Crab Pond Bay (Manchindown)		E Cc	Incidental catch observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
18. Old Johnson's Rock (Westmoreland)			Incidental catch observation
19. 5 Km offshore Manchioneal (Westmoreland)		E Cc	Fishery observation
20. 0.4 Km off Robin's Point (Westmoreland)		E	Incidental catch observation
21. 1½ Km offshore Cool's fishing beach, Sav-la-Mar (Westmoreland)		E Cc	Fishery observation
22. 1.5 Km off Hope Wharf Sav-la-mar (Westmoreland)		E Cc	Fishing observation
23. Turtle Stag reef (Westmoreland)		E Cc	Observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
24. Middle Ground South to south East to St. John's Point (Westmoreland)		E Cc Cm	Observation
25. 1.6 Km off Homer's Cove		E Cm	Incidental catch observation
26. 1.6 Km off Mary's Bay Beach		E Cm	Fishery observation
27. Off South Negril Point		E Cm	Fishery observation
28. 1 Km offshore Rocky Cay-along to Bloody Bay		E Cc	Incidental catch observation
29. 1 Km offshore Green Island Beach		E Cm Cc	Observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
36. Turtle ground (near Bush Cay Trelawny)		E Cc Cm	Observation
37. Prov 0.8 offshore Success Beach (St. James)		E Cm	Incidental catch
38. 3 Km offshore Flankers Beach (St. James)		E Cm	Incidental catch
39. 5 Km offshore Scarlett Hall Beach		E Cm Cc	Incidental catch
40. 0.4 Km abreast of Lilliput (Trelawny)		E Cm	Incidental catch
41. About 0.8 Km offshore Coopers Pen (Falmouth Trelawny)		E Cm	Fishery observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
42. About 0.2 Km beyond Darby's reef (Trelawny)		E Cc	Fishery Observation
43. Offshore from Long Bank's to Turtle pass (Trelawny)		E Cc Cc	Observation fishery
44. Just offshore the Queen's Bay beaches (Discovery Bay) St. Ann		E	Fishery observation
45. Unity Wharf and 0.4 Km of Runaway Bay Beach (St. Ann)		Cc Cm E	Fishery observation
46. Just offshore Salem Beach to Llandovery		E Cc	Observation Incidental catch
47. 1 Km offshore Priory		E Cc	Fishery observation

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
48. Rosabel Beach 0.2 Km. Offshore by Reef (St. Mary)		E, Cc	Observation and Fishery
49. Offshore 0.4 Km. Pagee Fishing Beach (St. Mary)		E Cc Cm	Incidental catch observation
50. Shermers Channel 0.4 Km offshore Robins Bay (St. Mary)		E Cc Cm	Observation Fishery
51. 1 Km. offshore Arnotts Bay Beach (St. Mary)		E Cc Cm	Observation Fishery
52. 5 Km. of shore Dr. Wood Point (Portland)		E Cm	Observation Incidental catch
53. 0.8 Km offshore Orange Bay (Portland)			Observation Incidental catch

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
56. [illegible]			
57. 3 Km West of Spring Farmer Point, Cape Sable (Portland)			
58. 3 Km beyond Ship Rock - St. Marguerite Bay (Portland)			
[illegible]			
[illegible]			
59. 1.6 Km offshore Presque Point (Portland)			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
60. Petite Plate Bay (1.6 Km offshore) - Barton, (Portland)			
61. Offshore the ocean front Port Bay to Kemsiq [illegible] (Portland)			
62. [illegible]			
63. [illegible]			
64. [illegible]			
65. 0.5 Km offshore [illegible]			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

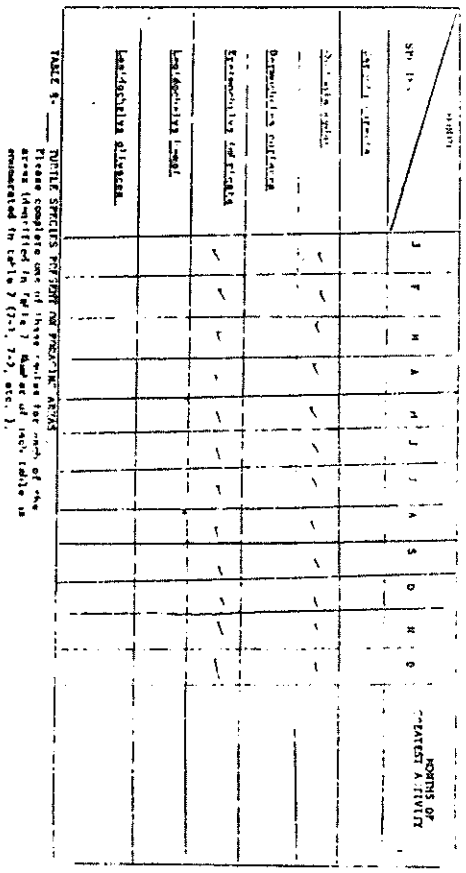
Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery incidental catch)
66. 4. Km of Point Prim - Pt. Spencer, Bank (St. Pierre)			
67. Macan Point offshore Dubarry Pen (St. Pierre)			
68. 0.5 Km offshore Lorient (St. Pierre)			
69. 0.5 Km offshore Lorient			
70. 0.5 Km offshore Pointe de Pointe Blanche Bank (St. Pierre)			
71. Off the "Five Fathom" [illegible]			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	LK
Lepidochelys olivacea	Lo



SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓	–	No peak in activity
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORACTIC AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORACTIC AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORACTIC AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓										
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May – Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORACTIC AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	may - aug
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	may - aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	may - Dec.
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Dec.
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas													
Dermochelys coriacea			✓		✓	✓	✓	✓	✓				May - Sept.
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept.
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas													
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Oct
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas													
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
L.H Caretta caretta													
G Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
L.B Dermochelys coriacea													
H.B Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea									✓				

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	–	–	–	–	–	–	–	–	–	–	–		
Eretmochelys imbricata	–	–	–	–	–	–	–	–	–	–	–		
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-17

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.)

7-18

3-269

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	–	–	–	–	–	–	–	–	–	–	–	–	April – Aug.
Eretmochelys imbricata	–	–	–	–	–	–	–	–	–	–	–	–	Sept. – Aug.
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-19

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	–	–	–	–	–	–	–	–	–	–	–	–	Dec
Chelonia mydas	–	–	–	–	–	–	–	–	–	–	–	–	May – Sept
Eretmochelys imbricata	–	–	–	–	–	–	–	–	–	–	–	–	May – Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.)

7-21

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓										✓	✓	ANY
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-28

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
[illegible]												✓	Dec
[illegible]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
[illegible]													
[illegible]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
[illegible]													
[illegible]													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-29

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
[illegible]													
[illegible]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
[illegible]													
[illegible]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
[illegible]													
[illegible]													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.)

7-28

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
[illegible]												✓	Dec
[illegible]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
[illegible]													
[illegible]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
[illegible]													
[illegible]													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-28

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.24

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 9- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.25

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Aug - Oct
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	June - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.26

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Aug - Oct
Pseudochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	June - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.27.

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.28

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓			✓		✓	✓						
Chelonia mydas	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓		
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.29

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓		✓	✓	✓	✓	✓	✓	✓				
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.30

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.31

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-82

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-83

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-84

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta					✓	✓	✓	✓	✓				May - Sept
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-86

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta					✓	✓	✓	✓	✓				May - Sept
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-87

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Nov
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Nov
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-88

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Feb - Aug
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Feb - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-89

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	–	–	–	–	–	–	–	–	–	may - Nov
Chelonia mydas	✓	✓	✓	–	–	–	–	–	–	–	–	✓	April - Nov
Dermochelys coriacea													
Eretmochelys imbricata	✓	–	–	–	–	–	–	–	–	–	✓	–	April - Nov
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-39

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	–	–	–	–	–	–	✓	–	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	–	–	–	–	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-40

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓								may - Oct
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	–	–	✓	–	–	–	✓	✓	May - Oct
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-41

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓								
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	–	–	–	–	–	–	✓	✓	May - Oct
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-42

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓				MARCH - SEPTEMBER
Chelonia mydas			✓	✓	✓	✓	✓	✓	✓				MARCH - SEPTEMBER
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	MARCH - NOVEMBER
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT OR FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.f3

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata									✓	✓	✓		SEPTEMBER - NOVEMBER
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT OR FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.f3

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓	✓			MARCH TO AUGUST
Chelonia mydas			✓	✓	✓	✓	✓	✓	✓	✓			MARCH TO OCTOBER
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	MARCH TO NOVEMBER
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT OR FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.f3

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT OR FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓				March to September
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	March to September
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	March to September
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-47

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta		✓	✓	✓	✓	✓	✓	✓	✓	✓			May - Sept
Chelonia mydas		✓	✓	✓	✓	✓	✓	✓	✓	✓			May - Sept
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea									✓				

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-49

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓				May - Aug
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓				May - Aug
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

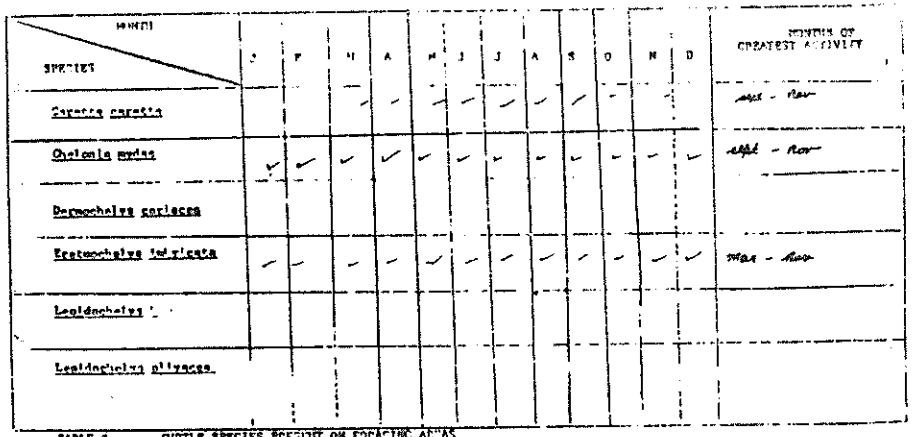
TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-49

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓	✓	✓		Sept - Nov
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Sept - Nov
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Nov (peak Aug - Nov)
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS .
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

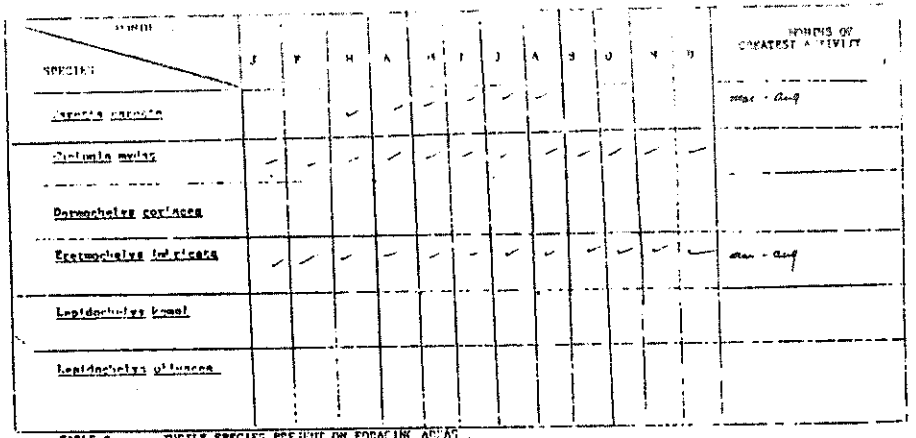
7-50



SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓	✓			Mar - Nov
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Sept - Nov
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Nov
Lepidochelys [illegible]													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

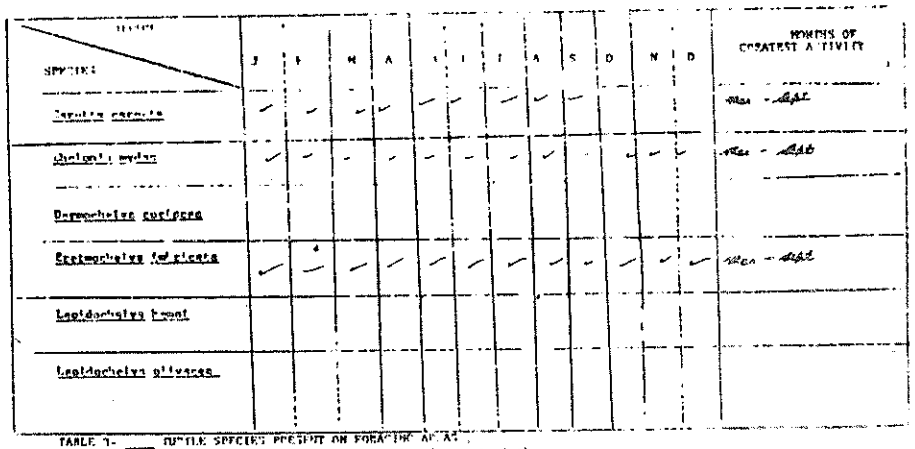
7 51



SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓					Mar - Aug
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

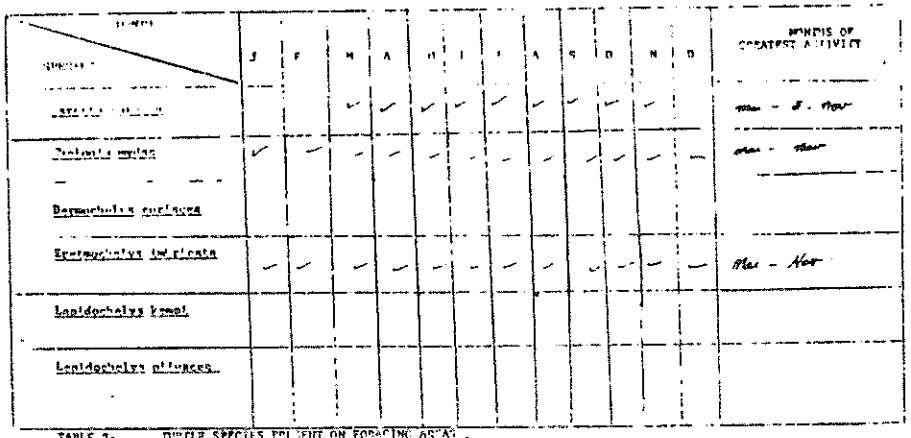
7 52



SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓				Mar - Sept
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Sept
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Sept
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7 53



SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓	✓	✓	✓		Mar - [illegible] - Nov
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Nov
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Mar - Nov
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7 54

SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta		✓	✓	✓	✓	✓							Feb - July
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Feb - July
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Feb - May
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 9- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-56

SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta				✓	✓	✓	✓	✓	✓	✓			April - Aug
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Aug
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 9- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-54

SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Aug
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Aug
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 9- ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-58

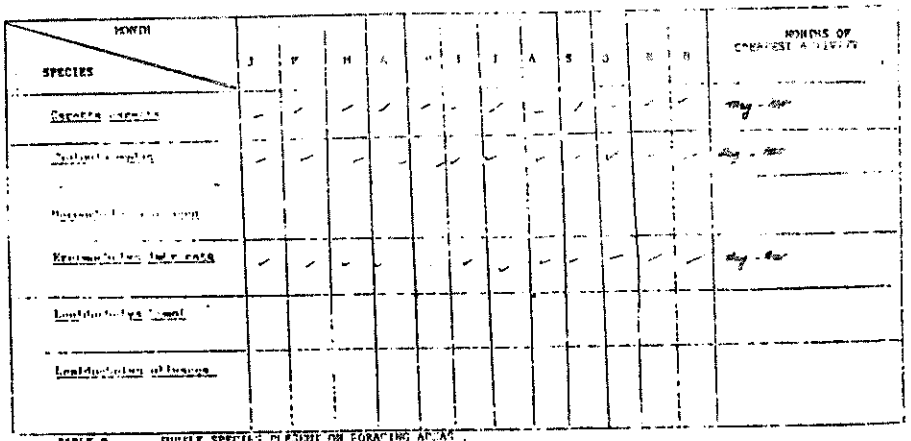


TABLE 9- ____ TUPELO SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

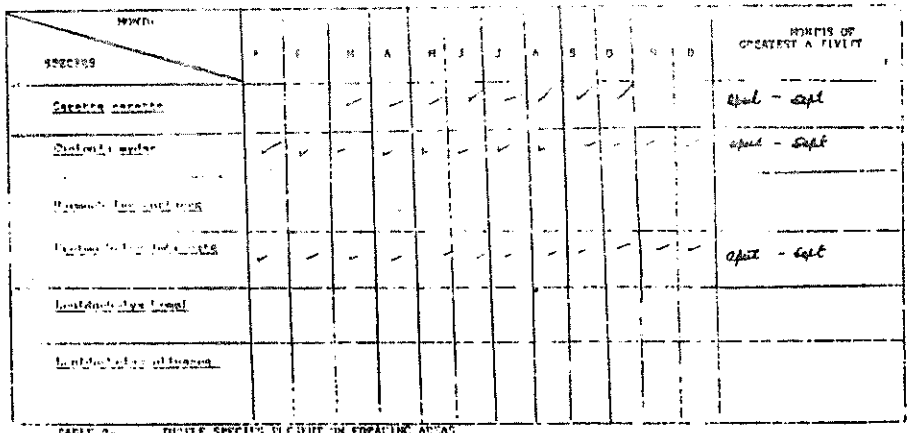
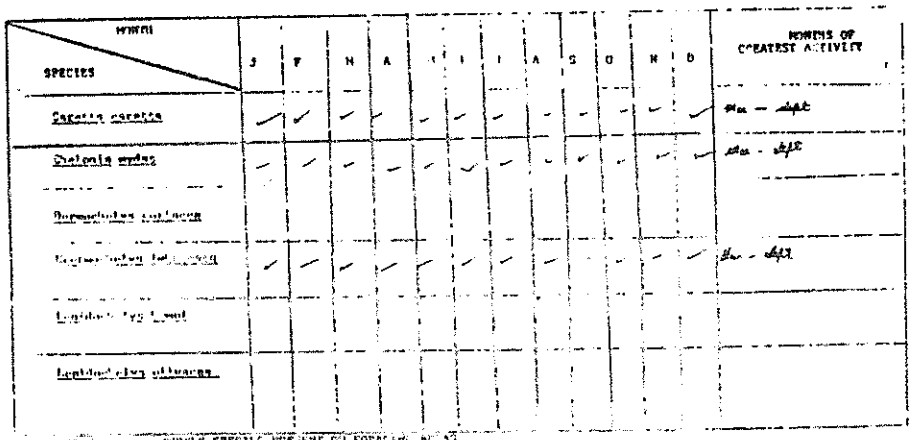
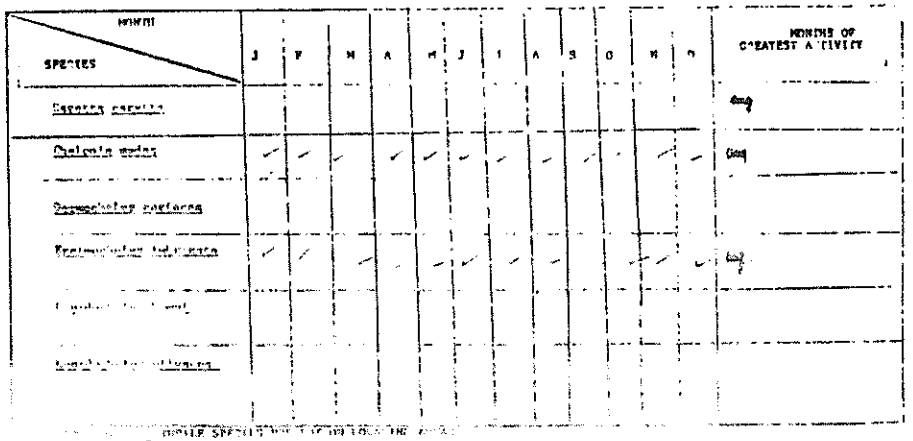


TABLE 9- ____ TUPELO SPECIES PRESENT IN FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).



TUPELO SPECIES PRESENT ON FORAGING AREAS
Please complete one of these tables



TUPELO SPECIES PRESENT IN FORAGING AREAS
Please complete

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta			✓	✓	✓	✓	✓	✓					mar - aug
Chelonia mydas			✓	✓	✓	✓	✓	✓					mar - aug
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	mar - aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.63

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Oct
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - Oct
Dermochelys coriacea													
Eretmochelys imbricata					✓	✓	✓	✓	✓	✓			May Oct
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.64

212

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	June - Nov
Dermochelys coriacea													
Eretmochelys imbricata						✓	✓	✓	✓	✓	✓		June - Nov
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.65

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas					✓	✓	✓						May - July
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	May - July
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 3- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7.66

214

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas				✓	✓	✓	✓	✓	✓				April - Aug
Dermochelys coriacea													
Eretmochelys imbricata				✓	✓	✓	✓	✓	✓				April - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-67

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Nov
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Nov
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-68

9/2

3-282

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta					✓	✓	✓	✓					May - Aug
Chelonia mydas													
Dermochelys coriacea													
Eretmochelys imbricata					✓	✓	✓	✓					May - Aug
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-69

MONTH / SPECIES	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas				✓	✓	✓	✓	✓	✓	✓	✓		April - Nov
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	April - Nov
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

7-70

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta		✓	✓	✓	✓	✓	✓	✓	✓				Feb - Apl
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Feb - Apl
Dermochelys coriacea													
Eretmochelys imbricata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Sep - Apl
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 7- ____ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number of each table as enumerated in table 7 (7-1, 7-2, etc.).

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
15 Km offshore Crab Pond		E Cm	Single sightings
4Km offshore Hope Wharf Westmoreland		E	Small groups of 2 and 3 observed.
30 Km from Bay-la-mer		E, Cc Cm	Groups of 2 observed
5Km off Little Bay		E, Cm	Singly
0.4 Km off Homer&Cove beach		E	Singly
0.4 Km off south Negril Point		E Cm	Singly appear to be travelling (Migratory)

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

226

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
1-8 Km off shore Bloody Bay Beach Hanover		E	Single; seen when they surface to breathe
1 Km off Cotton Tree bay		E, Cc	Single sighting

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
25-35 Km from Hellshire Bay St. Catherine		E Cm	Single sightings; seen while mating and when surface to breathe.
36 Km offshore Kgn. Harbour Kingston		E, D, Cm, Cc	Seen travelling together in groups.
50 Km of the Portland Cay's Kingston		E Cc and Cm	Single sightings
Duffy Cane Reef (S.W. from Rocky Point) Clarendon		E	Single sightings - when surfacing to breathe
40 Km from Taylor's hut to 40-50 Km off shore Clarendon		E Cm	Single sightings
0.8 Km from Bernevelldale beach to 16 Km from the Portland Cays. Clarendon		E	Single sightings

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

222

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
20 Km from Fargahan's beach. Manchester	E Cm D	E Cc Cm D	Single sightings, seen when they surface to breathe and mate.
16 Km radius from Outs River beach Manchester		E	Occasional small groups (2-4) (They've been seen feeding on bonnies on fish pots)
7 Km from Fr[illegible]en's beach St. Elizabeth		E	Single sightings.
70 Km from Calabash Bay St. Elizabeth		E Cc	Small groups
50 Km from the Great Pedro Bl[illegible] St. Elizabeth		E Cc Cm	Single sightings
1 20 Km from Top Bay (near Allig[illegible] Pond) St. Elizabeth		E Cc Cm	Single sightings

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
0.8 Km offshore Hanover Bay (St. Ann)		E, , Cc	Singly, mating surfacing to breathe
8. Km offshore Salem (St. Ann)		E, ,	Singly, surfacing to breathe
8 Km. offshore Island Point		E Cc	Singly, mating surfacing to breathe
5 Km. offshore Del Lane Beach (St. Ann's Bay)		E, , Cc	Travelling (migratory) Surfacing to breathe

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
80 Km from Great Bay		E, Cc Cm	Singly
80- 150 Km from Scott's Cove, near by the Lobo Banks		Cm	Single sightings.
4 Km off shore Parottee Point		E, Cc	Single sightings.
5 Km offshore Lemna Point		E, Cm	Single sightings. Seen mating
1.6 Km from Cook Pond (Amphibious) Westmoreland		E, Cc	Single sightings
1.6 Km from Cape Beach		E	Singly.

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
30 Km offshore Draper's beach (Portland)		E, ,	Single sightings
4 Km offshore Rosich Beach (Portland)		E, , E	Single sightings
Just N. East of Long Bay (on the banks.		E, , E , ,	Observed in groups.
Drappier's Bank - 40 Km N' of Manchioneal			Single sightings
Farm Acres bank- 80 Km. N. Manchioneal		E , ,	Small groups of 2-3
1.6 Km offshore Holland Bay		E , ,	Sometimes

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
1 km offshore White River (St. Ann)		C.M.	Surfacing to breathe Mating
19½-20½ Km offshore Lobster Bay (Old Shark Point - St. Mary)			Sometimes at surface Swimming.
6 Km East of Big Beach Branch (Green Point - St. Mary)			Singly
7½ Km offshore Northeast Point - Bonne Bay (St. Mary)			Swimming around, mating, surfacing to breathe
7½ Km offshore Branchhouse (Nelsons Point - St. Mary)			Appear to be coming in shore
22 Km. offshore Aquatic Bay			Sometimes at surface Mating
24-28 Km. offshore Duff Bay (Burnout Br. - Head Pt.)			Sometimes at surface

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
Grapplar's Bank -30 Km offshore to the S.W. of Isaac Bay		Rb	Observation - small groups
- Turn across bank 160 Km off Isaac Bay		Rb	Small groups. Surfacing to breathe Mating
Turtle sat (a Km off shore Holland Bay			Sometimes in groups
8 Km offshore Rocky Point			Single sightings
Old Georges Bank (offshore Port Hawkesbury)			Single sightings - resting at the surface
2 Km offshore White Harbour (as far as 5 Km offshore)			Single sighting Breathing at the surface.

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
8 Km offshore Rocky Point. (St. Mary)			Single sightings.
Old Georges Bank off shore Port Hawkesbury. (St. Mary)			Single sightings.
3 Km offshore Lyssons (St. Mary)			Single sightings.
6.8 Km -8 Km offshore White Harbour. (St. Mary)			Single sightings.
Offshore, (from 9Km - 5Km) Yallows. (St. Mary)			Single sightings.

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
Channel Shoal Rameur		M., Cc, Co	Surface to breathe Small Groups
Rameur Shoal (Six (6) K : off Lamoin Harbour)		2 M.	Singly, appear to be travelling (migratory)
Mapsail Fore-Beach (Two (2)K offshore Mapsail Fore beach) (Rameur)		4 C., 2 Co	Surface to breathe Swimming
6.8 Km offshore White Rhuns Beach (Rameur)		2 M.	Small groups appear to be travelling
22 Km. offshore Scatiny Beach - Falmouth ; Trelawny.		4 M., 2 Co	Singly, mating surface to breathe
12 Km offshore Harvey's Beach Trelawny		2 M.	Singly, mating travelling
8 Km offshore Orange Run Fishing Beach - Lilliput. (Falmouth) (Trelawny)		6 M, Cc; 2 Co	Small groups, mating Surface to breathe

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations :
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
5 km. offshore Flankers Beach (Mt. Bay)		[illegible]	Swimming at surface
2 km. offshore Scarlet Hall Beach		[illegible]	Single sightings surfacing to breathe.
Offshore Devil's Kitchen (St. James)		[illegible]	Single sightings surfacing to breathe
1 km offshore White Bay (Falmouth)		[illegible]	Surfacing to breathe single sightings
Offshore Darby's Reef (Duncans)		[illegible]	Breathing, casual swimming
7 km offshore Silver Sands (St. James)		[illegible]	Swimming, single sightings surface to breathe
16 km to North-West of Discovery Bay Harbour		[illegible]	Surfacing to breathe swimming

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles [illegible] areas.

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10

Natural Mortality

– no data available

TABLE 11

Landing Sites for Turtles & Turtle Products

There are no major landing sites in Jamaica. Turtles are usually landed at the fishing beach from which the fishermen who caught them [illegible].

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
8 km. offshore [illegible] Pt. – [illegible] Bay (Portland)		[illegible]	Single sightings Swimming at surface
8-16 km. offshore [illegible] Bay Portland.		[illegible]	Small groups [illegible] travelling
7 km. offshore St. Margaret's Bay (Portland)		[illegible]	Surfacing to breathe, swimming

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence if turtles in offshore areas.

Species Abbreviations :

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	62	67	61	82 No Kg
Eretmochelys Umbricata	-	-	-	472 [illegible] Kg
Chelonia Mydas	-	-	-	27 ([illegible] Kg)
Caretta Carella	-	-	-	22 ([illegible])
Dermochelys Coriacea	-	-	-	
Totals	314,495 lbs ([illegible] kg)	68,377 lbs ([illegible] kg)		([illegible]) [illegible] kg
	3		-	

TABLES 12-13

Species	Adults: Incidental catch	Adults: fishery	Sub-adults: Incidental catch	Sub-adults: fishery	TOTAL (kg)
E. imbricata	70	338	33	31	472 (33,975kg)
C. mydas	5	18	2	2	27 (4,980)kg
Coretta caretta	5	17	-	-	22 (3,170kg)
Dermochelys Coriacea	-	-	-	-	-
TOTALS	80	373	35	33	521 (42,025)

Estimated 1982 catch (from a survey carried out between September - November) 1982
fishermen's questionnaire (and)

TURTLE PRODUCT	YEARS 1979	YEARS 1981	YEARS 1982	CURRENT MARKET Price/Unit	REMARKS OF DATA COLLECTION
No. of eggs				$2.50/dozen	
Meat (Kg)		56,989	40,828	904-$1.00/kg	1981 - Fisheries Survey - Wanderer, 1982 - Survey of Turtle fishermen.
Shell (processes) No./Wt.	918 kg	185.7 kg	185.7 kg	$12.60/kg	1982 - Survey of Turtle fishermen.
Skins No./Wt.					
Stuffed Juveniles					
Other					

SPECIES
TABLE 15 OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TABLE 13

INCIDENTAL CATCH

— mostly in beach seines

TABLE 14

CATCH BY FOREIGN FISHERMEN

1982 — None

	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	2,189 *	$ 95,000	
Processing	170		
Selling	92 *		

TABLE 16 EMPLOYMENT DEPENDENT ON TURTLES

* Figures based on questionnaire survey of fishermen Sept-Nov 1982.

Table 16. Employment dependent on turtles
(Supplementary page)

A. Subsistence exploitation

1. Estimated number of eggs

Total number of people involved	= 100 - 150
Minimum No. of nests disturbed	= 100 - 150
" " " eggs (100 x 200) - (150 x 200). 20,000 - 30,000	-

2. Estimated number of nesting females (1982 = 70 minimum)

3. Number of turtles caught at sea (1982) = 120

B. Social aspects.

Limited export of processed turtle shell products to licensed individuals.
Licensing authority - Natural Resources Conservation Department,
one company involved in processing of old stocks of turtle shell - Opposed enforced
to make jewellry + eyeglass frame blanks. No new shell purchase permitted.

TABLE No 18

Institution Name and Address	No. active Members (engaged full-time on turtles)	Activities in progress
Natural Resources Conservation Department, Ministry of Mining and Natural Resources 53½ Molynes Road Kingston 10.	1	1. Public Education Program - involving films, posters, displays talks 2. Proposed head-starting project for Hawksbill turtles at Port Royal to commence - November 1982 3. Population Surveys (coral)

TABLE 17. MARICULTURE

THERE ARE NO MARICULTURE PROGRAMMES ONGOING OR PLANNED FOR JAMAICA

TABLE 19

NATIONAL + MARINE PARKS (see Encl 1)

Name and location	Area	Reasons for Protection	Type and effectiveness of enforcement
1. Ocho Rios Marine Park Ocho Rios St. Ann	100 ha	The complex of coral reefs in the park from an unbroken barrier from Ocho Rios to White River. Biologically rich and a suitable shore base for proposed museum and aquarium.	Status protected (beach control order 1956). Staff - none enforcement - none
2. Montego Bay Marine Park offshore Montego Bay	50 ha.	One of the few remaining undamaged reefs (since hurricane Allen 1980) Potential tourist attraction	Status - protected -staff, - none - Enforcement - none
3. Portland Ridge and Blight National Park	11937 A	Provides habitat for several endangered species. The beaches on the cays provides an important nesting site for the hawksbill turtle.	- Proposed - no enforcement
4. Port Royal Cays St. Andrew		The area has important historical interest nesting sites to turtles.	important nesting sites for turtles and several sea birds.
5. Canoe Valley National Park Clarendon.		Important area for several endangered species, also sites of historical interests.	Proposed - - no enforcement

JAMAICA

244

TABLE No 20 + Supplementary page - legislation pertaining to turtles

Legislation	Date	Purpose
Wild Life Protection Act (Amendment of 3rd Schedule Regulation)	July 6, 1982	to include the protection of species of Marine Turtles Eretmochelys imbricata Caretta caretta Lepidochelys kempi Dermochelys coriacea
Morant and Pedro Cays Act	27 - 4 - 1904	to protect turtles and eggs on the Morant and Pedro Cays
Wild-Life Protection Act	September 20, 1945	to pr turtle eggs on the main
Trade Law	1955	to prevent the export in rough or unprocessed form of turtle shells

JAMAICA

245

TABLE No 20 - Regulatory authority

Organization Name	Budget allocation to turtles	Staff assigned to turtles	Comments on levels of enforcement
Natural Resources Conservation Department/ Authority	$15,125.00 (1981-2) $8,975 00 (1982-3)	1	Administers the Wild Life Protection Act Schedule (3) regulation July 6, 1982. a Conservation Wardens employed (powers of arrest).
Fisheries Division Ministry of Agriculture	-	-	Authority under Morant and Pedro Cays Act. Fishery inspectors (Powers of arrest)

246

Project Title	Dates start	Dates end	Name & Address of Institution and chief investigator
Hawksbill Headstarting Project	Nov. 1982		Natural Resources Conservation Department. (NRCD) 53½ Molynes Road Kingston 10. Chief Investigator :- Rhoma Narr c/o NRCD.
		-	

Table 21
National Research Projects

196 PROCLAMATIONS RULES AND REGULATIONS [JULY 7, 1982

No. 58

THE WILD LIFE PROTECTION ACT

THE WILD LIFE PROTECTION (AMENDMENT OF THIRD SCHEDULE) REGULATIONS, 1982

In exercise of the power conferred upon the Minister by section 14 of the Wild Life Protection Act, the following Regulations are hereby made —

1. These Regulations may be cited as the Wild Life Protection (Amendment of Third Schedule) Regulations, 1982, and shall be read and construed as one with the Wild Life Protection Act.

2. The Third Schedule to the Wild Life Protection Act is hereby amended by adding immediately before the words "Fedri Seal" the following—

"Green Turtle (Chelonia mydas)
Hawksbill Turtle (Eretmochelys imbricata)
Loggerhead Turtle (Caretta Caretta)
Atlantic Ridley (Lepidochelys kempi)
Atlantic Leatherback (Dermochelys coriacea)".

Dated the 6th day of July, 1982.

EDWARD SEAGA
Minister of Mining and Energy

No. 59

THE WILD LIFE PROTECTION ACT

THE WILD LIFE PROTECTION (HUNTING LICENCES) (AMENDMENT) REGULATIONS, 1982

In exercise of the power conferred upon the Minister by section 14 of the Wild Life Protection Act, the following Regulations are hereby made —

1. These Regulations may be cited as the Wild Life Protection (Hunting Licences) (Amendment) Regulations, 1982, and shall be read and construed as one with the Wild Life Protection (Hunting Licences) Regulations, 1957, hereinafter referred to as the principal Regulations.

2. Regulation 4 of the principal Regulations is hereby amended in the following respects —

(a) by deleting from clause (2) the words "twenty-five" and substituting therefor the words "fifty"; and

(b) by adding after clause (2) the following as clause (3)—

"(3) The Collector-General shall refund to any applicant who fails to obtain a licence under clause (1) the fee of fifty dollars on the presentation to the Collector-General by such person of a certificate of refusal signed by the appropriate authority.".

3. The Schedule to the principal Regulations is hereby amended by deleting therefrom Form E and substituting therefor the following as Form E -

[illegible]

THE MORANT AND PEDRO CAYS LAW.

Cap. 57 Cap. 135. Law 6 of 1953.

[27th April, 1907.]

1. This Law may be cited as the Morant and Pedro Cays Law. Short title.

2. The Morant Cays and Pedro Cays shall, for all purposes other than taxation, be deemed to be within and form part of the parish of Kingston. Morant Cays and Pedro Cays deemed to be in parish of Kingston.

3. No person shall, without a written licence from the Colonial Secretary— Prohibition of unauthorized fishing, etc., on the Cays.

(a) fish within three miles of the Morant and Pedro Cays, or either of them;

(b) slay, or catch any birds on the said Cays, or either of them;

(c) catch turtle on the said Cays, or either of them, or within three miles thereof;

(d) on the said Cays, or either of them, or within three miles thereof, shoot at any birds, or discharge firearms or rockets, or make a noise calculated to frighten the birds on the said Cays, or either of them;

(e) take any eggs from the said Cays, or either of them;

(f) take, or allow to run to waste, any water stored artificially on the said Cays, or either of them.

Trespassers refusing or neglecting to leave the Cays. S. 5 of 8/1953.

4. Every person who shall trespass on the said Cays, or either of them, and who shall refuse or neglect to leave the same when required so to do by any person duly authorized in writing by the Colonial Secretary or by the agent or servant of such person shall be guilty of an offence against this Law.

Penalty and recovery thereof.

5. Any person offending against this Law shall be liable to a penalty not exceeding two hundred pounds, to be recoverable summarily in the Resident Magistrate's Court for the parish of Kingston, and in default of payment, to imprisonment with or without hard labour, for a period not exceeding twelve months.

Compensation to lessee.

6. The Governor may allow to the lessee of the Morant and Pedro Cays, or either of them, such compensation out of the moneys received under this Law, as to him may seem fit.

Arrest and detention of offenders. S. 4 of 8/1953.

7. Any person duly authorized in writing by the Colonial Secretary or the agents or servants of such person may without warrant, arrest any person found offending against this Law, and detain him until he can be brought to Kingston and delivered into the custody of the Police.

Provided always, that any person so arrested, shall be brought to Kingston as soon as is practically possible after his arrest.

Publication of name of lessee, etc.

8. The name of the lessee of the Morant and Pedro Cays or either of them, for the time being, shall be published in the *Gazette*, together with the date of the lease and the term for which it has been granted.

9. Notwithstanding anything to the contrary in this Law, any lessee of the Morant and Pedro Cays, or either of them, whose lease is unexpired on the 9th day of April, 1953, shall continue to enjoy the same rights, privileges, powers and protection to which he was entitled by virtue of the provisions of this Law in force before the said date. Preservation of lessee's rights. S. 2 of 8/1953.

JAMAICA

No. 19 - 1975

I assent

(L.S.)

F. A. GLASSPOLE,
Governor-General
11th April, 1975.

AN ACT TO Amend the Morant and Pedro Cays Act.
(11 the April, 1975)

BE IT ENACTED by the Queen's Most Excellent Majesty, by and with the advice and consent of the Senate and House of Representatives of Jamaica, and by the authority of the same, as follows: -

1 - This Act may be cited as the Morant and Pedro Cays (Amendment) Act, 1975, and shall be read and construed as one with the Morant and Pedro Cays Act, hereinafter referred to as the principal Act. Short title and construction.

2 - The principal Act is hereby amended by inserting next after section 1 the following as section 1A - Insertion of new section 1A in principal Act.

"Interpretation. Act of 1975 — 1A - In this Act "Fishery Inspector" shall have the meaning assigned to it in section 2 of the Fishing Industry Act, 1975".

Amendment of section 3 of principal Act. — 3 - Section 3 of the principal Act is hereby amended by deleting therefrom paragraph (f).

Repeal and replacement of section 4 of principal Act. — 4 - Section 4 of the principal Act is hereby repealed and the following substituted as section 4 -

"Trespassers on the Cays — 4 - Every person who, without reasonable excuse (the proof of which shall lie on him) trespasses on the said Cays, or either of them, shall be guilty of an offence against this Act.".

Repeal and replacement of sections 5,6,7,8 and 9 of principal Act. — 5 - Sections 5, 6, 7, 8 and 9 of the principal Act are hereby repealed and the following sections substituted therefor.

"Fishery Inspector may inspect Cays, etc. — 5 - (1) Any Fishery Inspector or any other person duly authorized in writing by the Minister, for the enforcement of the provisions of this Act, may at all times enter upon and inspect the Morant and Pedro Cays, or either of them, and may -

(a) require any person engaging in any of the activities specified in section 3 to produce his licence so to do;

4. [illegible] Inc. 19) The Morant and Pedro Cays (Amendment) Act

(b) require any person found there to give any explanation concerning his presence on the said Cays, or either of them; and

(c) search any person when he may have reasonable cause to suspect of committing, or having committed, an offence against this Act.

((2) No person who is a female shall be searched under paragraph (c) of subsection (1) except by another female.

Offences. 6 - (1) Any person who contravenes the provisions of section 3 or who obstructs a Fishery Inspector or any person duly authorized by the Minister in the execution of his duty under this paragraph shall be guilty of an offence against this Act.

(2) Any person who allows to run to waste any water stored artificially on the said Cays, or either of them shall be guilty of an offence against this Act.

(3) Any person who commits an offence against this Act shall be liable on summary conviction thereof before a Resident Magistrate to a fine not exceeding four hundred dollars, and [illegible] of [illegible] Warrant, to imprisonment for a term not exceeding twelve months.

Arrest and detention of offenders. 7 - Any Fishery Inspector or any other person duly authorized in writing by the Minister may, without warrant, arrest any person found committing an offence against this Act. Retain him until he can be taken to Kingston and delivered into the custody of the Police. Provided that any person so arrested shall be taken to Kingston as soon as is possible after his arrest.

JAMAICAN SEA TURTLE SURVEY
AUGUST - NOVEMBER, 1982

1. LOCATION

a. Place of Survey .....

2. INFORMANT(S)

a. Name ..... Sex..... Age.....

b. Address .....

c. Occupation
If informant is a fisherman:

d. Place(s) where he usually fishes: .....
.....

e. Number of years in fishing .....

3. SPECIES OF SEA TURTLE IN AREA

a. How many kinds of sea turtle are known here? (describe them)
.....
.....

b. What local name is used for them?
Chelonia mydas .....
Eretmochelys imbricata .....
Dermochelys coriacea .....
Lepidochelys kempi .....
Caretta caretta .....

c. Which is most common?
1. .....
2. .....
3. .....
4. .....
5. .....

d. Do people ever see any othe[illegible]s of turtles here? If so what are their names, do they look like?
.....

e. Where are turtles most common round here?
.....

f. Where do turtles nest most round here?
.....

4. SEASONALITY AND DISTRIBUTION OF FORAGING ADULTS

a. Do fully grown turtles occur round here? Yes/No
List the types .....
.....

b. Which kinds live in local waters all year round?
.....
.....

- 2 -

c. Which month [illegible] you see the others?
Green turtles .....
Hawksbill .....
Leather back .....
Logger head .....
Kemps Ridley .....

d. Where do the turtles go to when they are not here?
.....
.....

e. How do you know this?
.....

f. Do they always come and go?
a. All together, or
b. One by one
c. At the same time every year, or
d. At different times of year.

g. Where would you usually see adult turtles feeding or swimming (channels, reefs, turtle grass beds, gorgonia beds, mangrove rocks, open sea, other places, [illegible])
Green turtle .....
Hawksbill .....
Leather back .....
Logger head .....
Kemps Ridley .....

h. Do you ever fish for turtles? Yes/No

i. If you fish for turtles what method(s) do you use?
Turtle trap .....
Fish gun .....
Shining .....
Diving .....
Other (state) .....

j. Do you ever catch turtles by accident? Yes/No

k. How many turtles of each kind do you catch in a year

	Adult	Sub-adult
Green		
Hawksbill		
Leather back		
Logger head		
Kemps Ridley		

l. How many turtles do you catch on a good day?
(State method) .....

m. How many days per month or per year do you fish for turtles? .....

n. At what time or times of the year do you fish for turtles? .....

- 3 -

o. Where are the nearest turtle grass beds to here?
.....

p. Do you ever see sea turtles feeding on these beds?
.....
All the time/frequently/sometimes/never.

q. Where are the nearest reefs round here?
.....

r. Are turtles common on these reefs? Yes/No

s. Are there any places where turtles are especially common? Yes/No
Where? .....

t. Do you ever see turtles offshore? Yes/No
If so - How far from where? .....
What kinds? .....
Are they in groups? .....
What do they seem to be doing? .....
.....

Are they near - driftwood/seaweed/ just in open sea?

5. SEASONALITY AND ECOLOGY OF YOUNG

a. What sizes of each kind do you see?
Green .....
Hawksbill .....
Leather back .....
Logger head .....
Kemps Ridley .....

b. What kinds of small turtles live here year-round?
.....
.....

c. What type of place do you find each type of small turtle?
.....
.....
.....

d. Do you see different sizes of turtle at different times of the year?
.....

6. NESTING

a. Where do sea turtles meet around here?
List types of turtle and name the beaches where they meet.
.....
.....
.....
.....

b. Are there any places where different types of turtle

meet together? Yes/No

If yes, state: types .....
place .....
how often .....

c. How many turtles of each species do you think visit per mile of good nesting shore in your area?

	In an average night	In an average year
Green		
Hawksbill		
Leather back		
Logger head		
Kemps Ridley		

7. CHANGES IN POPULATION LEVELS

a. Are sea turtles i. generally fewer than they used to be.
ii. more numerous
iii. about the same?

b. 10 years ago were there
i. more turtles
ii. fewer turtles
iii. about the same number of turtles?

c. 25 years ago were there
i. more turtles
ii. fewer turtles
iii. about the same number of turtles?

d. On what do you base your beliefs
i. Annual catch
ii. A change in the amount of work it takes to catch a turtle
iii. A change in the numbers of turtles resting round here.
iv. On books or papers you have read
(state there .....
.....)

e. If you have seen changes what do you think has caused them?
.....
.....
.....

8. MIGRATORY RATES

a. At certain times of year, do you see turtles pass by that seem to be going somewhere?

b. If so what kinds? .....
what sizes? .....

c. Are they single or in groups? .....

If in groups about how many in a group?

c. Which way do they go? .....

d. Which way does the main current flow here? .....

e. Does the current affect the movements of the turtles?
.....

9. EXPLOITATION

a. Is turtle meat sold locally? Yes/No

b. If so, who buys it? Local people/People from North Coast/People from Town/Hotels and Restaurants

c. How much do they pay for it? .....

d. Are there any restaurants near here which sell turtle soup?
Names .....

e. How much do they sell it for? .....

f. How many local people eat turtle regularly? .....

g. Which kinds of turtles are eaten or used to make soup?
.....

h. Does anyone round here collect turtle eggs?
.....

i. If yes, how many people? .....

j. Do they sell them or eat them themselves? .....

k. If they sell them who do they sell them to?
.....

l. How much do they sell them for? .....

m. Does any one round here sell turtle shell? Yes/No

n. If yes, how many people? .....

o. Who do they sell to? Jamaicans
Caymanians
Japanese
Other

p. How much does it sell for? .....

q. Are small turtles ever stuffed for sale? .....

r. How much do they sell for? .....

s. Are small turtles ever sold as pets? .....

t. How much do they sell for? .....

u. Who catches turtles? Local people/visitors

v. How do they catch them?
Turtle traps
Fish pens
Nets

Divin
Other

w. Does anyone round here depend on turtles as their main source of income? .....

x. How many people? .....

y. How many fishermen round here catch turtles sometimes?
.....

z. How many people round here catch turtles for use by their families and friends only? .....

10. TURTLE LAWS

a. Did you know that the Wild Life Protection Act makes it an offence to catch turtles on the Morant and Pedro Cays? Yes/No.

b. Did you know that the Wild Life Protection Act makes it an offence to take turtle eggs on the mainland? Yes/No.

c. Do you think these laws are (a) fair
(b) unfair

d. Do people generally abide by the laws? Yes/No

e. Does the Government make a strong effort to enforce the laws? Yes/No

f. Have you ever heard of anyone getting caught for violating turtle laws? Yes/No

g. Have you ever heard of anyone being prosecuted? Yes/No

h. Do you think turtle catching and egg removal affects the numbers of turtles around? Yes/No

11. INCIDENTAL CATCH

a. Do any trawlers operate near here? Yes/No

b. If so, during which months? .....

c. Do they take turtles? .....

d. Do any foreign vessels take any turtles? .....
.....

e. How do you know this? .....
.....
.....

f. How often are turtles caught accidentally in
i. beach seines
ii. other nets
iii. by other methods (state how) .....
.....
.....

g. Has accidental catching of turtles increased recently?
Yes/No

h. What kinds of turtles are caught accidentally?
.....

i. How big are they? .....

j. When turtles are caught in nets are they usually
(i) Alive
(ii) Drowned?

k. Are turtles caught by accident usually
a. eaten
b. sold
c. released?

THE WILD LIFE PROTECTION ACT

ARRANGEMENT OF SECTIONS

1. Short title.
2. Interpretation.

Animals and Birds

3. Game Sanctuaries.
4. Hunting etc. in Game Sanctuary.
5. Game Reserves.
6. Hunting protected animals and protected birds.
7. Hunting, disposal, etc., of game birds.
8. Taking turtle eggs.

Fish

9. Taking immature fish.
10. Dynamite and other noxious materials.
11. Protection of waters containing fish from trade effluents.
12. Dealings with fish taken, killed or injured contrary to this Act.

General

13. Appointment of officers.
14. Regulations.
15. Power to enter lands.
16. Power of search.
17. Arrest without warrant.
18. Persons found offending.
19. Penalty for assaulting Game Wardens, Fishery Inspectors or Constables.
20. Penalty for offences generally.
21. Jurisdiction over offences committed at sea.
22. Power to exempt from provisions of Act.
23. Forfeiture of things seized.

SCHEDULES

THE WILD LIFE PROTECTION ACT

Cap. 413, Law 56 of 1960

(20th September, 1945)

Short title.

1. This Act may be cited as the Wild Life Protection Act.

Interpretation

2. In this Act -

"authorized trap" means any trap authorized by the Regulations under this Act;

"close season" means in relation to any kind of game birds the period declared in each year by the Minister by order during which the hunting of game birds of that kind is prohibited;

56/1960 S. 2(a)(i).

"Crown land" means any land vested in the Commissioner of Lands of Jamaica and not leased to any person;

"fish" means any creature which lives wholly or mainly in water;

"Fishery Inspector" means any person appointed to be a Fishery Inspector under this Act;

"forest Reserve" means an area declared to be a Forest Reserve under the Forest Act;

"Game Reserve" has the meaning assigned to that expression by section 5;

56/1960 S. 2(a)(ii).

"Game Sanctuary" means any area specified in the First Schedule;

First Schedule.

"game bird" means any bird specified in the first part of the Second Schedule;

Second Schedule.

"Game Warden" means any person appointed to be a Game Warden under this Act;

"hunt" includes kill, capture or wilfully molest by any method and any attempt to kill, capture or molest any animal or bird;

"noxious material" means any substance which kills, injures or stupefies fish or is likely or calculated to kill, injure or stupefy fish or is otherwise injurious to fish;

(The inclusion of this page is authorized by L.N. 460/1973)

Third Schedule.

"protected animal" means any animal specified in the Third Schedule;

Second Schedule.

"protected bird" means any bird (including birds kept in a domesticated state) other than the birds specified in the Second Schedule;

56/1960

"shooting season" in relation to any kind of game birds means, as respects any year, any period not included in the close season;

"trap" means any contrivance or structure, whether fixed or movable, used or intended to be used for taking or facilitating the taking of fish,

"water" includes the sea and any harbour, bay, creek, lake, pond, lagoon, river, stream or canal.

Animals and Birds

Game Sanctuaries. First Schedule.

3.-(1) The areas specified in the First Schedule are hereby declared to be Game Sanctuaries

(2) The Minister may by order amend the First Schedule by adding thereto or deleting therefrom any area specified in such order.

Hunting etc. in Game Sanctuary.

4.-(1) Every person who-

(a) hunts any animal or bird in a Game Sanctuary; or

(b) takes the nest or egg of any bird in a Game Sanctuary; or

(c) is found within a Game Sanctuary under circumstances showing that he was hunting any animal or bird or taking or intending to take the nest or egg of any bird; or

(d) takes any dog into or knowingly permits any dog to enter or be in a Game Sanctuary; or

(The inclusion of this page is authorized by L.N. 460/1973)

(c) carries in a Game Sanctuary any gun, catapult or other weapon capable of being used to hunt animals or birds,

shall be guilty of an offence against this Act.

(2) Any person found in a Game Sanctuary in possession of any animal, bird, bird's nest or egg shall be deemed to have hunted such animal or bird or taken such nest or egg in such Game Sanctuary unless the contrary be proved.

Game Reserves. 56/1960 S. 3(b).

9.- (1) The Minister on the written application of the owner or occupier of any lands, may by order apply in relation to the whole or any part of those lands the provisions of section 8 with such modifications, to be specified in the order, as appear to the Minister to be appropriate.

(2) An area in relation to which an order is in force under this section is in this Act referred to as a "Game Reserve".

Hunting protected animals and protected birds.

6.- (1) No person shall hunt any protected animal or protected bird.

(2) Every person who -
(a) contravenes the provisions of subsection (1), or
(b) has in his possession the whole or any part of any protected animal or protected bird; or
(c) takes or has in his possession the nest or egg of any protected bird,

shall be guilty of an offence against this Act.

Hunting, disposal, etc., of game birds. 56/1960 S. 2(c).

7.- (1) During the shooting season game birds of any kind to which that season relates may lawfully be hunted on the first day of the season and thereafter only on such days in each week as the Minister may by order prescribe.

(2) Every person who-
(a) hunts any game bird, either

(The inclusion of this page is authorised by L. N. 420/1973)

(i) during the close season, or

(ii) during the shooting season on any day other than the first day thereof or a day prescribed under subsection (1),

(b) takes or has in his possession for sale, barter, offers for sale or sells, stores in any commercial cold storage, any game bird,

shall be guilty of an offence against this Act.

(3) Any Game Warden or Constable who has reasonable cause to suspect that game birds are being stored in any commercial cold storage may (without prejudice to any powers conferred on him by this Act) at all reasonable time enter and inspect such cold storage any may seize and detain for the purpose of proceedings under this Act any game birds found therein.

Taking turtle eggs.

8. Every person who-
(a) takes or attempts to take; or
(b) sells or has in his possession for the purpose of sale,

any turtle eggs shall be guilty of an offence against this Act.

Fish

Taking immature fish.

9.-(1) Every person who-
(a) takes or attempts to take; or
(b) knowingly kills or injures or attempts to kill or injure; or
(c) knowingly buys, sells, exposes for sale or has in his possession,

fish which is immature shall be guilty of an offence against this Act.

(2) Paragraph (a) of subsection (1) shall not apply to any person who takes a fish accidentally and returns it to the water with the least possible delay.

(The inclusion of this page is authorised by L. N. 420/1973)

(3) For the purposes of this section a fish is immature if it is of a size smaller than the size prescribed by any Regulations made under section 14.

Dynamite and other noxious materials.

10. Every person who-
(a) uses, or causes to be used, dynamite or other explosive substance with intent thereby to take, kill or injure fish in any water, or

(b) places or causes to be placed any poison, lime or noxious material in any water with intent thereby to take, kill or injure fish that may then be or may thereafter be put therein, or

(c) unlawfully and maliciously cuts through, breaks down or otherwise damages or destroys any dam, flumegate or sluice with intent thereby to take, kill or injure fish, or

(d) uses or causes to be used in any river, stream or canal any trap other than as authorised trap,

shall be guilty of an offence against this Act.

Protection of waters containing fish from trade effluents.

11. Notwithstanding anything to the contrary every person who causes or knowingly permits to flow or puts or knowingly permits to be put, whether directly or indirectly, into any harbour, river, stream, canal, lagoon or estuary, containing fish, any trade effluent or industrial waste from any factory shall be guilty of an offence against this section and shall, upon conviction before a Resident Magistrate, be liable to a fine not exceeding five hundred dollars or to imprisonment with hard labour for any period not exceeding twelve months.

Dealings with fish taken, killed or injured contrary to this Act.

12. Every person who knowingly buys, sells or has in his possession fish taken, killed or injured in contravention of the provisions of this Act or of any regulations made thereunder shall be guilty of an offence against this Act.

(The inclusion of this page is authorised by L. N. 420/1973)

General

Appointment of officers.

13. The Governor-General may from time to time appoint Game Wardens, Fishery Inspectors and such other officers as he may deem necessary or expedient for carrying out the provisions of this Act.

Regulations.

14.-(1) The Minister may make regulations generally for the better carrying out of the provisions of this Act.

(2) Regulations made under this section may, without prejudice to the generality of the power conferred by subsection (1)-

Second and Third Schedules.

(a) alter or amend the Second and Third Schedules;
(b) control either generally or fo any specified period or periods the taking of any fish or of any specified species of fish either throughout the Island or in any specified water or area;

(c) make provision for the stocking of any water with fish and for the establishment and control of fish conservaries and hatcheries;

(d) control either generally or in respect of any specified water or area the methods and traps which may be employed in hunting any animal or bird or in taking any fish;

(e) restrict or impose conditions in respect of the keeping of any animal, bird or fish in captivity;

(f) limit the number of game birds or fish which may be hunted or taken by any one person in any one day;

(g) require persons to render returns containing such information as may be specified;

(h) prescribe the form and make provision for the issue of licences and the fees therefor.

Power to enter lands.

15.-(1)Any Fishery Inspector may for the purpose of -
(a) stocking any water with fish; or

(The inclusion of this page is authorised by L. N. 420/1973)

(b) inspecting any water containing fish, at all reasonable times of the day enter, remain upon and traverse any lands.

(2) Any Game Warden, Fishery Inspector or Constable may, where he has reason to suspect that any offence against this Act or against any regulations made thereunder is being committed or is about to be committed, at any time of the day or night enter, remain upon and traverse any lands.

(3) Every person who refuses to admit or obstructs—

(a) any Fishery Inspector in the exercise of any of the powers conferred by subsection (1); or

(b) any Game Warden, Fishery Inspector or Constable in the exercise of any of the powers conferred by subsection (2),

shall be guilty of an offence against this Act.

Power of search.

16. Any Game Warden, Fishery Inspector or Constable may in any public place or on any Crown lands or in any Game Sanctuary or Fish Sanctuary, search any person whom he may have reasonable cause to suspect of having contravened any of the provisions of this Act or of any regulations made thereunder, and may stop and search any vehicle, boat or other conveyance in or upon which he has good cause to suspect that there is any animal, bird or fish or the nest or egg of any bird in respect of which any offence against this Act or any regulations made thereunder has been committed or in or upon which he has reasonable cause to suspect that there is any gun, catapult or other weapon or any trap used in the commission of any such offence.

Arrest without warrant.

17. Where any person is found committing, or is reasonably suspected of being engaged in committing an offence against this Act or any regulations made thereunder, any

(The inclusion of this page is authorised by L. S. 420/1973)

Game Warden, Fishery Inspector or Constable may without warrant stop and detain him, and if his name and address are not known and he fails to give them to the satisfaction of the Game Warden, Fishery Inspector or Constable every Game Warden, Fishery Inspector, or Constable, may without warrant apprehend him and, where such arrest is effected by a Game Warden or Fishery Inspector, shall forthwith deliver him into custody at the nearest police station to be dealt with according to law.

Persons found offending.

18. Where any person is found offending against this Act or against any regulations made thereunder, any other person may require the offender to give his name, description and place of abode, and in case the offender does not truly give his name, description and place of abode, such offender shall, in addition to any other penalty to which he may be liable under this Act, be liable to a fine not exceeding ten dollars and in default of payment to be imprisoned with hard labour for any period not exceeding two months.

Penalty for committing Game Warden, Fishery Inspector or Constable.

19. Every person who—

(a) assaults, obstructs, hinders or resists; or

(b) aids, abets or incites any other person to assault, obstruct, hinder or resist,

any Game Warden, Fishery Inspector or Constable in the execution of his duty under this Act shall be guilty of an offence against this Act.

Penalty for offences generally.

20. Every person guilty of an offence against this Act for which no special punishment is provided by this Act shall, upon summary conviction be liable to a fine not exceeding one hundred dollars or in default of payment thereof to imprisonment with hard labour for any period not exceeding six months.

Jurisdiction over offences committed at sea.

21. Any offence against this Act committed at sea within three miles of the limits of any land shall be deemed to

(The inclusion of this page is authorised by L. S. 420/1973)

have been committed in any place adjoining such sea and may be tried and punished accordingly.

Power to exempt from provisions of Act.

22. Notwithstanding anything to the contrary contained in this Act, the Minister may, by writing under his hand for purposes of conservation or for scientific, historic or educational purposes, exempt either absolutely or for such time and subject to such conditions as he may think fit, any person or institution from all or any of the provisions of this Act.

Forfeiture of things seized.

23.-(1) Any animal, bird or fish or any part thereof in respect of which there is a conviction for an offence against this Act shall be forfeited to the Crown.

(2) Any boat, gun, catapult or other weapon or any trap used in the commission of any offence against this Act in respect of which there is a conviction may, in the discretion of the court be forfeited to the Crown.

(The inclusion of this page is authorised by L. S. 420/1973)

FIRST SCHEDULE (Sections 2 and 3)

Game Sanctuaries

All Forest Reserves, except the Peak Bay Forest Reserve as described in the First Schedule to the Forest (Crown Lands) Order.

96/1950 S 2(d)

SECOND SCHEDULE (Section 2)

First Part

Long-tailed Pondora	-	(Somateria macroura)
Ground dove	-	(Columbigallina passerina)
Whitewing	-	(Zenaida asiatica)
Bulgate	-	(Columba leucocephala)
Whistledy	-	(Leptotila jamaicensis)
Caribbean coot	-	(Fulica caribaea)
American coot	-	(Fulica americana)
Snipe	-	(Charadrius vilsonia)
Plover or Lapwing	-	(Squatarola squatarola)
Ducks	-	All migratory species

Second Part

Jabbering Crow	-	(Corvus jamaicensis)
Pigeon Hawk	-	(Falco columbarius)
Chicken Hawk	-	(Buteo jamaicensis)
Guinea Parrakiet	-	(Psrpus passerinus)
Parraquet	-	(Aratinga nana)
Petchary	-	(Tyrannus dominicensis)
Starling	-	(Sturnus vulgaris)
Wing-Wing	-	(Coloeus nigra)
Pondora	-	(Somateria spectra)
Easter Gun	-	(Callinula chloropus)

L.N. 205/1958

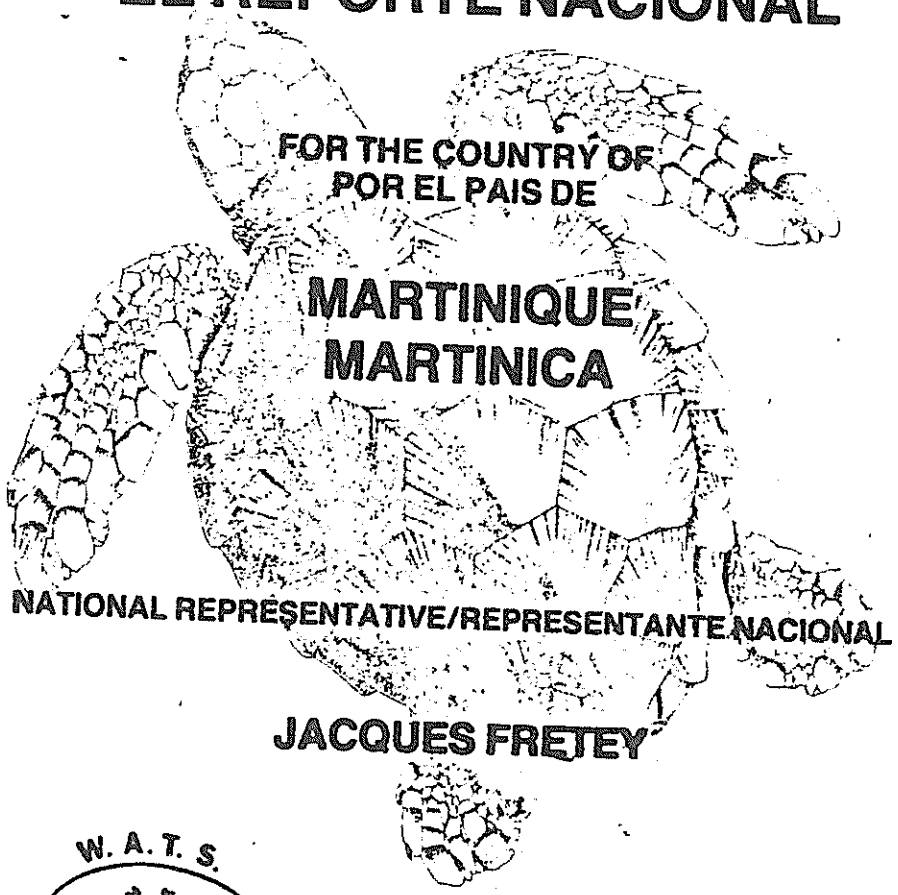
THIRD SCHEDULE (Section 2)

L.N. 28/1971

Snoey
Crocodile
Iguana
Manatee
Pedro Seal

(The inclusion of this page is authorised by L.S. 420/1973)

THE NATIONAL REPORT
EL REPORTE NACIONAL



W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

MARTINIQUE

NATIONAL REPORT PRESENTED BY

Jacques FRETEY

The National Representative

Address: Laboratoire Reptiles Amphibiens
25 rue Cuvier 75005 Paris
FRANCE

NATIONAL REPORT PREPARED BY

Jacques FRETEY

DATE SUBMITTED: 1er juillet 1983

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country Martinique (Antilles françaises)

Length of Coastline* ..... ≈ 230 Km

Km² of Continental Shelf Area ..... ___ Km

Seaward Extent of Jurisdictions:

Territorial Sea ..... 21,6 Km

Extended Economic Zone ..... 360 Km

Fisheries Jurisdiction ..... 360 Km

Other (Describe) ..... ___ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Loup Garou*		E D	
2. Macabou *		E D	zone importante
3. Bay d'Anglais*		E D	
4. Pointe des Salines*		E D	
5. Plat a Madame*		E	
6. Sainte Philomène**		E ?	
7. Anse Couleuvre**		E ?	
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

* d'après Anne et Peter Meylan

** d'après Jacques FRETEY

Périods de ponte :

E : mars à fin de l'été

D : février-mars à fin de l'été

Il semble qu'une zone importante de développement et d'alimentation soit situé dans les récifs le long de la côte Est pour E. imbricata et Ch. mydas. C. caretta ne semble pas pondre mais est visible dans les eaux martiniquaises de septembre à février. Une Lepidochelys a été vue vers Case Pilote.

Il existe des plages de ponte à Anse Caron et vers le Prêcheur (Ste Philomène). Anne et Peter Meylan écrivant ne pas savoir quelles espèces y pondent. D'après mes renseignements personels, il s'agirait de E. imbricata.

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

La prédation naturelle n'est pas connue.

TABLE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

Les captures ne sont pas officiellement répertoriés. Les effectifs maritimes citent les statistiques de 20 à 40 metric tons (toutes espèces de tortues marines) entre 1959 et 1976.
La viande et les œufs d'E. imbricata, Ch. mydas et D. coriacea sont consommés localement.
L'écaille est travaillée par les prisonniers de la prison de Fort-de-France. Carapaces et bijoux sont vendus aux touristes en grand nombre dans les magasins de souvenirs.

TABLE 16. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

Je n'ai que les indications suivantes (qui m'ont été communiquées par la Préfecture de la Martinique)

1979
exportations : néant
importations :
écaille brute : 89 kg (valeur = 6000 francs)
écaille polie : 1 214 kg (valeur = 58 000 francs)

3-298

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata	190 juv.							
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1982 (IST.P.M.)

TABLE 17 - ____ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Prison de Fort-de-France	9	travail de l'écaille

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Actuellement :

- arrêté du 5 décembre 1927 visant la protection des œufs de tortues marines (rem par arrêté du 12 janvier 1928) ; article 14.

non appliqué !

Projets :

- demande de protection intégrale par arrêté préfectoral (Fretey, 1980). Non suivie.
- arrêté ministériel de la Loi de Protection de la Nature de 1976 visant la protection intégrale des tortues marines en Métropole et dans les Départements d'Outre-Mer
(différents projets proposés au Secrétariat d'Etat à l'Environnement depuis 1977 ; acceptés par le Comité permanent du Conseil national de Protection de la Nature ; signature du Ministre de l'Environnement mais non du Ministre des DOM-TOM). A revoir en 1985.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	No. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Délégation à l'aménagement et à l'environnement BP 100 Boîte à Bite 93179 Pointe à Pitre (régional)	—	—	
Secrétariat d'Etat à l'Environnement. Avenue du Gl Leclerc. 92. Neuilly/S/S. FRANCE (national)	—	—	
Muséum national d'Histoire naturelle 25, rue Cuvier 75005 Paris (FRANCE) (national)	—	—	Affaires Maritimes
Préfecture de la Martinique (régional)	—	—	

TABLE 19. SANCTUARIES AND REFUGES

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Iles de Désirade			

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Etude des plages de nidification des tortues marines dans les Antilles françaises	84		Jacques FRETEY Muséum national d'Histoire naturelle 25, rue Cuvier 75005 Paris FRANCE

REPORTS AND PUBLICATIONS

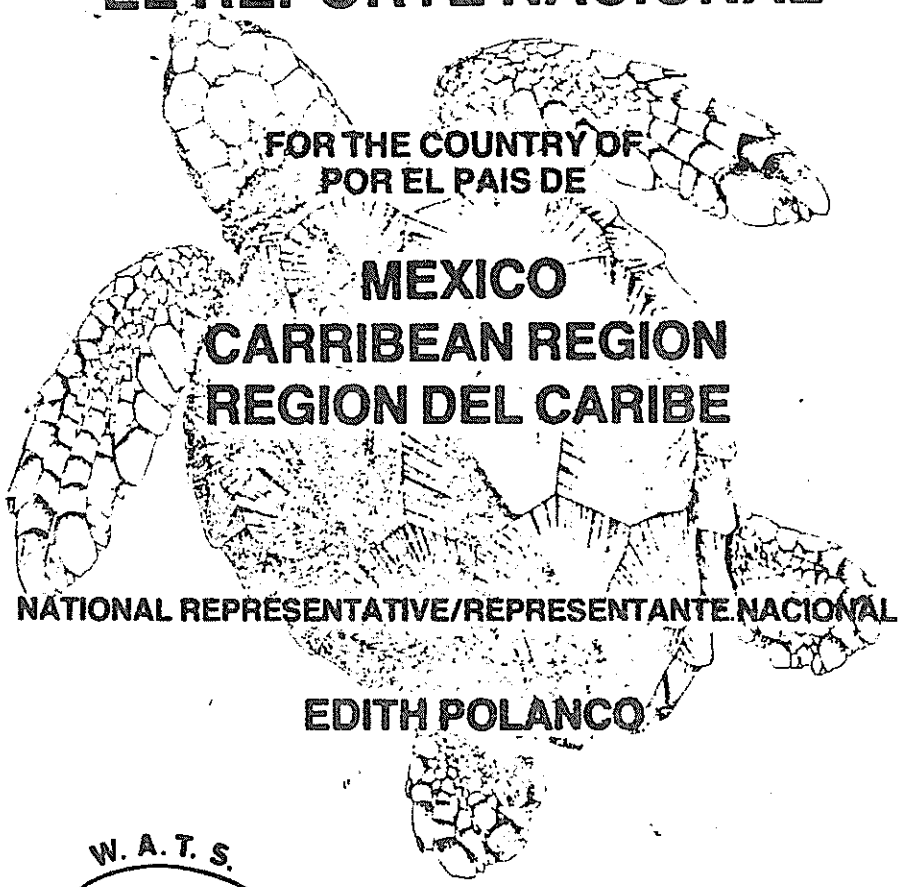
The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. CARR, A., A. MEYLAN, J. MORTIMER, K. BJORNDAL
2. and Th. CARR., 1982.— Surveys of Sea Turtle popula-
3. tions and habitats in the Western Atlantic.
4. NOAA Techn. Memor., 1-82, figs.
5. KERMARREC, A., 1976.— Le statut des tortues dans
6. les Antilles Françaises. Nouv. Agron. Ant.-Guy., 2(2)
7. 98-108.
8. FRETEY, J., 1980.— La protection des tortues marines
dans les DOM-TOM. Bull. Lions Club. Ant.-Guyane,
65 : 6-9, 17, pls., carte.

THE NATIONAL REPORT
EL REPORTE NACIONAL

FOR THE COUNTRY OF
POR EL PAIS DE

MEXICO
CARRIBEAN REGION
REGION DEL CARIBE



NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

EDITH POLANCO

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

3-300

W. A. T. S.
S. T. A. O.

SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE

MEXICO-REGION DEL CARIBE

REPORTE NACIONAL PRESENTADO POR

Dra. Edith Polanco

El Representante Nacional

Dirección: Directora General de Regulación
Pesquera del Departmento de Pesc.
Alvaro Obregón 269, Piso 1
Mexico 7, D.F. MEXICO

REPORTE NACIONAL PREPARADO POR

M.en C. RENE MARQUEZ MILLAN.
INSTITUTO NACIONAL DE LA PESCA. CENTRO DE INVEST. PESQ.
TENIENTE AZUETA S/N. PUERTO INTERIOR.
MANZANILLO, COL. 28200 MEXICO.

FECHA EN QUE SE PRESENTO: ENERO/1983

Favor enviar antes del 1º de diciembre de 1982, al Secretario Asistente de OCI para IOCARIBE, c/o UNDP, Apartado 4340, San José, Costa Rica.

País MEXICO-Región del Caribe

Longitud de la Costa*..de Cabo Catoche a Punta Xcalac ..... 753 Km

Km² de la Plataforma Continental..... Km

-Extensión de la Jurisdicción Marina:

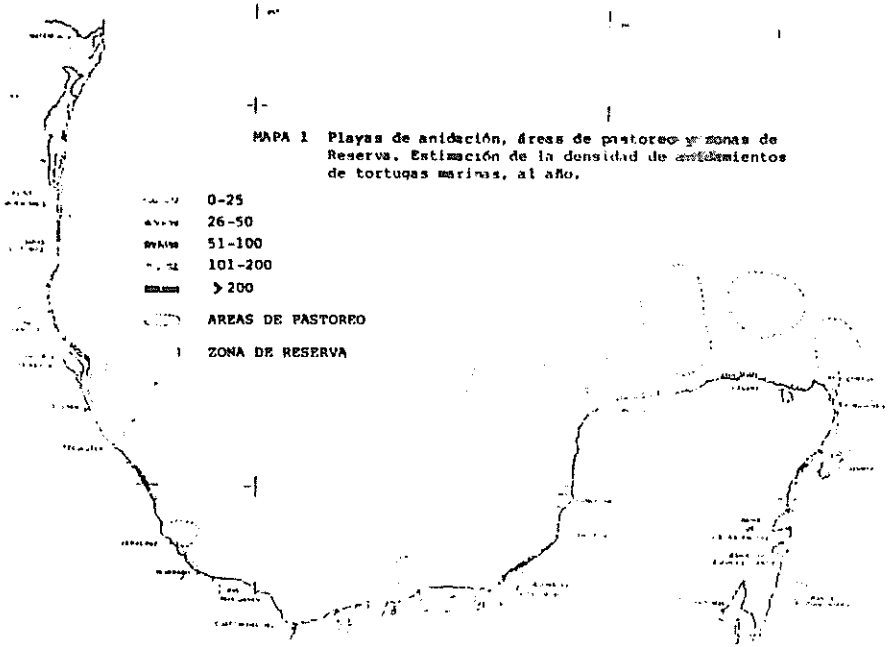
Mar Territorial..... 22 Km

Zona Económica Extendida..... 370 Km

Jurisdicción de la Pesquería..... 753 Km

Otras (descr*balas)..... Km

Tabla 1. INVENTARIO GEOGRAFICO



MAPA 1 Playas de anidación, áreas de pastoreo y zonas de Reserva. Estimación de la densidad de avistamientos de tortugas marinas, al año.

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país; por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

Tabla 1.- Inventario sumarizado de la costa y playas de posible anidación en el Caribe Mexicano.

Porción de costa (nombres entre límites	Longitud en Km.	Playa favorable Km.
Cabo Catoche-Punta Sargento	62.0	12.4
Isla Blanca	12.0	2.7
Isla Contoy	12.9	3.2
Isla Mujeres	20.4	4.1
Cancún Nizuc	13.9	11.1
Nizuc-Puerto Carmen	53.7	34.9
Isla Cozumel	101.8	16.3
Puerto Carren-Tulum	62.9	16.9
Tulum-Faro B. Asención	48.1	16.7
F.B. Asención-Pta. Norte	51.8	13.5
Espiritu Santo-Xcalac Este	125.9	25.2
Xcalac Este-Xcalac W.	6.3	0.0

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADA**	TOTAL
1. Playa Arenosa (Total)	128	32	160
A. ALTA ENERGIA			11
B. BAJA ENERGIA			149
2. Arrecife (expuesto)			118
3. Rocas			
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			
B. Zacates			
C. Manglares			300
D. Palmeras			
E. Otros árboles o arbustos			
F. Ciénegas (pantanos)			
6. Rocas de lagunas, ríos y canales			
Total de costa	693	60	753

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

CARACTERISTICAS DE LA COSTA MARINA	Km de Costa		
	SIN VEGETACION APARENTE	CON VEGETACION APARENTE	TOTAL
1. Playa Arenosa (Total)	128	32	160
A. ALTA ENERGIA			11
B. BAJA ENERGIA			149
2. Arrecife (expuesto)			118
3. Rocas			
4. Precipicios			
5. Vegetación (Total)			
A. Enredaderas (matas rastreras)			
B. Zacates			
C. Manglares			300
D. Palmeras			
E. Otros árboles o arbustos			
F. Ciénegas (pantanos)			
6. Rocas de lagunas, ríos y canales			
Total de costa	693	60	753 *

* Consulte el MANUAL DE LA FAUNA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Uso Humano)

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (Use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Isla Blanca	2.4	Cm, Cc, Ei, Dc	Mayo - Sept.
Isla Contoy	1.9	Cm, Cc, Ei, Dc	Mayo - Sept.
Isla Mujeres	4.0	Cm, Cc, Ei, Dc	Mayo - Sept.
Isla Cozumel	16.1	Cm, Cc, Ei, Dc	Mayo - Sept.
C. Catoche-P. Sargento	12.4	Cm, Cc, Ei, Dc	Mayo - Sept.
Nizuc-Pto. Carmen	34.0	Cm, Cc, Ei, Dc	Mayo - Sept.
Puerto Carmen-Tulúm	18	Cm, Cc, Ei, Dc	Mayo - Sept.
Tulum-B. Asención	18	Cm, Cc, Ei, Dc	Mayo - Sept.
P. Norte B. Asención-Xcalac	25	Cm, Cc, Ei, Dc	Mayo - Sept.

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Para una lista de playas en secuencia geográfica, favor de ver información adicional en la siguiente página.

* Abreviaciones para las especies
Caretta caretta
Chelonia mydas
Dermochelys coriacea
Eretmochelys imbricata
Lepidochelys kempi
Lepidochelys olivacea

TIPOS DE HABITATS DEL FONDO	Km2 DEL HABITAT	
	DENTRO 2%a(hacia la playa	Zona Alejada (2%a)
1. Arena	4 000	
2. Barro		
3. Rocas		
4. Vegetación sumergida		
5. Arrecifes (Total)	2 950	
A. De barrera		
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

Tabla 3. INVENTARIO DE PLAYAS (Información adicional sobre las condiciones para la anidación de tortugas marinas).

1) Cabo Catoche-Punta Sargento: Playa de baja energía, médanos bajos de 0-1 m, de alto, playas de media luna interrumpida por arrecifes, 20% buena para anidar. Pesca local, manglar a la orilla, zacate y zacate marino.

2) Isla Contoy: Playa variable de baja y media energía, médanos bajos de 0-2 m, zonas coloniales y arrecifales. Parque Nacional-refugio--para flora y fauna. 35% buena para anidar. Pesca local. Zacate, --mangle y zacate marino.

3) Isla Mujeres: Playa de baja energía, médanos bajos de 0-2 m, de alto. Zonas de arrecife y mangle. Isla turística, densamente habitada. 20% buena para la anidación. Zacate, mangle y zacate marino.

4) Isla Cancun-Punta Nizuc: Playa de energía baja y media con médanos de 0-4 m, de alto. Playas de arena blanca caliza, arrecife de barrera. Zona turística, Hotelera, Pesca y tránsito local. Zacate y coco.

5) Punta Nizuc-Puerto Carmen: Playa de baja energía muy variable en - amplitud, médano de 0-2 m, cortes arrecifales. 65% buena para anidar. Zonas pantanosas con escurrimientos de ácido tánico. Tránsito, pesca y turismo. Zacate y manglares.

6) Isla Cozumel: Pequeñas playas de alta energía, entre formaciones--arrecifales y cayos. Médanos de 0-5 m, de altura. Arrecifes coralinos, 10% buena para anidar. Zona hotelera, turismo y pesca. Mangle zacate y zostera.

7) Puerto Carmen-Tulum: Playas de energía baja y media, con médanos--de 0-8 m, de alto. Arrecifes paralelos a la costa. Zonas hoteleras. 30% buena para anidar. Turismo y Pesca. Zacate, mangle y zacate -- marino.

8) Tulum-Faro Bahía Asención: Playa de baja y alta energía, médanos-de 0-8 m, de alto, zonas coralinas que cortan las playas. 35% buenas para anidar. Turismo, tránsito, agricultura y pesca. Zacate,--mangle y zacate marino.

9) Faro Bahía Asención-Punta M. Espíritu Santo: Amplias bahías bordeadas de manglar, playas de baja energía, médanos de 0-1 m, fondo---arenoso con zacate marino. 25% buena para anidar la playa de Sotavento. Pesca, poblados y turismo. Mangle y zacate marino.

10) N. Espiritu Santo-Xcalac: Costa arrecifal de baja energía, pequeñas playas arenosas invadidas de mangle con médanos de 0-1 m, de alto - y 20% buena para anidar. Pesca y tránsito local. Contaminación de-- taninos en 5 km, manglar y zacate marino.

11) Xcalac E-Xcalac W: Costa de baja energía, playas invadidas por mangle a lo largo de toda la península, no hay médanos arenosos. Pesca local. Mangle y zacate marino.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta			Mayo - Agosto
Chelonia mydas			Junio - Agosto
Dermochelys coriacea			Julio - Sept.
Fretomochelys imbricata			Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Isla Blanca
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	5	15	Mayo - Julio
Chelonia mydas	5	20	Junio - Agosto
Dermochelys coriacea	1	3	Julio - Sept.
Fretomochelys imbricata	4	12	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Isla Contoy
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	3	9	Mayo - Julio
Chelonia mydas	4	12	Junio - Agosto
Dermochelys coriacea	0	1	Julio - Sept.
Fretomochelys imbricata	1	3	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Isla Mujeres
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	12	36	Mayo - Julio
Chelonia mydas	20 (6-Julio)	60	Junio - Agosto
Dermochelys coriacea	2	6	Julio - Sept.
Eretmochelys imbricata	3	9	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Isla Cozumel
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta		20	Mayo - Julio
Chelonia mydas		70	Junio - Agosto
Dermochelys coriacea		5	Julio - Sept.
Eretmochelys imbricata		10	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA C. Catoche - Punta Sarqanio
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	(1-Julio)	35	Mayo - Julio
Chelonia mydas	(4-Julio)	20	Junio - Agosto
Dermochelys coriacea		3	Julio - Sept.
Eretmochelys imbricata		10	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Nizuc - Puerto Carmen
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta		30	Mayo - Julio
Chelonia mydas	(6-Julio)	50	Junio - Agosto
Dermochelys coriacea		6	Julio - Sept.
Eretmochelys imbricata		12	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Puerto Carmen - Tulum
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 1. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la tabla 1.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	(3-Julio)	20	Mayo - Julio
Chelonia mydas	(1-julio)	25	Junio - Agosto
Dermochelys coriacea		6	Julio - Sept.
Eretmochelys imbricata		20	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Tulum - Bahía Asención

nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta		15	Mayo - Julio
Chelonia mydas	(2-Julio)	20	Junio - Agosto
Dermochelys coriacea		3	Julio - Sept.
Eretmochelys imbricata		12	Junio - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Punta N. Bahía Espiritu Santo - Xcalac

nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	NO* I. D.
070282	Cabo Catoche - Punta Sargento	0	0	0	0	0	0	0
070282	Isla Contoy	0	0	0	0	0	0	2
070282	Isla Mujeres	0	0	0	0	0	0	0
070282	Isla Cozumel	0	6	0	0	0	0	30
070282	Cancun - Nizuc	1	0	0	0	0	0	1
070282	Nizuc - Puerto Carmen	1	4	0	0	0	0	1
070282	Puerto Carmen - Tulum	0	6	0	0	0	0	24
070282	Tulum - Bahía Asención	3	1	0	0	0	0	5
070282	Bahía Asención - Punta Norte	0	1	0	0	0	0	1
070282	Bahía Espiritu Santo - Xcalac	0	2	0	0	0	0	2

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES \ AÑO	1982	1981	1980	1979	1978	1977
Caretta caretta		160				
Chelonia mydas		237				
Dermochelys coriacea		33				
Eretmochelys imbricata		88				
Lepidochelys kempi	0	0	0	0	0	0
Lepidochelys olivacea	0	0	0	0	0	0

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
Resuma el número estimado de hembras desovando de acuerdo a los años indicados y describa los métodos usados para efectuar estas estimaciones en la próxima página.

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO. (página suplementaria)

Favor de describir brevemente los métodos empleados para efectuar las estimaciones de la Tabla 6.

Información publicada en reportes internos del Instituto Nacional de la Pesca, observaciones en el campo e informes de pescadores en las regiones visitadas a lo largo de varios años.

UNIDAD DE CICLO DE VIDA	ESPECIES (abrevi)	CAUSAS DE MORTALIDAD	PORCENTAJE DE MORTALIDAD (por unidad)
Nidos/huevos		Turismo, contrabando, erosión, contaminación, depredación natural.	
Recién nacidos		Depredación natural, contaminación	
Juveniles		Pesca incidental	
Adultos (en el mar)		Pesca incidental, contrabando	
Hembras desovando		Contrabando	

TABLA 10. MORTALIDAD NATURAL

Las causas de la mortalidad natural pueden incluir: destrucción de nidos por erosión de la playa, depredación de huevos por cangrejos, aves marinas, [illegible] silvestres, enfermedades, tiburones y otros depredadores marinos, etc.

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NOMBRE DEL AREA (o indicar coordenadas)	AREA APROX. (Km²)	ESPECIES ALIMENTANDOSE (use abreviaciones) cantidad aproximada	NATURALEZA DE LA EVIDENCIA (observación, pesquería, pesca incidental)
1. Cabo Catoche - Arrowsmith	13 400	Cm, Ei, Cc, Dc, Lk.	Pesca incidental - marcado
2. Cozumel Norte	470	Cm, Cc, Ei, Dc	Pesca incidental y observación
3. Bahía Asención	560	Cm, Cc, Ei	Pesca incidental y observación directa.
4. Bahía Espiritu Santo	450	Cm, Cc, Ei	Pesca incidental
5. Banco Chinchorro	565	Cm, Cc, Ei, Dc	Pesca incidental
6. Bahía de Chetumal	2 600	Cm, Cc, Ei	Pesca incidental

TABLA 7. INVENTARIO DE AREAS DE FORRAJEO

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NOMBRE DEL PUERTO O LUGAR DE LLEGADA	ESPECIES CAPTURADAS (use abrev)	EQUIPO DE PESCA UTILIZADO	MESES DE ARRIBOS	NUMEROS Y PESOS (estimación)
1. Isla Mujeres	Cm, Cc	redes y correteo en lancha	Mayo Agosto	100
2. Cancun	Cm, Cc	redes y correteo en lancha	Mayo Agosto	50
3. Cozumel	Cm, Cc	redes y correteo en lancha	Mayo Agosto	100
4. Vigía Chico	Cm, Cc	redes y correteo en lancha	Mayo Agosto	50
5. Xcalac	Cm, Cc	redes y correteo en lancha	Mayo Agosto	25
6. Chetumal	Cm, Cc	redes y correteo en lancha	Mayo Agosto	25
7.				
8.				

TABLA 11. PUNTOS DE LLEGADA PARA TORTUGAS Y SUS PRODUCTOS.

Abreviaciones de las especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES \ AÑO	1982	1981	1980	METODO USADO PARA LA DETERMINACION
Caretta caretta			64 1 800	estadística oficial
Chelonia mydas		100	100	estadística oficial
Dermochelys coriacea		0	0	
Eretmochelys imbricata		0	0	
Lepidochelys kempi		0	0	
Lepidochelys olivacea		0	0	

TABLA 12. TOTAL ANUAL DE CAPTURAS DE TORTUGAS EN NUMEROS Y PESOS (N/Kg).
No incluya las tortugas capturadas incidentalmente en otro tipo de operación (e.g. pesca del camarón).

TABLA 16. EMPLEO QUE DEPENDE DE LAS TORTUGAS
(página suplementaria)

Además de los productos que se mercadean, se estima que los siguientes se capturan cada año en las playas o en el mar para utilizarlos como subsistencia.

A: Utilización de Subsistencia

1. Estimación del número de huevos: 19 000
2. Estimación del número de hembras anidando: 50
3. Número de tortugas capturadas en alta mar: 100
4. Otros: _____

B. Aspectos Sociales

Además de las actividades pesqueras descritas arriba, la utilización de las tortugas puede ser permitida en algunos países de acuerdo a ciertos privilegios y derechos especiales, otorgados a ciertos grupos de personas. Si algún tipo de explotación como la descrita existe, favor de dar detalles (i.e. derechos de playa, tradiciones étnicas, estaciones específicas durante el año, permisos especiales, etc.).

Se otorga un permiso anual de Mayo a Agosto a las Cooperativas de Isla Mujeres por la franquicia de 100 tortugas para consumo regional en Quintana Roo.

PRODUCTOS DE LA TORTUGA	AÑO 1982	AÑO 1981	AÑO 1980	MERCADO ACTUAL Precio/unid.	METODO DE COLECTA DE LOS DATOS
No. de huevos					
Carne (Kg)					
Carapachos (Concha número/peso					
Pieles número/peso					
Juveniles Disecados					
Número total de tortugas			64	1 800	Pago de impuestos y factura

ESPECIES Caretta caretta

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

ESPECIES	OPERACIONES DE INCUBACION: HUEVOS COLCTOS.	TORTUGUITAS NACIDAS	No. TORTUGUITAS LIBERDS.	EDAD DE LIBERACION *	No. DETENIDO	TORTUGAS EN CAUTIVERIO: JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta	1 000	600	600	RN	0			
Chelonia mydas	800	480	80	RN	400	100		
Dermochelys coriacea								
Eretmochelys imbricata	800	480	400	RN	80			
Lepidochelys kempi	0							
Lepidochelys olivacea	0							

AÑO 1980 - 1981

TABLA 17. MARICULTURA DE TORTUGA
Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, experimentos de mejoramiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

* RN = recien nacidas

MEXICO (CARRIBEAN)

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	NO. DE MIEMBROS ACTIVOS	ACTIVIDADES EN DESARROLLO
Instituto Nacional de la Pesca. Alvaro Obregon 269 México 06700	2	Apoyo a investigación, conservación, opiniones técnicas y asesoría.
Deleg. Fed. de Pesca. C.I.P. Puerto Morelos Dom. conocido. Pto. Morelos, Q. Roo. México	1	Apoyo a la conservación y cultivo experimental.
Deleg. Fed. de Pesca. C.I.P. Isla Mujeres Dom. conocido. Isla Mujeres, Q. Roo. México	1	Apoyo a la conservación, campamentos tortugueros y protección de playas de anidación.

TABLA 19. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE DEDICAN DE LA CONSERVACION/ADMINISTRACION DE LA TORTUGA

NOMBRE Y LUGAR	AREA Km^2	RAZONES PARA SU PROTECCION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY
Isla Contoy, Q. Roo.	287	Zona de anidación de aves marinas.	Campamento anual

TABLA 19. SANTUARIOS Y REFUGIOS

NUMERO Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
Secretaría de Pesca Alvaro Obregon 269 Hipódromo Condesa. México 06700, México		Variable	Administración, regulación y vigilancia.
Secretaría de Marina		Variable	Vigilancia.

TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

TABLA 20. AUTORIDAD REGULADORA
(página suplementaria)

Favor de citar la legislación federal, regional y local concerniente al manejo y la conservación de la tortuga. Indique el título, la fecha y la intención declarada.

Acuerdo por el que se establece la veda de la tortuga marina para las especies del Litoral del Golfo de México y mar caribe. Diario Oficial de la Nación, publicado el 13-VII-1973.

Cuadro oficial de vedas vigente de 1976 a la fecha, - que incluye las especies de tortugas marinas, para ambos litorales.

TITULO DEL PROYECTO	FECHAS		NOMBRE Y DIRECCION DE LA INSTITUCION Y DEL INVESTIGADOR PRINCIPAL
	INICIO	TERMINO	
Programa Nal. de Investigación y Conservación de Tortugas Marinas.	1965	-	Instituto Nacional de la Pesca. Alvaro Obregon 269, México 06700, Mex. M.en C. René Márquez Millán, C. Dr. C.I.P. Manzanillo, Tte. Azueta S/N, Puerto Interior, Manzanillo, Col. 28200, México
Cultivo Preecomercial de -- Tortugas Marinas.	1977	1981	Dirección General de Acuacultura. Alvaro Obregón 269, México 06700 México

TABLA 21. PROYECTOS NACIONALES DE INVESTIGACION

Cite las actividades sobre investigación de tortugas financiadas por su país.

REPORTES Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

1. Casas A.,G. 1978. Análisis de la anidación de las tortugas marinas del género Lepidochelys en México. Centro Cien. del -- Mar y Limnol. UNAM 5(1):141-158.

2. Chavez, H. 1968. Marcado y recaptura de individuos de tortuga lora Lepidochelys kempi (Garman) INIBP 19:1-28

3. Fuentes C.,D. 1967. Perspectivas del cultivo de tortugas marinas--- en el Caribe Mexicano (1) S.I.C., I.N.I.B.P., Bol. Prog. Nal. Marcado Tortugas Marinas. 1(10):1-9

4. Márquez M.,R. 1972. Resultado preliminar sobre edad y crecimiento-- de la tortuga lora, Lepidochelys kempi (Garman). IV -- Congreso Nal. de Oceanografía, 1969 México.

5. Márquez M.,R. 1973. Examen teórico de la Dinámica de Poblaciones de Tortugas Marinas. 53 rd. Annual Meeting, American Society of Ichthyologists and Herpetologists. 1973. San José, Costa Rica.

6. Márquez M.,R. et al. 1973. Instructivo para la protección de las -- Tortugas Marinas INP/SD, 2:1-34 (reeditado 1975, 1977).

7. Márquez M.,R. 1976. Estado actual de la Pesquería de Tortugas Marinas en México. INP/SI, 46:1-27

8. Márquez M.,R. 1976. Reservas Naturales para la conservación de las-Tortugas Marinas en México. INP/SI, 83:1-22.

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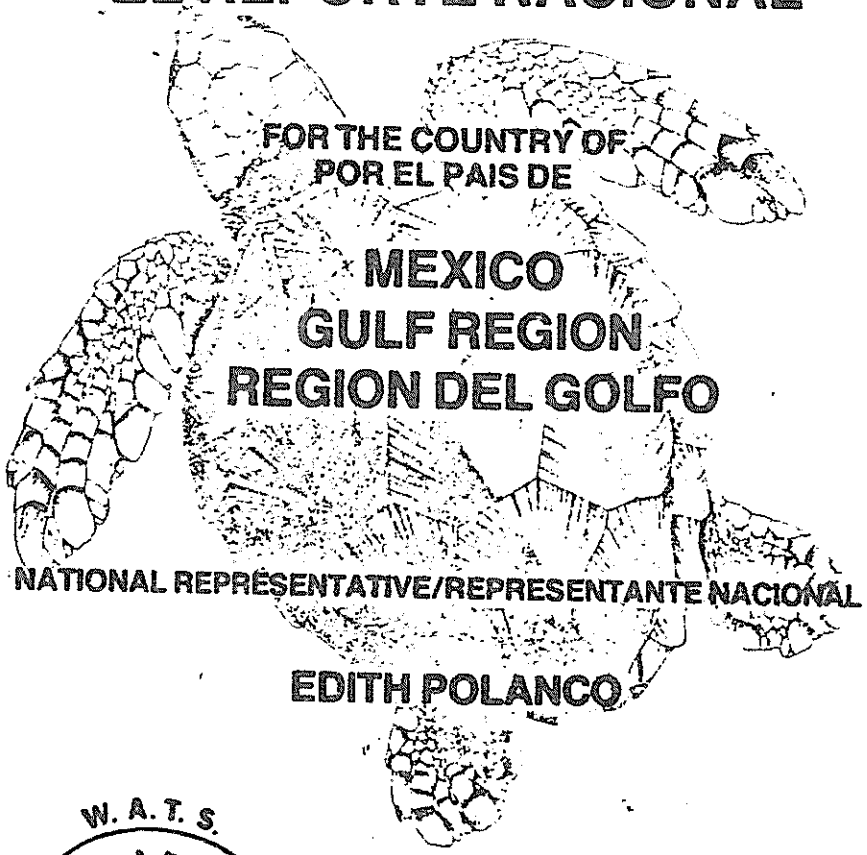
THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

MEXICO
GULF REGION
REGION DEL GOLFO

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

EDITH POLANCO

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE

MEXICO-REGION DEL GOLFO

REPORTE NACIONAL PRESENTADO POR

Dra. Edith Polanco

El Representante Nacional

Dirección: Directora General de Regulación
Pesquera del Departmento de Pesc
Alvaro Obregón 269, Piso 1

Mexico 7, D.F. MEXICO

REPORTE NACIONAL PREPARADO POR

M. en C. RENE MARQUEZ MILLAN.

INSTITUTO NACIONAL DE LA PESCA.- CENTRO DE INVEST. PESC
TENIENTE AZUETA S/N. PUERTO INTERIOR.

MANZANILLO, COL. 28200 MEXICO.

FECHA EN QUE SE PRESENTO: ENERO/1983

Favor enviar antes del 1º de diciembre de 1982, al Secretario Asistente de CCI para IOCARIBE, c/o UNDP, Apartado [illegible], San José, Costa Rica.

País MEXICO - Región del Golfo de México

Longitud de la Costa*..... 1 760 Km

Km² de la Plataforma Continental..... Km

Extensión de la Jurisdicción Marina:

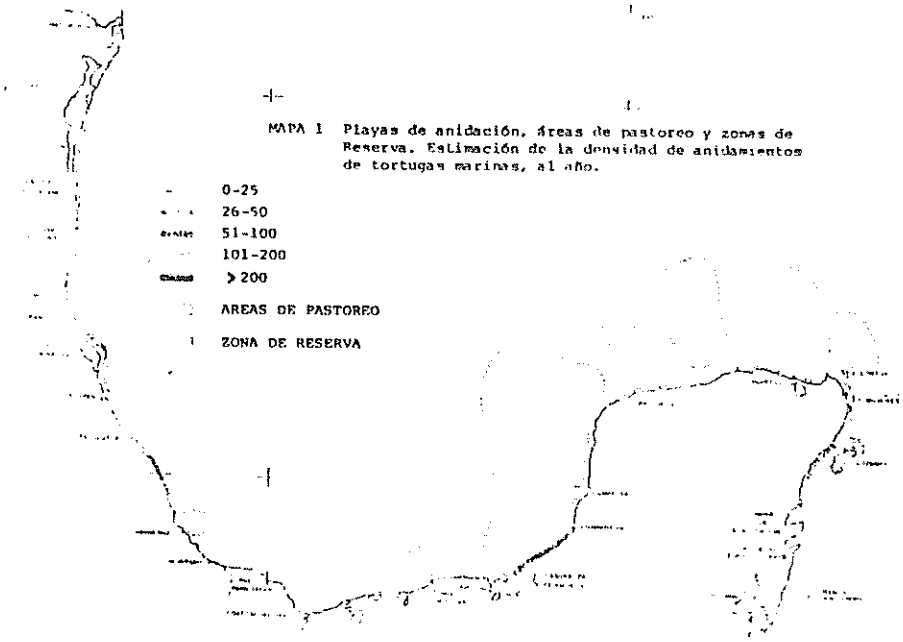
Mar Territorial..... 22 Km

Zona Económica Extendida..... 370 Km

Jurisdicción de la Pesquería..... 1 760 Km

Otras (describalas)..... Km

Tabla 1. INVENTARIO GEOGRAFICO



MAPA 1 Playas de anidación, áreas de pastoreo y zonas de Reserva. Estimación de la densidad de anidamientos de tortugas marinas, al año.

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país; por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

TABLA 1.- Inventario sumarizado de la costa y playas de posible anidación en el Golfo de México.

Porción de costa (nombre entre límites)	Longitud en Km	Playa favorable
Playa Washington-B. Sn. Rafael	98.4	88.6
B. Sn. Rafael-B. Sandoval	9.8	7.9
B. Sandoval-B. Jesús María	59.0	47.8
B. Jesús María-La Pesca	81.1	65.7
La Pesca-Bs. Ostionales	44.2	38.0
B. Carrizo-B. El Tordo	34.4	31.0
B. El Tordo-B. Chavarría	39.4	28.4
B. Chavarría-Tampico	58.3	26.2
Tampico-B. Tampachichi	14.7	4.0
B. Tampachichi-Cabo Rojo	51.6	13.9
Cabo Rojo-B. Corazones	34.4	12.4
B. Corazones-B. Tuxpan	29.4	10.6
B. Tuxpan-R. Cazones	28.7	15.5
R. Cazones-R. Tecolutla	37.0	10.0
R. Tecolutla-R. Nautla	38.8	17.5
R. Nautla-El Morro	64.6	29.1
El Morro-Veracruz	48.3	8.7
Alvarado-Roca Partida	62.9	31.3
Roca Partida-Minatitlán	101.8	13.3
Coatzacoalcos-Laguna Carmen	62.0	4.9
Laguna Carmen-Mecoacán	77.7	15.5
Mecoacán-Frontera	55.5	13.3
Frontera-Isla Carmen Norte	94.4	9.4
Isla Carmen N.-Isla Aguada	40.7	32.6
Isla Aguada-Sabancuy	49.9	47.5
Sabancuy-Seibaplaya	94.4	36.3
Seibaplaya-Campeche	25.3	5.1
Campeche-Punta Arenas	92.5	4.62
Punta Arenas-Sisal	73.1	55.0
Sisal-Progreso	42.6	28.9
Progreso-Dzilam de Bravo	83.3	20.0
Dzilam-Río Lagartos	75.9	15.9
Río Lagartos-Cabo Catoche (faro)	124.9	93.6

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADO**	TOTAL
1. Playa Arenosa (Total)	796	61	857
A. ALTA ENERGIA			350
B. BAJA ENERGIA			507
2. Arrecife (expuesto)			10
3. Rocas			22
4. Precipicios			2
5. Vegetación (Total)			
A. Forrajeras (matas rastreras)			
B. Zacates			
C. Manglares			
D. Palmeras			
E. Otros árboles o arbustos			
F. Ciénegas (pantanos)			
6. Bocas de lagunas, ríos y canales			13
Total de costa	1 159	101	1 760

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA COSTA MARINA (Reconocimientos aéreos)

** Desarrollo humano (Ver Manual)

TIPOS DE HABITATS DEL FONDO	Km² DEL HABITAT	
	DENTRO 25m(hacia la playa)	Zona Aledaña (25m)
1. Arena	43 500	
2. Barro	325	
3. Rocas	?	
4. Vegetación sumergida		
5. Arrecifes (Total)	75	
A. De barrera	75	
B. En Parche		
6. Otros		

TABLA 2A. INVENTARIO DEL TIPO DE FONDO EN EL HABITAT MARINO

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use Abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Washington-San Rafael	80	Lk, Cm, D, Cc	Abril - Agosto
S. Rafael-La Pesca	121	Lk, Cm, D, Cc	Abril - Agosto
Rancho Viejo	69	Lk, Cm, D, Cc	Abril - Agosto
El Tordo-Chavarría	28	Lk, Cm, Cc	Abril - Agosto
Tampico-P.Corazones	52	Lk, Cm, Cc	Abril - Agosto
P.Corazones-Tuxpan	10	Lk, Cm, Cc	Abril - Agosto
Tuxpan-Nautla	43	Cm, Lk, Cc	Mayo - Septiembre
Nautla-Veracruz	20	Cm, Lk, Cc	Mayo - Septiembre
Veracruz-Pta. Sn. Juan	13	Cm, Cc, Lk	Mayo - Septiembre
Sn. Juan-Frontera	14	Cm, Cc, D	Mayo - Septiembre

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

Table 3. INVENTARIO DE PLAYAS (Información adicional sobre las condiciones para la anidación de tortugas marinas).

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use Abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Carmen-Sabancuy	60	E, Cc, Cm	Mayo - Septiembre
Sabancuy-Celestun M.	67	E, Cm, Cc	Mayo - Septiembre
Celestun-Progreso	52	Cm, Cc, E	Mayo - Septiembre
Progreso-Río Lagartos	20	Cm, Cc, E	Mayo - Septiembre
Río Lagartos-El Cuyo	42	Cm, Cc, E	Mayo - Septiembre
El Cuyo-C.Catocha	50	Cm, Cc, E, D	Mayo - Septiembre

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies
Caretta Caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

1 Playa Washington-San Rafael: Playa de baja energía, con médanos de 1 a 2 metros. 90% buena para anidación, muy extendida, con - lagunas costeras. Transito local de vehículos, pesca. Vegetación principal zacate e Ipomea.

2 San Rafael-Faro de La Pesca: Playa de baja energía, médanos de 1 a 2 metros. 80% buena para anidación, muy extendida, con lagunas costeras, tránsito local de vehículos, pesca. Vegetación principal zacate e Ipomea.

3 La Pesca-Osticnales-El Carrizo: Playa de baja energía, médanos de 1 a 2 metros. 85% buena para anidación, esteros. Pesca , tránsito local. Vegetación zacate e Ipomea.

4 Carrizo-El Tordo: Playa de baja energía, médanos amplios de 1 a 2 metros de alto. 90% buena para anidación. Reserva Natural de tortuga lora (LK). Pesca. Vegetación de zacate, Ipomea.

5 El Tordo-Barra Chavarría: Playa de energía media, médanos amplios de 2 a 3 metros de alto. 70% buena para anidación. Pesca y tránsito local. Vegetación de zacate e Ipomea.

6 Barra Chavarría-Puerto Tampico: Playa de media y alta energía, - médanos altos (2-4 metros), tramos angostos y esteros. 45% buena para la anidación. Tránsito local y pesca. Vegetación de zacate- e Ipomea. Contaminación industrial: química y petróleo.

7 Puerto Tampico-Cabo Rojo: Playa de alta energía en su mayoría con cortes verticales y médanos altos de 2 a 8 metros. 25% buena para la anidación. Pesca y tránsito local. Vegetación de zacate , siembra de coco.

8 Cabo Rojo-Río Tuxpan: Playa de energía media y baja. Configuración variable de médanos amplios y altos de 2 a 6 metros. 80% - buena para anidación. Pesca, potreros, cultivos y caminos de tránsito local, canal de navegación. Turismo. Vegetación de zacate y- coco.

9 Río Tuxpan-Río Cazones: Playa de alta energía, cortes verticales- y zonas rocosas: médanos de 2 a 15 metros de alto. 50% buena para anidación. Potreros. Vegetación de zacate hasta los cortes de - zona alta, coco.

10) Río Cazones-Río Tecolutla: Playa de energía media, médanos variables, cortados por arroyos, de 2 a 5 metros de alto. 25% buena para la anidación. Playa con palizadas. Aldeas aisladas, siembra de cocos y potreros. Selva.

11) Río Tecolutla-Río Nautla: Playa de baja energía, médano de 1 a 3 metros de alto. 45% buena para la anidación. Playa con palizadas-turismo y carretera, hoteles y albercas. Vegetación de zacate, -- cazuarina y coco.

12) Río Nautla-El Morro: Playa de baja y alta energía, zonas pedregozas, médano muy variable, desde 1 a 30 m, de alto. Playa obscura-(biotita) con carretera, hoteles y pesca, 45% buena para anida--- ción. Vegetación de zacate y coco.

13) El Morro-Puerto de Veracruz: Playa de alta energía con médanos -- muy altos desde 1 a 100 metros, tramos de buena playa para anidación (18%). Tránsito local y pesca. Vegetación arborea, cazuarinas y zacate.

14) Veracruz-Alvarado: Zona restringida a la navegación, médanos altos de 1-10 metros, playa de energía media, zonas habitadas, pesca y potreros.

15) Alvarado-Faro de Punta San Juan: Playa de alta energía, médanos - cortados de 1 a 10 metros de alto, ensenadas, arroyos y poco drenaje. 18% buena para anidar. Muelles, potreros, casas, árboles y-zacate a la orilla, cocales. Contaminación por petróleo cerca de-Minatitlán.

16) Minatitlán-Laguna del Carmen: Playa de energía media, muelles, - carreteras y puertos, industria petrolera. Médanos de 1 a 5 metros de alto. 8% de playas buenas para la anidación. Cocales y - zacate a la orilla del médano. Contaminación industrial.

17) Laguna del Carmen-Mecoacán: Playa de energía media, médanos de 1 a 5 m, de alto, playas de media luna, arena obscura (biotita), - canales, arroyos y barras. 20% de buena playa para la anidación. Pesca, turismo y puerto, siembra de plátano y coco.

18) Laguna Mecoacán-Frontera: Playa de baja energía, médanos de 1 a 2 m. 30% buena para anidar. Tránsito local, pesca y cocales.

19) Frontera-Isla del Carmen: Playa de energía baja, médanos de 0 a-2 m, de alto, Playas lodosas, esteros y mangle, 10% buena para - anidar. Pesca y tránsito local. Vegetación de mangle, coco, zacate y zostera. Refinería.

20) Isla del Carmen-Isla Aguada: Playa de baja energía, 80% buena para anidar. Pesca, turismo y tránsito local. Cortes de piedra caliza y contrabandistas de huevo. Mangle, coco, zacate y zostera. Pozos petroleros y plataformas.

21) Isla Aguada-Sabancuy: Playas amplias de baja energía, médanos de - 0 a 2 m. 95% buena para la anidación. Carretera paralela a la playa, casas y pescadores.

22) Sabancuy-Champotón: Playa de baja energía, médano de 0 a 2 m. 50% - buena para la anidación. Casas, tránsito, pesca, extracción de arena, cocos, zacate y zostera.

23) Champotón-Seiba playa: Playa de baja energía, poco drenaje, médanos de 0-1 m, estrecha y con arrecife de barrera. Pesca, tránsito y poblados. Cocal, zacate y pasto marino.

24) Seiba playa-Campeche: Playa de baja energía, médano de 0-2 m. 20 -- buena para anidar, zonas rocosas, ensenadas y playas estrechas. Cocal, zacate y zostera.

25) Campeche-Punta Arenas: Playa estrecha de baja energía. 5% buena para anidar: playitas, esteros y mangle. Pesca.

26) Punta Arenas-Faro Norte Celestun: Playa de baja energía, médano de-0-1 m, de alto, zonas calizas, esteros y mangle. 72% buena para anidar. Pesca y tránsito local. Manglar y zostera.

27) Faro N. Celestun-Sisal: Playa de baja energía, médano de 0-1.5 m, - de alto, playa ancha con 80% buena para anidar. Salinas a la orilla del mar, muelle, pesca y turismo. Zacate y coco.

28) Sisal-Progreso: Playa de baja energía con cortes calizos, médano de 0-1 m, playa muy ancha con carretera a un lado. Pesca, cocal y mangle.

29) Progreso-Río Lagartos: Playa de baja energía, cortes calizos hasta-de 6 m, de alto, médano de 0-6 m. de alto. Zonas coralinas de barrera y mangle. 20-30% de playa buena para anidar. Salinas y poblados--ribereños. Mangle, zacate, cocal y zostera. Pesca regional.

30) Río Lagartos-Faro Holbox: Playa de baja energía, zonas calcareas en cortes irregulares, bien drenada, médano de 0-1 m. 80% buena para - anidar. Salinas y camino a 30 m, de la playa. Tránsito local y casgríos. Zacate, coco y zostera.

31) Faro Holbox-Faro Cabo Catoche: Playa de baja energía, médano de -- 0-1 m, 60% buena para anidar. Tránsito local y pesca. Manglar, zacate y zostera.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	5	?	Mayo - Agosto
Chelonia mydas	5	?	Mayo - Agosto
Dermochelys coriacea	2	?	Mayo - Sept.
Fretomochelys imbricata		0	
Lepidochelys kempi		10 - 50	Abril - Julio
Lepidochelys olivacea	0	0	0

TABLA 4. CENSO DE NIDOS POR PLAYA Washington - San Rafael
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	2 (Junio)	?	Mayo - Agosto
Chelonia mydas	15 (Junio)	?	Mayo - Agosto
Dermochelys coriacea		?	
Fretomochelys imbricata		0	
Lepidochelys kempi	1 (Junio)	10	Abril - Julio
Lepidochelys olivacea		0	

TABLA 4. CENSO DE NIDOS POR PLAYA San Rafael - La Pesca
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	CION DE DATOS
Caretta caretta		5	Mayo - Julio
Chelonia mydas	3 (Junio)	5	Mayo - Julio
Dermochelys coriacea		3	Junio - Agosto
Eretmochelys imbricata		?	
Lepidochelys kempi		1000	Abril - Julio
Lepidochelys olivacea		0	0

TABLA 4. CENSO DE NIDOS POR PLAYA Pancho Nuevo
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	CION DE DATOS
Caretta caretta		5	Mayo - Julio
Chelonia mydas		10	Mayo - Julio
Dermochelys coriacea		2	Junio - Agosto
Eretmochelys imbricata		?	
Lepidochelys kempi	3 (Junio)	10 - 50	Abril - Julio
Lepidochelys olivacea		0	0

TABLA 4. CENSO DE NIDOS POR PLAYA El Tordo - Chavarría
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	CION DE DATOS
Caretta caretta		5	Junio - Agosto
Chelonia mydas	3 (Junio)	20	Junio - Agosto
Dermochelys coriacea		?	
Eretmochelys imbricata			
Lepidochelys kempi	4 (Junio)	10	Abril - Julio
Lepidochelys olivacea	0		

TABLA 4. CENSO DE NIDOS POR PLAYA Tampico - Tuxpan
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	CION DE DATOS
Caretta caretta	10 (Junio)	?	Mayo - Agosto
Chelonia mydas	15 (Junio)	?	Mayo-- Agosto
Dermochelys coriacea		?	
Eretmochelys imbricata	?	?	
Lepidochelys kempi		50	Abril - Julio
Lepidochelys olivacea		0	

TABLA 4. CENSO DE NIDOS POR PLAYA Tuxpan - Veracruz
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-CION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	1 (Junio)	20	Mayo - Agosto
Chelonia mydas	2 (Junio)	40	Mayo - Agosto
Dermochelys coriacea		?	
Eretmochelys imbricata		?	
Lepidochelys kempi		20	Mayo - Agosto
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Veracruz - Frontera
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3, etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-CION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	2 (Junio)	50	Junio - Sept.
Chelonia mydas	1 (Junio)	50	Junio - Sept.
Dermochelys coriacea	2 (Junio)	10	Junio - Sept.
Eretmochelys imbricata	56 (Junio)	300	Mayo - Agosto
Lepidochelys kempi	0	0	
Lepidochelys olivacea	0	0	

TABLA 4. CENSO DE NIDOS POR PLAYA Carmen - Sabancuy
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-CION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta		50	
Chelonia mydas		50	
Dermochelys coriacea		5	
Eretmochelys imbricata	6 (Junio)	100 - 200	Mayo - Agosto
Lepidochelys kempi		0	
Lepidochelys olivacea		0	

TABLA 4. CENSO DE NIDOS POR PLAYA Sabancuy - Celestun Norte
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLEC-CION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta	(1-Junio)	50	Mayo - Agosto
Chelonia mydas	(3-Junio)	50	Mayo - Agosto
Dermochelys coriacea		10	Julio- Octubre
Eretmochelys imbricata		50	Mayo - Agosto
Lepidochelys kempi		0	
Lepidochelys olivacea		0	

TABLA 4. CENSO DE NIDOS POR PLAYA Celestun - Río Lagartos
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta		40	
Chelonia mydas	(4-Junio)	40	
Dermochelys coriacea		10	
Eretmochelys imbricata		30	
Lepidochelys kempi		0	
Lepidochelys olivacea		0	

TABLA 4. CENSO DE NIDOS POR PLAYA Río Lagartos - Cabo Catoche

nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	[illegible]	[illegible]	[illegible]
063082	Isla Carmen - Sabancuy	2	1	2	56	0	0	27
063082	Sabancuy - Celestun Norte	0	0	0	6	0	0	13
070182	Celestun N. - P. Progreso	0	0	0	0	0	0	8
070182	P. Progreso - R. Lagartos	1	3	0	0	0	0	1
070182	R. Lagartos - El Cuyo	0	2	0	0	0	0	5
070182	El Cuyo - Cabo Catoche	0	2	0	0	0	0	2
	(Muestreo efectuado del 28 de junio al 2 de julio de 1982) Totales	6	40	2	62	10	0	86

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS.
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:
Caretta caretta Cc
Chelonia mydas [illegible]
Dermochelys coriacea [illegible]
Eretmochelys imbricata E
Lepidochelys kempi [illegible]

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	[illegible]	[illegible]	[illegible]
062882	Washington - San Rafael	[illegible]	-	-	-	[illegible]	0	0
062882	San Rafael - La Pesca	2	15	0	0	[illegible]	0	0
062882	Rancho Nuevo	0	3	0	0	12	0	1
062882	El Tordo - B. Chavarría	0	0	0	0	[illegible]	0	0
062882	Tampico - B. Corazones	0	3	0	0	[illegible]	0	9
062882	B. Corazones - R. Tuxpan	0	0	0	0	[illegible]	0	0
062982	R. Tuxpan - R. Nautla	0	5	0	0	[illegible]	0	1
062982	R. Nautla - P. Veracruz	0	10	0	0	[illegible]	0	11
062982	P. Veracruz - Pta. San Juan	1	2	0	0	[illegible]	0	5
063082	Pta. San Juan - P. Frontera	0	0	0	0	0	0	3

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie
Caretta caretta Cc
Chelonia mydas [illegible]
Dermochelys coriacea [illegible]
Eretmochelys imbricata [illegible]
Lepidochelys kempi [illegible]
Lepidochelys olivacea [illegible]

ESPECIES \ AÑO	1982	1981	1980	1979	1978	1977
Caretta caretta		225 ?				
Chelonia mydas		265 ?				
Dermochelys coriacea		40 ?				
Eretmochelys imbricata		480 ?				
Lepidochelys kempi *	621	705	693	754	656	680
Lepidochelys olivacea	0	0	0	0	0	0

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
Resuma el número estimado de hembras desovando de acuerdo a los años indicados y describa los métodos usados para efectuar estas estimaciones en la próxima página.

* Poblaciones estimadas solamente en Rancho Nuevo, [illegible] se consideran las demás playas. Total aproximado en [illegible]

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO. (página suplementaria)

Favor de describir brevemente los métodos empleados para efectuar las estimaciones de la Tabla 6.

Observaciones directas a través del conteo de huellas en las playas, recolección de nidos y marcado de adultos durante la anidación.

NOMBRE DEL AREA (o indicar coordenadas)	AREA APROX. (Km²)	ESPECIES ALIMENTANDOSE (use abreviaciones) cantidad aproximada	NATURALEZA DE LA EVIDENCIA (observación, inspección, pesca incidental)
1. Nautla-Cabo Rojo	6 130	Lk, Cc, Cm, El	Pesca incidental y marcado
2. Arrecife Cabezo	1 130	Lk, Cc, Cm, El	Pesca incidental y marcado
3. Cayo Arcas-Triángulos.	12 500	Lk, Cc, Cm, El	Pesca incidental y marcado
4. Cayo Arenas-Snake-Madagascar.	30 000	Cc, Cm, El, Dc	Pesca incidental y marcado
5. Arrecife-Alacrán	2 450	Cm, Cc, El, Dc	Pesca incidental y marcado
6. Banco Campeche	16 600	Cm, Cc, El, Dc	Pesca incidental y marcado

TABLA 7. INVENTARIO DE AREAS DE FORRAJEO

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	El
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

UNIDAD DE CICLO DE VIDA	ESPECIES (abrev.)	CAUSA DE MORTALIDAD	PORCENTAJE DE MORTALIDAD (por unidad)
Nidos/huevos		Contrabando, erosión y contaminación	
Recién nacidos		Depredación natural y contaminación	
Juveniles		Pesca incidental	
Adultos (en el mar)		Pesca incidental, contrabando	
Hembras desovando		Contrabando	

TABLA 10. MORTALIDAD NATURAL. Las causas de la mortalidad natural pueden incluir: destrucción de nidos por erosión de la playa, depredación de huevos por cangrejos, aves marinas y otros animales terrestres; enfermedades; filtraciones y otros depredadores marinos, etc.

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	El
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NOMBRE DEL PUERTO O LUGAR DE LLEGADA	ESPECIES CAPTURADAS (use abrev)	EQUIPO DE PESCA UTILIZADO	MESES DE ARRIBOS	NUMEROS Y PESOS (estimación)
1. Tampico	Lk, Cm, Cc	Arrastre camaronero	Abril-Sept.	50
2. Veracrúz	Lk, Cc, Cm, E	Arrastre camaronero, contrabando	Abril-Octubre	50
3. Frontera	Cc, Cm, Lk, E	Arrastre camaronero, contrabando	Mayo-Sept.	50
4. Campeche	Cc, Cm, E, Lk	Arrastre camronero, contrabando	Mayo-Sept.	100
5. Progreso	Cm, Cc, E	Arrastre camaronero, contrabando	Mayo-Sept.	50
6.				
7.				
8.				

TABLA 11. PUNTOS DE LLEGADA PARA TORTUGAS Y SUS PRODUCTOS.

Abreviaciones de las especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	El
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES \ AÑO	1982	1981	1980	METODO USADO PARA LA DETERMINACION
Caretta caretta				
Chelonia mydas			312 15 427	ESTADISTICA OFICIAL
Dermochelys coriacea			0	
Eretmochelys imbricata			0	
Lepidochelys kempi			0	
Lepidochelys olivacea			0	

TABLA 12. TOTAL ANUAL DE CAPTURAS DE TORTUGAS EN NUMEROS Y PESOS (N/Kg).
No incluya las tortugas capturadas incidentalmente en otro tipo de operación (e.g. pesca del camarón).

ESPECIES \ AÑO	1982	1981	1980	TIPO DE ACTIVIDAD PESQUERA Y METODO DE ESTIMACION
Carette caretta		50		Arrastre camaronero, Trasmallos
Chelonia mydas		50		Arrastre camaronero, Trasmallos
Dermochelys coriacea		10		Arrastre camaronero, Trasmallos
Eretmochelys imbricata		50		Arrastre camaronero, Trasmallos, buceo autónomo
Lepidochelys kempi	100	100		Arrastre camaronero, Trasmallos
Lepidochelys olivacea	0	0	0	

TABLA 13. Estimación de la Captura Incidental de Tortuga.
Dar estimaciones en números y/o pesos.

PRODUCTOS DE LA TORTUGA	AÑO 1982	1981	1980	MERCADO ACTUAL Precio/unid	METODO DE COLECTA DE LOS DATOS
No. de huevos	0	0	0	0	
Carne (Kg)					
Carapachos (Concha número/peso					
Pieles número/peso					
Juveniles Disecados	0	0	0		
Número total de tortugas			26	2 000	Factura y pago de impuestos

ESPECIES Chelonia mydas

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

TABLA 16. EMPLEO QUE DEPENDE DE LAS TORTUGAS
(página suplementaria)

Además de los productos que se mercadean, se estima que los siguientes se capturan cada año en las playas o en el mar para utilizarlos como subsistencia.

A: Utilización de Subsistencia

1. Estimación del número de huevos: 10 000
2. Estimación del número de hembras anidando: 100
3. Número de tortugas capturadas en alta mar: 260
4. Otros: _____

B. Aspectos Sociales

Además de las actividades pesqueras descritas arriba, la utilización de las tortugas puede ser permitida en algunos países de acuerdo a ciertos privilegios y derechos especiales, otorgados a ciertos grupos de personas. Si algún tipo de explotación como la descrita existe, favor de dar detalles (i.e. derechos de playa, tradiciones étnicas, estaciones específicas durante el año, permisos especiales, etc.).

ESPECIES	OPERACIONES DE INCUBACION					TORTUGAS EN CAUTIVERIO		
	HUEVOS COLECTADOS	NIDADAS (No. DE DIAS)	No. DE CRIAS LIBERADAS	CRIAS DE DIFICIL LIBERACION *	No. DE NIDOS	JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi	96 470	65 814	63 996	R.N.	1 818			
Lepidochelys olivacea								

MEXICO (GOLF)

AÑO 1979

TABLA 17.

VARICULTURA DE TORTUGA

Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, repoblamiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

* RN = Recién nacidas

ESPECIES	OPERACIONES DE INCUBACION					TORTUGAS EN CAUTIVERIO		
	HUEVOS COLECTADOS	NIDADAS (No. DE DIAS)	No. DE CRIAS LIBERADAS	CRIAS DE DIFICIL LIBERACION *	No. DE NIDOS	JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi	89 270	48 486	45 984	R.N.	2 502			
Lepidochelys olivacea	0	0	0	0	0	0	0	0

MEXICO (GOLF)

AÑO 1980

TABLA 17.

VARICULTURA DE TORTUGA

Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, repoblamiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

* 1 RN = Recién nacidas

ESPECIES	OPERACIONES DE INCUBACION					TORTUGAS EN CAUTIVERIO		
	HUEVOS COLECTADOS	NIDADAS (No. DE DIAS)	No. DE CRIAS LIBERADAS	CRIAS DE DIFICIL LIBERACION *	No. DE NIDOS	JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi	92 319	55 548	53 715	R.N.	1 833			
Lepidochelys olivacea								

MEXICO (GOLF)

AÑO 1981

TABLA 17.

VARICULTURA DE TORTUGA

Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, repoblamiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

* RN = Recién nacidas

ESPECIES	OPERACIONES DE INCUBACION					TORTUGAS EN CAUTIVERIO		
	HUEVOS COLECTADOS	NIDADAS (No. DE DIAS)	No. DE CRIAS LIBERADAS	CRIAS DE DIFICIL LIBERACION *	No. DE NIDOS	JUVENILES	HEMBRAS ADULTAS	MACHOS ADULTOS
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi	78 100	48 082	46 512	R.N.	1 570	57		
Lepidochelys olivacea								

MEXICO (GOLF)

AÑO 1982

TABLA 17.

VARICULTURA DE TORTUGA

Esta tabla cuantifica las actividades relacionadas con la cría de tortugas para conservación, colonización, repoblamiento de poblaciones, incubación y liberación de recién nacidos y juveniles. Prepare una tabla separada para cada año.

* RN = Recién nacidas

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	NO. DE MIEMBROS ACTIVOS	ACTIVIDADES EN DESARROLLO
Instituto Nacional de la Pesca. Alvaro Obregon No. 269 México 06700	2	Apoyo a la investigación, conservación, opiniones técnicas y asesoría.
Deleg. Fed. de Pesca. C.I.P. Manzanillo Prog. Nal. de Investigación y Conservación de Tortuga--Marina. Tte. Agueta S/N, Manzanillo, Col. 28200, México.	6	Investigación, conservación, asesoría y opiniones técnicas.
Instituto de Biología Universidad Nacional de México. Ciudad Universitaria México, D.F.	2	Investigación de algunos aspectos de la biología y apoyo a la conservación.
Universidad del Noreste. Av. Hidalgo S/N Tampico, Tamaulipas.	Variable	Apoyo a los programas de conservación e investigación con estudiantes en servicio social.

TABLA 18. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE PREOCUPAN DE LA CONSERVACION/MANEJO/UTILIZACION DE LA TORTUGA

NOMBRE Y LUGAR	AREA Km²	RAZONES PARA SU PROTECCION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY
"Rancho Nuevo", Tams. Tams.	70.6	Especie en peligro de extinción, tortuga lora ---- (L.k.)	Centro de Investigación y Conservación.

TABLA 19. SANTUARIOS Y REFUGIOS

NUMERO Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
Secretaría de Pesca Alvaro Obregon 269 Hipódromo Condesa México 06700, México		Variable	Administración, regulación y vigilancia.
Secretaría de Marina		Variable	Vigilancia

TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

TABLA 20. AUTORIDAD REGULADORA
(página suplementaria)

Favor de citar la legislación federal, regional y local concerniente al manejo y la conservación de la tortuga. Indique el título, la fecha y la intención declarada.

1.- Acuerdo por el que se establece la veda de la tortuga marina para las especies del Litoral del Golfo de México y Mar Caribe. Diario Oficial de la Nación, publicado el 12-VIII-1976.

2.- Cuadro oficial de vedas vigente de 1976, a la fecha que incluye las especies de tortugas marinas, para ambos litorales.

3.- Acuerdo que establece como zona de refugio y de veda para la protección de tortuga lora marina (Lepidochelys kempi), la comprendida en la playa de Rancho Nuevo, Mpio. de [illegible], Tam. Diario Oficial del 4 de julio 1977.

TITULO DEL PROYECTO	FECHAS		NOMBRE Y DIRECCION DE LA INSTITUCION Y DEL INVESTIGADOR PRINCIPAL
	INICIO	TERMINO	
Programa Nal. de Investigación y Conservación de Tortugas Marinas.	1965	-	Instituto Nacional de la Pesca. Alvaro Obregón 269, México 06700, Mex. M. en C. René Márquez Millán, C. Dr. C.I.P. Manzanillo, Tte. Azueta S/N, Puerto Interior, Manzanillo, Col., 28200, México.
Cultivo Precomercial de -- Tortugas Marinas.	1977	1981	Dirección General de Acuacultura. Alvaro Obregon 269, México 06700 México

TABLA 21. PROYECTOS NACIONALES DE INVESTIGACION

Cite las actividades sobre investigación de tortugas financiadas por su país.

ESTUDIOS Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

1. Casas A.,G. 1978. Análisis de la anidación de las tortugas marinas del género Lepidochelys en México. Centro Cien. del -- Mar y Limnol. UNAM 5(1):141-156.

2. Chavez, H. 1968. Marcado y recaptura de individuos de tortuga lora Lepidochelys kempi (Garman) INIBP 19:1-28

3. Fuentes C.,D. 1967. Perspectivas del cultivo de tortugas marinas--- en el Caribe Mexicano (1) S.I.C., I.N.I.B.P., Bol. Prog. Nal. Marcado Tortugas Marinas. 1(10):1-9

4. Márquez M.,R. 1972. Resultado preliminar sobre edad y crecimiento-- de la tortuga lora, Lepidochelys kempi (Garman). IX. -- Congreso Nal. de Oceanografía, 1969 México.

5. Márquez M.,R. 1973. Examen teórico de la Dinámica de Poblaciones de Tortugas Marinas. 53 rd. Annual Meeting, American Society of Ichtyologists and Herpetologists. 1973. San José, Costa Rica.

6. Márquez M.,R. et al. 1973. Instructivo para la protección de las -- Tortugas Marinas INP/SD, 2:1-34 (reeditado 1975, 1977).

7. Márquez M.,R. 1976. Estado actual de la Pesquería de Tortugas Marinas en México. INP/SI. 46:1-27

8. Márquez M.,R. 1976. Reservas Naturales para la conservación de las Tortugas Marinas en México. INP/SI, 83:1-22.

9. Márquez M.,R. 1976. Progreso en la Investigación de las Tortugas -- Marinas de México. Mem. Reunión sobre los Recursos de-- Pesca Costera de México. Veracruz. 2:82-94.

10. Márquez M.,R. 1978. Sea Turtles, FAO Species identification sheets. Fishing Area 31 (16 p.) Editor W. Fisher.

11. Márquez M.,R. 1978. Natural Reserves for the Conservation of marine turtles of México. Fla. Interregional Conference on Sea Turtles. 1976. Fla. Mar. Res. Pub. 33:56-62

12. Márquez M.,R. et al. 1982. Población de Tortuga Lora en el Golfo de México. Lepidochelys kempi. W.C.T.C. Washington 1979. Memorias.

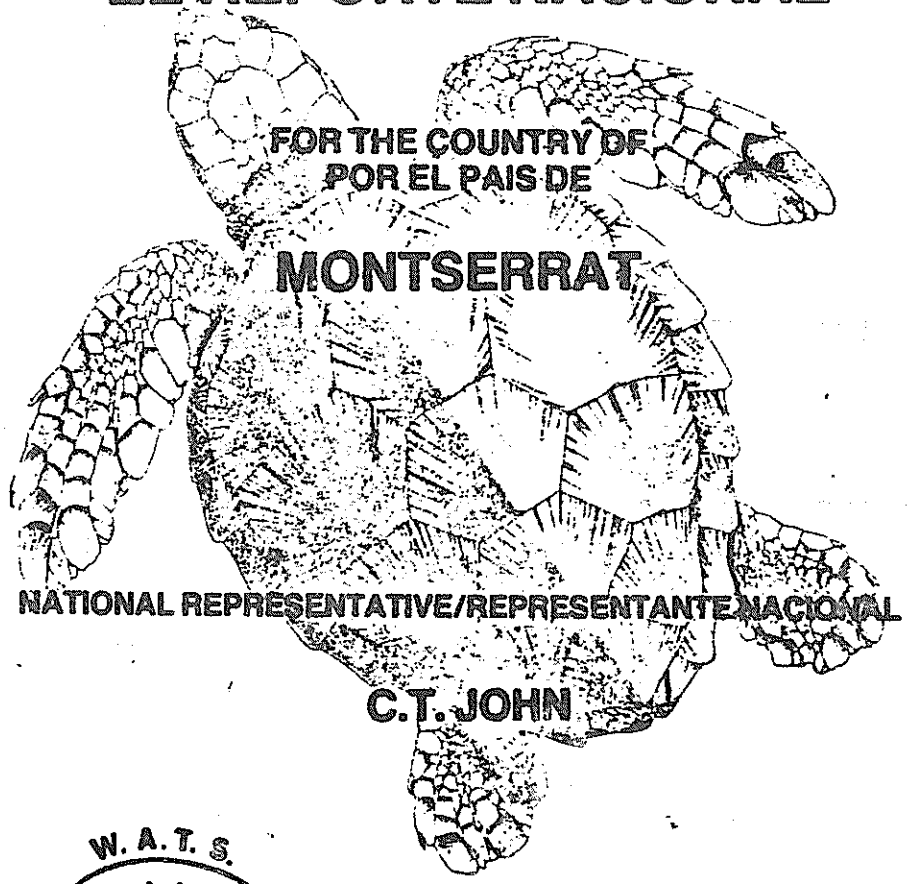
13. Montoya A.,E. 1967. Recopilación de los datos del valor y la captura anual de tortugas marinas en el período 1947-1965. INIBP Vol. 1(8).

14. Montoya A.,E. 1969. Programas de Investigación y Conservación de las Tortugas Marinas en México. IUCN. Pub. New Ser. Supp. Pap., 20:34-53.

15. Pritchard, P.C.H. y R. Márquez. 1973. Kemp's Ridley Turtle or the Atlantic Ridley (Lepidochelys kempi, Garman). I.U.C.N. monograph. 2:1-30.

16. van Dissel H, A. van Schravendijk, R. Márquez. Sea Turtle in México: problems that have to be solved in the near future. (en prensa) 16 p.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

MONTSERRAT

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

C.T. JOHN

W.A.T.S.
S.T.A.O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W.A.T.S.
S.T.A.O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

Montserrat

NATIONAL REPORT PRESENTED BY

The National Representative

Address: Director of Agriculture
Ministry of Agriculture, Trade, Lands and Housing
P.O. Box 272, Plymouth, Montserrat, W.I.

NATIONAL REPORT PREPARED BY

John Jeffers, Fisheries Assistant
Anne Meylan, WATS Technical Team

DATE SUBMITTED: 24 May 1983

Please submit this NATIONAL REPORT no later than 8 December 1983
to: IOC Assistant Secretary for IOCARIBE, & UNDP, Apartado AE/C
San Jose, Costa Rica.

Country Montserrat

Length of Coastline* ..... 49 Km

Km² of Continental Shelf Area ..to 100 fathom line.. 145 Km²

Seaward Extent of Jurisdictions:

Territorial Sea ..... 5.5 Km

Extended Economic Zone ..... Km

Fisheries Jurisdiction ..... 265 Km

Other (Describe) _____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	3.5	3.7	7.2
A. High Energy	0.8	0	0.8
B. Low Energy	2.7	3.7	6.4
2. Reef (exposed)			0
3. Rocks			> 42
4. Cliffs			
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves			
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, rivers, canals			
7. Total Shoreline			49

* Refer to CFS TURTLE MANUAL (Aerial Survey)
** Human development or use (See Manual)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Farm Bay	0.6	E, D?	
2. Yellow Hole	0.1	E, Cm?	
3. Rendezvous Bay	0.6	E	
4. Little Bay	0.3	E	
5. Carr's Bay	0.4	E	
6. Bunkum Bay	0.1	Cm?, E	
7. Woodlands Bay	0.3	E	
8. Limekiln Bay	0.1	Cm?, E	
9. Old Road Bay	0.3	E	
10. Fox's Bay	0.7	E	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Name of Beach	Color Sand	Livestock present	Artificial Lights	Human Use	Sand Mining
Farm Bay	Black	yes	none	light	none
Yellow Hole	Black	no	none	[illegible]	[illegible]
Rendezvous Bay	white	no	none	light	none
Little Bay	Black	yes	none	heavy	[illegible]
Carr's Bay	Black	no	none	moderate	yes
Bunkum Bay	Black	no	none	light	[illegible]
Woodlands Bay	Black	no	yes	heavy	none
Limekiln Bay	Black	no	none	light	[illegible]
Old Road Bay	Black	yes	none	heavy	none
Fox's Bay	Black	yes	none	heavy	yes

F Fisherman's landing site
C Light construction
E Ephemeral

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Name of Beach	Type of development
Farm Bay	in vicinity of national airport
Yellow Hole	none
Rendezvous Bay	1 private residence/temporarily occupied
Little Bay	none - proposed site for hotel
Carr's Bay	fishermen's shed - selling area
Bunkum Bay	none
Woodland's Bay	public beach house/recreation area
Limekiln Bay	none
Old Road Bay	major hotel, golf course, yacht mooring site
Fox Bay	none (artificial reef offshore)

A leatherback nested ~1980 at Sugar Bay, just south of Plymouth, but this is not a normally nesting beach.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - ___ NESTING CENSUS FOR BEACH _____
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

No nesting censuses were conducted. Nesting is very sparse, sporadic.

NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use Abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. O'Garro's vicinity of		Cm, E	observation, fishery, interviews
2. Bransby Point		Cm, E	observation, fishery, interviews
3. Bunkum Bay vicinity of		Cm	observation, interviews
4. Rendezvous Bluff		E	observation, interviews
5. Yellow Hole		E	interview, fishery
6. Trant's Bay		Cm, E	fishery, interviews

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	X	X	X	X	X	X	X	X	X	X	X	X	
Dermochelys coriacea													
Eretmochelys imbricata	X	X	X	X	X	X	X	X	X	X	X	X	
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

Same seasons for all areas

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	E	Crabs	
Hatchlings	E	Sea birds, crabs, sharks	
Juveniles	E, Cm	Sharks	
Adults (in water)	E, Cm	Sharks	
Nesting females			

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

Note: Mongoose are not present on the island

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

Nest reported by Peace Corps Volunteer at Rendezvous Bay contained 250 eggs .. hourly

NAME OF PORT OR SITE	SPECIES LANDED (Use Abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Plymouth	E, Cm	spearguns, nets		
2. Carr's Bay	E, Cm	nets		
3. Bunkum Bay	E, Cm	spearguns		
4. Sugar Bay	E, Cm	spearguns		
5. Farm Bay	E, Cm	spearguns		
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

No information available However, no shrimp trawlers operate in the area. Turtles are caught incidentally in gill nets, extent of capture unknown. Longlining is practiced in the area, and turtles may be incidentally caught.

TABLE 16. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

Polished carapaces of green turtles and hawksbills, and tortoiseshell jewelry, are sold in local shops as souvenirs.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing			
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

No one is exclusively dependent on turtle fishing. Four or five turtle nets are in occasional use.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Division of Fisheries Ministry of Agriculture The Groves, P.O. Box 272 Plymouth, Montserrat Montserrat National Trust c/o Mr. Franklin Margetson Plymouth, Montserrat		enforcement of regulations conservation education

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Division of Fisheries Ministry of Agriculture The Groves, P.O. Box 272 Plymouth, Montserrat	0	0	Closed season fully enforced Size limit, taking of eggs not fully enforced
Royal Montserrat Police Force Plymouth, Montserrat	0	0	Same as above.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

11.

12.

13.

14.

15.

16.

17.

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Ordinance attached.

LAWS OF MONTSERRAT

Volume II

CHAPTER 112: Turtle (24 September, 1951)

1. This Ordinance may be cited as the Turtle Ordinance.

2. In this Ordinance, the word "Turtle" means sea or river turtle.

3. Any person who-

a) catches or takes, or attempt to catch or take, or causes to be caught or taken any turtle between the first day of June and the thirtieth day of September, both days inclusive; or

b) at any time catches or takes, or attempts to catch or take, or causes to be caught or taken, any turtle which is under twenty pounds in weight; or

c) slaughters any turtle or buys, sells, exposes for sale or has in his possesion the whole or any portion of the meat of such turtle, between the first day of June and the thirtieth day of September, both days inclusive; or

d) takes, or attempts to take, or causes to be taken, any turtle eggs, between the first day of June and the thirtieth day of September, both days inclusive; or

e) buys, sells, exposes for sale, or has in his possesion any turtle eggs, between the first day of June and the thirtieth day of September, both days inclusive,

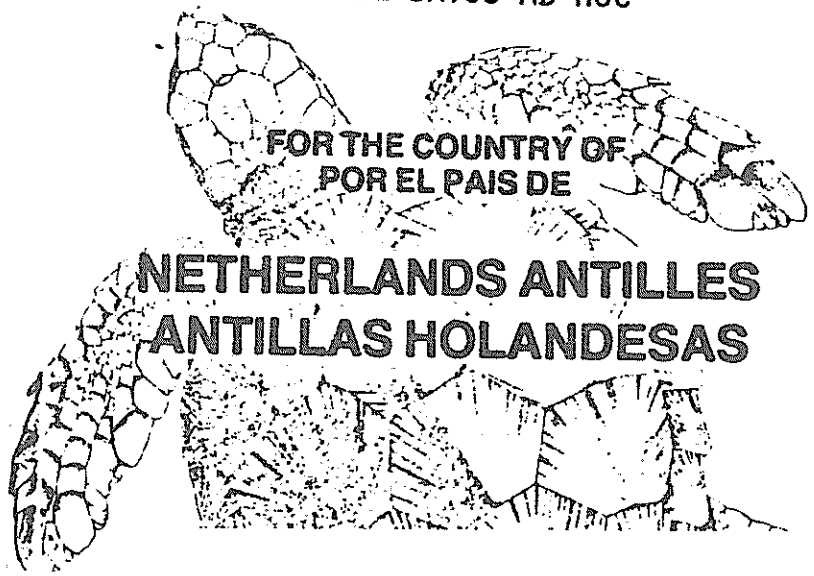
shall be guilty of an offense against this Ordinance, and on summary conviction, shall be liable to a fine not exceeding forty-eight dollars.

4. If any public officer shall have reasonable grounds for believing that any person is committing or attempting to commit an offense against this Ordinance he may arrest such person without a warrent.

5. Any police officer may seize any turtle or part thereof or any turtle eggs found in the possesion of any person between the first day of June and the thirtieth day of September in any year and upon the conviction of such person the articles so seized shall be forfeited.

6. Any net, instrument or thing which any police officer has reasonable grounds for believing is being or has been used for or in connection with the commission of any offense against this Ordinance shall be seized by such police officer, and any magistrate may, upon the conviction of any person for an offense against this Ordinance in connection with which such net, instrument or thing so seized was used, order such net, instrument or thing to be forfeited.

THE AD HOC DATA REPORT
EL REPORTE DE DATOS AD HOC



FOR THE COUNTRY OF
POR EL PAIS DE

NETHERLANDS ANTILLES
ANTILLAS HOLANDESAS

PREPARED BY/PREPARADO POR

GERARD VAN BUURT

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
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WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

AD HOC DATA REPORT FOR THE COUNTRY OF

Netherlands Antilles - Aruba, Curacao, Bonaire
(Saba, St. Eustatius, St. Martin in separate report)

AD HOC DATA
REPORT PREPARED BY

Gerald van Burrt

Department of Agriculture & Fisheries

Klein Kwartier 33, CURACAO

DATE SUBMITTED: 3 February 83

Please submit AD HOC DATA REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country [illegible]

Length of Coastline* Aruba: 66 Km; Curaçao 150 Km; Bonaire 232 Km; total

Km² of Continental Shelf Area 22,000 Aruba 220 Km², Curaçao 1,900 Km², Bonaire 2000 Km² (0-200m depth)

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 3 nm . . . . . 5½ Km

Extended Economic Zone [illegible] . . . . . Km
Out outside agreement with neighboring states

Fisheries Jurisdiction . . . . . Km

Other (Describe) _____ . . . . Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

	NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
	1.		[illegible]	
Bonaire	2. Klein Bonaire	0.5	Cc E	June - Sept
	3. [illegible]	[illegible]	E Cc?	[illegible]
	4. Sorobon	[illegible]	E Cc? Cm?	
	5. [illegible]	[illegible]	E Cc? Cm?	
	6. Playa [illegible]	[illegible]	E Cc? Cm?	
Curaçao	7. Klein Curaçao	2	Cc E?	July-Sept Cc ? July-Nov E
	North side 8. East Point Bay	2.2	Cc? E? Cm?	
Aruba	various beaches 9. on North Coast	[illegible]	E	NO INFORMATION
	10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

b North side of East Point Lagoon - A small beach (2-3 km) no artificial lighting except for lighthouse nearby. Medium grain size coral sand, not very fine with shell fragments etc. unconsolidated area, shallow beach profile some but very little backbeach vegetation - Turtle nesting tracks were reported, species unknown

Curaçao

a Klein Curaçao - A small (1 km²) limestone island with a white coral sand beach on the western side of the island. The island is uninhabited except for the lighthouse and a few fishermen who stay out for a few days. The beach profile is shallow. There is no backbeach vegetation and very little artificial lighting. The sand is very fine.

b Playa Kanoa - A nesting beach(es) was known to exist on the beach in the western end of Curaçao. The beach is not on the island and very many people go there. Any nesting in this area would be rare. It is doubtful that any hatchlings would survive.

Aruba

On the North side of the island several sandy beaches exist such as Playa Grande, Fos-Prasa, Boca Prins, Dadup, most of these are separated by limestone plateaus some have a backbeach vegetation and some Sesuvium portulacastrum. There is no artificial lighting along the beach, except for a few lights at Arashi (one location).

No nesting tracks were observed. However, local residents do report nesting activity on the beach. Tracks do not exist on the southern exposed beaches. It is not known whether this is due to lack of nesting activity or the fact that the beaches have been disturbed by tourist development. One would expect more beaches to be used for nesting since the sand is very fine.

Bonaire

a Klein Bonaire - 3 km² uninhabited island with coral sand beach on the north-western side - some backbeach vegetation (shrubs) no artificial lighting except for lighthouses on SW tip of island. The sand is very fine.

b Wash Kenepa (Some may also called Washikemba) - A small beach on the lower eastern side of the island. The beach is a cove in a limestone plateau which is eroding in this area. The sandy parts of the beach are very difficult and dangerous to reach - coral sand and rocks. No artificial lighting.

c Sorobon - S.E. part of Lac Bay - coral sand beach on the inside of the barrier reef, no backbeach

d Saliña - S.W. part of the island - fine coral sand no artificial lighting, little backbeach vegetation but a few shrubs

e Playa Grande (near Washington Park entrance -

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. North Coast of Curaçao	30 km^2 (0-50m)	E, Cc, Cm.	Sargassum fields - turtles (E) observed by divers looking for food between sargassum
2. North Coast of Aruba	15 km^2 (0-50m)	E, Cc, Cm	"
3. North and East Coasts of Bonaire	30 km^2 (0-50m)	E, Cm, Cc	"
4. Lac Bay Bonaire	6 km^2	Cm, Cc, E	Caught with nets. Turtle grass vegetation in the Bay.
5. East Point Bay Curaçao	0,6 km^2	Cm, Cc, E	Turtle grass vegetation
6. Turtle grass fields south coast SW of Aruba			No information.

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	[illegible] AND EST. NOS. Abbreviations)	COMMENTS
Cm, Cc and E in offshore waters. D does occur sometimes but it is very rare. There are no confirmed reports on ridleys			

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS [illegible] (Estimate
1. Bonaire Lac Bay + Kralendijk	Cm, Cc, E	In Lac beach seine; outside spears		200/yr most Cm
2.		* some of these come from Aves isl and Los Roques.		
3.				
4. Curaçao	Cm, Cc, E	Turtles at Curaçao abatoir: 1977 - 16, 1978 - 21, 1979 - 13, 1980 - 14, 1981 - 7. Most of these were brought in by Venezuelan vessels (Aves? Roques?)		40/yr max local catch
5.				
6. Aruba				No information
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

Almost no foreign fishing in Antillean waters. Occasionally Venezuelan tuna purse seiners enter, these do not catch turtles

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Stinapa P/A Carmabi POBox 2090 Curaçao Ned Ant		Stinapa is the Antillean Natl Park Foundation (Stichting Nationale Parken Ned Antillen) Stinapa is working on Underwater Natl Park in Bonaire and Curaçao
The Dept of Agriculture and Fisheries on the three islands LVV-Curaçao LVV-Aruba LVV-Bonaire		Have to advise Island Governments on Stinapa proposals and formulate proposals for regulations together with Dep for Juridical affairs

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND LOCATION	AREA Km^2	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Washington Natl Park – Bonaire (Stinapa)	Land area 60 Shoreline approx 21 km	Natl Park	Effective

TABLE 19. SANCTUARIES AND REFUGES

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Aruba – Eilandsverordening tot beheer van het marien milieu in Aruba (Marien Milieuverordening Aruba) 1980

These Island regulations (Marine Environment Aruba)
– prohibit spearfishing Article 4 protects Sea Turtle nests and eggs
The turtles as such are not protected

Bonaire – Eilandsverordening 29e juni 1961 tot bescherming van de zeeschildpadden en kreeften (protection of turtles and lobsters).
– Article 1 protects Sea Turtle nests and eggs
– Visspeerverordening 1971 – this regulation prohibits all spearfishing
Turtles as such are not protected a new regulation which protects these is in preparation

Curaçao – Eilandsverordening tot beheer van het marien milieu in de wateren van het Eilandgebied Curaçao 22 sept 1976 (Management of the marine environment)
– Spearfishing is prohibited, no special protection of either turtle nests and eggs or turtles themselves

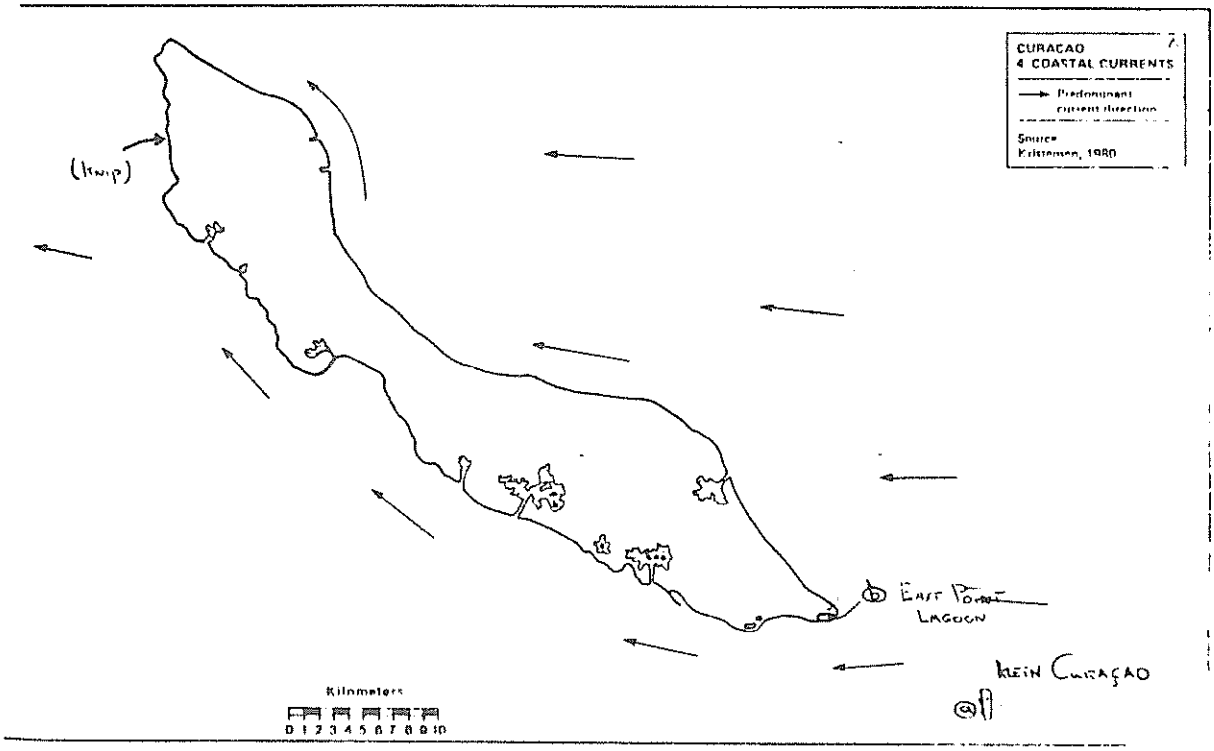
According to the ERNA Eilandenregeling the Central Government has jurisdiction over all the waters within the 3 mile zone, including the inner bays, while responsibility for the development of Agriculture and Fisheries has been relegated to the island Governments ERNA does not mention resource management
This has resulted in some legal confusion Some lawyers contend that all these island regulations are in conflict with ERNA and that they could be challenged in the courts on constitutional grounds (e.g. jurisdiction of island vs Central Government)
For these reasons the Curaçao Justice department has been very reluctant to amend and extend the marine environment management regulations. No Central Government laws exist –
The Neth Antilles have not yet decided to join the Washington convention 1973 – adequate national legislation would have to be enacted first.
All legislation is in Dutch – no English translations exist.
For this reason I have not included copys of the original legislation
All the legislation has been summarized in the Stinapa booklet (Documentation series no 6 1979)
Wetgeving Natuurbeheer op de Nederlandse Antillen in 1978 (Nature Conservation & Management Legislation in the Netherlands Antilles in 1978) by WW Timmers
Since 1978 there have been no major additions to these laws and regulations (as a result of the legal problems mentioned above)

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

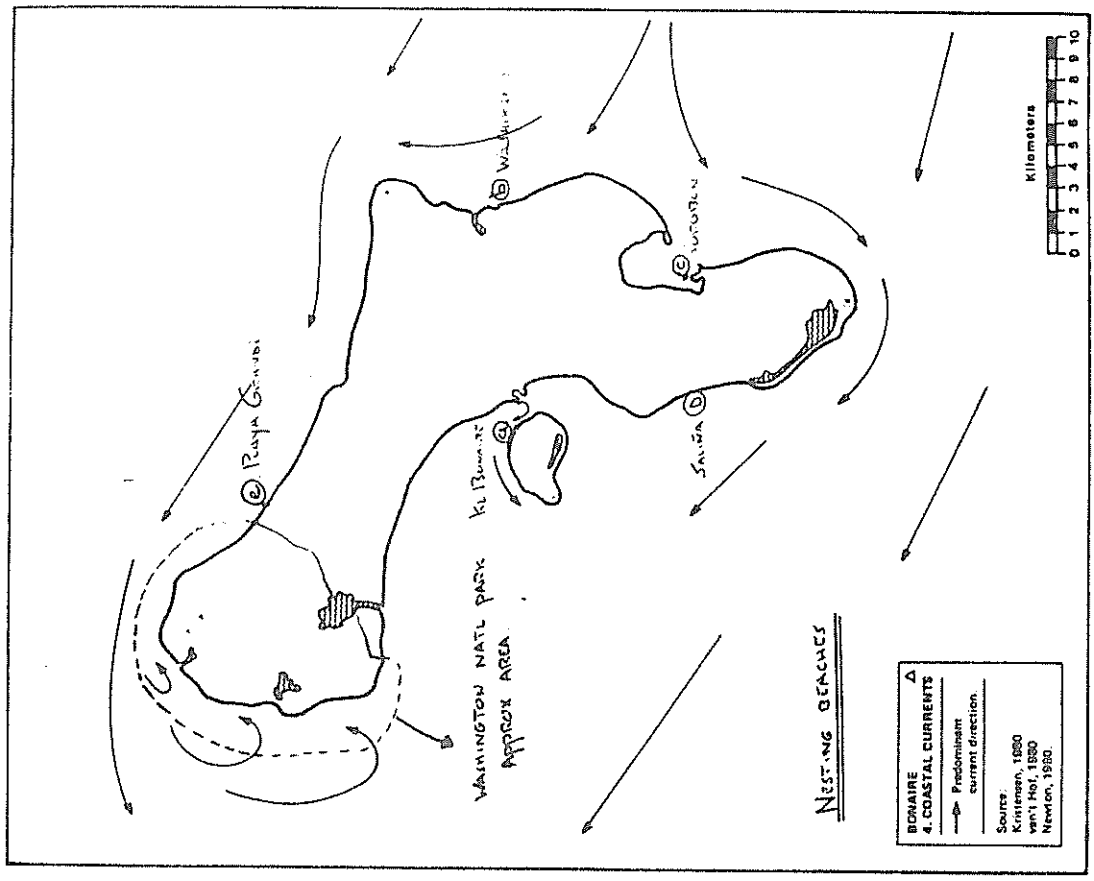
1. Schildpadden en van beteekenis voor de Nederlandse Antillen – I.J. Hermans – 1961 mimeographed report 71 pp
2.
3.
4.
5.

NETHERLANDS ANTILLES

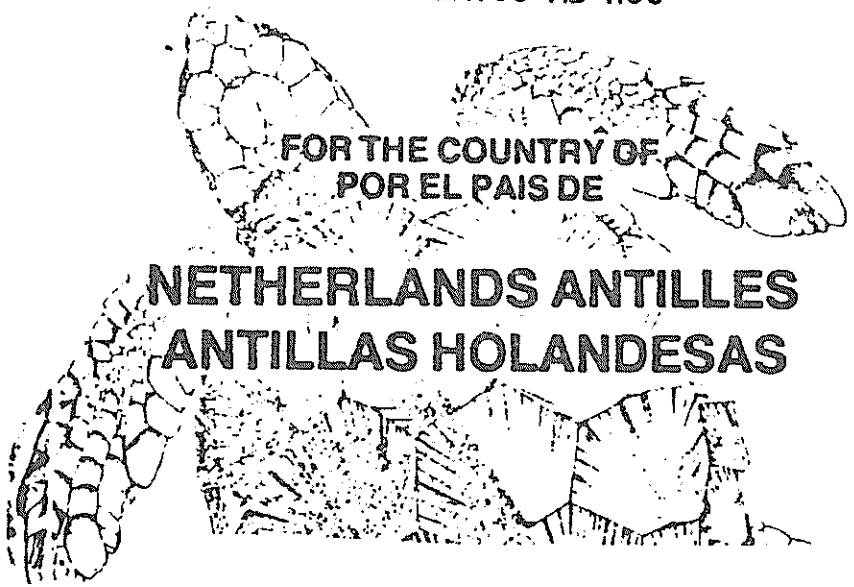


NETHERLANDS ANTILLES

RESOURCE DATA MAPS • BONAIRE



THE AD HOC DATA REPORT
EL REPORTE DE DATOS AD HOC



FOR THE COUNTRY OF
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ANTILLAS HOLANDESAS

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San Jose, Costa Rica

July 1983

AD HOC DATA REPORT FOR THE COUNTRY OF

Netherlands Antilles -
Saba, St. Eustatius, St. Martin

AD HOC DATA
REPORT PREPARED BY

Gerald van Burrt

Department of Agriculture & Fisheries

Klein Kwartier 33, CURACAO

DATE SUBMITTED: 3 February 81

1 Please submit AD HOC DATA REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, & UNDP, Apartado 4540, San Jose, Costa Rica.

Country NETH ANTILLES

Length of Coastline* SABA, STATIA & ST. MARTIN (DUTCH PART) 44 Km

km² of Continental Shelf Area SABA BANK 2200, STATIA 65 . 2265 Km².
(0-200m)

Seaward Extent of Jurisdictions: ST MARTIN OU ANGUILLA BANK, BORDERS OF DUTCH AREA NOT YET DETERMINED

Territorial Sea . . . . 3 . NM. . . . . ____ Km

Extended Economic Zone HAS NOT YET BEEN DECLARED . . . ____ Km

Fisheries Jurisdiction . . . . . ____ Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
ST EUSTATIUS			
1. CONCORDIA BAY	2.2	E, Cm	June/Aug Cm
2. CORRE CORRE BAY	0.2	D once observed	
SABA			
3. CAVE OF RUM BAY	0.1	E	
4.		NO R.leys	
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

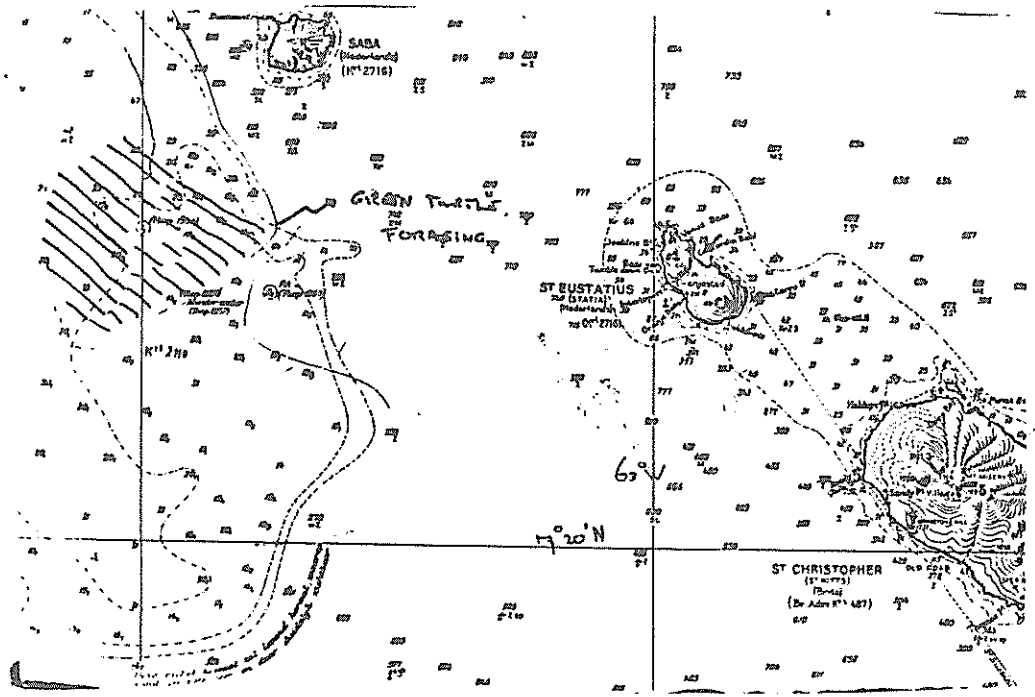


TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

ST EUSTATIUS

CONCORDIA BAY - WIDE BAY WITH LOW HILLS AND SOME DUNES IN THE BACKGROUND - CREME COLORED SAND. VOLCANIC MIXED WITH WHITE CORAL SAND - GENTLY SLOPING PROFILE. A HOTEL HAS BEEN BUILT. ACCORDING TO THE INFORMANT MR LLOYD CONTAR TURTLE NESTING HAS DECLINED IN RECENT YEARS. INFORMANT EXPRESSED THE OPINION THAT THIS DECLINE WAS CAUSED BY THE LIGHTS OF THE HOTEL.

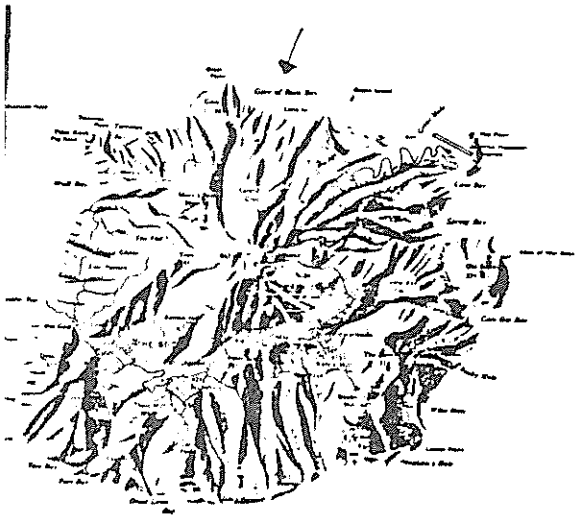
CORRE CORRE BAY - SMALL BAY - BACKISH SAND, STEEP HILLSIDES IN THE BACK

SABA

CAVE OF RUM BAY - VOLCANIC SAND DARK BROWN WITH ROCKS AND PEBBLES - STEEP MOUNTAIN IN BACKGROUND.

ST MARTIN

THE BEACHES ON THE DUTCH SIDE OF THE ISLAND ARE THINLY DEVELOPED TOURIST AREAS TURTLES MIGHT STILL BE NESTING AT SOME BEACHES ON THE FRENCH SIDE

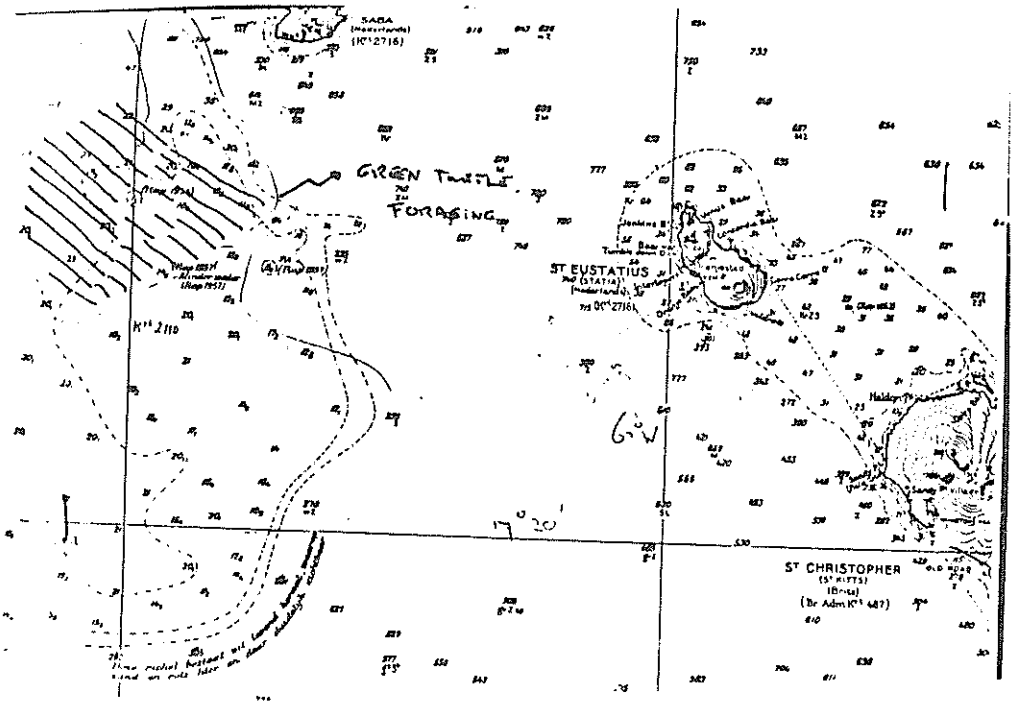


NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	(Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
St Eustatius			
1. Tumbledown Dick and Jenkins Bay	2 km^2	E	- Observation by - Fishermen
2. Whitewall	2 km^2	Cm	- Observation by - Fishermen - William Blair and Lloyd Counter info
3. Part of NE Saba Bank (see map)	50 km^2	Cm	Observation by Saba and Statia Fishermen, info R Hassel
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo



LE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

No data available. Foreigners fish on Saba Bank which is still international water

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

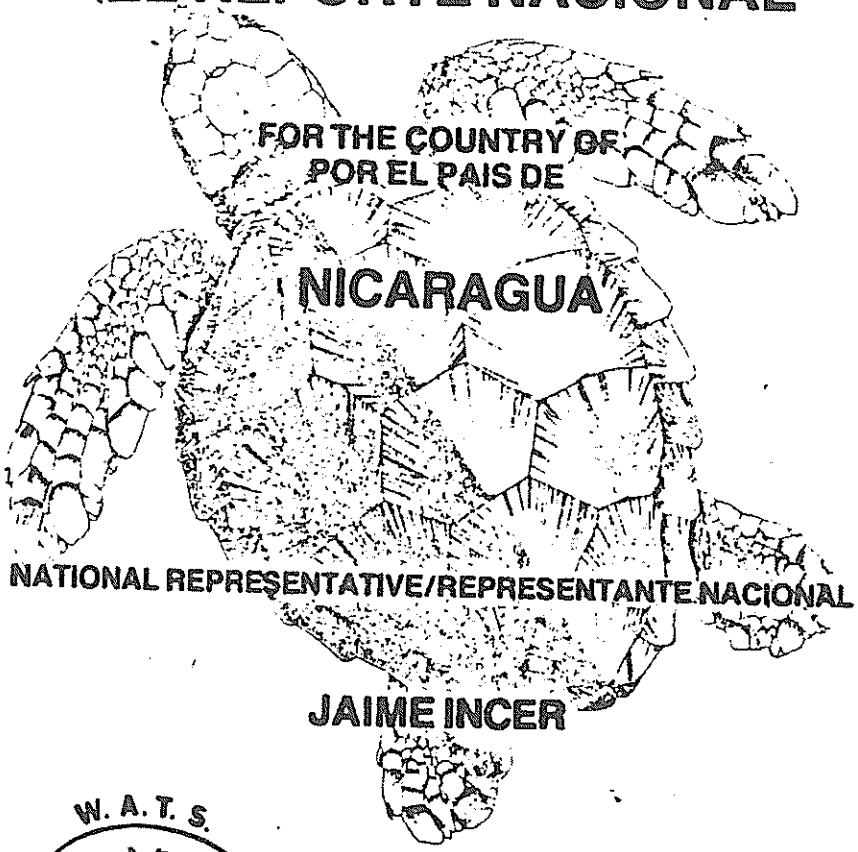
Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

No island regulations at all
see part I

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
See part I (Aruba, Bonaire, Curaçao)		

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

NICARAGUA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

JAIME INCER

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE

NICARAGUA

REPORTE NACIONAL PRESENTADO POR

Jaime Incer

El Representante Nacional

Dirección: IRENA Km 12½ Carr. Norte

Managua Nicaragua C. América

REPORTE NACIONAL PREPARADO POR

Reynaldo Arostegui Montiel

FECHA EN QUE SE PRESENTO: _____

Favor enviar antes del 1º de diciembre de 1982, al Secretario Asistente de CDI para IOCARIBE, p/d UNOP, Apartado 4540, San José, Costa Rica.

País Nicaragua

Longitud de la Costa* .... 500 Km

Km² de la Plataforma Continental .... [illegible] Km²

Extensión de la Jurisdicción Marina

Mar Territorial .... 3[illegible] Km

Zona Económica Extendida .... [illegible] Km

Jurisdicción de la Pesquería .... [illegible] Km

Otras (descríbalas) Km

Tabla 1. INVENTARIO GEOGRAFICO Areas conocidas de alimentación y apareamiento para Carey. Según [illegible] del sur de los cayos [illegible] a las [illegible] de San Juan del Norte. Areas conocidas:
1) Tyara Cay 18 kms al este de la Barra de [illegible]
2) Tungla Shoal 7 kms E[illegible] de Tyara Cay
3) [illegible]buskar Shoal 6 kms Sur de Tyara Cay
4) [illegible] Aupa 5 kms E de Tasbapauni
5) [illegible] (Western Rock, 6 kms [illegible] de [illegible] Cay
6) [illegible] cayos pequeños o [illegible] [illegible]
7) [illegible] Shoal 11 kms ENE de [illegible] Cay [illegible]
8) Alrededor de diversos Cayos de Man[illegible] Sound Bar y al sur de [illegible]
9) Banco de Greytown 15 kms SE de San Juan del Norte.

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país, por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

Areas conocidas de alimentación y [illegible] para tortuga verde:
1) Cayos [illegible] y [illegible] de alrededores

CARACTERISTICAS DE LA COSTA MARINA*	Km de Costa		
	SIN DESARROLLAR	DESARROLLADO**	TOTAL
1. Playa Arenosa (Total)	[illegible]	[illegible]	[illegible]
2. Arrecife (expuesto)	—	—	—
3. Rocas	29		29
4. Precipicios	15		15
5. Vegetación (Total)	—		—
A. Enredaderas (matas rastreras)	[illegible]		[illegible]
B. Zacates			
C. Manglares			
D. Palmeras	[illegible]		[illegible]
E. Otros árboles o arbustos	[illegible]		[illegible]
F. Ciénegas (pantanos)			
7. Rocas de lagunas, ríos y canales			
Total de costa			

Tabla 2. INVENTARIO DEL HABITAT DE LA COSTA MARINA

* Consulte el MANUAL DE LA TORTUGA MARINA (Reconocimientos aéreos)

** Desarollo humano (Ver Manual)

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
San Juan del Norte	37		
Caño Diablo	43	E	Agosto El
Barra Punta Gorda	21		
Monkey Point	29		
Barra Henson	18		
Bluefields-(False Bluff)	42.5	E	[illegible] - Julio Ei
Punta Barra	15		
Punta Perlas	30		
Taba Paune	12		
Laguna [illegible]	11		

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies
Caretta [illegible]
Chelonia mydas
Dermochelys coriacea
Eretmochelys imbricata
Lepidochelys kempi
Lepidochelys olivacea

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO
(para información suplementaria)

Favor proveer información adicional sobre cada playa de anidamiento identificada en la Tabla 3. Incluya información sobre el color de la arena, tamaño de la partícula, perfil de la playa, vegetación superior en la playa, iluminación artificial, etc

San Juan del Norte:
Playa [illegible] Costa Rica, la playa tiene [illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible]

[illegible] playa [illegible]

[illegible]

[illegible] cubierta por [illegible]

[illegible]

[illegible] por el [illegible]

[illegible]

[illegible] de 25 pies [illegible]
[illegible] poca vegetación.

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO
(para información suplementaria)

Favor proveer información adicional sobre cada playa de anidamiento identificada en la Tabla 3. Incluya información sobre el color de la arena, tamaño de la partícula, perfil de la playa, vegetación superior en la playa, iluminación artificial, etc.

Punta Perlas:
Playa angosta de arena blanca, bastante [illegible]
[illegible] cerca de la costa

Tasbapauni:
[illegible] cerca de la costa, se encuentra en forma de [illegible] dicho aproximadamente antes de la línea de agua.

Laguna de Miskitania:
[illegible] cerca de la costa

Barra de Río Grande:
[illegible]
[illegible] hacia el [illegible]

Perezpaltan:
Playa amplia 30 pies desde la línea alta de marea [illegible] pies aproximadamente de plantas rosaceras

Walpasiksa:
Playa ancha no muy empinada, con [illegible] de arrastre con una 2da a 20-30 pies de [illegible]

Wounta:
Playa de unos 30 pies de ancho de los cuales [illegible] pies son buenos para anidar. Pequeños [illegible] detrás de la playa.
S.E. angosta llegando a Haulover

Haulover:
[illegible] por las mareas que penetran en la vegetación. Estuario detrás de la playa con manglares [illegible]

Barra de Unan:
[illegible] se encuentra playa, árboles en la línea de agua-cerca de [illegible] playa angosta de 2.3 Pies aproximadamente

Pto. Lempira:
Playas de suelo rojo, árboles dispersos, no hace playa

Barra Sandy:
[illegible] pies de ancho en algunas partes. [illegible] se encuentra de la playa, con agua estancada. Se pasan en [illegible] pies de arena blanca.

Plan Barra:
Playa [illegible] con cocoteros al borde del agua, con poca [illegible] angosta, triangle al borde del agua, marea [illegible] vegetación

Barra de Cocos:
[illegible] de 10 a 50 pies de anchura, con pocos [illegible] [illegible] son árboles, pero retirados de la costa.

Barra de Soy:
[illegible] playa con una línea de cocoteros [illegible] si viene y esta, dirección de el [illegible] vegetación y árboles de playa

Barra de Tuapi:
Playa de pocos pies de ancho, angosta el agua llega a los árboles, cocoteros en su base.

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANDO (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Barra Río Grande	52		
Punta Apiña	10		
Walpasiksa	10		
Wounta	14		
Haulover	21		
Barra de Unan	22		
Puerto Cabezas	16		
Barra Sawawala	22		
Punta Gorda	6		
Barra del Río	10		

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO.
Haga una lista de playas en secuencia geográfica. Incluya información adicional en la siguiente página.

* Abreviaciones para las especies

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	12	31	Junio - Julio - Sept.
Lepidochelys kempi			
Lepidochelys olivacea			

TABLA 4. CENSO DE NIDOS POR PLAYA [illegible]
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicado en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 1.

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	*I. D.
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
(Página suplementaria)

De cualquier información adicional disponible de los reconocimientos aéreos. Esta información debe incluir verificaciones terrestres si éstas se llevan a cabo.

[illegible]

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

FECHA	PLAYAS INSPECCIONADAS	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	*I. D.
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							
[illegible]	[illegible]							

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
Resuma el número estimado de hembras desovando de acuerdo a los años indicados y describa los métodos usados para efectuar estas estimaciones en la próxima página.

ESPECIES \ AÑO	1982	1981	1980	1979	1978	1977
Caretta caretta						
Chelonia mydas						
Dermochelys coriacea						
Eretmochelys imbricata		24	—	—	—	—
Lepidochelys kempi					—	—
Lepidochelys olivacea						

TABLA 6. ESTIMACIONES DE POBLACIONES DE HEMBRAS DESOVANDO.
(página suplementaria)

Favor de describir brevemente los métodos empleados para efectuar las estimaciones de la Tabla 6.

Simple observación directa en la playa de anidación durante la temporada de desove.

NOMBRE DEL PUERTO O LUGAR DE LLEGADA	ESPECIES CAPTURADAS (use abrev)	EQUIPO DE PESCA UTILIZADO	MESES DE ARRIBOS	NUMEROS Y PESOS (estimación)
1. Puerto Cabezas	Cm	Artesanal-Cayuco, arpon, Redes	Enero a Mayo	PC/mensual
2. Bluefields	Cm	Artesanal, Cayuco-arpon		
3.				
4.				
5.				
6.				
7.				
8.				

TABLA 11. PUNTOS DE LLEGADA PARA TORTUGAS Y SUS PRODUCTOS.

Abreviaciones de las especies:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys Kempi	Lk
Lepidochelys olivacea	Lo

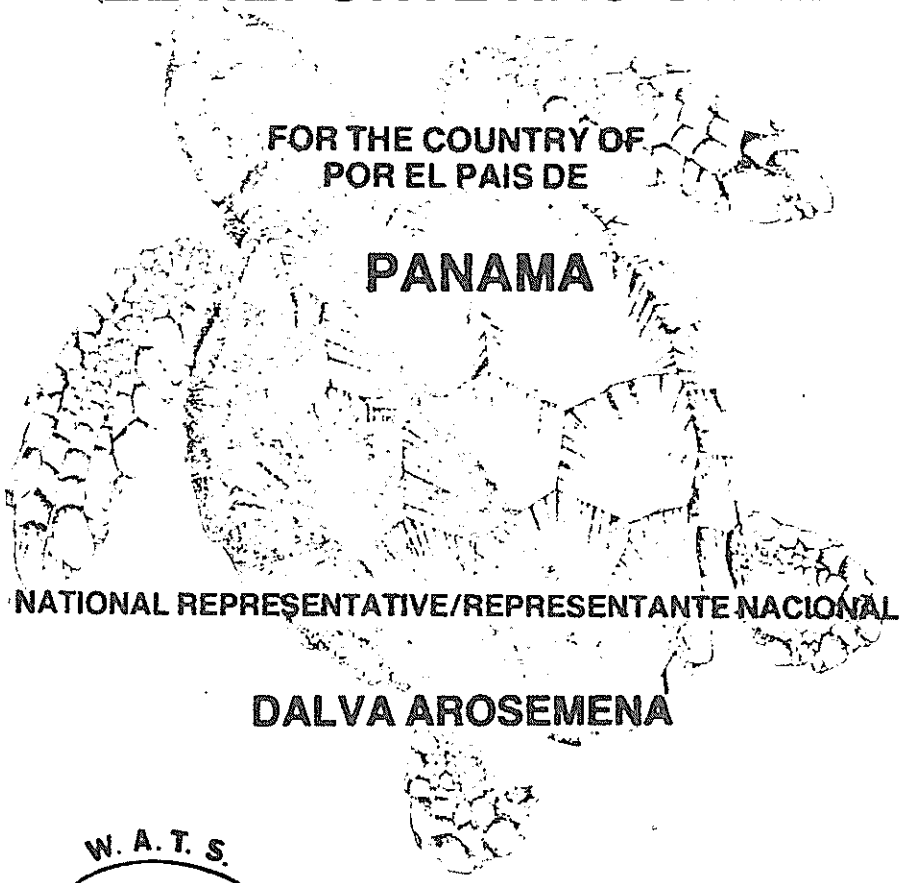
ESPECIES \ AÑO	1982	1981	1980	METODO USADO PARA LA DETERMINACION
Caretta caretta				
Chelonia mydas	720	—	—	Conversaciones personal con pescador y vendedor de tortuga en un placeres local y tipos de cabezas que en ocasiones venden a tortugas. diario: 3 semanales/30 meses/6 años
Dermochelys coriacea				
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLA 12. TOTAL ANUAL DE CAPTURAS DE TORTUGAS EN NUMEROS Y PESOS (N/Kg).
No incluye las tortugas capturadas incidentalmente en otro tipo de operación (e.g. pesca del camarón).

ESPECIES \ AÑO	1982	1981	1980	TIPO DE ACTIVIDAD PESQUERA Y METODO DE ESTIMACION
Caretta caretta				
Chelonia mydas	710 libras	1,910 libras	53,144 libras	Puerto Cabezas y Bluefields en base a [illegible]
Dermochelys coriacea				
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLA 13. Estimación de la Captura Incidental de Tortuga.
Dar estimaciones en números y/o pesos.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

PANAMA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

DALVA AROSEMENA

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

SIMPOSIO DE TORTUGAS DEL ATLANTICO OCCIDENTAL

San José, Costa Rica

Julio 1983

REPORTE NACIONAL PARA EL PAIS DE
Panamá

REPORTE NACIONAL PRESENTADO POR
D. H. Arosemena

El Representante Nacional

Dirección: Apartado 3318
Panama 4, Panamá

REPORTE NACIONAL PREPARADO POR
Biol. Epimenides Diaz

FECHA EN QUE SE PRESENTO: Nov. 30/82

Favor enviar antes del 1° de diciembre de 1982, al Secretario Asistente de COI para IOCARIBE, c/o UNDP, Apartado 4540, San José, Costa Rica.

PRODUCTOS DE LA TORTUGA	AÑO 1982	AÑO 1981	AÑO 1980	MERCADO ACTUAL Precio/unid.	METODO DE COLECTA DE LOS DATOS
No. de huevos	—	—			
Carne (Kg)	—			[illegible]	
Carapachos (Concha) número/peso	910 lbs.	1,040 lbs.	24 lbs	[illegible] lbs [illegible]	[illegible] pesqueras, volúmenes de exportaciones, [illegible] y sus derivados
Pieles número/peso					
Juveniles Disecados					
Número total de tortugas					

ESPECIES Eretmochelys [illegible]

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

PRODUCTOS DE LA TORTUGA	AÑO 1982	AÑO 1981	AÑO 1980	MERCADO ACTUAL Precio/unid.	METODO DE COLECTA DE LOS DATOS
No. de huevos					
Carne (Kg)			47 470 [illegible]	[illegible]	[illegible]
Carapachos (Concha) número/peso					
Pieles número/peso					
Juveniles Disecados					
Número total de tortugas			144 [illegible]	[illegible]	[illegible] pesqueras — volúmenes [illegible]

ESPECIES Chelonia [illegible]

Tabla 15. ESTADISTICAS OFICIALES SOBRE CAPTURA Y PRODUCCION DE TORTUGAS
Complete una de estas tablas para cada especie capturada por la industria pesquera.

INSTITUCION U ORGANIZACION NOMBRE Y DIRECCION	NO. DE MIEMBROS ACTIVS	ACTIVIDADES EN DESARROLLO
Instituto de Recursos naturales y del ambiente (Irena) Km 12½ carretera Norte, Managua, Nicaragua	9 Biologas	Ninguna
Instituto Nicaraguense de la Pesca (Inspesca) Km 4½ carretera Sur	8 personas	Ninguna

TABLA 18. INSTITUCIONES PUBLICAS Y PRIVADAS QUE SE PREOCUPAN DE LA CONSERVACION/MANEJO/UTILIZACION DE LA TORTUGA

NUMERO Y DIRECCION DE LA ORGANIZACION	PRESUPUESTO ASIGNADO A TORTUGAS	NO. DE PERSONAS ASIGNADAS A TORTUGAS	COMENTARIOS SOBRE LOS NIVELES DE CUMPLIMIENTO DE LAS REGULACIONES
Instituto Nicaraguense de la Pesca (Inspesca)	Ninguno	Ninguno	Ley de pesca - Contempla época de veda - se cumple parcialmente Inspectoría muy limitada en el área

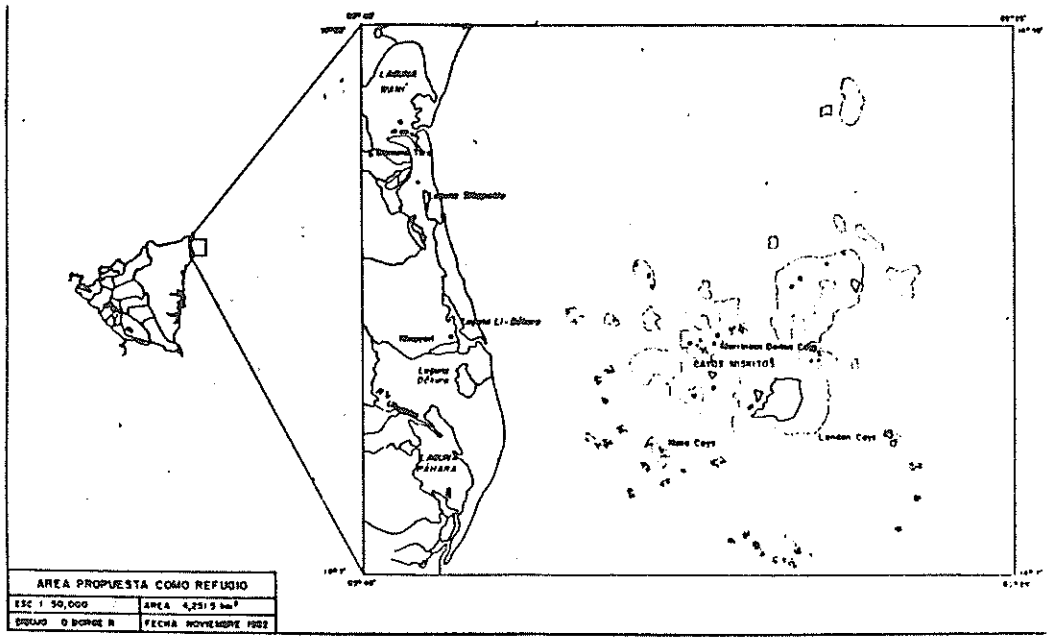
TABLA 20. AUTORIDAD REGULADORA
Indique todas las entidades con responsabilidad jurídica (e.g. Departamento de Pesca, Ministerios, Policía, Guardacostas, etc.)

TABLA 20. AUTORIDAD REGULADORA
(página suplementaria)

Favor de citar la legislación federal, regional y local concerniente al manejo y la conservación de la tortuga. Indique el título, la fecha y la intención declarada.

Decreto N° 557, Ley especial sobre explotación de la Pesca Capítulo II

Decreto N° 207 relativo a [illegible] en el Océano Pacífico



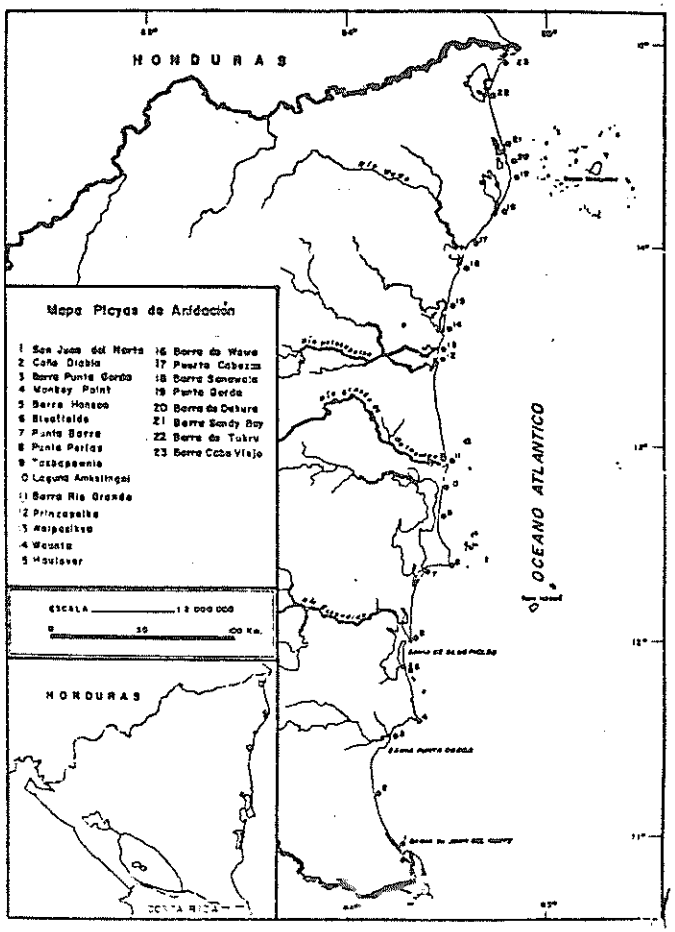
NICARAGUA

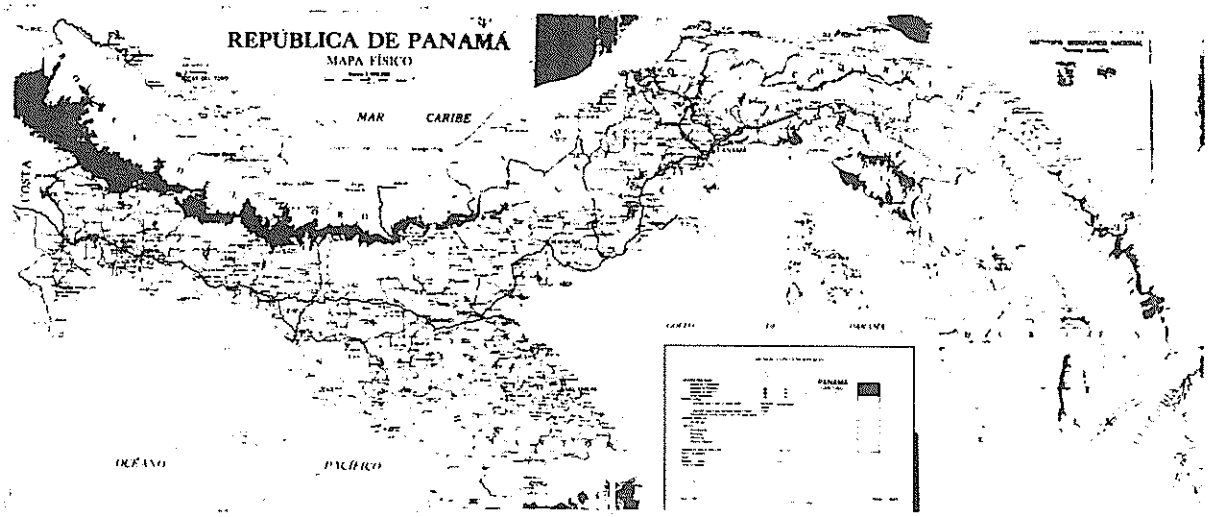
REPORTES Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

1. Archie Carr et al (1974, the Ecology, [illegible] turtles, 7 the West Caribbean Green turtle Colony
2. Bernard Peterson (1974) La explotación de la tortuga [illegible] en la Costa Este de Nicaragua
3. Bernard Peterson (1974) [illegible]
4. Bernard Peterson (1974, Green turtle of Tortuguero
5. [illegible]
6. Joanne A. Carr (1982) the Ecology of the Green turtle (Chelonia mydas) in Tortuguero,
7. Sea turtle Survey (1974, Nicaragua
8. Cifuentes (1975) Informe de [illegible] Bluefields de los Meses de Junio y Julio
9.

NICARAGUA




REPÚBLICA DE PANAMÁ
MAPA FÍSICO
MAR
CARIBE
OCEANO
PACIFICO

NOMBRE DE LA PLAYA (área)	LONGITUD EN KM	ESPECIES ANIDANTES (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Río Sixaola - Río Chiriquicito		D	Abril
Chiriquicito	—		
Río Chiriquicito - Punta del Drago	—	D	Abril
Punta del Drago - Norte de Puerto Viejo (Isla Colón)	—	D	Abril
Florio Beach (Isla Colón)		D	Abril
Wizards Beach (Bastimentos)		D	Abril
Drake Bay Beach (Bastimentos)		D	Abril
Long Beach (Bastimentos)		D	Abril
Río Chiriquí - Río Cañamoral	± 25	D	Abril, mayo
Cañamoral - Pedregal de Guabo	—	D	Abril
Río Chiriquí - Punta del Este del Río Basa la	—	D	Abril

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies
Caretta caretta
Chelonia mydas
Lepidochelys olivacea
Eretmochelys imbricata
Dermochelys coriacea

NOMBRE DE LA PLAYA (área)	LONGITUD EN KM	ESPECIES ANIDANTES (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Río Colorado - Punta Cahuita		D	Abril
Río Concepción - Río Guacimo	—	D	Abril
Este de Belén	—	D	Abril
Punta Platanal - Cocles del Norte	—	D	Abril
Este de Cocal		D	Abril
Gandoca		D	Abril
Salsa - Palmas Bellas		D	Abril
Almirantes		D	Abril
Cuango		D	Abril
Playa Chiquita		D	Abril

TABLA 3. INVENTARIO DE PLAYAS DE ANIDAMIENTO
Haga una lista de playas en secuencia geográfica.
Incluya información adicional en la siguiente página.

* Abreviaciones para las especies
Caretta caretta
Chelonia mydas
Lepidochelys olivacea
Eretmochelys imbricata
Dermochelys coriacea

Área 1 [illegible]

Longitud de la Costa*..... 1,670 Km

Área de la Plataforma Continental..... 11,943 Km²

Extensión de la Jurisdicción Marina:

Mar Territorial..... 320 Km

Zona Económica Extendida..... — Km

Jurisdicción de la Pesquería..... 320 Km

Otras (especificar)..... — Km

Tabla 1. INVENTARIO GEOGRAFICO

*La longitud de la costa es una medida de la frontera nacional hacia el mar de un país, por ejemplo, la distancia de frontera a frontera sobre la costa para un país costanero y la circunferencia en el caso de un país istmeño.

NOMBRE DE LA PLAYA	LONGITUD EN KM	ESPECIES ANIDANTES (use abreviaciones)*	MESES EN QUE SE HAN REGISTRADO ANIDAMIENTOS
Playa Colorada	± 9	D	Abril, agosto
Isla Grande - NW Río Naranjo		D	Abril
Naranjo		D	Abril
Frente al Aeropuerto Tuma River (East)		D	Abril
Isla la Aislada		D	Marzo, Abril
Río Frío - Río Agua		D	Abril

Nota: [illegible]

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	346		MAYO
Eretmochelys imbricata	17		MAYO
Lepidochelys kempi			
Lepidochelys olivacea			

TABLA 4. CENSO DE NIDOS POR PLAYA Playa Chiriquí
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

FECHA	PLAYAS INSPECCIONADAS (AREAS)	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	NO* I. D.
29/4/81	Rio San San - Rio Changuinola			32				
"	Rio Changuinola - Boca del Drago			111				
"	Norte de Lime Point (Isla Colón)			2				
"	Floris Beach (Isla Colón)			6				
"	Wizards Beach (Bastimentos)			3				
"	Dreffe Beach (Bastimentos)			1				
"	Long Beach (Bastimentos)			6				
"	Rio Chiriquí - Rio Cañaveral			198 190				
"	Peñasco de Guapán - Rio Chiriquí			4				
"	Este del Rio Pasaula			3				

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

ESPECIES	NUMERO DE NIDOS		MES DE RECOLECCION DE DATOS
	Nidos/Mes Promedio	Nidos/Temporada (Estimación)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	8		MARZO
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLA 4. CENSO DE NIDOS POR PLAYA Bahia Aglatomate
nombre

Favor de completar estas tablas para sumarizar el censo de datos para cada playa indicada en la Tabla 3. Numere las tablas secuencialmente (4-1; 4-2; 4-3; etc.) igual como están enumeradas en la Tabla 3.

FECHA	PLAYAS INSPECCIONADAS (AREAS)	NUMERO DE HUELLAS DE ANIDAMIENTO						
		Cc	Cm	D	E	Lk	Lo	NO* I. D.
29/4/81	Rio Calovebora - Santa Catalina			2				
"	Rio Concepción - Rio Guasaro			3				
"	Este de Belén			2				
"	Punta Platanal - Coclé del Norte			2				
"	Este de Icacal			1				
"	Gorgona			2				
"	Salud - Palmas Bellas			1				
"	Chagres			4				
28/4/81	Cuango			1				
"	Playa Chiquita			2				

TABLA 5. RESUMEN DE RECONOCIMIENTOS AEREOS
De cualquier otra información disponible de los reconocimientos aéreos. La información debe incluir observaciones de reconocimientos terrestres si éstos se llevan a cabo.

*I.D.=Individuos no identificados

Abreviaciones para cada especie:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

VISITA A	FECHA	PLAYA (S)	Cc	Cl	H	Nd	Ac	Lo	Nd
28/8/81		Playa Colorada			2				
"		Río Colorado - Río Frío Desembocadura			3				
"		Nueva Granada			1				
"		Boca de Sabalito Tortuguero (Río Sixaola)			5				
"		Barra Matina			10				
"		Río Pacuare - Río Parismina			109 - 136				

NOTA: Los huellas se refieren a caminos formados por tortugas, ya que en el informe de reconocimiento aéreo, la mayoría de anidaciones a dos especies

TABLA 7. ESTABLECIMIENTOS DE ARTESANIAS DE TORTUGAS

VISITA A (Localidad, nombre del establecimiento)	VISITADO (Sí o No)	ESPECIES ELABORADAS (Nombre común y científico)	OBSERVACIONES (Cantidad de artículos en existencia, precios, etc.)
Artesanías de Chiquero, Puerto Limón		Cc	Concha
Bocas		Cmy	Concha
Isla Uvita, Bahía de San Blas		E. Cor - Dc	Concha, cuero

Favor de suplir cualquier dato adicional sobre productos de tortugas en su país. Incluya productos elaborados como los derivados del carapacho (concha), etc., si tales datos se poseen.

Exportaciones de carey en la República de Panamá Años 1967-1981 (en libras inglesas)

Año	Peso Neto	Lugares de destino	Valor en dólares
1967	3.0	Japón	35.750
1968	4.9	Japón	67.655
1969	5.5	Japón	72.173
1970	8.1	Japón	134.767
1971	5.9	Japón	115.651
1972	10.9	Japón, Italia	252.079
1973	11.8	Japón, Países Bajos	430.577
1974	6.8	Japón	252.675
1975	8.7	Japón	250.380
1976	6.1	Japón	327.100
1977	3.5	Japón	156.975
1978	2.7	Japón	152.182
1979	2.7	Japón	438.795
1980	1.8	Japón	300.000
1981	1.3	Japón	120.000

Fuente: Departamento de Comercio Exterior - Contraloría General de la República

TABLA 20. AUTORIDAD REGULADORA
(página suplementaria)

Favor de citar la legislación federal, regional y local concerniente al manejo y la conservación de la tortuga. Indique el título, la fecha y la intención declarada.

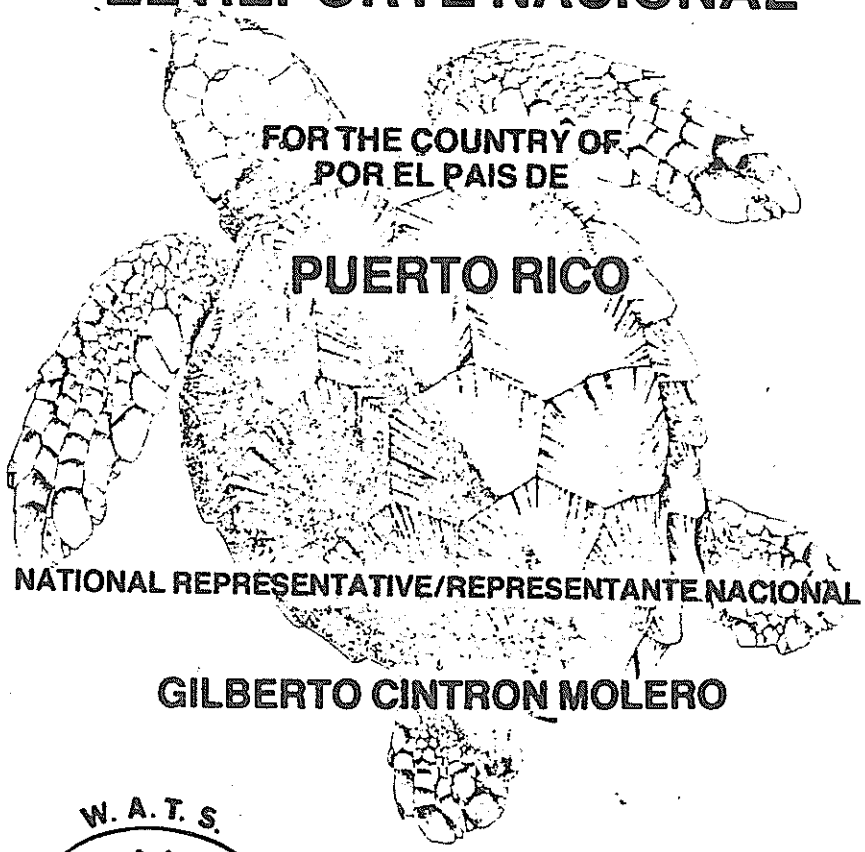
- Decreto Ejecutivo Nº 104, del 9 de sept. 1980 Por el cual se adiciona el Decreto Ejecutivo Nº 23 del 30 de enero de 1967.
- Que las tortugas marinas constituyen una fuente importante de proteínas para la población rural del país, que es la más vulnerable y explotada para los precios altos y futuros decrecimientos.
  Que es necesario la captura de tortugas marinas y la recolección de sus huevos durante la época de reproducción, ya que en la existencia normal de estas especies
- Resolución Nº DAR-002-80, del 20 de enero de 1980.
  Declara a las tortugas marinas en peligro de extinción y con urgente necesidad de protección, entre otras especies.
- Decreto Nº 23 del 30 de enero de 1967. Por el cual se dictan medidas de carácter urgente para la protección y conservación de la fauna silvestre

REPORTES Y PUBLICACIONES

La siguiente es una lista de los informes y publicaciones principales relacionados con los recursos nacionales de tortuga. Dé el nombre del autor, la fecha de publicación, título y editor.

T. Ri...a, I. (1961) The status of sea turtle conservation in the Western Central Atlantic. World Study 7.
T. Carr et al 1982 Surveys of sea turtle populations and habitat in the Western Atlantic. NOAA-TM-NMFS-SEFSC-82.
T. Comisión Nacional de Protección de la Fauna Silvestre. 1970. Informe de visita a la República de Panamá del Sr. ... relacionado con la captura de tortugas.
T. McPhee, D.F. 1980 Nesting activity of the loggerhead turtle (Caretta caretta) in the Caribbean coast of Panama. Bowdoin Coast Laboratory, Bowdoin College, Brunswick, Maine 04011, U.S.A.
T. Ruiz, R.A. (en preparación) La tortuga marina Dermochelys coriacea en Playa Kina, Isla Colón (Bahía de Almirante).
T. Tovar, D. 1971 La anidación de las tortugas marinas en la costa Atlántica de Panamá (Informe interno - Resumen).

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

PUERTO RICO

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

GILBERTO CINTRON MOLERO

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

Puerto Rico

II

NATIONAL REPORT PRESENTED BY

Gilberto Cintrón
The National Representative

Address: Depto. de Recursos Naturales
Box 5887, Pta. de Tierra Station
San Juan, P.R. 00906

NATIONAL REPORT PREPARED BY

Juan G. González, Ph.D.
Department of Marine Sciences
University of Puerto Rico
Mayaguez, Puerto Rico 00708

DATE SUBMITTED: July 11, 1983

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country: Commonwealth of Puerto Rico

Length of Coastline
(Total including adjacent islands) ..... 914 km

Length of Coastline Segments

Main Island

North coast	274
South coast	3[illegible]
East coast	9[illegible]
West coast	8[illegible]
SUBTOTAL	721 km

Adjacent Islands

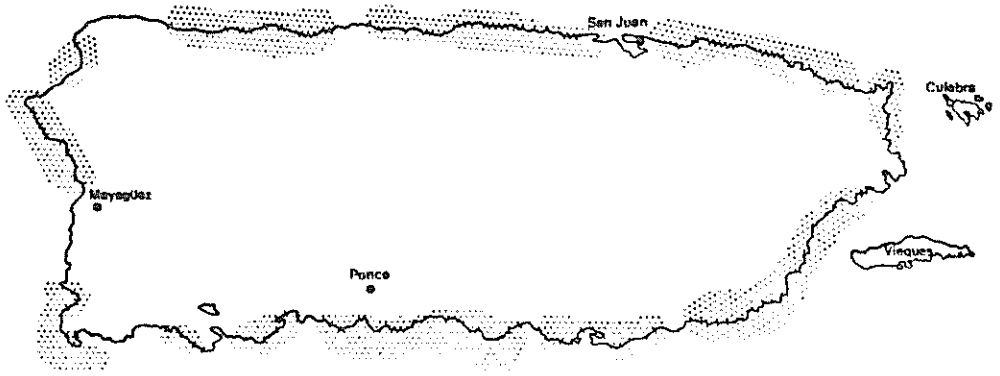
Vieques	110
Mona	53
Culebra	3[illegible]
SUBTOTAL	193 km

Km^2 of insular shelf area = 7203 km^2
(includes Puerto Rico and Virgin Islands)

Km^2 of insular shelf area
(Puerto Rico only) = 5282 km^2

Seaward Extent of Jurisdictions

Territorial Sea	16.7 km
Extended Economic Zone	322 km
Fisheries Jurisdiction	322 km



Reported turtle nesting beaches in the main island of Puerto Rico. All sandy beaches are potentially turtle nesting sites. Although not shown on this map active nesting beaches occur in Culebra, Culebrita and eastern Vieques. North coast beaches are subjected to higher wave energies, are generally steeper and coarser grained than those of the other coasts.

TABLE 2: COASTAL HABITAT INVENTORY OF MARINE SHORELINE

MARINE SHORELINE CHARACTERISTICS	% OF SHORELINE: UNDEVELOPED	DEVELOPED	TOTAL
1. SAND BEACH (TOTAL)			200.5
A. HIGH ENERGY			
B. LOW ENERGY			
2. REEF (EXPOSED)			
3. ROCKS			
4. CLIFFS			120.7
5. VEGETATION (TOTAL)			355.3
A. VINES			3.3
B. GRASSES			72.5
C. MANGROVES			147.5
D. COCONUT TREES			35.1
E. OTHER TREES AND SHRUBS			129.14
F. MARSHES			11.8
6. MOUTHS OF LAGOONS, RIVERS, CANALS			4.0
7. TOTAL SHORELINE			727.9

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Beach E. of Punta Arenas, Vieques	1/2 km	D.c.?	May
2. Green Beach, Vieques	1/2 km.	3 E.i.	May
3. Yellow Beach, Vieques	1 km.	D.c., C.m., 2?	May
4. Turtle Beach, Vieques	1/3 km.	2 D.c., 3?	May
5. 2nd beach S.E. of Punta Salinas, Vieques	1/4 km.	?	May
6. 2nd beach west of Punta Icacos, Vieques	1/4 km.	D.c.	May
7. Purple Beach, Vieques	1 1/4 km.	D.c., ?	May
8. Playa Brava, Culebra	1 1/2 km.	~ 20 D.c., C.m. ?	May, June
9. Playa Resaca, Culebra	1 km.	~ 8 D.c.	May, June
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Playa Mujeres (Carite) de Isla Mona	1.4	D.c.	April
2. Playa Mujeres (Carite de Isla Mona	"	D.c	April
3. Playa Sardinera de Isla Mona	1.0	E.i.	April
4. Playa Sardinera de Isla Mona	"	E.i.	April
5. *Playa Punta Arena	1.0	E.i.**	October***
6. *Tablonal de Aguada	1.0	E.i**	January***
7. Playa Jobos de Isabela	2.5	D.c.	April
8. *Playa Jobos de Isabela	2.5	E.i. ?	April
9. *Piñones	8.0	E.i.	September or October***
10. Playa Larga N.E. of Pta. Tuna	4.0	D.c.	April

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

*Information from outside sources
**Inferred from nesting season
***Inferred from date of hatching

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

A.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. West beaches of Culebrita Is.		E	11
2. North Beach, Culebrita Is.		E	11
3. South Beach Culebrita Is.		E	11
4. Northwest Beach Culebrita Is.		E	11
5. South Beach, Cayo Norte, Culebra Is.		E	11
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

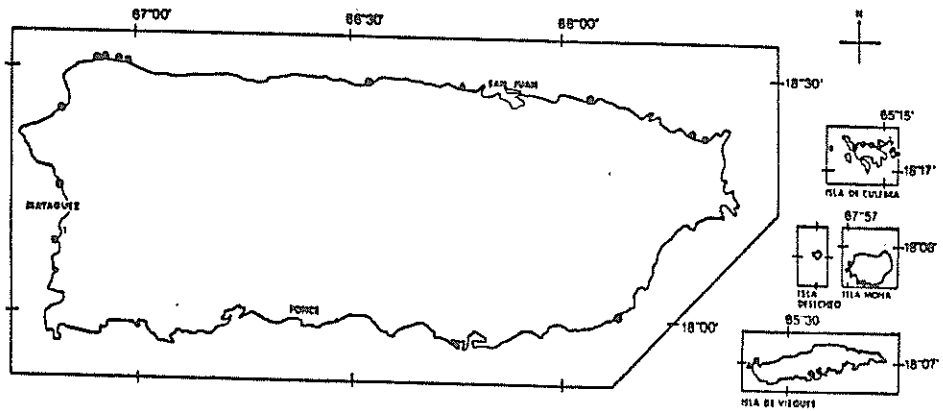
B.

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Mona Island	8 km	E	10
2. Culebra Island		D	
3. Vieques Island		D, E, Cm.	1
4. Playa Resaca, Culebra Is		E	1
5. Playa Brava, Culebra Is.		E	1
6. Playa Larga, Culebra Is.		E	1
7. West beach of Isla Culebrita, Culebrita Island		E	1
8. North Beach, Culebrita		E	1
9. Playa Resaca, Culebrita		E	11
10. Playa Brava, Culebra Is.		E	11

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E



⊙ Beaches where turtle tracks or hatchlings have been encountered since October 1982. Search effort was not equal for all areas.

▲ Only false crawls found.

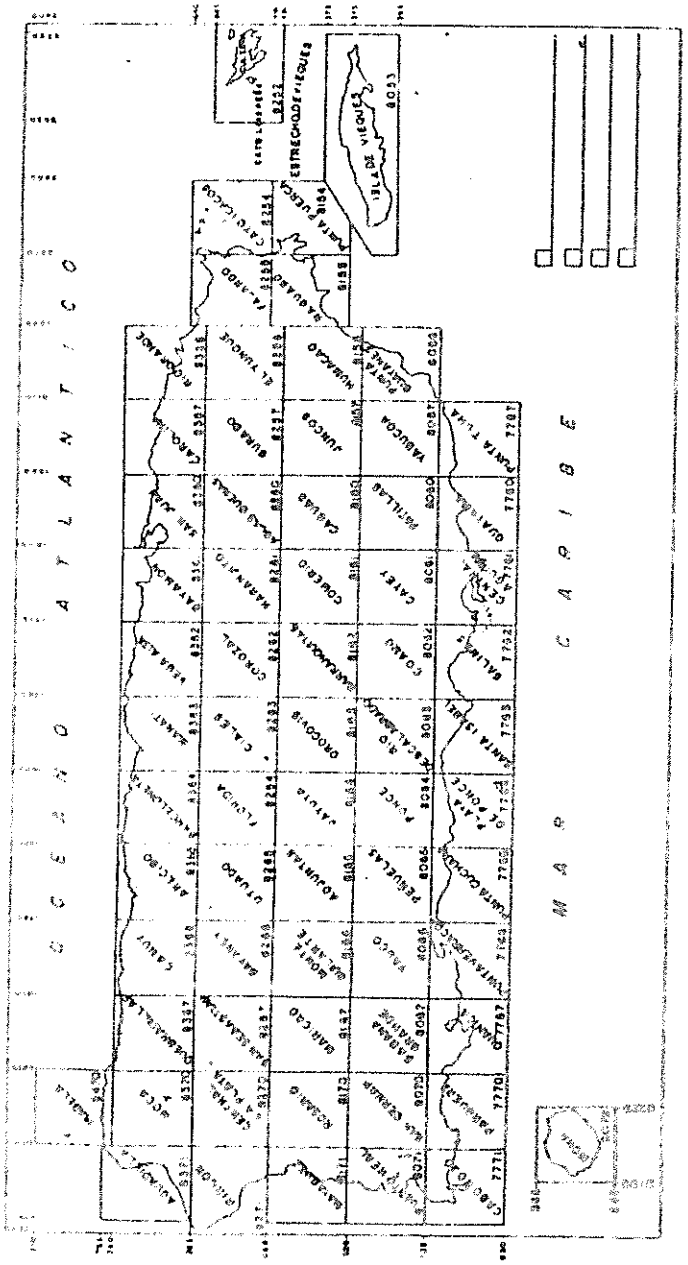


Table 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

1. Beach E. of Punta Arenas, Vieques

The beach is about 10 m. wide and fairly flat. The sand is fine and gray. The beach is bordered by mangroves, vines and palms. There were many cattle tracks on the beach. An old 3 m. wide pit was found close to the high tide line.

2. Green Beach, Vieques

The beach is 8-13 m. wide and fairly flat. The sand is light and of medium grain. The backbeach area has scattered 1/3 m. high rocks and then a 3 m. hill that only has vegetation on top. This consists of grasses, and sea grapes. The water has some unexposed beach rock. The three tracks found were only 35.5 cm. wide and did not have nest pits.

3. Yellow Beach, Vieques

The beach is 20-30 m. wide and has two 1/2 m. berms with flat beach between them. Sand is fine and gray. Vegetation consists of grasses, vines, sea grapes, acacia, giant milkweed, and some mangroves. One track was fresh from that night, but had been erased by concerned locals. It could still be measured, and was about 104 cm. The locals seemed to know about tracks, and volunteered that they were parallel and made by a green turtle. No evidence of a pit remained, and there probably wasn't one to start out with. The other three pits were older, and at least one was a Dermochelys, and one was poached.

4. Turtle Beach, Vieques

This beach was checked by boat. There were 5 old pits and at least two were big enough to be Dermochelys.

5. 2nd beach S.E. of Punta Salinas, Vieques

One old pit nose on this beach by boat.

6. 3rd beach W. of Punta Icacos, Vieques

Saw one fresh track and nest by boat, from that night.

7. Vacuna Beach, Vieques

The beach is about 15 m. wide with a 30° slope up to a low berm and then a relatively flat backbeach area. The sand is light and of medium grain. The vegetation consists of giant milkweed, vines, grasses, sea grape, acacia, and some coco palms. A fair amount of Syringodium was washed up on beach. Two pits were found, both poached, and one was large enough to be Dermochelys. Saw some men on horseback with a dog.

Table 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

8. Playa Brava, Culebra

The beach is about 25 m. wide with a 30° slope up to a small berm, and then slopes gently to a second berm 1-1 1/2 m. high at the vegetation line. The sand is light, of medium grain and very soft. The vegetation consists of vines, grasses, sea grapes, giant milkweed, acacia, and half of the beach has palms 100 m. behind.

This beach was covered with old tracks and pits and it was impossible to tell how many had been made since the aerial survey of 16 May 1981. Only pits with tracks still visible were counted to get the figure of 20, since there were probably made within the last 18 days. The smallest set of tracks was 142 cm and was listed as a possible Chelonia mydas. The pit was farther into the vegetation than most, and the track was one of the few that crossed itself for any distance. Broken eggshells or yolkless eggs were found at 4 pits, signifying that these had been poached (unless the turtle had dropped these after covering). However, there were other signs of poaching activity and at least several others showed these signs to varying degrees.

9. Playa Resaca, Culebra

This beach is about 25 m. wide and has 2 berms. The 1st berm is steep in some places, and the second gently slopes up 1 m. with fairly flat beach between them. The sand is light, of medium grain, and soft. Eight tracks were still visible on the beach, but the wind was rapidly erasing them. Eggshells were found at three pits, but many more looked disturbed.

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

1) Playa Mujeres (Carite) de Mona

The beach is about 40 m. wide with a 30°slope from the water up to a 1 ft. berm, and then has a fairly flat backshore area, bordered by Australian pines. The soft carbonate sand is white and coarse. There are no buildings here, but a diurnally used landing strip is nearby.

2) Playa Sardinera de Mona

The beach is about 7 m. wide with a 40-50°slope, and with soft carbonate sand. The backbeach vegetation consists mainly of bay cedar averaging 1 m. high, and 150 m. behind this are Australian pines. There are no buildings where the turtles came up, but there are many only 1/2 kilometer away Immediately offshore are exposed reefs.

3) Playa Pta. Arena

The beach is about 7-8 m. wide with a slight slope. The sand is light & of medium grain. There is a 5 story condominium and many houses and lights on the beach. The vegetation consists mainly of coco palms.

4) Tablonal de Aguada

The beach is about 8 m. wide and fairly flat. The sand is light, of medium grain, and there is beach rock offshore. There are many 3 m. high rocks in the backbeach area, with mainly coco palms and West Indian almond trees behind them. There are scattered houses in the area.

5) Playa Jobos de Isabela

The beach is about 10 m. wide with a 20°slope up to the dunelike. The sand is light and of medium grain. The dunes are fairly high in some places and the vegetation is mainly sea grapes. The Dermochelys laid very close to a street light, in an area where there are many houses on the dunes.

6) Piñones

The beach is 10 m. wide and the slope varies from 0-30°, with a .1 m. berm in some places. The sand is white and semi-coarse. The vegetation is mainly coco palms and Australian pines. The road is close to the beach and there are scattered houses.

7) Playa Larga N.E. of Pta. Tuna

This beach is about 20 m. wide with a 30°slope coming out of the water and then a gradual slope to the vegetation. The sand is light & of medium grain. The vegetation is mainly coco palms and sea grapes.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			24 May 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH Beach East of Punta Arenas , Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			24 May 1983
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH Green Beach, Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			26 May 1983
Dermochelys coriacea			26 May 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - ___ NESTING CENSUS FOR BEACH Yellow Beach,Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			27 May 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 4 NESTING CENSUS FOR BEACH Turtle Beach, Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			27 May 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5 NESTING CENSUS FOR BEACH 2nd beach S.E. of Punta Salinas, Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			27 May 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH 2nd beach to W. of Punta Icacos, Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			26 May 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7 NESTING CENSUS FOR BEACH Purple Beach, Vieques
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			3 June 1983
Dermochelys coriacea	1-2?		3 June 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH Playa Brava, Culebra
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	1?		4 June 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH Playa Resaca, Culebra
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			12 April 1983 12 April 1983
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1,2 NESTING CENSUS FOR BEACH Playa Mujeres de Isla Mona
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			15 April 1983
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 3, 4 NESTING CENSUS FOR BEACH Playa Sardinera de Isla Mona
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			(hatched) 6 January 1983
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5 NESTING CENSUS FOR BEACH Playa Punta Arena
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			(hatched) 9 March 1983
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH Tablonal de Aguada
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			10 April 1983
Eretmochelys imbricata			15 April 1983
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7,8 NESTING CENSUS FOR BEACH Playa Jobos de Isabela
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			(hatched) 26 November 1983
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH Piñones
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			1 May 1993
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 10 NESTING CENSUS FOR BEACH Playa Larga, N.E. of Punta Tuna
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		3	Nesting season (1974)
Dermochelys coriacea			
Eretmochelys imbricata		13 P.S. 8 P.B. 1- U.C.	May-Oct. 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH Playa Bardinera (P.S. (Uvero Carabinero (U.C., Playa Brava (P.B) Playa Pájaros (P.P.)
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea		4	1974
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH Culebra Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		3	May 1974-Feb., 1975
Dermochelys coriacea			
Eretmochelys imbricata		3-P.S. 20-P.S. 105-U.C. 33-U.C. 12 P.B. 31 P.B. 60 others	Nov.-1973 Jun 74-Jan. 1975 " " " " " " " "
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1B NESTING CENSUS FOR BEACH Playa Bardinera (P.S.), Uvero Carabinero (U.C.), Playa Brava (P.B.) Playa Pájaros (P.P.)
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		4	May-Sept 1981
Dermochelys coriacea		9/26	May 6-June 6, 1978 April 1981-Oct 1981
Eretmochelys imbricata		2/23	May 6-June 6, 1978 Dec. 1980-Oct. 1981
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 3B NESTING CENSUS FOR BEACH Vieques Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas		1	May-June, 1977
Dermochelys coriacea		2	May-June, 1977
Eretmochelys imbricata		4,3	June 1975, Jul. 1976-June 1977
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 4B (4-9B) NESTING CENSUS FOR BEACH Playa Resaca, Culebra Is., P. R.
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3	May-June 1977
Chelonia mydas		3	May 6-June 10, 1977
Dermochelys coriacea		4,1	June 1975, July 1976-June 1977
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5B (4-10B) NESTING CENSUS FOR BEACH Playa Brava, Culebra Is., P. R.
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		3, 0	June 1975 July 1976, June 1977
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6B NESTING CENSUS FOR BEACH Playa Larga, Culebra Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		MONTH OF DATA COLLECTION
	Nests/Month (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		3, 15	June 1975 July 1976-June 1977
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7B NESTING CENSUS FOR BEACH West Beach of Isla Culebrita
4-1A (name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		3, 1 -from NB 0.2- from SB 0.4- from NWB C.N.	June 1975 July 1976-June 1977
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 -NB+2A NESTING CENSUS FOR BEACH North Beach (NB), South Beach (SB), Northwest Beach (NWB), South Beach, Cayo Norte (S.B, C.N.)
4-3A for SB
4-4A for NWB (name)
4-5A for SB, C.N.

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

6/3/83 A fairly large track, with pit in the middle of the beach. No ground truth made.

6/8/83 Pilot only had time to check these four known nesting beaches. No tracks were seen.

6/17/83 Many pits were seen from the air at Playas Añasco and Maní, but a ground truth on 19 June identified only 6 as probable sea turtle nests. The others were made for sand excavation. Four of the pits were made near a large sandy point at the southern end of Playa Añasco, which is the northern end of Playa Maní. These two beaches form one contiguous sandy stretch, except for two small rivers that meet the sea at the sandy point. The beach is very wide at the point , has many tire tracks, and has a large sand excavation project going on in the backbeach area. Large heavy equipment is used for the sand mining. These four pits were fairly large and only one had an identifiable track.

There were two more pits at Playa Maní, of which only one had a barely measurable track about 142 cm., borderline between C. mydas and Dermochelys. The other one was close to a residential area where a fisherman said a hawksbill had laid 3 weeks ago. There are many houses close to the beach at Maní.

6/17/83 There were two old pits at two of the pocket beaches closest to Playa Uvero and one old one at Playa Carabinero. Since the water in front of the pocket beaches has very shallow or exposed reef, these pits were most likely made by Eretmochelys.

6/17/83 Photos were taken of the three elongated pits on Playa Mujeres. Two were wide enough to be Dermochelys when compared to tire tracks and footprints. The third one resembled the others closely, but was smaller.

6/17/83 Two old large pit, similar to those on Playa Mujeres.

6/26/83 One old medium sized pit, with part of track still visible.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I, D.
6/3/83	Most of the Northern beaches between Playa Jobos and Playa El Convento							
6/3/83	Secret spot beach (3rd beach west of Punta Sardina, Isabela.							1
6/883	Playa east of town of Luquillo, Playa El Convento, Piñones, and Playa Tortuguero.							
6/17/83	Playa Añasco, Playa Maní, and all beaches on Mona Island							
6/17/83	Playa Añasco and Playa Maní				1			5
6/17/83	Pocket beaches of Uvero, Mona				27			
6/17/83	Playa Carabinero, Mona							1
6/17/83	Playa Mujeres, Mona			2				1
6/17/83	Playa Punta Arena, Mona							2
6/26/83	Beaches from Borinquen Beach to Guajataca Beach							

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO T. D.
3/26/83	Beach east of Punta Sardina, Isabela							1

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea Dc
Eretmochelys imbricata Ei
Lepidochelys kempi Lk

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO T. D.
4/11/83	Most of the northern beaches between Playa Jobos and Las Colinas (didn't cover between Playa Uvero & Luquillo							
4/22/83	Most of the beaches from Rincón north to San Juan							
4/22/83	Playa Isabela			1				
4/22/83	Playa Tortuguero							1
4/29/83	The Northern beaches between Punta Borinquen and Punta Medio Mundo.							
4/29/83	Playa Tortuguero			1 ?				
4/29/83	Playa east of town of Luquillo			1				
4/29/83	Playa el Convento			1				
5/4/83	Most of Beaches between Survival Beach (in Aguadilla) South to Ponce. All the beaches of Mona.							
5/4/83	Playa Mujeres de Mona			1 ?				

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea Dc
Eretmochelys imbricata Ei
Lepidochelys kempi Lk

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO T. D.
5/4/83	Playa Tres Hermanos		1					4
5/4/83	Playa Córcega							1
5/16/83	The large eastern & N western beaches of Culebrita, the & northern beaches of Culebra, & Almost all the beaches between Playa el Convento & Survival Beach (Aguadilla)							
5/16/83	Playa Larga de Culebra			3				
5/16/83	Playa Brava de Culebra			17?				
5/16/83	Playa Resaca de Culebra			19 ?				
5/16/83	Playa Flamingo de Culebra		1 ?	2				
5/16/83	Playa el Convento			6 ?				
5/16/83	Playa east of town of Luquillo			4				
5/15/83	Piñones							4

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea Dc
Eretmochelys imbricata Ei
Lepidochelys kempi Lk

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO T. D.
5/16/83	Sabana Seca							1
5/15/83	Most of the beaches from Playa Jobos to San Juan							

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea Dc
Eretmochelys imbricata Ei
Lepidochelys kempi Lk

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

The aerial surveys were conducted with one observer/recorder in an 8 seater Sikorsky helicopter that belonged to the U. S. Coast Guard. The observations were usually made from the seat next to the large opening on the side of the helicopter, and as close to the beach as possible. Flying altitude was between 200-300 ft. and speed varied from 95-110 knots. Flights were made at all hours of the day.

4/11/83 The only observations was of the pit of the turtle that laid at Playa Jobos on 4/10/83.

4/22/83 A ground truth was made at Playa Isabela. The beach is about 2 Km. long and 20 m. wide, starts out flat, and then slopes 30°up to sand dunes. The sand is light and of medium grain. The dunes are covered with grasses and about 100 m. behind are some coco palms. It was raining lightly, but the track seemed fairly fresh, probably from last night. There were footprints in the area and a broken eggshell was found, implying the nest had been poached. Afterwards two men were seen trying to dig up the nest again.

4/22/83 The beach at Playa Tortuguero is about 2 km. long and 13-26 m. wide. The western end is very sloped and has a large amount of beach rock. The eastern end is fairly flat with very soft white sand. The vegetation consists of coco palms and sea grapes. The road is close to the beach and there are few buildings on the eastern end. The track was fairly large and the turtle probably didn't lay, since a pit was not visible.

4/29/83 The playa east of the town of Luquillo, and Playa El Convento are really one large stretch of beach about 7 km. long and over 30 m. wide. The beach is fairly flat and the sand is orange colored. There are sand dunes, and the vegetation is mainly sea grape and coco palms. Although the beach has no buildings or roads behind it, it is frequented by many off-road vehicles.

5/4/83 A ground truth was made at Playa Tres Hermanos. The beach is about 2 km. long but is continuous with Playa Añasco which is several kilometers longer. It is about 12 m. wide and has a slight slope. The sand is light & of medium grain, and has much debris, such as bamboo, washed up on it from heavy rains a few weeks earlier. The vegetation consists of grasses, vines, coco palms and West Indian almond trees. There is a housing area to the north, and the public beach of Añasco to the south.

Five old pits were found on the beach and only one still had identifiable tracks. This nest also had footprints and fresh sand dug up in the center. Many people frequent this beach.

5/4/83 The beach at Playa Córrega is about 2 km. long and varies from 7-20 m wide. The sand is gray and of medium grain, and in some areas there is a 1 m. berm. The vegetation consists of vines, coco palms and West Indian almond trees. There are no houses here, but there is a public beach area, and there are many buildings to the north and south.

TABLE 5. AERIAL BEACH SURVEY SUMMARY (Con'd)
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

5/16/83 The beaches of Culebra have not been visited yet, and there were so many tracks that it could neither be determined if they really all were Dermochelys, nor if any were false crawls. Playas Larga, Brava and Resaca each had at least one very fresh track. Playa Flamingo had one large old track that had a different kind of tail marking and could have been a Chelonia mydas. It rained here earlier in the day.

5/16/83 At Playa El Convento, again there were too many tracks to be sure all were Dermochelys.

5/16/83 The beach at Piñonas is 9.5 km. long, but 1.5 km. at the western end has beach rock and some jetty type rocks added by man. The rest of the beach varies from 10-30 m. wide, and from flat to a 30°slope and a 1 m. berm. The sand is white and semi-coarse, and there are sand dunes. The vegetation is mainly coco palm and Australian pines. A road runs along the entire length of the beach, but houses are sparse. In the aerial survey, all that remained to be seen were four large, old pits.

5/16/83 The beach at Sabana Seca is about 6 km. long and 30 km. wide, some areas are steep. The sand is soft, black and of fine grain. The vegetation is mainly coco palm and sea grapes. Many off-road vehicles are used here. A large false crawl was seen on the eastern end, where there are many houses.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta						
Chelonia mydas		4				4
Dermochelys coriacea		26			9	5
Eretmochelys imbricata	22*	23			2	33
Lepidochelys kempi						
Leipdochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

* Only 3 days of survey from Oct. 27-29, 1982.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Estimation of population of nesting females was done by adding results of Table 4 since these represent really individual tracks and not nests (which can be more than one per track). An overestimation could result from the fact that 2 or more tracks could have been from the same turtle.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Bahía Playa Blanca Vieques Island		C.M.	Observation of immature turtles
2. Culebra Island, reefs		D-1 Z-5R C.M.-131 C.C.- 1	Observation of mature & immature turtles
3. Monito Island		Z-10	Observation of 10 turtles in one day (29 Oct. 1982)
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. Abbreviations)	COMMENTS
	October 1982	L.O. 1	4-5 miles offshore west of Punta Salinas

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
[illegible]	Lk

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	E	Wild pigs and wild cats	
Hatchlings	E	Birds: Pearly-Eyed Thrasher, Yellow-Crowned Night Heron, frigate birds, feral pigs	
Juveniles		Predators at sea	
Adults (in water)	E	Human predation	
Nesting females	E	" "	

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Department of Natural Resources Box 5887, Puerta de Tierra, P.R. 00906		
Caribbean Fishery Management and Council Suite 1108 Banco de Ponce Building Hato Rey, P. R. 00918		
U. S. Fish and Wildlife Service Box 3003, Marine Station Mayaguez, Puerto Rico 00709		

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Department of Natural Resources Commonwealth of P. R. Box 5887 Puerta de Tierra, P.R. 00906			
U. S. Fish & Wildlife Service Law Enforcement Division Room 418 Marine Sciences, Geology and Physics, Bldg, UPR, Mayaguez, P.R.			

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Thurston, J. and W. E. Rainey, 1973. Concentrated nesting of the Hawksbill Sea Turtle (Eretmochelys imbricata) on Mona Island, West Indies. Department of Natural Resources.
2. Thurston, J. and T. A. Wiewandt. 1975. Management of Sea Turtles on Mona Island. Department of Natural Resources.
3. Thurston, J. 1975. The green turtle, Chelonia mydas, at Mona Island and the hatchling green turtle project. Department of Natural Resources.
4. Carr, T. 1974. Marine turtles at Culebra Island. Dept. Nat. Res.
5. Pritchard, P.C. H. and T.H.Stubbs. 1981. Vieques Island Sea Turtle Study.
6. Cintrón, C. y J. Thurston. 1977. Las Tortugas marinas de P. R., Department of Natural Resources.
7. Thurston, J. 1975. Observations on the ecology of the Hawksbill turtle, Eretmochelys imbricata, on Mona Island, P. R., Department of Natural Resources.
8. Caldwell, D. K. 1969. Pacific Ridley Sea Turtle, Lepidochelys olivacea, in P.R. Bull. So. Calif. Acad. Sci. 68 (2): 112.
9. Carr, T. 1978. A survey of Marine Turtles at Vieques Island. Department of Marine Sciences.
10. Carr, T. 1978. The Marine Turtles and terrestrial reptiles of Culebra Island. U. S. Fish & Wildlife.
11. Carr, A., A. Meyan, J. Mortimer, K. Bjorndal and T. Carr. Surveys of Sea Turtles populations and habitats in the Western Atlantic. NOAA

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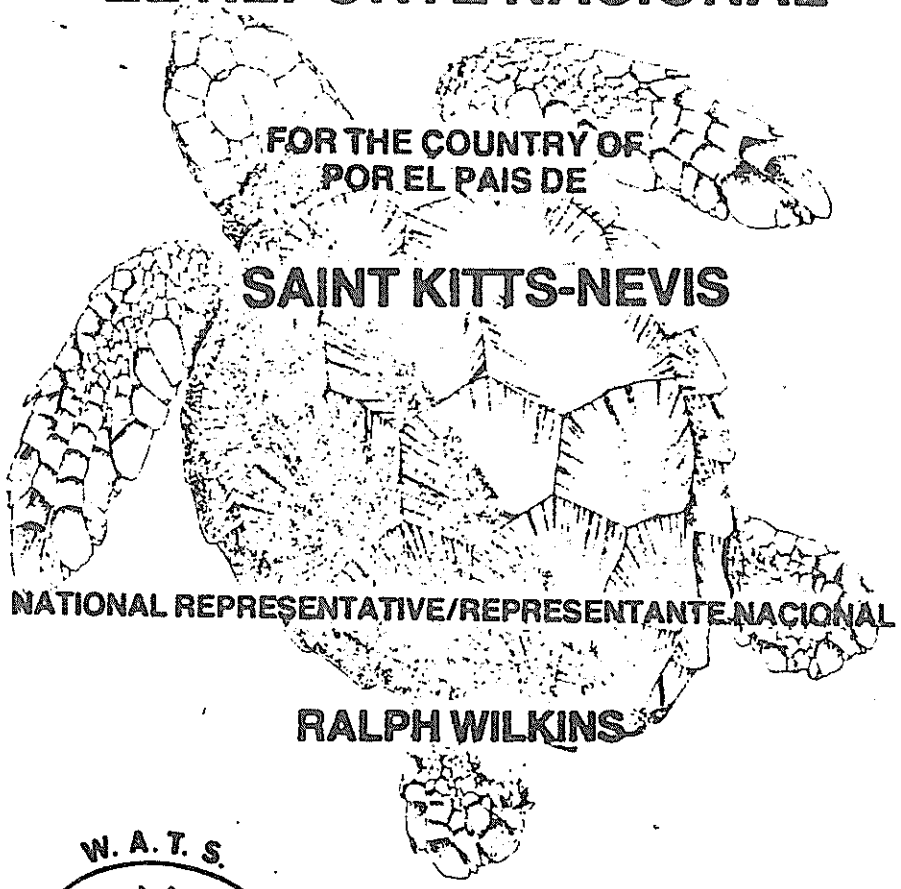

FOR THE COUNTRY OF
POR EL PAIS DE

SAINT KITTS-NEVIS

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

RALPH WILKINS

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

St Kitts/Nevis

NATIONAL REPORT PRESENTED BY

Ralph Wilkins
The National Representative

Address: Fisheries Division
Ministry of Agriculture
P.O. Box 186, Basseterre
St Kitts, W.I.

NATIONAL REPORT PREPARED BY

Ralph Wilkins and Anne Meylan

DATE SUBMITTED: 1st June 1983

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, & UNDP, Apartado 4540, San Jose, Costa Rica.

Country St. Kitts & St. Christopher / Nevis

Length of Coastline* 3.0 S. Nov. Scale in Miles 1:1 000 000 Km 102.5 KM

Km² of Continental Shelf Area ..... Km

Seaward Extent of Jurisdiction:

Territorial Sea ..... N.P Km

Extended Economic Zone ..... — Km

Fisheries Jurisdiction ..... N.P Km

Other (Describe) ..... Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national ard boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

1. St Kitts and Nevis are divided by a Strait called the Narrows and is two miles wide at the nearest points
2. Data on the area of the Continental Shelf is not available. However, it is considered to be extended to about twelve miles from the coastline.

MARINE SHORELINE CHARACTERISTICS*			% OF SHORELINE		
			UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)		St Kitts Nevis			21.1 8.0
A. High Energy	Coastline Types				
B. Low Energy					
2. Reef (exposed)		St Kitts Nevis			9.0 25.0
3. Rocks		St Kitts Nevis			47.0 19.0
4. Cliffs		St Kitts Nevis			44.0 4.0
5. Vegetation (Total)					
A. Vines					
B. Grasses					
C. Mangroves					
D. Coconut Trees					
E. Other Trees or Shrubs					
F. Marshes					
6. Mouths of lagoons, rivers, canals					
7. Total Shoreline		St Kitts Nevis			69.9 32.5

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand		
2. Mud		
3. Rocks		
4. Submerged Vegetation		
5. Reefs (Total)		
A. Fringing Reefs		
B. Patch Reefs		
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

A detailed survey of the bottom has not yet been carried out. However some information can be obtained from the Resource, Habitat and Stock maps done by our Planning Unit. Slides on which I am hoping to present at the Symposium

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Nevis

1. All beaches except the first Km of Pinney's Beach and Nisbet Castle Beach have limited lighting (streetlights)
2. All beaches have an Antilles Coarse Sand
3. Backbeach vegetation on beaches not on Sea Island Shrubs and in the case of Pinney's and Nisbet Castle Coconut Trees dominate

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

ST KITTS

1. MOST BEACHES HAVE A LOW ENERGY PROFILE WITH BACKBEACH VEGETATION OF SEA VINES, GRASS, SCHRUBS BACKED BY MANCHINEEL ALMONDS OR CLIFTS
2. THE SANDY POINT, CONAREE AND THOSE BEACHES ON THE PENINSULA (MAJORS, COCKLESHELL, SAND BANK AND NORTH FRIARS) ARE THE MAIN NESTING BEACHES IN ST KITTS
3. OCCASSIONALLY NESTING MAY BE DONE ON THE OTHERS
4. ONLY CONAREE, FRIGATE BAY AND THOSE BEACHES ON THE PENINSULA ARE OF WHITE CORAL SAND

(ST KITTS) NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Sandy Point	2.2	D. CM. E	D. MARCH MAY CM. A. – MAY – SEPT
2. Newton Ground	.4	CM. E	MAY – OCT
3. Dieppe Bay	.4	CM. E.	MAY – OCT
4. Sandy Bay	.2	CM. E	MAY – OCT
5. Conaree	9.6	D. E CM	D MARCH – MAY E CM JUNE – SEPT
6. North Friars Bay	.6	D. E. CM	D MARCH – MAY E CM JUNE – SEPT
7. Sand Bank Bay	.6	D. E. CM	D MARCH – MAY E CM MAY – SEPT
8. Mosquito Bay	.7	E. CM.	MAY – SEPT
9. Majors Bay	.1	E. CM	MAY – SEPT
10. Cockleshell Bay	.6	E. CM.	MAY – SEPT

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

INFORMATION DERIVED FROM CONAREE DATA ATLAS AND INTERVIEWS WITH FISHERMEN.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

(ST KITTS) NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Balast Bay	.7	E. CM	MAY – SEPT
2. Garvey's	.5	E. CM	" "
3. Challenger's	.8	E. CM	" "
4. (NEVIS)			
5. Pinney's Beach	4.5	E. CM	MAY – OCT
6. Hurricane Hill	1.2	E.	" "
7. New Castle	.8	E.	" "
8. Red Cliff (Black Bay)	.2	E. CM. D	D MARCH – MAY " "
9. Indian Castle	.3	E. CM. D	D MARCH – MAY " "
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	NOT SURE	3-5	30-5-83
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 – NESTING CENSUS FOR BEACH INDIAN CASTLE / NEVIS
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

OTHER SPECIES TAKEN IN THIS AREA. GENERALLY, ARE TAKEN BY SET N. OR SPEAR FISHING

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	Not Known	Not Known	
Dermochelys coriacea	0-1	6	18-5-83
Eretmochelys imbricata	Not Known	Not Known	
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 1 NESTING CENSUS FOR BEACH Sandy Point Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

Same animals to this beach

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta	1 Confd		
Chelonia mydas			
Dermochelys coriacea	0-1	12	18/19-5-83
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 2 NESTING CENSUS FOR BEACH Conaree Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

Hawksbill and Green Turtles have been known to nest on this beach also. Information on estimates numbers has not been recorded.

NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Sandy Point		J. C., Cm.	Observation & Fishery
2. Wheats / St Paul		C. Cm. J.	Observation & Fishery
3. Jeffs Bay		C. Cm. J.	Observation & Fishery
4. Kay's / Conaree		J. C.	Observation
5. South Frigate Bay		C. Cm.	Observation
6. Major's Bay		C. Cm.	Observation & Fishery

TABLE 7. FORAGING AREAS INVENTORY

1. Pinney's Beach C. Cm. Observation

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	-	-	-	-	-	-	-	-	-	-	-	-	
Chelonia mydas	x	x	x	x	x	x	x	x	x	x	x	x	May - Oct
Dermochelys coriacea	-	x	x	x	x	x	-	-	-	-	-	-	March & April
Eretmochelys imbricata	x	x	x	x	x	x	x	x	x	x	x	x	May - Oct
Lepidochelys kempi	-	-	-	-	-	-	-	-	-	-	-	-	
Lepidochelys olivacea	-	-	-	-	-	-	-	-	-	-	-	-	

TABLE 8 - ___ TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of mating, hours and conditions of hatchling, etc.

1. There are probably predation of hatchlings by mongoses, dogs and sharks at sea.
2. In most cases nests are raped by man for the eggs — very little chance for hatchlings
3. Several tags from bird island have been recovered off turtles by fishermen in Nevis. Some were sent back to the address

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Basseterre	D, E, CM	Set Nets from Nevis	[illegible]	
2. Sandy Point	D, E, CM	Set Nets, Spear, Nesting	" "	
3. St Pauls	E CM	Set Nets, Spear	" "	
4. Dieppe Bay	E CM	Set Nets, Spear	" "	
5. Indian Castle	D, E, CM	Set Nets, Spear	" "	
6.				
7.				
8.				

Very Poor Information

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Nevis Historical and Conservation Society Charlestown Nevis	Appx. 160	1. Newspaper ads on conservation 2. Appealing to government to enforce proper regulations.
Environmental Research Projects 212 E Broadway (@1904) New York NY 10002	Not Known	1. Posters and literature material 2. Proposed programme on turtle conservation in St Kitts.

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
St Kitts	N/A.	2.	Support has recently been given to the Royal St Christopher and Nevis Police Force in the form of a Land Rover and Outboard Motor for use in Turtle Protection Work.
Police Dept. Cayon Street St Kitts		TOTAL	Some Lapse of Enforcement during Turtle Season.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

See Copy of Turtle Ordinance Attached.

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. E. Caswell Data Attached St Kitts/Nevis 1980

2. Caldwell, D. K. and Rathjen, W. F. 1969 Unpublished West Indian Nesting Sites for D. C. Turtles. Copies Attached

TURTLE (CAP. 99 [illegible]

CHAPTER 99.

TURTLE.

(1st January, 1948) S/1947

Short Title. 1. This Ordinance may be cited as the Turtle Ordinance.

Interpretation. 2. In this Ordinance, the word "turtle" means sea or river turtle.

Offences. 3. Any person who -

(a) catches or takes, or attempts to catch or take, or causes to be sought or taken, any turtle between the first day of June and the thirtieth day of September, both days inclusive; or

(b) at any time catches or takes, or causes to be sought or taken, any turtle which is under twenty pounds in weight; or

(c) slaughters any turtle or buys, sells, exposes for sale or has in possession the whole or any portion of the meat of such turtle, between the first day of June and the thirtieth day of September, both days inclusive; or

(d) at any time between the first day of June and the 31st thirtieth day of September, both days inclusive takes, or attempts to take or causes to be taken, any turtle eggs; or

(e) at any time between the first day of June and the thirtieth day of September, both days inclusive, buys, sells, exposes for sale, or has in his possession any turtle eggs,

shall be guilty of an offence against this Ordinance, and on summary conviction shall be liable to a fine not exceeding twenty-four dollars.

Power of arrest. 4. If any constable shall have reasonable grounds for believing that any person is committing or attempting to commit an offence against this Ordinance he may arrest such person without a warrant.

Forfeiture of turtles, etc. 5. Any constable may seize any turtle or part thereof or any turtle eggs found in the possession of any person between the first day of June and the thirtieth day of September in any year and upon the conviction of the persons the articles so seized shall be forfeited.

Forfeiture of nets, etc. 6. Any net, instrument or thing which any constable has reasonable grounds for believing is being or has been used for or is connection with the commission of any offence against this Ordinance shall be seized by such constable, and any Magistrate may upon the conviction of any person for an offence against this Ordinance in connection with which such net, instrument or thing as seized was used, order such net, instrument or thing to be forfeited.

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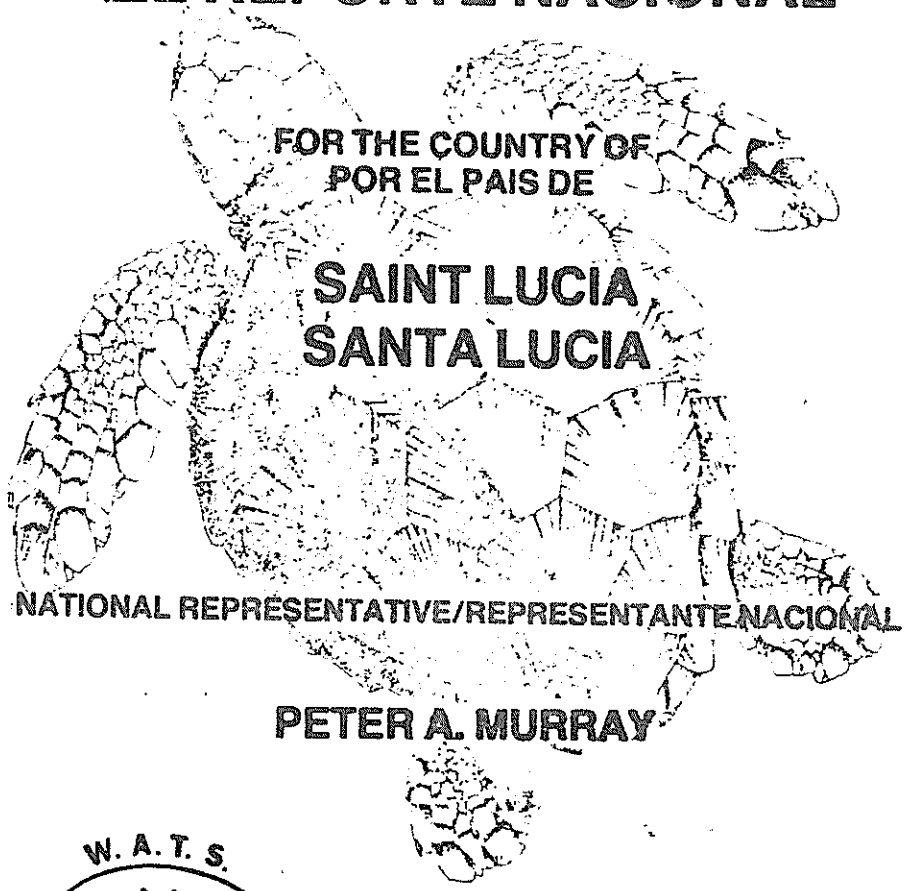

FOR THE COUNTRY OF
POR EL PAIS DE

SAINT LUCIA
SANTA LUCIA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

PETER A. MURRAY

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

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WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

ST. LUCIA

NATIONAL REPORT PRESENTED BY

PETER A. MURRAY
The National Representative

Address: FISHERIES MANAGEMENT UNIT,
MINISTRY OF AGRICULTURE, LANDS, FISHERIES
& CO-OPERATIVES, CASTRIES, ST. LUCIA

NATIONAL REPORT PREPARED BY

PETER A. MURRAY

DATE SUBMITTED: 82/11/30

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

INTRODUCTION

Beginning May 14, 1982, a sea turtle study of St. Lucia was conducted. This study had to be spread over a five month period since it was not possible for the investigation to be carried out in a short intensive study. The purpose of this study was to obtain data to complete a national report of St. Lucia for the Western Atlantic Turtle Symposium (W.A.T.S.) to be held in July 1982 in San José, Costa Rica.

The following guidelines were used to collect the data:

1. Conduct surveys of the marine shoreline of St. Lucia.
   a. Record all sign of sea turtle tracks and nests on nesting beaches to determine the extent of nesting activity.
   b. Record the types of shoreline present - to record actual or potential sea turtle nesting beaches.
2. Compile all available data to determine the status of sea turtle populations.
3. Review present conservation and management programs in regard to sea turtles.
4. Determine socio-economic importance of sea turtles.
5. Make recommendations to help promote the survival status of sea turtle populations inhabiting the territorial waters of St. Lucia.

GENERAL GEOGRAPHIC DESCRIPTION OF ST. LUCIA

St. Lucia is a newly independent nation, comprising of the main island adjoined by four (4) islets, Pigeon Islet in the Northwest was recently joined to the mainland by a cause-way, Rat Island just Northwest of the capital city of Castries and the two Maria Islets to the east of the Southern most extremity of the island. St. Lucia is situated at latitude 13N and longitude 61W, just south of Martinique (one of the French West Indian Islands) and North of St. Vincent. St. Lucia has an area of 512.8 square kilometers.

The population of St. Lucia was estimated in 1980 at 120300.

COASTLINE AND OFFSHORE AREAS

The coastline of St. Lucia is fairly varied, with roughly 29.9% of its length being cliffs and 11.5% being sand beaches. On the east coast can be found the moderate to high energy beaches. The vegetation varies greatly along the length of the east coast, from sea grapes and coconut trees, in some areas, to white cedar and shrubs in other areas. The beaches on the east coast tend to be reasonably long by West Indian standards one being as long as 1.6 kilometres.

The sand appears to be mainly biogenic marine carbonate with a small terrigenous component. The sand ranges from fine grained to medium grained, on occasion one type being seen on either of two adjacent beaches. The colour ranges from light tan (mainly) to dark gray.

In addition to the long stretches of sandy beach, the east (windward) coast has areas of sheer rocky coastline. The major communities of mangrove on the island are to be observed on the east coast.

The west coastline of St. Lucia is much more rugged with mountains and hills that drop off straight into the sea. There are however a number of relatively short sandy beaches, made up of medium to course grained particles.

The offshore areas of St. Lucia are reasonably diverse. Unmapped grass beds can be found in water of one to two meters depth, comprised of a large extent Thalassia and Syringodium.

The south-eastern coast of the island has the major fringing reef system running from Saltibus Point southwards to Moule-a-Chique. These reefs contain a reasonable diversity of marine flora and fauna, but are not as esthetically pleasing as the west coast patch reefs found close inshore in areas less than twenty-five metres from shore.

HISTORY OF SEA TURTLES IN ST. LUCIA

Sea Turtles have been a significant factor in the diets of the inhabitants of coastal areas of St. Lucia. In fact some fishermen have been known to fish only for turtle during the open season (September to April). Green Turtle, Hawksbill, leatherback and occasionally some Loggerheads are captured. The turtle industry of St. Lucia started circa 1937. Live Green Turtles were shipped to England and the U.S.A. up to 1941 after which time dried green turtle was shipped. Around 1949 green turtles began being imported from Aves Island and landed at Castries; this took place during the local closed season under special licence; up to three hundred turtles would be brought in. Some of this turtle meat was sold locally up to 1979. Turtle was being shipped from St. Lucia to Hamburg, Germany up to 1979 after being brought in from Aves. Presently turtle is imported from other islands and re-exported to Germany. Bebel (1974) quotes landing estimates for 1949 as being 17046 kilograms of green turtle and 10909 kilograms of hawksbill turtle. The closed season is in effect from 1st May to 31st August, but does not apply to animals taken outside territorial waters.

Turtles are caught in nets and when they come ashore to lay eggs, although this latter practice is illegal. The problem however, that though the nesting females and their eggs are protected by law, there is no adequate means of enforcing the legislation. In addition only hawksbill and green turtle are protected, the legislation does not include leatherback sea turtles.

STATUS OF THE KNOWLEDGE OF SEA TURTLES

Only as a result of this survey is a significant amount of knowledge coming to hand about the sea turtle populations of St. Lucia. Prior to preparation for the W.A.T.S. there was infact no attempt at a systematic study of these animals. What little is known comes from three main sources, fishermen's takes, incidental observations by local sport divers and a survey conducted by Anne Meylan and Archie Carr in 1979.

Information from these three sources as well as the present survey indicates that there is a significant nesting activity for the green, hawksbill and leatherback turtle on the island. Most of the crawls observed belonged to leatherback sea turtles, and a few belonged to hawksbill and green turtles. No crawls belonging to loggerheads were observed.

The more active turtle fishermen however have described sea turtles which appear to fit the description of loggerhead sea turtles.

Local fishermen and some professional dive tour leaders have given information which indicates a reasonably large population of juvenile green sea turtles present in the waters of the south western coast of the island. Though the magnitude of the population has not been verified, staff members of the Fisheries Management Unit have sighted green turtles near patch reefs on the west coast of the island.

Recently the Fisheries Management Unit bought five green sea turtles from a local fisherman ranging in weight from 7.3 kilograms to 15.2 kilograms (35.6 cm to 55.9 cm carapace length). These turtles, which had been caught on the east coast of the island, were tagged and released on a secluded beach further south. It is hoped that this beach would be imprinted on the turtles, and that at some subsequent time if not caught, they will return to that beach. This was the first recorded turtle tagging experiment carried out in St. Lucia to the best knowledge of this investigator.

One member of the Fisheries Management Unit has sighted a hawksbill hatchling in mid October on an east coast beach entering the sea, indicating some hawksbill nesting activity on that coast.

Beach surveys on the east (Windward) coast of the island, have indicated a fair amount of leatherback turtle nesting; this has been known by the inhabitants of that part of the island for some time as shown by the number of leatherback carcasses found in Grand Anse Beach, which has a length of 1.60 kilometers and an average width of 53.2 metres.

In a period ranging from May 14, 1982, to June 16, 1982, seven leatherback carcasses were found as well as six crescent shaped sets of tracks (indicating successful nesting and escape) and one nest with the tracks to and from it washed away.

Interviews with fishermen suggest that the largest observations of Green and Hawksbill turtles have been made on the west coast of St. Lucia. It is not possible to state conclusively whether these turtles were foraging or basking. In one day in late August four green and one hawksbill were landed in the village of Canaries.

It seems fairly certain that the nesting season for turtles in St. Lucia

is from May to August each year, but there appears to be the distinct possibility that nesting may continue into mid-September.

Fishermen have indicated that the numbers of sea turtles seen, and/or captured in 1982 shows a significant decrease relative to 1980 and a major decrease relative to 1972. One interviewer suggests that circa 1962 leatherback sea turtles were the least abundant in St. Lucian waters and that nestings of green and hawksbill sea turtles may be at the same level but since there are less turtle fishermen in evidence, indications of these turtles presence go more unnoticed.

METHODS

Due to temporal constraints, only two strategies were used for obtaining information to prepare the national report for St. Lucia:

1. Beach surveys of known nesting beaches and potential nesting beaches,
2. Conducting personal interviews with local fishermen.

It must be acknowledge that the investigation was aided by the volunteered assistance of members of the St. Lucia Naturalists Society, particular note being made of Mr. Terry Cross who spent a number of hours of his spare time walking beaches and visiting beaches at night in the hope of seeing emergent turtles.

BEACH SURVEYS

Daytime visits were made to known turtle nesting beaches or beaches which were potential nesting beaches (identification of the latter was carried out using criteria indicated by Anne Meylan in a personal communication). These visits were all made by land and the observers walked the entire length of the beaches. In addition to recording nesting activity and other signs of turtle presence, the observers noted the nature of the sand (colour, grain size): this latter determination was perforce subjective, since the facilities and knowledge base was not available for objective analysis.

A number of "night watches" were staged by members of the Fisheries Management Unit and volunteers from the Naturalists Society in the hope that sighting of turtles, coming to nest, would be made. On one occasion a two-shift, twenty hour watch was carried out nine days after finding signs of a successful nesting which appeared to be no more than three days old. This particular watch however proved futile.

Interviews with Fishermen and local inhabitants

Six local fishermen and a number of other inhabitants of different areas were interviewed to gain information for this report. The general format found on pages 64 - 68 of the Sea Turtle Manual of Research and Conversation Technique (June 1982) was followed, but not verbatim because of the necessity of dealing with two languages, English and Patois. Some interviews were carried out in the same days as a number of the beach surveys.

RECOMMENDATIONS

Based on the findings of this survey, it is felt that the following recommendations would make a significant contribution to the survival of the sea turtles inhabiting the waters of St. Lucia.

1. The lobster, turtle and fish protection act number 13 of 1972 should be amended such that:
   a. All species of sea turtles are protected.
   b. The minimum legal weight for sea turtles becomes 13.608 kilograms (30 lbs).
   c. The closed season be from April through September.
2. There should be active enforcement of the above act.
3. St. Lucia should become a signatory to C.I.T.E.S.
4. The taking of sea turtles should be restricted except for local consumption, with a maximum allowable yearly weight for the country.
5. A more intensive study be made of the population of turtles (by species) in St. Lucian waters and a tagging program be properly instituted.
6. Major nesting beaches should be declared natural marine sanctuaries for sea turtles and pedestrian traffic on the sanctuaries be restricted from April through September, as well as the renewal of sand.
7. A public education programme be developed to include all aspects of the society and to stress the need to manage the sea turtle population so that its continued survival can be guaranteed.

Country _____

Length of Coastline* . . . . 190.975 . . . . . ____ Km

Km² of Continental Shelf Area . . . . . ____ Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 4.8 . . . . . ____ Km

Extended Economic Zone . . . . . ____ Km

Fisheries Jurisdiction . . . . . 4.8 . . . . . ____ Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)			21.975
A. High Energy			
B. Low Energy			
2. Reef (exposed)			
3. Rocks			
4. Cliffs			57.075
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves			
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, rivers, canals			1.300
7. Total Shoreline			190.975

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Honeymoon Beach		E, Cm	?
2. Pond D'or	0.97	D(?); Cc(?); E(?)	?
3. Anse Lapins	0.55	Cc(?); E(?)	?
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Grand Anse	1.60	D	May, June, July
2. Cariblue	0.21	E	August
3. Anse Ger	0.29	D	June
4. Anse Trouanase	0.72	D (?)	June
5. Trou l'Oranger	0.09	Cm; E(?)	June, July
6. Anse Micoud	0.71	E(?) D(?)	June
7. Anse Chastenet	0.25	Cm; E	July
8. Dennery	0.37	E	July, August
9. Anse de Sablen	0.41	Cm(?); E(?)	?
10. Anse Commerette	0.19	Cm(?); E(?)	May, June, July (?)

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Beach	SAND Colour	Particle Size	Shape	Energy	Back-beach Vegetation	Artificial Light
Grand Anse	White	M – F	1/4	H	Shrubs, coconuts	–
Cariblue	Light Grey	M – C	1/24	L	Sparse due to hotel	+
Anse Ger	White	F	1/49	M	Shrubs	–
Anse Trouanase	White	C	1/57	H	Shrubs, coconuts	–
Trou l'Oranger	White	M	1/5	L-M	Trees, shrubs	–
Anse Micoud	White & Grey	F	1/21	M-H	Cliff	–
Anse Chastenet	White	M	1/4	L	Hotel	+
Dennery	White	F – M	1/20	M	——	+
Anse de Sables	White	M	1/32	H	Shrubs	+
Anse Commerette	White	F	1/3	M	Shrub	–
Honeymoon Beach	White	M – F	——	M	Mixed	–
Pond d'Or	White	M – F	1/50	M-H	Coconut erect Shrubs	–
Anse Lapins	White	F	1/3	L-M	——	–

* Grand Anse beach has an average width of 60 metres nearest to the sea the beach has a steep gradient for an average of 5 metres for the MHW line. This is the slope recorded above similarly for Anse Commerette.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	3	18	14th May; 16th June; 29th June; 5th July; 12th June; 13th & 14th July
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH GRAND ANSE
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	1	3	31st July; 2nd August
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH GARTHINS
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	1	2	June 22; 26
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 3 NESTING CENSUS FOR BEACH ANSE CER
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 4 NESTING CENSUS FOR BEACH
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	?	?	July 22
Dermochelys coriacea			
Eretmochelys imbricata	1	2	July 5, July 22
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5 NESTING CENSUS FOR BEACH TROU L'ECHAUT R
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	?	2	June 22
Dermochelys coriacea			
Eretmochelys imbricata	?	3	June 22
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH ANSE HIGOUD
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	?	3	July 10
Dermochelys coriacea			
Eretmochelys imbricata	1	1	July 10
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7 NESTING CENSUS FOR BEACH ANSE CHASTENET
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	1	2	October 10
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH [illegible]
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	?	?	July 7
Dermochelys coriacea			
Eretmochelys imbricata	?	?	July 7
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH ANSE DE SABLES
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NOTE: This table indicates that the informant was unable to give definite dates of nesting or frequency but identified the species as nesting on that particular beach. See tables 4 - 10 to 4 - 13 inclusive.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	?	?	May, June 82
Dermochelys coriacea			
Eretmochelys imbricata	?	?	May, June 82
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 10 NESTING CENSUS FOR BEACH ANSE CORMORANTE
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	?	?	July 7, 1982
Dermochelys coriacea			
Eretmochelys imbricata	?	?	July 7, 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 11 NESTING CENSUS FOR BEACH [illegible]
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	?	?	June 82
Chelonia mydas			
Dermochelys coriacea	?	?	June 82
Eretmochelys imbricata	?	?	June 82
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 12 NESTING CENSUS FOR BEACH POND D'OR
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	?	?	June 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	?	?	June 82
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 13 NESTING CENSUS FOR BEACH ANSE LAPINS
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
82/5/14	Anse Commerette, Anse Lapins, Grand Anse			2				
82/5/16	Grand Anse			5				
82/5/19	Grand Anse			1				
82/6/22	Anse Cer, Anse Nicoud, Anse Trouvanse							
82/7/5	Grand Anse			2				
82/7/13	Grand Anse							
82/7/19	Anse de Sables							
82/7/22	Trou l'Oranger				1			

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Note: Aerial Surveys were not carried out all information obtained for nesting beaches was from ground observations and interviews.

82/5/14: Grand Anse: in addition to 2 tracks, 4 carcasses of leatherback were found.

82/6/16: Grand Anse: 3 new carcasses were found in addition to the 5 new sets of nesting tracks.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta	2					
Chelonia mydas	6					
Dermochelys coriacea	22					
Eretmochelys imbricata	11					
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Estimation for table 6 obtained by adding estimated numbers of nests per season per beach for all the beaches considered in tables 4 - 1 to 4 - 13 inclusive; and assuming that each nest represents one different female.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Anse Chastanet		Cm/30; E/10	Observation; incidental catch
2. Cicorea		Cm/3	Observation
3. Maria Islands/V.P.		Cm/10; E/5	Observation; incidental catch
4. Dennery		Cm/5	Fishery
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas						X			X				September
Dermochelys coriacea													
Eretmochelys imbricata						X			X				September
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - 1 TURTLE SPECIES PRESENT ON FORAGING AREAS. ANSE CHASTANET
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas										X			?
Dermochelys coriacea													
Eretmochelys imbricata										X			?
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - 2 TURTLE SPECIES PRESENT ON FORAGING AREAS. CICORIA
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas							X						?
Dermochelys coriacea													
Eretmochelys imbricata							X		X				?
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - 3 TURTLE SPECIES PRESENT ON FORAGING AREAS. MARIA ISLAND
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas										X			?
Dermochelys coriacea													
Eretmochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - 4 TURTLE SPECIES PRESENT ON FORAGING AREAS. (REVISED)
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Dc,Cm,E,Cc	Dogs, Human intervention, pigs	70%
Hatchlings	C,Cm,E,Co	Unknown	?
Juveniles	Unknown	Unknown	
Adults (in water)	D,Co,Cm,E	Human intervention (fishing or incidental catch)	25 - 40 %
Nesting females	Dc,Cm,E,Co	Human intervention	50%

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

Below are data on carcasses, tracks and live turtles observed.

Dermochelys Coriacea

Total Length	Carapace Length	Width	Weight	Width of Track	Sex
1.38 m	XX*	0.85m	XX	—	F
1.45 m	XX	0.80m	XX	—	F
—	—	—	—	1.5 m	F
—	1.48	N.C.	XX	—	F
—	1.30	0.80	XX	—	F
1.85 m	1.50	0.85	XX	—	F
—	—	—	—	1.7 m	F
—	—	—	—	1.5 m	F
1.70 m	1.4	0.85	XX	—	F
1.65 m	1.45	0.65	XX	—	F
—	—	—	XX	1.76	F

Chelonia Mydas

XX	0.43	XX	9.53	XX	XX
XX	0.36	XX	9.40	XX	XX
XX	0.56	XX	15.20	XX	XX
XX	0.48	XX	11.34	XX	XX
XX	0.48	XX	11.34	XX	XX

*XX - not determined
— - unavailable for measurement

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Castries	Cm	"Turtle net"	September	5
2. Canaries	Cm; E	Net	September	4; 1
3. Vieux Fort	Cm	Net	September "ovember	4
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Fisheries Management Unit Ministry of Agriculture, Lands Fisheries and Co-operatives, St. Lucia	10	MATS, Turtle Survey
St. Lucia Naturalists Society Castries, St. Lucia		Aid Fisheries Management Unit with MATS Survey

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

St. Lucia

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

1. Fish, Lobster and Turtle Protection Act No. 13 of 1971

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Fisheries Management Unit, Ministry of Agriculture, Lands Fisheries & Co-operatives, Castries, St. Lucia	Nil	1	Manpower not available for proper enforcement
Royal St. Lucia Police Force St. Lucia	Nil	Nil	No specific duties for enforcement of turtle related legislations

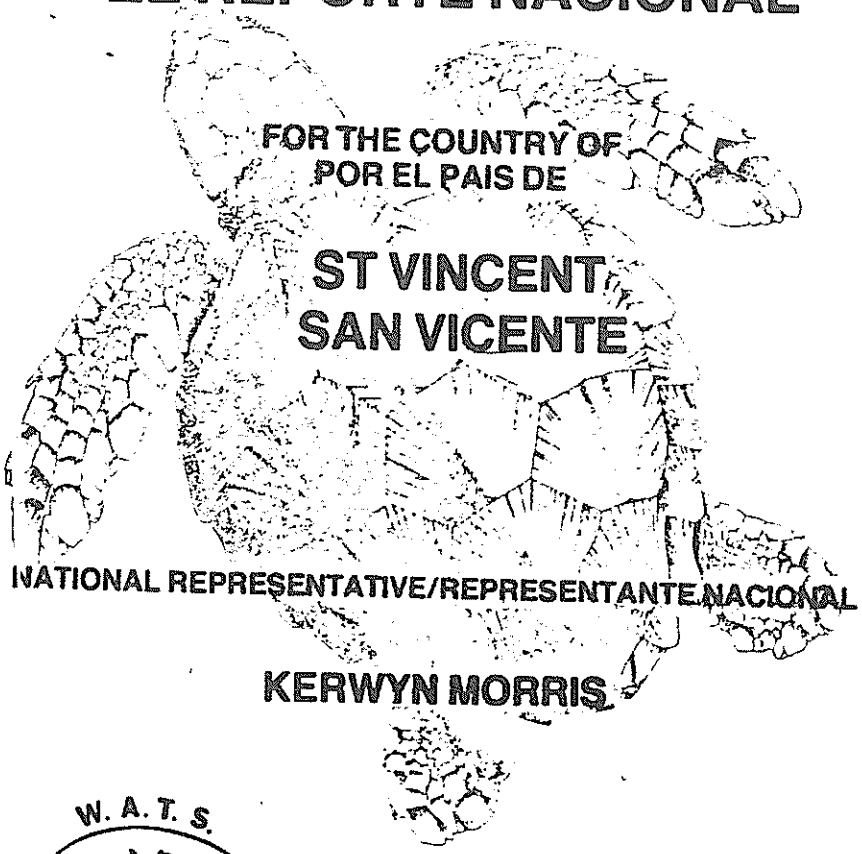
St. Lucia

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
MATS Turtle Survey	May 82	Ongoing	Peter A. Murray, Fisheries Management Unit, Ministry of Agriculture, Lands, Fisheries and Co-operatives, St. Lucia

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

THE NATIONAL REPORT
EL REPORTE NACIONAL



FOR THE COUNTRY OF
POR EL PAIS DE

ST VINCENT
SAN VICENTE

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

KERWYN MORRIS

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
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WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

ST. VINCENT AND THE GRENADINES

NATIONAL REPORT PRESENTED BY

KERWYN MORRIS
The National Representative

Address: FISHERIES OFFICER,
MINISTRY OF TRADE & AGRICULTURE
ST. VINCENT & THE GRENADINES, WEST INDIES

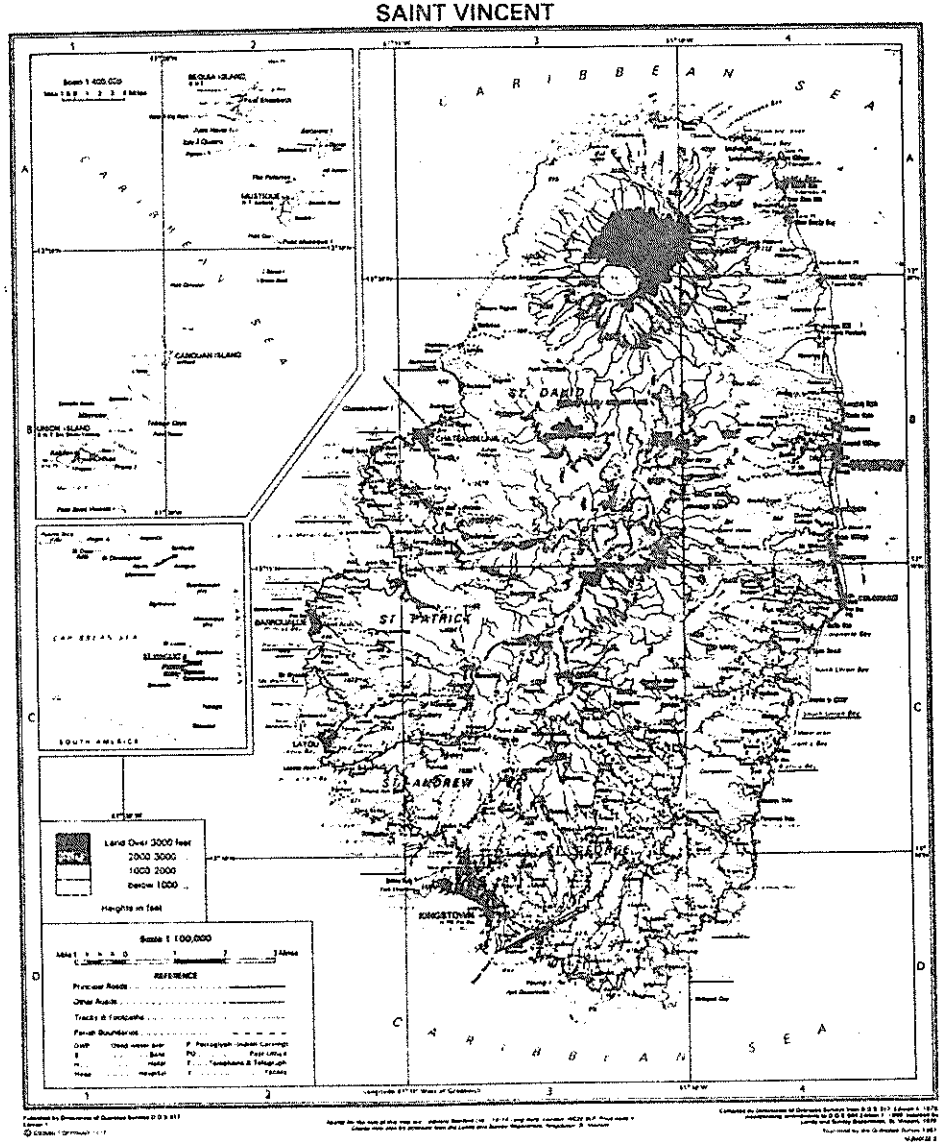
NATIONAL REPORT PREPARED BY

KERWYN MORRIS

DATE SUBMITTED: _____

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

SAINT VINCENT



SEATS NATIONAL REPORT

GENERAL GEOGRAPHIC DESCRIPTION

The State of St. Vincent and the Grenadines is a group of islands of which St. Vincent is the largest. The territory lies between 61°10' - 61°23' W and 12°40' - 13°25' N. The total land area is 150 sq. miles of which St. Vincent alone is 133 sq. miles.

COASTLINE AND OFFSHORE AREAS

There is a great variation in the coastline. On the east coast which faces the atlantic ocean, beaches are relatively much longer and are really stretches of high energy beaches with moderately sloping profiles. The vegetation consists primarily of sea grapes, coconut palms and to a much lesser degree mangroves. The mangrove areas are confined to the Grenadine islands. On the west coast there are many small beaches all low energy with similar vegetation. On St. Vincent island the sand is black but elsewhere it is white.

There are many shallow and mid-water reef systems and sea grass beds of Thalassia. The grass beds are in low energy areas and are found in water generally less than 10 metres. Tides are microtidal and less than 2m.

STATUS OF MARINE TURTLES

Information on sea turtles is non-existent here and there is no evidence that any investigation has ever been carried out. However it is generally believed by fishermen that the sea turtle populations have definitely declined drastically over the last two decades. The animals are taken mainly in the Grenadines by gill nets and by hand during nesting and off shore trolling for large pelagic fish.

The data for this report was obtained mainly by

1) Visits to most of the beaches
2) Conducting personal interviews with
   a) fishermen
   b) shell-craftmen
   c) craft shop clerks
3) Conducting local market surveys

It was impossible to carry out any aerial surveys since there are no facilities for this purpose.

Over fifty fishermen were interviewed and the data obtained from the responses were integrated into the report. The interviews were based on the questionnaire appearing in the Sea Turtle Manual of Research and Conservation Techniques (pp 64-68).

Local gift shops were visited to find out the source of scutes and their availability during various months of the year.

Most whole shells originated in the Grenadines. Craftmen pay on the average $35.40 E.C. per pound for individual scutes, the price varying with the tourist season. Whole shells fetch a price of from $100 - 160 E.C.

From the interviews conducted there appears to be no concentration of Nesting by any species on any of the islands and seldom are more than 4-5 turtles seen foraging in a group.

There is no fisherman who fishes exclusively for sea turtles and there is no commercial turtle fishing fleet. All landings known are made at beach sites identified.

An attempt will be made to complete tables 4 and 9 in a supplementary report to be submitted at a later date.

Kerwyn Morris
Fisheries Officer
St. Vincent & The Grenadines
11.2.83

Country _____

Length of Coastline* . . . . . 18 . . . . . Km

Km² of Continental Shelf Area . . 2,984 . . . . . Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 5 . . . . . Km

Extended Economic Zone . . . . . Km

Fisheries Jurisdiction . . . . . 5 . . . . . Km

Other (Describe) _____ . . . Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	90	30	120
A. High Energy	55	10	65
B. Low Energy	35	20	55
2. Reef (exposed)	7	0	7
3. Rocks	3	0	3
4. Cliffs	1.0	0	1.0
5. Vegetation (Total)			
A. Vines	0	0	0
B. Grasses	0	0	0
C. Mangroves	.5	0	.5
D. Coconut Trees	4.0	0	4.0
E. Other Trees or Shrubs	0	0	0
F. Marshes	0	0	0
6. Mouths of lagoons, rivers, canals	0	0	0
7. Total Shoreline	105.5	60	135

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	200	725
2. Mud	75	
3. Rocks		
4. Submerged Vegetation	300	300 - 295
5. Reefs (Total)		
A. Fringing Reefs		
B. Patch Reefs		
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. BRIGHTON BAY	.35	E, L,	
2. STUBBS BAY	.2	E, D	
3. BIABOU BAY	.25	E, D	
4. SOUTH MALOU BAY	.5	E	
5. GEORGETOWN BAY	1.5	E, D	
6. SANDY BAY	.5	E	
7. MISS IRENE	.2	E	
8. CAMPBELL	.1	E	
9. CHATHAM BAY	.5	E	
10. BROOKS BAY	.5	E	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. RICHMOND BEACH	1.5	E	
2. CHISCOMBE BAY	.7	E	
3. PETIT BORDEL BAY	.2	E	
4. TROUMAKA BAY	.2	E	
5. CUMBERLAND BAY	.2	E	
6. WALLILABOU BAY	.15	E	
7. KEARTON'S BAY	.08	E	
8. PETER'S HOPE BAY	.1	E	
9. MOUNT WILLO BAY	.3	E	
10. LOWMAN'S BAY	.2	E	

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NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. RAFFAL	.5	Cm, E	April - August
2. FRIGATE Island	.15	Cm, E	" "
3. RICHMOND BEACH	.75	Cm, E	" "
4. SPRING BEACH	.2	Cm, E	" "
5. FRIENDSHIP BEACH	.15	Cm, E	" "
6. ADAMS BEACH	.1	Cm, E	" "
7.			
8.			
9.			

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A great deal of the data for this report has been synthesised from reports published on seaturtle research done (or still in progress) in Suriname.

I prepared this report in the hope that the data in the report will contribute to the survival of the endangered marine turtle species and that mankind will benefit from these animals as they constitute an important source of protein.

II. Background.

General Geographic description of the Republic of Suriname.

The Republic of Suriname, a former Dutch colony, is situated between 2° and 6° North latitude and 54° and 58° West Longitude, on the Northeastern part of South America, bordering on the Atlantic Ocean to the North, on Guyana to the West, on French Guiana to the East.
The size is about 160.000 square kilometers and with the total population of about 355.000 (31,3% Creoles, 37,6% of Hindustani descent, 15,2% of Indonesion descent, 9,5% Bushnegroes, 2,1% Amerindians, 1,6% Chinese and 1,1% European and 1,6% others).
Suriname is one of the most thinly populated countries in South America. The annual main temperature is 80°F.
(the warmest month is September: 83°F and the coolest month is January: 78° F.)
The annual rainfall varies from 1500 mm in the coastal region to about 3000 mm in the mountainous hinterland.
Heavy rains usually fall from mid-April to mid-July.
The periods February - March and mid August to November are relatively dry, especially the latter period.
About 80% of the country is covered with uninhabited and undisturbed Neotropical rain forest.
In the North and the extreme South there are a variety of unusual savanna types.
Along almost the entire coast mangrove forest occurs, with scattered sandbeaches here and there.
The mangrove forest covers about 4% of the total landsurface.

Coastline and offshore areas.

The coast lies alternately in de NE tradewind belt and the SE tradewind belt, or on the division between the two.
From December to the beginning of April the NE tradewind are blowing strongly onto the coast. In these month the swells are the heaviest, and the surf the strongest. The most important movements of the sandy beaches occur between December and February. From April to June, the wind becomes more variable and the sea becomes much calmer.

From June to August the SE tradewind is weak and variable.
In the November to December period it gives way to the more definite and stronger NE tradewind which causes the heavy swells during winter and spring.

Along the coast of Suriname the Guiana Current flows in a WNW direction. It is the continuation of the Northern Equatorial Current, and travels along the north coast of Brazil and the Guianas, dividing at the Lesser Antilles into the Caribbean Current and the northwest directed Antillean Current.
The water along the coast is brown due to mud particles in the water. At 20-30 km from the coast the brown color of this muddy water suddenly changes into a blue-green color of much clearer water. At 50-70 km offshore the water is blue. There is a very marked tidal difference along the coast of Suriname, which clearly has an influence on the nesting periodicity of sea turtles. At Eilanti, where an extensive mudbank is located, the tide determines the accessibility of the nesting beach.

One of the characteristics of the Surinam coast is the continuous alteration of the shoreline. The radical changes have a cyclic nature: accretion and erosion are succeeding each other alternately. The slow westward directed N. Equatorial Current carries along the Guiana coast, a large amount of mud, part of which is deposited in the Surinam mudbanks. The Amazon is held to be the source of this very mobile mud.
The mudbanks are separated by sections along which generally narrow sand and/or shell beaches are present. Deposition of mud on the one hand, and of sand and shells on the other takes place separately. The combination of sea current and the wave action, results in a cyclical erosion on the east side of the mudbanks and a silting up of the west side. Therefore mudbanks and consequently the intermediate sections of the coast continually migrate to the west. The cycle is believed to repeat itself approx. every 35 years. The beaches are built up of sand, shells and shell debris in all possible combinations, varying from pure sand to pure shell material.

History and Knowledge of sea turtles in Suriname.

The earliest account of sea turtle nesting in Suriname is found in the narrative of a Labbadist expedition (Anonymous, 1665, Knappert: 1926). In Stedman's narrative (1796), comments about the consumption of turtle meat in the colony are found; he also reported having observed off the Cayenne coast on January 30 of the year 1773 one or two large turtles, floating past the ship's side. Stedman stated further that in Suriname . . . . "The turtles are generally distinguished by the names of Calipee or green turtle, and carett". The first name may be a corruption of the local name krapé and "carett" probably refers to the warana (Lepidochelys olivacea). It seemed that, except for a short period before the second world war, sea turtles on the Surinam coast were never killed for food on a large scale.
At the present day sea turtle meat is not appreciated by the Caribs living near the principal nesting places.
According to Kloos (1971) the Maroni Caribs say that they do not like the smell of the meat, but he mentions another probable reason, now forgotten: their fear to become as stupid as the animal from which the flesh is eaten. The meat of other turtles was probably seldom or never eaten. Capture of hawksbill for tortoise shell was probably never important, presumably because this species is not numerous here and, according to Kappler, because American tortoise shell was worth less than that from Asia.

Geijskes (1945) records the following about use of the meat of the green turtle. Before 1940, green turtles were caught for export. This business was in the hands of a Mr. Berkeley at Albina. How long this trade had already been going on, and no what scale, is not mentioned. No information is given about of capture. Information obtained from the Caribs says that the turtles were caught as they came ashore to nest.
The late Mr. Lijkwan, who for many years worked for'the Honourable' Berkeley, mentions an average of approx. 600 female turtles killed by the Indians for Berkeley for export during the period 1933 to 1940. According to Geyskes this estimate is on the low side. He mentions a number of 1000 greenturtles and 1500 ridleys each year.

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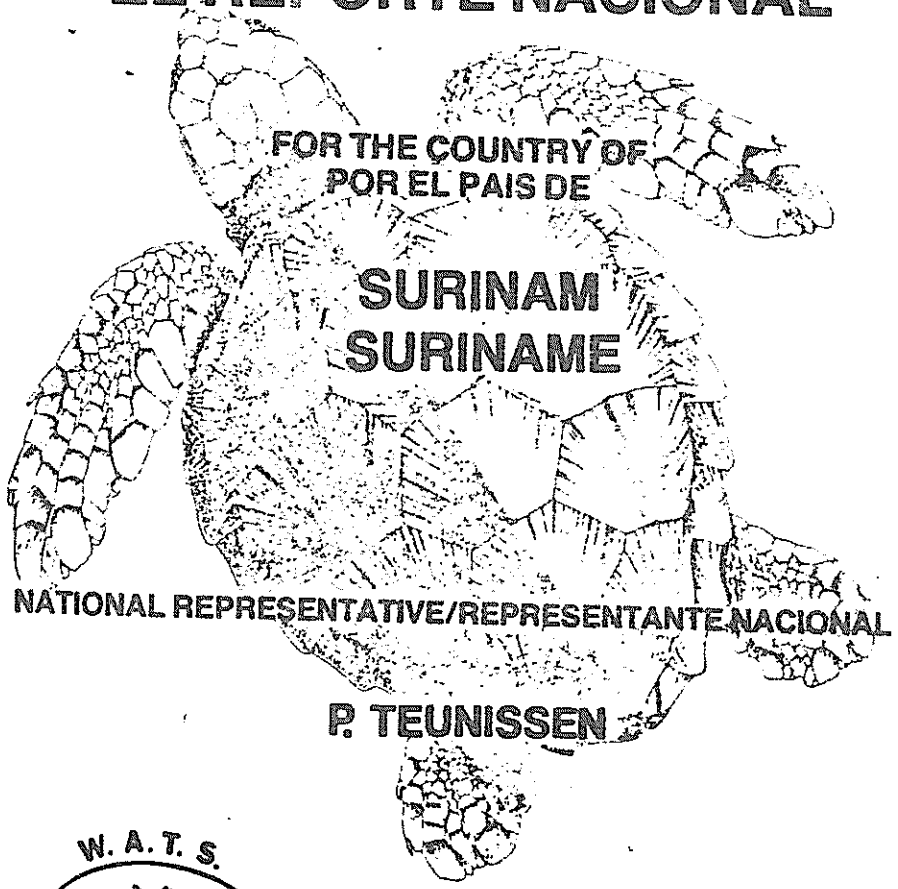

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Republic of Suriname

NATIONAL REPORT PRESENTED for
P. Teunissen by H.A. Reichart
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Address: Suriname Forest Service
Corn. Jongbawstr. 10 P.O.Box 436
Paramaribo - Suriname

NATIONAL REPORT PREPARED BY

K. Mohadin with assistance of
Mr H.A. Reichart. M.Sc.

DATE SUBMITTED: 27 November 1982.

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

ALL BEACHES ON ST VINCENT ARE OF BLACK SAND. PROFILES ARE GENTLE. THERE IS LITTLE VARIATION IN VEGETATION.

ARTIFICAL LIGHTING IS PRESENT ONLY ON YOUNG ISLAND BEACH WHERE THERE IS SIGNIFICANT BEACH DEVELOPMENT.

ALL BEACHES IN THE GRENADINES ARE OF WHITE SAND.

NAME OF AREA (or give coordinates)	APPROX. AREA (km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
60°10·30'W : 12°58'N			
1. BALLICEAU ISLAND 61°W : 12°41'N		Cm, E,	OBSERVATION, FISHERY & INCIDENTAL
2. CANOUAN ISLAND 61°19'W : 12°55'N.		Cm, E,	" " "
3. UNION ISLAND 60°10'W : 12°55'N		Cm, E,	" " "
60·12'W : 12·51'N 4. MUSTIQUE ISLAND		Cm, E,	" " "
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

SEE MAP

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ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing			
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

NO EMPLOYMENT DEPENDENT EXCLUSIVELY ON TURTLES. CRAFTSMEN ARE INVOLVED ONLY FOR SUPPLEMENTAL EMPLOYMENT AND HAVE SKILLS SUCH AS PLUMBING, CARPENTRY, MASONRY, HOTEL WAITERS.

FIGURES ARE DIFFICULT TO OBTAIN FOR THIS TABLE.

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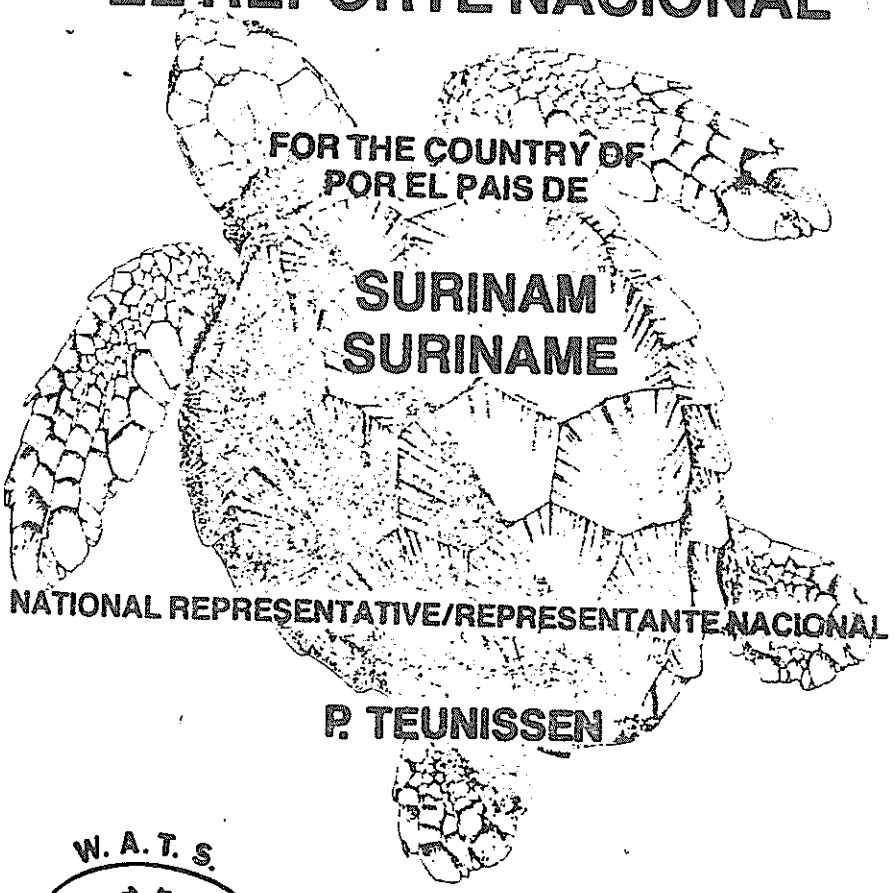

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In 1938 and 1939 for example, he had caught at least 3000 green turtles. In 1966, a year in which more green turtles nested than in previous years, only ca 1000 came ashore in this region. This means that thirty years ago many green turtles and ridleys nested on the beaches near the mouth of the Marowijne.

After 1940 the slaughter of turtles for export came almost to an end. Yet many turtles were still being killed on the beach by, among others, the fishermen, as appears from Geyskes remarks. About the hawksbill Geyskes reported in 1945 that people in Suriname mostly do not recognise this species and kill the turtle only for the meat which, however, cannot be particularly tasty as the Caribs consider it to be poisonous.
Collecting of eggs (mostly ridley and green turtle) seems to have been quite important. This was a tradition of the coastal Caribs- at least during the last century - chiefly in and near the Marowijne estuary. According to Geyskes '(1945) report, eggtaking in the forties was more intensive than in the previous century, due to the increased demand by chinese and other people of Asiatic orgin, especially Javanese. The eggtakers kept the daily proceeds of eggs in their camps, until enough were collected to load a boat (17000 tot 100.000). In those days the eggs were taken to Paramaribo, the Commewijne district, and also to St. Laurent (French Guiana). No figures are mentioned for the total number of eggs taken per year. In 1954 a big change occurred in the fate of sea turtles nesting in Suriname. In that year the Game Ordinance and the Nature Preservation Ordinance came into force, followed by the Game Decree and the Decree that declared the Bigi-santi breeding beach. (once one of the most important nesting beaches of the leatherbacks, now washed away a Nature Reserve.
These legislative measures prohibited the killing of marine turtles and limited the collection of their eggs along part of the coast. But the turtles did not immediately benefit from these measures, as the most important beaches near the Marowijne estuary remained outside the area to which the regulations apply.
Since 1964, the policy of turtle management aims at complete protection of the nesting animals on the beaches and the harvesting of a "justifiable" quota of the eggs of the green turtle.

Eggs of other species are not collected and will not be collected in the near future. In 1969, the Galibi area was declared a Nature Reserve which includes all the nesting beaches of the Marowijne estuary, thus effectively protecting the rookeries there.
The primary reason for the decision to harvest some of the eggs of the green turtle is the intention to attempt a rational exploitation of the eggs, on a sustained - yield basis, as a cheap part of the protein requirement in the diet of the population. Apart from this, an abrupt, total ban on the collecting of eggs of all species probably would have met with such strong resistance, both from the side of the egg collectors and from the consumers that it could have jeopardized the entire project from the start. Yearly a quota of approx. 250.000 eggs are collected, which are sold in Paramaribo and in the various districts of Suriname. The major partion of these eggs are removed from beach sections where nests were endangered by erosion or were laid below high tide level. Many of these socalled "doomed eggs" are also relocated in man-made nests on higher reaches of the beach, or they are hatched out in styrofoam nest boxes at the fieldstation. Upon emergences, these hatchling are released to the sea.
The logistics of collecting and selling the eggs is in the hands of the Surinam Foundation for Nature Preservation (STINASU), a organization with the purpose to stimulate, coordinate and inance scientific exploration in the Nature Reserves and to stimulate public awareness of nature conservation. Some of the green turtle eggs are also being used for a green turtle ranching project. Part of these captive-reared turtles are released at various age classes while the others are kept in the turtle Ranch at Matapica for future commercial use. The turtle ranch at Matapica which so for is only a feasibility study was founded in 1977 to investigate the odea that captive-raised sea turtles can contribute to the socioéconomic development of a country as well as and protect and possible increase the wild populations.

In the past little scientific attention has been paid to sea turtles nesting in Surinam. Kappler's observations were the only ones that were published before the present research was commenced in 1913.

In 1963 en 1964, six expeditions were made by personnel of the Forest Service with the primary intention of locating the nesting places of the sea turtles in Suriname. Among others, group nesting ("arribada") of the olive ridley (Lepidochelys olivacea) was discovered. During these expeditions it was also established that in Suriname most sea turtles come ashore near the mouth of the Marowijne River. In 1965 and 1966 only occasional observations were made. In 1966 tagging of turtles was begun by students from the University of Florida, led by P.C.H. Pritchard, and a number of turtles were weighed and measured. In 1967, surveillance and the systematic collecting of quantitative data about nesting was resumed by a permanent staff at Bigisanti, and commenced at Eilanti. The daily counting of nests was carried out along similar lines as in 1964. Also more data were collected about incubation periods and hatching percentages of eggs, including those in relocated nests. Daily countings of the nests were continued at Bigisanti in 1968, as well as at Eilanti. Up to now daily countings are taking place and on all known nesting beaches. On the basis of observations on returns of previously tagged turtles, the first data about breeding cycles were collected. M. Mrosovsky (University of Toronto) began research into the stimuli that affect leather back young as they travel from the nest to the sea.

In the following years, Mrosovsky continued these studies, and in 1971 the Dutch Zoologist J.T. Wildschut devoted four mouths to ethological experiments will hatchlings.
Pritchard continued tagging, and his reports on weights of ridleys and green tyrtles have been published (Pritchard, 1969, 1969 a).
In 1969-1973, the work of previous years was continued and intensified with considerable assistance from R.L. Hill (1969-1971), A Britisch Zoologist. In 1969 and 1971, respectively D.J. Green and J.T. Wildschut assisted in research activities. Data collected concerning internesting intervals, incubation periods, size of clutches and hatching succes of turtle nests show the following:

a. inter nesting intervals: Green turtles seem to return to nest in a 1-, 2-, 3 or 4-year cycles and while the biennial cycle probably predominates. The ridley shows a predominance of 1-year intervals and the leatherback a predominance of 2-year intervals.

b. incubation periods:

The incubation period of green turtle, as well as that of the Olive ridley and the leatherback varies from an average of 52 days during February-March to 58 days during the raining season. (April-May). Transplanted nests show about the same incubation time as natural nests.

c. Size of clutches.

The average number of eggs per nest for the green turtle is 130, for the Olive ridley 114, for the leatherback 85 and for the hawksbill 146. This is an average taken from a 5 year period.

d. Hatching success.

The hatching success in wild nests for the green turtle is around 84%, for the leatherback 50%, and for the olive ridley 60%. Replanted nests show a lower percentage of hatchlings: for the green turtle around 58%, for the leatherback around 35% and for the ridley around 50%.

The low emergence percentage in the nests of the leatherback is due to a high percentage of small, infertile eggs in the nests.
The leatherback clutches contain on the average 30% small, infertile eggs in the nests. The leatherback clutches contain on the average 30% small, infertile eggs. A study done by C. Whitmore and P. Dutton of the University of stirling in Scotland to get more data about clutch size, hatching success and incubation period in natural nests (in total 39) of the green turtle show the following:

- average clutch size: 131 eggs.
- hatching success 89,14%
- incubation period 56,4 days.

This study was done on the Krofajapasi beach during April-June 1981. As mentioned above, some eggs are also hatched in styrofoam boxes. For the green turtle the average emergence in these boxes is nearly as high as in the natural nests (around 86% vs 84%) and for the leatherback even higher (54% vs 50%).
The incubation period in the boxes however is a some what longer than in the natural nests, which is probably due to the lower ambient temperature in the boxes. From 1969 onward, about 4500 turtles have been tagged, making a total of 5676 turtles tagged in Suriname.

Up to 1973, 130 captures at sea of Surinam-tagged turtles were reported which give us the following information:

a. The migratory patterns: green turtles nesting in Suriname forage on the feeding grounds centered off the coast of Ceará (Brazil); recoveries of tagged olive ridleys span roughly 4500 km of coastline, extending from Natal in Brazil to the Gulf of Venezuela, with secondary concentration occurring in the area around the Island of Margarita and in the Gulf of Paria; one leatherback tagged in Suriname was caught at Salt Pond, Ghana, while four leatherbacks tagged in French Guiana were recovered at sea, at locations off the coast of Campecne (Mexico), Texas, S. Carolina and New Jersey (Pritchard, 1973a). These recoveries confirm that at least part of the leatherbacks nesting in our area comes from northern temperate waters.

b. number of clutches per season: it seems that most of the olive ridleys nest once per season, while the green turtle and the leatherback have an average of 3 to 4 nests per season. (pers. information from beachguards).

c. the decree of attachment of the turtles to a particular nesting beach: it seems that sea turtles of all species use the same nesting beaches year after year.

Other studies on sea turtle to be mentioned are:

- Norbert Pilz and assistant (1979): comparison of the temperature in natural nests and styrofoam boxes. This study has been done on the Baboensanti beach.

- Peter Dutton and Clare Whitmore (1979-1983): a) collect data on the sand characteristics including salinity, moisture content, grain type, rootlet content and a temperature profile.
  b) determine the size and weight of the leatherback hatchlings artificially incubated in the styrofoam boxes. This study has been done on the Krofajapasi beach.

- Dr. A.M. Granda (1980):neurological studies on green turtle and leatherback hatchlings.

- Prof. N. Mrosovsky: Effect of temperature on sex determination in hatchlings.

- Clare Whitmore (1981): Electron microscopic studies of sea turtle egg shells.

An other project on sea turtle that should be mentioned is the Surinam - Brazil green turtle population project.
The aim of this project is an attempt.

a. To better direct and implement the management of natural populations which are to be exploited on a sustained-yield basis as a renewable natural resource.
b. To determine if operation "headstart" is an additional means to build up natural sea turtle populations where necessary.

III Methods

Data for this national report has been obtained by:

1. beach aerial survey
2. the ongoing daily countings of nests on all nesting beaches
3. personal interviews with beachguards
4. visits to the beaches
5. consulting literature.

Aerial surveys

A total of 5,52 hours were spent conducting aerial surveys. A Cessna 172 was used to conduct these surveys. the entire coastline of Suriname was flown over at least twice. The surveys were made at an altitude of 250 feet and at an airspeed of 100 miles per hour. All flights were made so that the observer could see the coastline on his right. During the flights fresh turtle tracks were counted, beach vegetation and other characteristics were recorded.

Daily countings:

Since 1964 till up to now daily countings of turtle nests have been taking place. It is done by permanent beachguards stationed on the nesting beaches.

Personal interviews

Personal interviews with beachguards were conducted in order to obtain data about poaching, predators, incidental turtle catch by fishermen.

Visits to beaches

Beaches were visited first of all to talk with the beachguards and secondly to get information about beach characteristics and vegetation.

Consultation of literature

A great deal of the data for this report has been synthesized from the book "Seaturtles nesting in Surinam" by Dr. J.P. Schulz. (1975) and other reports published on sea turtles research done (or still in progress) in Suriname.

Recommendations

As already has been pointed out in the previons section, great attention is being paid to the protection of the sea turtle species nesting in Suriname.
However, whatever the relative condition for survival of the sea turtle species nesting in Suriname may be, it is beyond argument that the present world situation is alarming for all the seven species of sea turtles.
It is in this view that I would like to propose the following recommendations which I believe could make a positive contribution to the survival of the sea turtles.

1. To call upon all countries where sea turtles are present to initiate effective conservation measures, and where conservation measures already exist, to possibly improve and enforce those measures.
2. To conduct nest relocating program in order to prevent eggs, which are endangered by tides of beach erosion to be washed away.
3. To conduct effective antipoaching program.
4. To develop a region wide public education program to advance conservation principles.
5. To continue and intensify sea turtle research to learn more about the life of sea turtles.
6. To develop methods to minimize damage done through incidental catch by fishermen.
7. To develop and stimulate international cooperation between countries which share sea turtle populations.
8. To develop and implement sea turtle conservation so that it will be of benefit to the local people.

Country Republic of Suriname

Length of Coastline* . . . . . 400 Km

Km² of Continental Shelf Area . . . . . Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 200 Km Miles

Extended Economic Zone . . . . . 200 Km Miles

Fisheries Jurisdiction . . . . . 200 Km Miles

Other (Describe) _____ . . . Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	UNKNOWN	UNKNOWN
2. Mud	UNKNOWN	UNKNOWN
3. Rocks	NONE	NONE
4. Submerged Vegetation	NONE	NONE
5. Reefs (Total)	NONE	NONE
A. Fringing Reefs	NONE	NONE
B. Patch Reefs	NONE	NONE
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	62.2		62.2
Mudcreole			
A. High Energy	11.8		11.8
B. Low Energy	50.4		50.4
2. Reef (exposed)			
3. Rocks			
4. Cliffs			
5. Vegetation (Total)	370	15	385
A. Vines			
B. Grasses	44.3		44.3
C. Mangroves	298.7		298.7
D. Coconut Trees			
E. Other Trees or Shrubs	16		16
F. Marshes	11		11
6. Mouths of lagoons, rivers, canals	15		15
7. Total Shoreline	385	15	400

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE * Refer to SEA TURTLE MANUAL (Aerial Survey) ** Human development or use (See MANUAL)

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Galibi	3.0	Cm, D, Lo	Jan, Febr, Mrch, Apr, May, June, July, Aug.
2. Baboensanti	3.0	Cm, D, Lo	Jan, Febr, Mrch, Apr, May, June, July, Aug
3. Eilanti	1.9	Cm, D, Lo	Jan, Febr, Mrch, Apr, May, June, July, Aug
4. Krofajapasi & Matkreek	11.0	Cm, D, Lo	Jan, Febr, Mrch, Apr, May, June, July, Aug
5. Matapica	5.0	Cm, D, Lo, E	Jan, Febr, Mrch, Apr, May, June, July, Aug
6. Kathreek & Diamantkreek	7.9	Cm, D, Lo, E	Febr, Mrch, Apr, May, June, July, Aug
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	8.1 peak in March, Apr, May	(982) 982	Jan - Aug 1982
Dermochelys coriacea	3.5 peak in May, June, July	299	Jan - Aug 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	?	43	Apr - Aug 1982

TABLE 4 - ___ NESTING CENSUS FOR BEACH Galibi.
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	14.0 peak in March, Apr, May	1584	Jan - Aug 1982
Dermochelys coriacea	18.8 peak in May, June, July	1980	Jan - Aug 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	?	220	Apr - Aug 1982

TABLE 4 - ___ NESTING CENSUS FOR BEACH Baboensanti.
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	7.5 peak in March, Apr, May	781	Jan - Aug 1982
Dermochelys coriacea	2 peak in May, June, July	81	Jan - Aug 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	?	401	Apr - Aug 1982

TABLE 4 - ___ NESTING CENSUS FOR BEACH Eilanti
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	5.1 peak in March, Apr, May	603	Jan - Aug 1982
Dermochelys coriacea	5.6 peak in May, June, July	671	Jan - Aug 1982
Eretmochelys imbricata	?	4	Apr - Aug 1982
Lepidochelys kempi			
Lepidochelys olivacea	?	222	Apr - Aug 1982

TABLE 4 - ___ NESTING CENSUS FOR BEACH krofajapasi & Motkreek
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	1.2 peak in March, Apr, May	48	Jan - Aug 1982
Dermochelys coriacea	3.4 peak in May, June, July	366	Jan - Aug 1982
Eretmochelys imbricata	?	2	Apr - Aug 1982
Lepidochelys kempi			
Lepidochelys olivacea	?	34	March - Aug 1982

TABLE 4 - __ NESTING CENSUS FOR BEACH Matapica.
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	1,2 peak in March, Apr, May	62	Febr - June 1982
Dermochelys coriacea	2.3 peak in May, June, July	259	Jan - Aug. 1982
Eretmochelys imbricata	?	7	Apr - Aug 1982
Lepidochelys kempi			
Lepidochelys olivacea	?	73	Apr - Aug 1982

TABLE 4 - __ NESTING CENSUS FOR BEACH Katkreek & Dianastrand
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS: Cc	Cm	D	S	Lk	Lo	No I. D.
2-6-82	Galibi		2	5				7
"	Babonsanti		9	24				33
"	Eilanti		1	1				2
"	Krafajapasi & Mothreek		4	26				30
"	Matapica			3				3
"	Kathreek & Dianastrand			6				6

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta						
Chelonia mydas	3500	6000	4000	4500	7200	9800
Dermochelys coriacea	2500	1300	1000	2700	1500	3900
Eretmochelys imbricata	?	?	?	?	?	?
Lepidochelys kempi						
Lepidochelys olivacea	500	600	650	400	450	550

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

The population size has been calculated as follows:

the total number of nests laid during one season has been divided by the average number of nests a female lays during one season. This number has then been multiplicated by the average interbreeding interval.

(total number of nests in one season / average number of nests of one female in one season × average interbreeding interval)

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Cm, Dc	Erosion, ghostcrabs	37%
Hatchlings	Cm, Dc, Lo	ghostcrabs, seabirds, vultures, catfish, sharks	?
Juveniles			
Adults (in water)	Cm, Dc, Lo	shrimps trawlers	?
Nesting females	Cm	Jaguar	<1%

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Krofajapasi + Matkreek.

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH (MODERATE) LOW

DESCRIPTION OF SAND CHARACTERISTICS: Medium sand with abundant shell fragments.

VEGETATION: creeping plants (Canavalia, Ipomoea) grasses.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: (MAJOR (More Than 5) REGULAR (Less Than 5) INCIDENTAL

GENERAL COMMENTS: The Krofajapasi beach is the seaward side of a large sand spit parallel with the mainland. The west end of the spit is still being elongated by deposits of sand, while the east end is in state of erosion. Mostly visited by the leatherbacks. There are also fishermen's camps on the spit. Matkreek beach is thinly grown by mangrove and is in state of erosion. Is an important beach for ridleys.

NAME OF BEACH: Matapica

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH (MODERATE) LOW

DESCRIPTION OF SAND CHARACTERISTICS: Medium to coarse sand with abundant shell and shell fragments.

VEGETATION: Grasses, creeping plants, Batis, sesuvium

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: (MAJOR (More Than 5) REGULAR (Less Than 5) INCIDENTAL

GENERAL COMMENTS: This beach is also being elongated at the west end and eroding at the east end. Predominantly visited by leatherbacks.

NAME OF BEACH: Katkreek & Dianastrand

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH (MODERATE) LOW

DESCRIPTION OF SAND CHARACTERISTICS: Medium sand

VEGETATION: A thin growth of mangrove with scattered creeping plants and grasses.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: (MAJOR (More Than 5) REGULAR (Less Than 5) INCIDENTAL

GENERAL COMMENTS: There is a mudbank in front of the beach of Katkreek Predominantly visited by the leatherbacks.

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Calibi

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE (LOW)

DESCRIPTION OF SAND CHARACTERISTICS: medium sand

VEGETATION: A thin growth of mangrove on the sandy beach

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: (MAJOR (More Than 5) REGULAR (Less Than 5) INCIDENTAL

GENERAL COMMENTS: an extensive sand bank is situated in front of the beach. Water is brackish to almost fresh in the rainy season. Predominantly visited by green turtles.

NAME OF BEACH: Baboen santi

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH (MODERATE) LOW

DESCRIPTION OF SAND CHARACTERISTICS: medium sand

VEGETATION: Grasses Creeping plants (Canavalia, Ipomoea)

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: (MAJOR (More Than 5) REGULAR (Less Than 5) INCIDENTAL

GENERAL COMMENTS: wide, high crested beach with a slightly steeper slope, very suitable nesting beach. Predominantle Leatherback.

NAME OF BEACH: Zilanti

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE (LOW)

DESCRIPTION OF SAND CHARACTERISTICS: Medium sand

VEGETATION: Creeping plants (Canavalia, Ipomoea) and thin growth of mangrove on the sandy beach.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: (MAJOR (More Than 5) REGULAR (Less Than 5) INCIDENTAL

GENERAL COMMENTS: An extensive mudbank is situated in front of the beach . Important beach for the ridleys.

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs	250.000	250.000	250.000	90.06-80%	The collecting and selling is in the hands of STINASU (Foundation for Nature Preservation in Suriname).
Meat (Kg)					
Shell No./Wt.					
Skins No./Wt.					
Stuffed Juveniles					
Other					

SPECIES Green turtle (Chelonia mydas)

TABLE 15.___ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: 250.000
2. Estimated number of nesting females: _____
3. Number of turtles caught at sea: _____
4. Other: _____

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

SPECIES	HATCHERY OPERATIONS EGGS COLLECT	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	26.780	19.304	11.582	within 3 days after hatching	7.722			
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

SURINAME

YEAR 1982

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS EGGS COLLECT	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	28.865	26.785	15.110	within 3 days after hatching	11.420			
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

SURINAME

YEAR 1981

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	50.781	33614	22.112	within 3 days after hatching	11.502			
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

SURINAME

YEAR 1980

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	62.317	35.064	30.825	within 3 days after hatching	3996			
Dermochelys coriacea	1174	835	835					
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea	1632	702	702					

SURINAME

YEAR 1979

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	10.545	10.548	28.118	within 3 days after hatching	2934			
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

SURINAME

YEAR 1978

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Galibi Nature Reserve	4	Sea turtle nesting beaches	Daytly beach patrol Nightly beach patrol Anti poaching patrol
Matapica/krofajapasi area (special managment area)	?	Sea turtle nesting beaches	

TABLE 19. SANCTUARIES AND REFUGES

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Suriname Forest Service - (Min. of Natural Resources and Energy)			
STINASU (Foundation for Nature Preservation in Suriname - (Min of Natural Resources and Energy.)	$ 24.188	10	

Suriname

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Suriname TURTLE (Sea turtle ranging project)	1977		c/o STINASU Chief investigator : H.A. Reichart M Sc.
University of Toronto	1979	1983	Funded by the University of Toronto with additional financial and logistic support from STINASU.

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

Suriname

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

1. The Nature Preservation Ordinance (1954) and Nature Preservation Degree (1966): provide the basis for the establishment of Nature Reserves by Degree.
   According the Ordinance public lands are eligible for reserve status if they are of scientific, aestetic or cultural value.
   It was by this Ordinance therefore possible to establish, among others, the Galibi Nature Reserve in 1969 and the Wia-Wia Nature Reserve in 1961 with important sea turtle nesting beaches within it.

2. The Game Ordinance (1954) and the Game Degree (1970).
   The Game Ordinance protects all wild mammals, birds and seaturtles, with the exception of those designated by Degree as 'game species', 'domestic animals' (i.e. cage birds) or 'predominantly harmful species'.
   The 'Game Degree' lists the sea turtles under the game species, but prohibits anyone to take, kill, possess, mutilate, sell or offer for sale any sea turtle or part of it in the area to which the Ordinance applies, but permits the collecting, transport and sale of eggs from March 1st to May 31th.

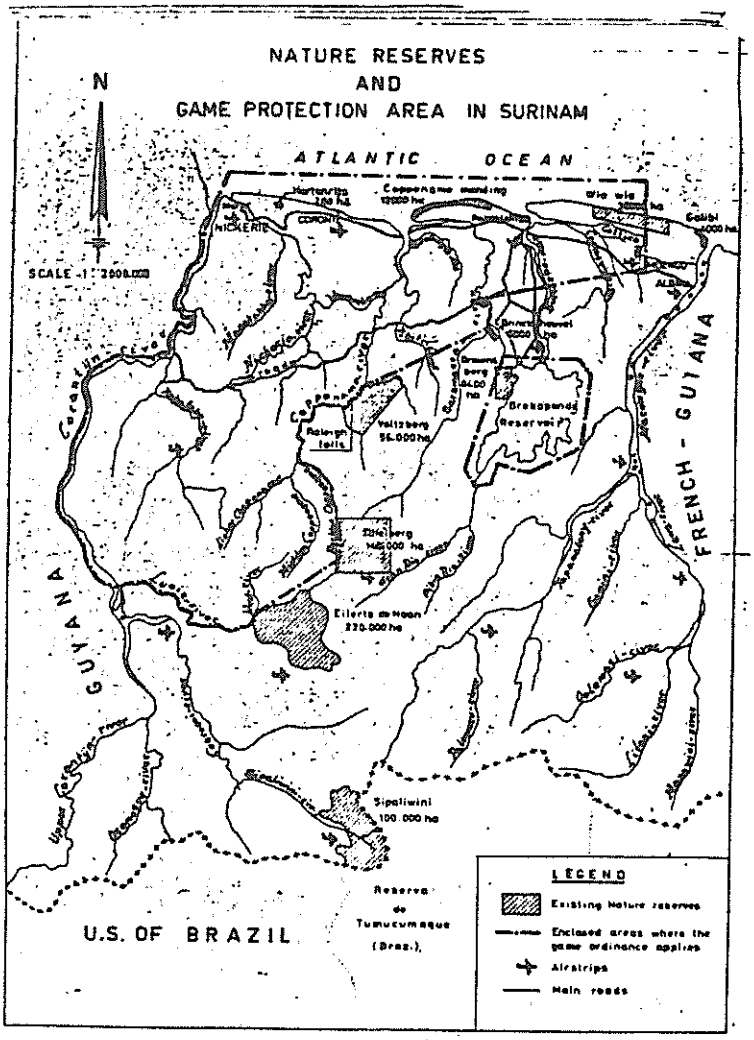
REPORTS AND PUBLICATIONS

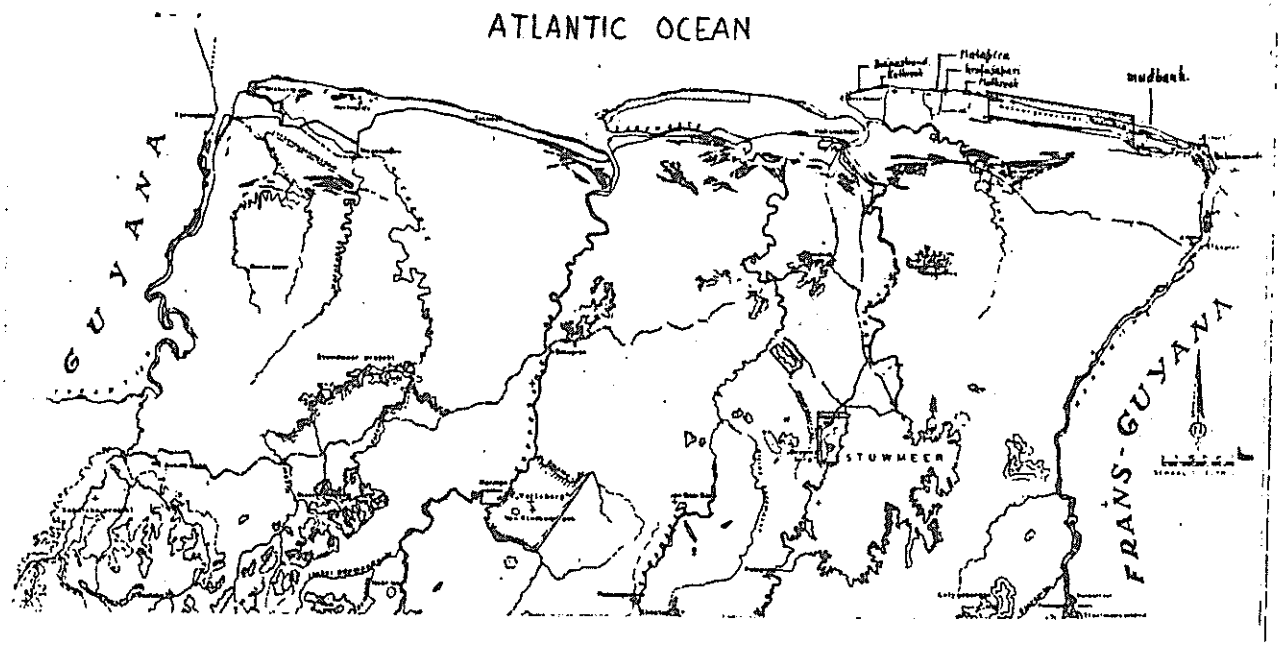
The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Schulz, J.P., 1975. Sea turtles nesting in Suriname. Sur. Forest Service

2. Whitmore, C and P. Dutton, 1981, Suriname sea turtle expedition (preliminary report).

3.





Northern part of the Republic of Suriname.
showing the location of the turtle nesting beaches and the mudbanks.

THE NATIONAL REPORT
EL REPORTE NACIONAL

FOR THE COUNTRY OF
POR EL PAIS DE

TRINIDAD-TOBAGO

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

LORI CHU CHEONG

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

17-22 July 1983

NATIONAL REPORT FOR THE COUNTRY OF

Trinidad & Tobago

NATIONAL REPORT PRESENTED BY

Lori M. Chu Cheong
The National Representative

Address: Institute of Marine Affairs
P.O. Box 3160
Carenage, TRINIDAD

NATIONAL REPORT PREPARED BY

Institute of Marine Affairs
Hilltop Lane, Chaguaramas

DATE SUBMITTED: May 16, 1983

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country TRINIDAD

Length of Coastline* . . . . . 494.4 Km

Km² of Continental Shelf Area . . . . . ____ Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 22.2 Km
(SUBJECT TO AGREEMENT WITH NEIGHBOURING COUNTRIES)

Extended Economic Zone . . . . . 370.6 Km
(EXTENDED PROPOSAL NOT YET PASSED)

Fisheries Jurisdiction . . . . . ____ Km

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)			48.03
A. High Energy			41.93
B. Low Energy			6.10
2. Reef (exposed)			–
3. Rocks			192.65
4. Cliffs			46.80
5. Vegetation (Total) not including Human Development			186.30
A. Mixed Human Development - City + Docks		14.85	14.85
B. Grasses			–
C. Mangroves			64.42
D. Coconut Trees		6.80	61.10
E. Other Trees or Shrubs FOREST, SAVANNAH, SUGAR CANE, CITRUS		37.98	59.63
F. Marshes			3.26
6. Mouths of lagoons, rivers, canals			8.80
7. Total Shoreline			488.83

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

	NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
North Coast	1. MACQUERIPE BAY	0.10	E	August
	2. MARACAS BAY	1.90	D	
	3. LAS CUEVAS BAY	2.15	D	March - August
	4. Blanchisseuse Bay	1.40	D	
	5. Paria Bay	0.95	D	March - August
	6. Murphy Bay	1.00	D	March - August
	7. Petit Tacarigua	0.80	D	March - August
	8. Grande Tacarigua	1.15	D	March - August
	9. Madamas Bay	0.60	D	March - August
	10. Matelot Beach	0.15	D	
East Coast	11. Grande Riviere Bay	1.10	D	April - August
	12. L'Anse Dorcas Bay	0.90	D	April - July
	13. Grande L'Anse Bay	0.85	D	April - July
	14. Comana Bay	1.10	D	
	15. Matura Bay (north)	3.30	D Cm Lo	March - August June July
	16. Matura Bay (central)	9.30	D	March - August
	17. Matura Bay (south)	6.70	D	March - August
	18. Manzanilla Bay	18.80	D, Lo, Cm	April - August
	19. Mayaro Bay	30.10	D	
Gulf of Paria	20. Salt Pan, Chaguaramas	1.00	Cl	July

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.
See attached MAP A.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.
See attached MAP A.

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Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY (Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

[illegible] THE ROCK COLOUR CHART OF THE GEOLOGICAL SOCIETY OF AMERICA, BOULDER, COLORADO 1979.

NESTING BEACH	COLOUR OF SAND	PARTICLE SIZE	BACKBEACH VEGETATION	ARTIFICIAL LIGHTING	OTHER
1. MACQUERIRE BAY	YELLOWISH GRAY 5Y 7/2 TO DARK YELLOWISH BROWN 10YR 4/2	2.42	ROCK SLOPE	NONE	
2. MARACAS BAY	YELLOWISH GRAY 5Y 7/2	2.64	SPARSE COCONUT PALM COCOS NUCIFERA	CAR PARK BEHIND BEACH LIT AT NIGHT	SAND TRAP BUILT ALONG BEACH.
3. LAS CUEVAS BAY	PALE YELLOWISH BROWN 10YR 6/2	2.69	CLIFF, COCONUT PALM COCOS NUCIFERA, TWINER IPOMOEA	NONE	
4. BLANCHISSEUSE BAY	PALE YELLOW 10YR 6/2 TO MODERATE YELLOWISH BROWN 10YR 5/4	1.63	COCONUT PALM COCOS NUCIFERA	NONE	
10. MATELOT BAY	LIGHT OLIVE GRAY 5Y 6/1	2.21	CLIFF	NONE	

TABLE 3. NESTING BEACH INVENTORY (Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

NESTING BEACH	COLOUR OF SAND	PARTICLE SIZE	BACKBEACH VEGETATION	ARTIFICIAL LIGHTING	OTHER
11. GRANDE RIVIERE BAY	DARK GRAY 3 N3 TO YELLOWISH GRAY 5Y 7/2	-0.07	COCONUT PALM COCOS NUCIFERA	LIGHTS FROM A HOTEL & BEACH BAR ILLUMINATE MIDDLE SECTION OF BEACH	
14. CUMANA BAY	PALE YELLOWISH BROWN 10YR 6/2	1.27			FISHING DEPOT
15. MATURA BAY			twiner Ipomoea pes capra, shrubs coccoloba uvifera (sea grape) & Chrysobalanus icaco (fat pork) trees Terminalia catappa (Indian almond) & Bourreria germinans (black mangrove), & coconut palm Cocos nucifera Bacon 1973	None	

NESTING BEACH	COLOUR OF SAND	PARTICLE SIZE	BACKBEACH VEGETATION	ARTIFICIAL LIGHTING	OTHER
18 MANZANILLA BAY			COCONUT PALM COCOS NUCIFERA		AT HIGH TIDE SEA UP TO VEGETATION IN PLACES TURTLES CONCEALED BY AMONG COCONUT ROOTS
19 MAYARD BEACH			COCONUT PALM COCOS NUCIFERA		
20 SALT POND, CHACACHACARE	NOT AVAILABLE	—	Comprises Sporobolus virginicus Kunth, Hippomane mancinella L + Fimbriatylis cymosa A. Br. (Bacon, 1967)	None	Good undisturbed nesting site

Bacon, P.R. 1967. The Salt Pond, Chacachacare Island J. Trin. Fld. Nat. Club. 41-44.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	0.75	160	29.30 May 25.26 June 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH Paria Bay 1982 (name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

Calculations 3 nests / 4 periods

avg. = 0.75 nests/night

March - Sept. 214 nights/season ∴ 214 nights/0.75 nests/

= 160 nests/season

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	0.5	107	29, 30 May 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH Murphy Bay 1982
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

Calculations $\frac{1 \text{ nest}}{2 \text{ patrols}}$
avg. = 0.5 nest / night
March - Sept. 214 nights / season
∴ 214 nights × 0.5 nests / night
= 107 nests / season

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	2.25	481	29, 30 May, 31 July or August 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH Grande Tamarisco
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

Calculations $\frac{9 \text{ nests}}{4 \text{ patrols}}$
avg. 2.25 nests / night
March - Sept. 214 nights / season
214 nights × 2.25 nests / night
= 481 nests / season

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	1.3	278	5 May 5, 12 June 1982
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 11 NESTING CENSUS FOR BEACH Grande Riviere
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

Calculations $\frac{4 \text{ nests}}{3 \text{ patrols}}$
avg. 1.3 nests / night
March - Sept. 214 nights / season
214 nights / 1.3 nests / night
= 278 nests / season

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea	1.97	421	April 8, 9, 10, 11, 13, 15, 19, 21, 23, 27, 29; May 1, 3, 5, 7, 8, 10, 13, 19, 15, 18, 21; June 3, 4, 5, 7, 12, 17, 19, 23, 28; July 1, 6, 14, 17, 27; August 6, 11, 20 — 1982 28.27
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea	0.02	length of season unknown	Same as above

TABLE 4 - 16 NESTING CENSUS FOR BEACH Matura Bay north
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

Calculations $\frac{81 \text{ nests}}{41 \text{ patrols}}$ DC
avg 1.97 nests / night
March Sept. 214 nights / season
∴ 214 nights × 1.97 nests / night
= 421 nests / season

Calculations for Lo
$\frac{1 \text{ nest}}{241 \text{ patrols}}$ = 0.02 nests / night

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata	0.5	Length of season unknown	9 to July 1982
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 20 NESTING CENSUS FOR BEACH Salt Pond, Chaviachaque
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

Calculations 1 nest / 2 patrols
avg. 0.5 nests/night

3 mi = 4 miles

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS: Cc	Cm	D	E	Lk	Lo	ND I. D.
11-06-82	Cayenne - Matura, Salibia, Fortaleza, Icacos, Soupboo; North Coast - Parlatuvier, Mt. Irvine, L'Anse Noire, Grand Riviere, Matelot, Madamas, Grande Tarouba, Mt. Thomas, Mayaro, Rio Claro, Manzanilla, Vaz, Lecluse, Plaisance			14				
1-07-82	South Coast - Moruga, Guayaguayare. Icacos, Southeast Coast, Nigaro, Beach, Manzanilla Salt Pond			1	1			
8-07-82	Gulf of Paria - Salt Pond, La Tinta, Chaguaramas							2
9-07-82	North Coast - Los Cuevas, Blanchisseuse, Paria, Maraval, Matelot Tacarigua Grande Tacarigua, Madamas, Matelot Grande, Riviere			25				1
22-07-82	East Coast - Matura Bay, central & north; South coast - Icacos, Icacos Islets, Cedros, Erin; Gulf of Paria - Guapo Bay, Irois Bay, Granville, Scenery Islands			7				
29-07-82	East & South coast & Salt Pond			5				7
17-08-82	East & North coast & Salt Pond			5				
03-09-82	East & North coast			1				1
14-09-82	East & North coast			—				

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

3-402

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

On the north coast beaches of Madames & Grande Tarouba it was difficult to count separate nests because of high density nesting. The upper beach at the two locations were a continuous mass of disturbed sand & an individual set of tracks could not be differentiated. The tracks were those of leatherbacks, with few smaller unidentified species in between. This high density nesting was observed up until August, after which individual tracks could be seen.

In the Gulf of Paria, at Salt Pond, Chaguaramas, tracks of a loggerhead turtle species were recognized on the aerial survey. Salt Pond has a narrow strip of pebble beach, approximately 6 ft between surf & upper beach. On ground truthing the area, the turtle tracks were not distinguishable because of the nature of the substrate. The pebbles appeared to be uneven in all directions, thus, uniform tracks could not be seen. During a night patrol in July a hawksbill nested in the vegetation below the beach.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta						
Chelonia mydas						
Dermochelys coriacea		Matura Bay 62				
Eretmochelys imbricata						
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

The method used for estimating the leatherback population at north Matura Bay was used by Bacon (1973) to assess Matura bay during three nesting seasons 1970 - 1972.

Assuming that leatherbacks re-nest at intervals of about ten days & may nest up to seven times in a season, the number for a season may be estimated as twenty times the number nesting on an average night.

The number nesting on an average night was found by patrolling north Matura for 14 consecutive nights & averaging the number of females sighted per night. This was 1.04
Therefore the season's nesting population was
1.04 female/night x 20 = 208 females
The population for the entire bay was then found by multiplying this figure x 3
208 x 3 = 62. nesting females for the season.

Bacon, P.R. 1973. The Status & Management of Sea Turtle Resources in Trinidad & Tobago. Rep. to Permanent Secretary, Min. Agric. Lands & Food Prod.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Macgillivray Bay		E	Observation
2. Grande Riviere Bay		E, Cm	Fishery
3. Toco		E, Cm	Fishery, Observation
4. Salibia		E	Observation, Fishery
Matura Rock off of		D	Incidental catch
5. Salibia Bay		E	Observation, Fishery
Cavari Pt.		E	Observation
Soldado Rock		E, Cm	Observation, Fishery
6. Scotland Bay		Cm	Observation

TABLE 7. FORAGING AREAS INVENTORY

See attached map 6.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretrochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10: NATURAL MORTALITY (Supplementary page for additional biological data)

SIGHTINGS OF TURTLES BETWEEN MAY 12-AUGUST 15,1981.

Dc - Dermochelys coriacea
Cm - Chelonia mydas

DATE	BEACH	SPECIES SYMBOL	TIME SEEN	ACTIVITY	TIME OF RE-ENTRY	LENGTH OF CARAPACE (cm)	WIDTH OF CARAPACE (cm)	LENGTH OF FLIPPER (cm)	NO. OF EGGS	TAG NO
12/5/81	North Matura	Dc	2130	Emergence	2330	163		91.3	112 Fertile 4 Infertile	
15/5/81	North Matura	Dc	2145	Digging nest	2252	150	90.2	83.9	100 Fertile	
18/5/81	North Matura	Dc	2015	Digging nest	2132	150	116.7	83.9	82 Fertile 24 Infertile	
20/5/81	North Matura	Dc	2100	Re-entry	2105	165.2	114.2		Moving toward sea	
21/5/81	North Matura	Dc	2100	Camouflaging nest	2300	162.5	109.2	91.4	Covering nest	
21/5/81	North Matura	Lk	2145	Emergence	2330	167.6	104.1	83.8	Camouflaging nest	
23/5/81	North Matura	Dc	2150	Re-entry	2155	167	122	93	Moving toward sea	
28.5.81	North Matura	Dc	2045	Re-entry	2045				Re-entering sea	
4.6/81	North Matura	Dc	2130	Being slaughtered		156.7	116.8	83.0		
9.6/81	North Matura	Dc	2210	Digging nest	2331	154.9	116.9	Right 86.3 Left 80.9	97 Fertile 33 Infertile	
9.6/81	North Matura	Dc	2150	Digging nest	2320	165	121.9	93.1	120 Fertile 5 Infertile	
9.6/81	North Matura	Dc	0009	False crawl	0030	162	No measurements taken		Moving up beach	
10.6/81	North Matura	Dc	0055	Digging nest	0249	167	124	Right 93 Left 83	80 Fertile 30 Infertile	
11.6/81	North Matura	Dc	0255	Emergence	0435	155	114	86		
11.6.81	North Matura	Dc	2313	Re-entry	2316	Unable to obtain measurements, returning to sea too fast				
17/6/81	North Matura	Dc	2100	Digging nest	2200	157	121.9	Right 76 Left 91	98 Fertile 34 Infertile	
18.6/81	North Matura	Dc	2355	Digging nest	0158	168.9	128	91	97 Fertile 36 Infertile	
22.6/81	North Matura	Dc	2125	Digging nest	2220	152	124	91	77 Fertile 27 Infertile	Right front T1352
23/6/81	South of Matura R.	Cm	2240	Laying eggs	2317	96	76			
24/6/81	North Matura	Dc	2140	Digging nest	2235	151	111	85	76 Fertile 30 Infertile	Right front T1381
24/6/81	North Matura	Dc	2250	Covering nest	2332	165	111	91	Covering nest	
25/6/81	North Matura	Dc	2230	False crawl	2230	157			False crawl.	
25/6/81	North Matura	Dc	0003	Digging nest	0131	163	109	Right 87 Left 91	101 Fertile Est. 12 Infertile	
26/6/81	North Matura	Dc	2125	Digging nest	2230	152	111	99	79 Fertile 24 Infertile	
26.6/81	North Matura	Dc	0001	Digging nest	0135	160	123		91 Fertile 25 Infertile	Left front AA0270 & AA0272
27.6/81	North Matura	Dc	2050	Emergence	2100	146	113		False crawl	
27.6/81	North Matura	Dc	2205	Digging nest	2240	169	124	83	111 Fertile 20 Infertile	Left front AA0275

TABLE 10: NATURAL MORTALITY (Supplementary page for additional biological data)

SIGHTINGS OF TURTLES BETWEEN MAY 12-AUGUST 15,1981

Dc - Dermochelys coriacea
Cm - Chelonia mydas

DATE	BEACH	SPECIES SYMBOL	TIME SEEN	ACTIVITY	TIME OF RE-ENTRY	LENGTH OF CARAPACE (cm)	WIDTH OF CARAPACE (cm)	LENGTH OF FLIPPER (cm)	NO. OF EGGS	TAG NO
26/6/81	North Matura	Dc	0100	Digging nest	0220	160	119	97	103 Fertile 36 Infertile	
27.6.81	North Matura	Dc	2050	Covering nest	2136	160	121	88		
28.6.81	North Matura	Dc		Being slaughtered		153	111			
29.6.81	North Matura	Dc	2044	Digging nest	2155	148.5	115.5	78	88 Fertile 24 Infertile	
1.7.81	North Matura	Dc	2135	Emergence	2345	160	124	83	107 Fertile 48 Infertile	Left front AA027
2.7.81	Paria	Dc	2100	False crawl	2155	152	114	88	False crawl	
2.7.81	Paria	Dc	2110	False crawl	2305	152	116	84	False crawl	
4.7.81	Paria	Dc	2150	Emergence	0045	167	121	91	105 Fertile	Recapture - Right front T1352
6.7.81	North Matura	Dc	2144	False crawl	2240	160	111	88	False crawl	
11.7.81	North Matura	Dc	2147	Laying eggs	2229	160	114	Right 91 Left 99	84 Fertile 3 Infertile	Right front AA0257
16/7/81	North Matura	Dc	2106	Digging nest	2236	167.6	111.7	86.3	83 Fertile 12 Infertile	T1387
31.7.81	North Matura	Dc	2310	Camouflaging nest	2323	171.6	127	104	Covering nest	

TABLE 10 NATURAL MORTALITY (Supplementary page for additional biological data)

SIGHTINGS OF TURTLES BETWEEN APRIL-AUGUST 15, 1982

Dc - Dermochelys coriacea
Cm - Chelonia mydas
*An epoxy glue was used to adhere a monel tag to the leatherbacks carapace

DATE	BEACH	SPECIES SYMBOL	TIME SEEN	ACTIVITY	TIME OF RE-ENTRY	LENGTH OF CARAPACE (cm)	WIDTH OF CARAPACE (cm)	LENGTH OF FLIPPER (cm)	NO. OF EGGS	TAG #
8-04/82	North Natura	Dc	2310	Finishing Laying	2400	165.1	116.8	81.3	-	
04/82	North Natura	Dc	0020	Emergence	0100	160.0	111.8	81.3	False crawl	
10/04	North Natura	Dc	0000	Digging nest	-	157.5	109.2	-	55	AAD 226 Left fron
11/04	North Natura	Dc	2125	Digging nest	0020	149.9	109.9	Right 81.6 Left 66.5	84	AAI 258 Right front
11/04	North Natura	Dc	0025	Laying eggs	-	152.4	112.4	80.2	50	AAI 227 Right front
15/04	North Natura	Dc	2130	Camouflaging nest	-	161.3	111.8	-	-	
15/04	North Natura	Dc	2145	False crawl	-					
19-04	North Natura	Dc	0002	Digging nest	0109	154.9	121.8	87.1	96	AAI 254 Right front
21/04	North Natura	Dc	2020	Emergence	2145	149.9	106.7	82.8	91	AAD 259 Left front
23/04	North Natura	Dc	2255	Emergence	-	165.1	116.4	91.4	124	
23/04	North Natura	Dc	0039	Emergence	-	156.9	119.4	94.0	[illegible]	AAI 256 Left rear
29/04	North Natura	Dc	2238	Laying eggs	-	162.6	124.5	94.0	94	AAI 224 Left front
21/5/82	North Natura	Dc	2300	Emergence	-	158.8	115.6	93.9	82	AAD 230 Right front
05/05	North Natura	Dc	0120	Covering nest	-	172.7	125	104.1	-	AAI 231 Left rear
1/05	North Natura	Dc								
[illegible]	North Natura	Dc	2040	Covering nest	-	160.0	111.1			
[illegible]	North Natura	Dc	2050	Laying eggs	-	152.4	11[illegible]		1	Rec'd. w/ AA [illegible]
15/05	North Natura	Dc	2110	Camouflaging nest	2140	152.4	111.8			AAI 232 Left [illegible]
15/05	North Natura	Dc	2150	Emergence	-	146.1	104.1	76	92	AAI 233 Right [illegible] AAI 234 Left rear
15/05	North Natura	Dc	0400	Digging nest	-	156.2	1[illegible]		[illegible]	AAD 235 Left front
[illegible]	North Natura	Dc	2020	Digging nest		157.5	[illegible]	[illegible]	[illegible]	[illegible]
17/05	North Natura	Cm	-	Camouflaging nest	2233	163.7	113.7			MMC 003
17/05	North Natura	Cm	-	Camouflaging nest	0 30					
17/05	North Natura	Dc	-	False crawl	-					

TABLE 10 NATURAL MORTALITY (Supplementary page for additional biological data)

SIGHTINGS OF TURTLES BETWEEN APRIL 8-AUGUST 20, 1982

Dc - Dermochelys coriacea
Cm - Chelonia mydas

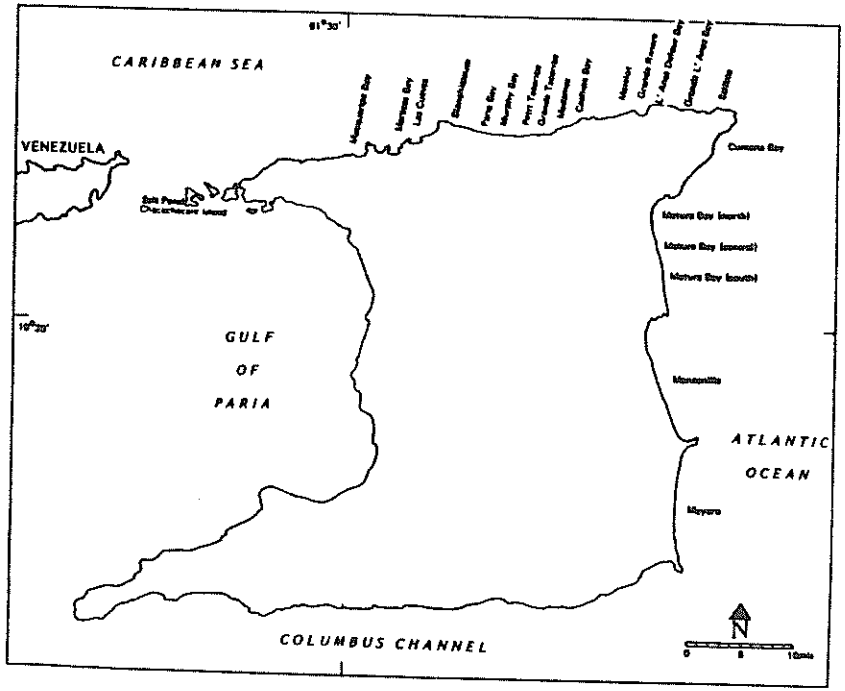
DATE	BEACH	SPECIES SYMBOL	TIME SEEN	ACTIVITY	TIME OF RE-ENTRY	LENGTH OF CARAPACE (cm)	WIDTH OF CARAPACE (cm)	LENGTH OF FLIPPER (cm)	NO. OF EGGS	TAG #
04/05	North Natura	Dc	2145	Emergence	0145	-	-	-	105	
04/05	North Natura	Dc	0030	False crawl	-	-	-	-	-	
[illegible]	North Natura	Dc	2300	Digging nest	-	149.9	118.6	86.9	82	MMC 004 Left
[illegible]	North Natura	Dc	2045	Covering nest	2332	157.5	113.0	94.0	-	Recapture + AAI [illegible]
15/05	North Natura	Dc	2135	False crawl	2135	-	-	-	-	
15/05	North Natura	Dc	2235	Digging nest False crawl	2250	157.7	119.4			
19/05	North Natura	Dc	2240	Laying eggs	2325	157.5	116.8	94.5	117 * infertile included	T1398 Left fron + AAD 239 Epoxy
[illegible]	Control Natura	Dc	2310	Digging nest	-	155.6	118.8	-	79	MMC 003 Left rear MMC 004 Left [illegible]
19/05	North Natura	Dc	2220	Digging nest	2317	-	-	-	99	Recapture UN removed MMC 001 Left rear MMC 008 Right [illegible]
[illegible]	North Natura	Dc	2300	Covering nest	-	159.7	109.2	-		
21/05	North Natura	Dc	2300	Digging nest	-	-	-	-	76	Recapture AAI [illegible] MMC 009 Left rear MMC 010 Right [illegible]
21/05	North Natura	Dc	0050	Selecting nesting spot	-	-	-	-	-	Recapture AAI [illegible]
[illegible]	Grande Riviere	Dc	2005	Emergence	2141	154.0	111.1	84.3	115 including 34 infertile	MMC 007 Left [illegible] MMC 011 Right [illegible] AAD 237 Epoxy
[illegible]	Grande Riviere	Dc	2310	Fresh slaughter before nesting	-	148.7	104.1	92.7		
[illegible]	North Natura	Dc	2030	Selecting nest site	2155	160	121	95	105 including 25 infertile	
22/05	North Natura	Dc	2300	Re-entering surf	2300	-	-	-		
22/05	North Natura	Dc	2215	Covering nest	-	-	-	-		
22/05	North Natura	Dc	2225	Laying eggs	2240	160	132	95		
[illegible]	North Natura	Dc	2245	Laying eggs	2340	158	122	81		
[illegible]	North Natura	Cm	2320	Camouflaging nest	2335					
[illegible]	North Natura	Dc	2350	Camouflaging nest	0010	-	-			
22	North Natura	La	0040	In surf	False crawl	-				

TABLE 10 NATURAL MORTALITY (Supplementary page for additional biological data)

SIGHTINGS OF TURTLES BETWEEN APRIL 8-AUGUST 20, 1982

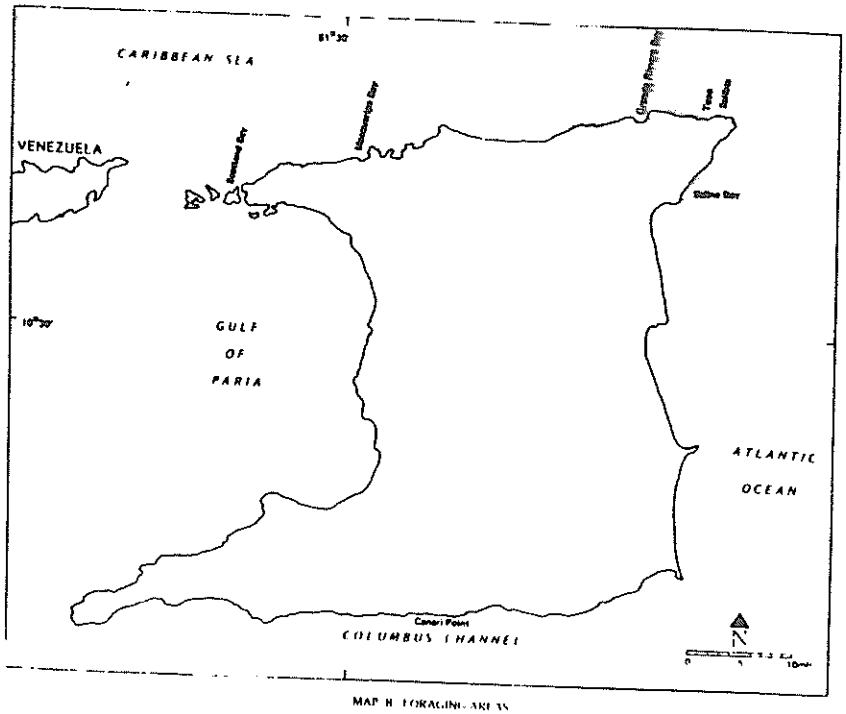
Dc - Dermochelys coriacea
Cm - Chelonia mydas
Lo - Lepidochelys olivacea
Ei - Eretmochelys imbricata

DATE	BEACH	SPECIES SYMBOL	TIME SEEN	ACTIVITY	TIME OF RE-ENTRY	LENGTH OF CARAPACE (cm)	WIDTH OF CARAPACE (cm)	LENGTH OF FLIPPER (cm)	NO. OF EGGS	TAG #
05/06	North Natura	Dc	-	False crawl	-	-	-	-	-	
05/06	North Natura	Dc	0052	Digging nest	-	160.0	116.3	-	-	AAD 226 Epoxy
07/06	North Natura	Dc	2128	Digging nest False crawl	-	-	-	-	-	
07/06	North Natura	Dc	2253	Digging nest	-	157.4	114.3	-	89	MMC 026 Right rear AAD 277 Epoxy
12/06	North Natura	Dc	2255	False crawl	2312	-	-	-		
12/06	Grande Riviere	Dc	0015	Emergence	-	160.0	111.7	88.9	-	MMC 031 Right rear
5/06	Las Cuevas	Dc	2300	Digging nest False crawl	0033	149.8	107.9	-	-	MMC 025 Right rear AAD 278 Epoxy
[illegible]	North Natura	Dc	2048	Selecting nest site False crawl	2112	-	-	-		
[illegible]	North Natura	Dc	2110	False crawl	2110					
19/06	North Natura	Dc	2115	Selecting nest site	-	154.9	106.6	92	104	MMC [illegible] Right rear AAD 279 Epoxy
21/06	North Natura	Dc	2210	Camouflage nest	2220	160.0	118.1	-	-	MMC 027 Right rear
[illegible]	North Natura	Dc	2128	Digging nest	-	149.8	111.7	-	104	MMC 029 Left rear flipper MMC 028 Left front flipper
21/06	North Natura	Lo	2329	Emergence	0051	69.9	68.5	33.0	111	MMC 029 Right rear flipper MMC 030 Right front flipper
[illegible]	North Natura	Dc	-	Re-entry	-	-	-	-	-	MMC 041 Right rear flipper
[illegible]	North Natura	Cm	2341	Digging nest	-	159.2	109.2	104.1	-	MMC 044 Left rear flipper AAD 287 Epoxy
30/07	Salt Pond, Chacachacare	Ei	2329	Digging nest	0038	87.6	76.2	39.3	170	MMC 045 Right rear flipper MMC 046 Left front flipper
01/08	Grande Tarataba	Dc	2240	Did not emerge from surf	-	-	-	-	-	
04/08	North Natura	Cm	2224	Camouflaging nest	2155	156.2	111.7	-	-	MMC 049 Left rear flipper AAI 288 Epoxy



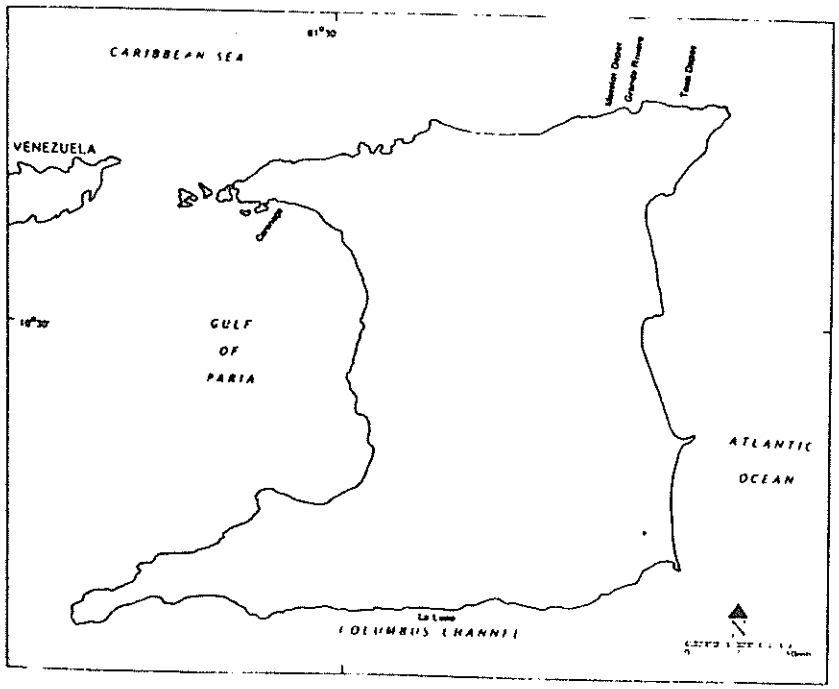
MAP A KNOWN SEA TURTLE NESTING BEACHES IN TRINIDAD

SEE TABLE 9.



MAP B FORAGING AREAS

SEE TABLE 7.



MAP C LANDING SITES

See TABLE 11

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Matelot Depot	Cm, Ei	TURTLE NETS	OFFICIAL HUNTING SEASON Oct.-March	
2. Grande Riviere Depot	Cm Ei, Lo	TURTLE NETS, HARPOONS	Oct-March	
3. Toco Depot	Cm Ei, Lo	TURTLE NETS, HARPOONS	Oct. March	
4. La Lune Depot	Cm. Ei	TURTLE NETS	Oct-March	
5. Carenage Depot	Cm. Ei, Lo	TURTLE NETS, HARPOONS	Oct. March	
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

See ATTACHED MAP C.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs	Not Sold				
Meat (Kg)					INTERVIEW FISHERMEN
Skull No./Wt.	$5 - $10 per lb.				INTERVIEW FISHERMEN
Skins No./Wt.	NOT SOLD				
Stuffed Juveniles	NOT SOLD				
Other					

SPECIES Cm. t; Lo all species treated alike

TABLE 15.___ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	NA		Because of seasonality of this activity, turtle fishing is supplementary to fishing livelihood. No one totally dependent on turtle fishing.
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs:_____
2. Estimated number of nesting females: _____
3. Number of turtles caught at sea:_____
4. Other: _____

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

St Peter's Day Fishermen's Festival in early July. Different sea foods are prepared for an all day festival. Turtles are caught & prepared even though the occasion occurs during Official Closed Turtle hunting season.

SPECIES	HATCHERY OPERATIONS EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea	158	61	15	2 hours	4			
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1981

TABLE 17 - 1 TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

TRINIDAD/TOBAGO

TRINIDAD/TOBAGO

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea	261	58	45	2-4hrs	4			
Eretmochelys imbricata	165	75	43	4hrs	24	20		
Lepidochelys kempi								
Lepidochelys olivacea	60	5	none		3	3		

YEAR 1982

TABLE 17 - 2 TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

TRINIDAD/TOBAGO

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata						2		
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1983

TABLE 17 - 3 TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Institute of Marine Affairs	2	RESEARCH - TO DETERMINE CURRENT NESTING POPULATION OF DERMOCHELYS CORIACEA AT MATURA BEACH - TO DETERMINE DEMAND + MARKETABILITY OF TURTLE MEAT + PRODUCTS IN TRINIDAD . TO DETERMINE FEASIBILITY OF HATCHING AND REARING A SPECIES FOR MARKETING - TO COLLECT biological data on nesting Turtles
Trinidad Field Naturalists Club		Observing + tagging of leatherbacks during group outings

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

TRINIDAD - TOBAGO

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS OR LEVELS OF ENFORCEMENT
FORESTRY DIVISION MINISTRY AGRICULTURE, LANDS + FOOD PRODUCTION			During the 1982 turtle nesting season a warning signs were posted at each Matura bay stating that the taking of turtles & eggs was an offence according to the 1975 Turtle Protection Regulations. Even though these regulations fall under the Fisheries Act, no enforcement of the law is present.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TRINIDAD-TOBAGO

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, ~~regional, and local~~ legislation concerning turtle management and conservation. List title, date, and stated purpose.

Marine Areas (Preservation + Enhancement) Regulations 1974

Restriction of entry, interference + removal of fish (includes turtles + turtle eggs) from restricted areas
- here Buccoo Reef

See attached

Fisheries Act 1916

Regulates - fishing in waters of Trinidad + Tobago -
- mesh size of nets + use of nets
- size of turtles taken, prohibition of sale of turtles below prescribed size
- prohibition + taking of fish in restricted area

See attached

Protection of Turtle + Turtle Eggs Regulations 1975

1 Prohibition against taking possession of female turtle, or taking, removing or selling turtle eggs.

2 Restriction on killing, harpooning + selling turtle

See attached.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Investigations on the nesting hatchings + feeding of the leatherback turtle Includes: POPULATION estimate of nesting leatherbacks at Matura Bay : MARKET SURVEY ON AVAILABILITY OF TURTLES : FEASIBILITY STUDY ON BEEPING HAWKSBILLS IN CAPTIVITY.	MAY 1981	DEC 1983	INSTITUTE OF MARINE AFFAIRS P.O. BOX 3160 CARENAGE, TRINIDAD INVESTIGATOR: LORI M. CHU CHEONG

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

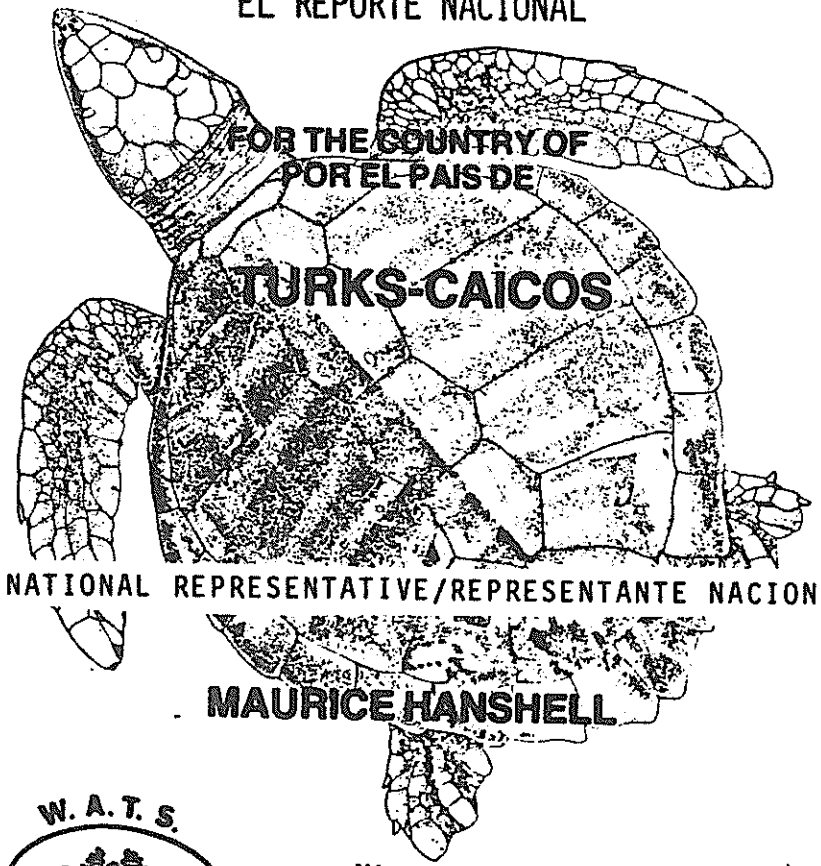
REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Brown P.R. 1967 Leatherback Turtles. J Trin. Field Nat Club 2-3
2. ——— 1969 The Leatherback Turtle Project, Progress Report 1967-1968 + recommendations J Trin Field Nat Club 8-9
3. ——— 1969 Report of the Trinidad Sea Turtle Conservation Project Ann Rep. Trin Field Nat Club 18-35.
4. ——— 1970a Studies on the Leatherback Turtle, Dermochelys coriacea (L) in Trinidad, West Indies Biol Conservation 2(3) 213-217
5. ——— 1970b Political Restrictions make safe nesting possible J Int Turtle + Tortoise Soc 4(3): 6-7
6. ——— 1970c The Status of Sea Turtle Conservation in Trinidad. Environmental Newsletter Carib. Com. Assoc. 1(2) 14-17
7. ——— 1971a Sea Turtles in Trinidad + Tobago In Proc 2nd working meeting IUCN Marine Turtle Specialist Group IUCN Publ Nat Ser. Supp Pap No 21: 79-83.
8. ——— 1971b Tagless Turtles J Int Turtle + Tortoise Soc 5(3) 26-27
9. ——— 1973 Observations on the loss of Tags by Sea Turtles. J. Trin. Field Nat Club. 68-77
10. ——— 1973 The Status + Management of the Sea Turtle Resources of Trinidad + Tobago Rep to Permanent Secretary Min Agric Lands + Food Prod 40pp
11. ——— 1973 The Orientation Circle in the Beach Ascent Crawl of the Leatherback turtle Dermochelys coriacea, in Trinidad. Herpetologica 29 343-348
12. ——— 1975 Review on Research, Exploitation + Management of the Stocks of Sea Turtles in the Caribbean Region EAD Fisheries Circular No 334, 19pp
13. Brown, P.R. + Maliphant, G.K. 1971. Further Studies on sea turtles in Trinidad + Tobago J Trin. Field Nat Club. 1971; 2-17
14.
15.

THE NATIONAL REPORT

EL REPORTE NACIONAL



NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

MAURICE HANSHELL

W.A.T.S.

S.T.A.O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W.A.T.S.

S.T.A.O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

TURKS & CAICOS ISLANDS

NATIONAL REPORT PRESENTED BY

Maurice Hanshell

The National Representative

Address: Permanent Secretary, Ministry of Agriculture, Department of Fisheries and Agriculture

Grand Turk, TURKS AND CAICOS, WI

NATIONAL REPORT PREPARED BY

John Robert Fletemeyer, Nova University Oceanographic Center, 8000 North Ocean Drive, Dania, Florida 33004

DATE SUBMITTED: 1 September 1982

! Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540. San Jose, Costa Rica.

TABLE OF CONTENTS

SECTION	PAGE
INTRODUCTION	1
BACKGROUND	2
Coastline and Offshore Areas	4
History of Sea Turtle in Turks and Caicos	5
Status of the Knowledge of Sea Turtles	7
METHODS	9
RECOMMENDATIONS	10
TABLE 1. GEOGRAPHIC INVENTORY	12
TABLE 1A. SUMMARY OF COASTLINES	13
TABLE 2. COASTAL HABITAT INVENTORY	14
TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES	15
TABLE 3. NESTING BEACH INVENTORY	16
TABLE 3A. SUPPLEMENTARY DATA	20
TABLE 4. NESTING CENSUS FOR BEACH	26
TABLE 5. AERIAL BEACH SURVEY SUMMARY	29
TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES	31
TABLE 7. FORAGING AREAS INVENTORY	33
TABLE 7A. SAMPLE OF LIVE TURTLES FROM FORAGING AREAS	36
TABLE 8. TURTLE SPECIES PRESENT OR FORAGING AREAS	38
TABLE 9. NON-FORAGING TURTLES AT SEA	39
TABLE 10. NATURAL MORTALITY	41
TABLE 11. LANDING SITES FOR TURTLES AND TURTLE PRODUCTS	42
TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS	43
TABLE 13. ESTIMATED INCIDENTAL TURTLE CATCH	44
TABLE 14. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN	46

TABLE OF CONTENTS (Continued)

SECTION	PAGE
TABLE 15. OFFICIAL STATISTIC OF TURTLE PRODUCTION	47
TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES	48
TABLE 17. TURTLE MARICULTURE OPERATIONS	49
TABLE 18. PUBLIC & PRIVATE GROUPS CONCERNED WITH TURTLE CONSERVATION	50
TABLE 19. SANCTUARIES AND REFUGEE	51
TABLE 20. REGULATORY AUTHORITY	52
TABLE 21. NATIONAL RESEARCH PROJECTS	57
REPORTS AND PUBLICATIONS OF TURKS AND CAICOS ISLANDS	58
ACKNOWLEDGEMENT	59

INTRODUCTION

Beginning 7 July 1982 a seven-day sea turtle socio-economic and nesting survey study of the Turks and Caicos Islands was conducted. The purpose of this study was to collect data to complete a national report of this area for the Western Atlantic Turtle Symposium (W.A.T.S.) to be held in July 1983 in San Jose, Costa Rica. The data for the report was collected using the following objectives as a guideline.

1. Conduct surveys of all the marine shoreline within the British territory known as the Turks and Caicos Islands.

   a) Record the types of shoreline present -- for the purpose of recording actual or potential sea turtle nesting beaches (so that subsequent surveys can be more time- and cost-effective), and to document the kinds and amounts of shoreline throughout the area.

   b) Record all signs of sea turtle tracks and nests or nesting beaches -- for the purpose of developing a comprehensive index of the extent of sea turtle nesting activity, including updated data on prior known concentrations, determination of extent of dispersed nesting activity, and determination of any prior unrecorded nesting sites.

2. Compile data of all kinds to determine the status of sea turtle populations.

3. Review present conservation and management programs related to sea turtles.

4. Determine socio-economic importance of sea turtles.

5. Make recommendations to help promote the survival status of sea turtle populations inhabiting the territorial waters of the British Virgin Islands.

BACKGROUND

General Geographic Description of the Turks and Caicos Islands

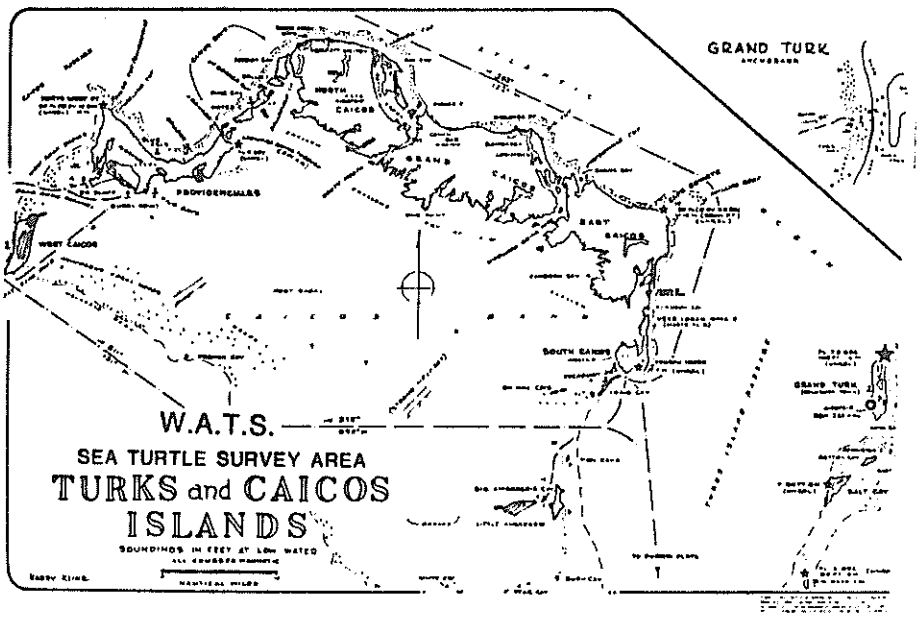
The Turks and Caicos Islands represent a British Crown Colony. The colony consists of two groups of islands at the southern extremity of the Bahamas chain lying between 21° and 22° North and 71° and 72° West (refer to Fig. 1).

The Turks and Caicos Islands consist of eight inhabited islands and many uninhabited islands. These islands have a total land area of 166 square miles; North Caicos and Middle Caicos have the largest land areas.

Population estimates for these islands vary, but the 1970 census reveals that it is 5,657 (Sadler 5:2). During the last decade or so the population of these islands has been declining, due to primarily the emigration of people to Freeport and other areas of the Bahama Islands. The breakdown of the 1970 census is as follows:

Grand Turk	2,330	Kew	290
Salt Cay	350	Whitby	52
Conch Bar	155	Sandy Point	64
Bambarra	123	Blue Hills	362
Lorimers	102	The Bight	114
Bottle Creek	601	Five Cays	82
South Caicos	1,032		

The Turks and Caicos Islands may be considered part of the Bahamas. In terms of terrain and vegetation these islands are comparable to Great Inagua and Mayaguana. The drier islands of Grand Turk, Salt Cay, South Caicos and East Caicos resemble Great Inagua; Middle Caicos, North Caicos and Providenciales resemble Mayaguana. The latter has sufficient rainfall to support a moderate state of coppice vegetation.



Coastline and Offshore Areas

The coastline of the Turks and Caicos Islands varies greatly. On the north side there are long stretches of moderate to high-energy beaches. Typically these beaches have a moderately sloping beach profile which is usually well vegetated about 10 meters above the high tide line. The vegetation consists of sea grapes, saltbush, purslane, beach morning glory, and buttonwood. Similar but much shorter beaches are found on many of the small, offshore cays located to the east and south.

Laboratory analyses of sand collected from many of the beaches reveal that the sands are carbonate in origin. The sand is usually medium grained and well-sorted. However, a few beaches have predominately fine-grained sediments. The color, according to Menzel's color scheme, is white to light tan.

In addition to long stretches of sandy beach there are areas of coastline on the windward side of the islands that are extremely rocky. Well-stratified sandstone areas have been exposed by wind and hydraulic erosional forces.

A completely different description is applied to much of the southern coastline. Here vast communities of mangroves are common. Extensive tidal swamps with long meandering tidal creeks sometimes stretch more than 4 kilometers inland.

Only Middleton Cay does not fit the above description. This .5 kilometer island apparently was built from the gradual accumulation of conch shells which fishermen have left for countless decades (Hodgkins, personal communication).

The offshore areas bordering the Turks and Caicos Islands are quite diverse. On the south sides of many of the islands vast expanses of shallow-

water tidal flats predominate. In most cases, the water is about one meter deep and grass beds (consisting of Thalassia and Syringodin) occupy the bottom. Grass vegetation is common on the bottom of most of the tidal creeks; however, some of the creek bottom has not been colonized by vegetation because of extensive siltation. Much of this exposed bottom is blanketed by jellyfish.

Farther south is the Caicos bank, which extends 20 to 40 miles south of the island chain. On the windward side of many islands are spectacular fringing reefs which range between 5 meters and 20 meters in depth. Here there are rich and spectacular populations of reef fish and hard corals. Occasionally, farther away from shore some "patch" reefs may be found.

One unusual submarine feature worth mentioning is the "Ocean Hole." A dive and two aerial surveys of this feature (conducted during the July 1982 survey) revealed that the hole is about 1 kilometer in diameter. The rim is located in about 4 meters of water and then descends perhaps a hundred meters or more almost straight to the bottom. The water is extremely turbid with visibility of 10 meters at the surface dropping down to almost nil at 80 meters. Although there are large populations of reef and pelagic fish as well as large numbers of green sea turtles (mainly juveniles) in the Ocean Hole, there is a conspicuous absence of hard corals.

A History of Sea Turtles in the Turks and Caicos Islands

Green sea turtles were an important factor in the colonization of the American tropics because they were abundant, easy to keep alive for months, and represented an important protein source. There are reports from the time of the Spanish exploration until the late nineteenth century of ships stopping to replenish their stores with water and turtles in the Turks and Caicos Islands. Unfortunately the number of turtles taken and the relative

abundance of turtles is unknown. The earliest record on this subject is from 1906. During that year the Turks exported $3,538.00 worth of Hawksbill turtle shell (Sadler, 1972:37). In 1907, the local sea turtle industry reached its peak and during the same year the government passed the Turtle Protection Ordinance, which protected turtles from poaching by fishermen from the Bahamas and other nearby islands. In 1909, the Caicos Development Company leased Chalk Sound for raising and canning turtles. Although the sea turtle industry became quite large during the first decade of this century, it gradually declined to nil by 1530. Although the reasons for this decline are unknown, presumably a decline in the population of these animals and a lessening demand for turtle products were responsible.

Although there has never been a resurgence in the turtle industry, there is still a keen interest in these animals among the local island population. There is a rich oral tradition in which the turtle is frequently mentioned. Today there are only a few "halftime" turtle fishermen on the island and perhaps about seventy fishermen who will take a turtle when the opportunity presents itself. Virtually all turtles are consumed locally and can be found in markets only sporadically but on a year-round basis.

Based on the July 1981 survey, it is estimated that about 850 turtles are caught annually. Most of these turtles are juvenile green sea turtles which weigh between two and eight kg. Some hawksville, (juvenile to adult-size) are taken incidentally during lobster season and occasionally a loggerhead or an adult green will be taken when encountered by fishermen on deepwater reefs. Based on the results of the survey, fishing pressure at this level does not seem to pose a serious threat to the survival of the sea turtle population in the waters off the Turks and Caicos Islands

Status of the Knowledge of Sea Turtles

Very little is known about the sea turtle populations that inhabit the Turks and Caicos Islands. This is due to the lack of any government records and to the lack of systematic studies of these animals. What is known comes from two sources: incidental observations of local divers and fishermen and a survey conducted by Anne Meylan in 1979 (NMFS Technical Memorandum, 1979, 35-36).

Information from these two sources indicate that there is no concentrated nesting by any species in the islands. The July 1983 survey confirmed this belief; however, a few beaches were found on which a large number of crawls could be identified. Most of these crawls belonged to hawksbill sea turtles but a few belonged to green sea turtles. No crawls belonging to leatherbacks or loggerheads were observed. However, David Winn (personal communication), one of the most active turtle fishermen in the area, is certain that loggerhead sea turtles do occasionally nest there. He has also observed turtles nesting in the daytime!

There are some reports of "Bastard" and "Mulatto" turtles in the Turks and Caicos Islands, but the reports are conflicting. Meylan also reported mention of "Mulatto" turtles during her 1979 survey. It is probable that these are "folk" names for loggerheads. However, the possibility that these names might be used to refer to "ridleys" cannot be completely discounted.

Local fishermen also mention a large population of juvenile green sea turtles present in the tidal creeks on the south side of Middle Caicos and North Caicos Islands. Both aerial and boat surveys confirmed this belief. During the 1982 observation, a large number of juvenile green sea turtles in the channels were seen in most of these creeks (refer to Table 7A). Some sightings of juvenile greens were made almost four kilometers inland. A

special collecting survey that involved capturing a representative sample of these animals indicated that they were in the 3 KG to 10 KG size range. Smaller and larger greens were not encountered in the creeks during these surveys. A stomach content analysis made from a selected number of juvenile greens revealed that these animals were subsisting on turtle grass (Thalassia), although other materials were present but which could not be positively identified.

Larger greens as well as a wide size range of hawksbills were observed in deep water. Most sightings of hawksbills were made on fringing and patch reef where coral was abundant. Only one juvenile hawksbill was encountered on a grass bed. During the aerial surveys only one loggerhead sea turtle could be positively identified. This animal was a juvenile swimming over a deep-water reef in about 100 meters of water.

A larger number of green sea turtles and one hawksbill were observed in the Ocean Hole during two aerial surveys. All of these sightings were of juvenile animals. Meylan also reports sighting some large green turtles in the Ocean Hole. Local interviews with native fishermen indicated that a large number of turtles have been attracted to this area.

Information on seasonality and migratory patterns of turtles for this area are nonexistent. However, it is possible to say with some degree of confidence that nesting occurs between the months of April and August with the heaviest nesting month being May. Some fishermen report that adult greens are more common in the spring and that hawksbills of all ages and juvenile greens are seen year-round. There have been no observations of hatchings. Meylan reports an interview with a local fisheries officer who has observed a seasonal movement of leatherbacks past Drum Point in East Caicos. No collaborating observations of this nature could be found.

METHODS

To obtain the most accurate and comprehensive data on sea turtles and to prepare the national report for the Turks and Caicos Islands, this investigator employed five different strategies: (1) beach and pelagic aerial surveys, (2) visits to many of the beaches for the purpose of "ground truthing", (3) researching governmental records, (4) conducting personal interviews with local fishermen, and (5) participating in turtle fishing with native fishermen.

Aerial Surveys: A total of 9.1 hours were spent conducting aerial surveys. A Cessna 172 was used to conduct these surveys the entire coastline of the Turks and Caicos Islands was flown over at least once. These surveys were conducted according to the method described in the Manual of Sea Turtle Research and Conservation Techniques (pp. 43-64). Before each flight, each large island to be surveyed was divided into zones which were usually defined by a major geomorphological coastal feature (i.e., the mouth of an estuary or a large rock easily identified on a chart) or some kind of human architecture (i.e., an airstrip or marina). In most cases the surveys were made at an altitude of 100 feet and at an airspeed of 85 KG, and in all cases flights were made so that the observer could see the coastline on his right. Pelagic surveys were conducted in the same manner but the elevation was increased to 400 feet and the air speed was increased to 120 KTS. The pilot and the recorder were instructed to watch for turtles over open water. When a nest or turtle was identified, it was plotted on a chart. Using a small hand-held tape recorder, a record was made of the time of the sighting, the location, and the species and size of the turtle. The zone in which each nest or turtle was observed also was recorded.

It was possible to record all of this data in the plane because of the small number of turtles and nests which were observed on each of the survey flights.

Ground Truthing: Visits were made to many of the beaches where turtle nests had been observed from the air. Most of the visits were made by boat, and the observers walked the entire length of the beaches. In addition to recording nesting activity and other features of interest (i.e., vegetation type), sand samples were collected for later analysis and comparison.

Research of Local Records: One day was spent on Grand Caicos talking with government officials about local information on sea turtles (i.e., laws, local statutes, records of catches).

Interviews with Fishermen: Four local fishermen were interviewed to gain some additional useful information for this report. Interviews were conducted according to the questionnaire found in the Manual of Sea Turtle Research and Conservation Techniques(pp. C1-91).

Turtle Fishing: One day was spent turtle fishing. This involved actually participating in a turtle hunt and provided a great deal of useful information on size, numbers, and techniques of turtle fishing in the Turks and Caicos Islands.

RECOMMENDATIONS

Based on the findings of the 1982 survey, the following recommendations would make a significant contribution to the survival of the sea turtle inhabiting the waters of the Turks and Caicos Islands.

1. Actively enforce the marine turtle protection act.
2. Prohibit the taking of hawksbill sea turtles during lobster season.
3. Restrict the taking of sea turtles except for local consumption.
4. Establish major nesting beaches as natural marine sactuaries and restrict pedestrian traffic on the sanctuaries from April through September.

5. Establish an artificial hatchery for relocating endangered nests using the W.A.T.S. Sea Turtle Conservation Manual as a guideline.

6. Establish a "head-start" program aimed at revitalizing local sea turtle populations.

7. Develop a public education program for the Turks and Caicos Islands involving the government, local hotels, library, public school system, and the PRIDE foundation, which stresses the need to manage the sea turtle population so that its continued survival can be guaranteed.

8. Continue the sea turtle tagging program initiated in July 1982 and intensify the research effort to learn more about the natural history (by species) of turtles inhabiting the area.

Country Turks and Caicos Islands

Length of Coastline* . . . . . 212.2 Km

Km^2 of Continental Shelf Area . . . . . ____ Km

Seaward Extent of Jurisdictions:

Territorial Sea . . . . . 200 Miles

Extended Economic Zone . . . . . 200 Miles

Fisheries Jurisdiction . . . . . 200 Miles

Other (Describe) _____ . . . ____ Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

NAME OF ISLAND	APPROXIMATE LENGTH OF COASTLINE (KM)	APPROXIMATE LENGTH OF SUITABLE NESTING BEACH (METERS)
Big Ambergris Cay	3.9	600
Big Cameron Cay	.8	0
Big Cay	.3	0
Big Sand Cay	1.9	900
Big Southern Bush	1.2	0
Bush Cay	.4	220
Cotton Cay	2.1	100
East Caicos	24.0	8,000
East Cay	1.1	210
Fish Cay	.8	450
French Cay	.9	300
Ft. George Cay	2.8	400
Gibb Cay	.3	120
Grand Caicos	29.0	6,000
Grand Turk	11.0	2,500
Highas Cay	2.1	300
Horse Cay	.2	20
Joe Grant's Cay	4.2	0
Little Ambergris Cay	3.8	1,200
Long Cay (Grand Turk)	2.4	0
Long Cay (East Caicos)	2.5	400
Mary Cays	.4	0
Middleton Cay	9.8	100
Middle Creek Cay	1.0	?
North Caicos	21.0	1,500
Parrot Cay	6.4	1,400
Pear Cay	.4	0
Penniston Cay	.8	?
Pine Cay	5.8	2,000
Providenciales	17.4	2,400
Round Cay	.5	0
Sail Rock Island	.5	0
Salt Cay	4.5	900
Sand Bora Cay	.8	400
Seal Cays	.7	0
Shot Cay	.2	150
Six Hills Cay	.4	0
South Caicos	9.2	1,600
Stubbs Cay	2.5	900
Water Cay	5.6	1,600
West Caicos	12.2	3,000
West Sand Spit	.5	350
White Cay	.4	50
TOTAL	212.2 KM	52,470 M (52.5 KM)

Table 1 A: Summary of total coastline of islands and cays located in the Turks and Caicos Islands and estimation of total length of beaches suitable for sea turtle nestig. Estimates made from aerial surveys conducted between 7 July and 14 July 1982.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	42.5	10	52.5
A. High Energy	22.0	6	28.0
B. Low Energy	20.5	4	24.5
2. Reef (exposed)	10.0	0	10.0
3. Rocks	15.0	2	17.0
4. Cliffs	0	0	0
5. Vegetation (Total)	100.2	0	100.2
A. Vines	0	0	0
B. Grasses	0	0	0
C. Mangroves	100.2	0	100.2
D. Coconut Trees	0	.5	.5
E. Other Trees or Shrubs	0	0	0
F. Marshes	0	0	0
6. Mouths of lagoons, rivers, canals	30.0	1.5	31.5
7. Total Shoreline	198.2	14.0	212.2

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES (Estimated)	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	375 Km^2	900 Km^2
2. Mud and Silt (includes tidal creeks)	225 Km^2	?
3. Rocks	25 Km^2	?
4. Submerged Vegetation	850 Km^2	300 - 900 Km^2
5. Reefs (Total)	200 Km^2	300 - 400 Km^2
A. Fringing Reefs	80 Km^2	250 Km^2
B. Patch Reefs	20 Km^2	50 Km^2
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

NAME OF BEACH	LENGTH IN Meters	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Grand Turk Island	2,500	E., Cm?, Cc?	April, May, June, July, Aug.
2. Highas Cay	300	E., Cm, Cc?	April, May, June, July, Aug.
3. Horse Cay	20	E.?	
4. Little Ambergris Cay	1,200	E.?, Cm?	
5. Long Cay (East Caicos)	400	E.?	
6. North Caicos Island	1,500	E., Cm?, Cc?	April, May, June, July, Aug
7. Parrot Cay	1,400	E., Cm?, Cc?	April, May, June, July, Aug
8. Pine Cay	2,000	E., Cm, Cc?	April, May, June, July, Aug
9. Providenciales	2,400	E., Cm?, Cc?	April, May, June, July, Aug
10. Salt Cay	900	E.? Cm?, Cc?	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN Meters	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Big Ambergris Cay	600	E., Cm (?)	April, May, June, July, Aug
2. Big Sand Cay	900	E.	April, May, June, July, Aug
3. Bush Cay	100	E.(?)	
4. Cotton Cay	100	E.(?)	
5. East Caicos Island	8,000	E., Cm, Cc	April, May, June, July, Aug.
6. East Cay	210	E.	April, May, June, July, Aug.
7. Fish Cay	300	E., Cm ?	April, May, June, July, Aug.
8. French Cay	400	E., Cm, Cc?	April, May, June, July, Aug.
9. Gibb Cay	120	E.?, Cm ?	
10. Grand Caicos Island	6,000	E. , Cm , Cc ?	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

*(?) Question Marks represents unconfirmed reports.

NAME OF BEACH	LENGTH in Meters	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Sand Bora Cay	400	E.?, Cm?	
2. Shot Cay	150	E., Cm?	April, May, June, July, Aug
3. South Caicos Island	1,600	E., Cm?, Cc?	April, May, June, July, Aug
4. Stubbs Cay	900	E.	April, May, June, July, Aug
5. Water Cay	1,600	E., Cm?, Cc?	April, May, June, July, Aug
6. West Caicos Island	3,000	E., Cm, Cc?	April, May, June, July, Aug
7. West Sand Spit	350	E.?, Cm, Cc?	
8. White Cay	50	E.	April, May, June, July, Aug
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

REFER TO TABLE 3A FOR SUPPLEMENTARY DATA ON BEACHES

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Long Bay Beach ISLAND East Caicos Island

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Med. to fine grain carbonate beach. Mod. profile with vegetation and dune

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: One hawksbill crawl observed on this beach. Other beaches may also have nesting but development on parts of the island limits this possibility

NAME OF BEACH: East Cay Beach ISLAND East Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. to fine grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Possible nesting on east end of cay.

NAME OF BEACH: Fish Cay Beach ISLAND Fish Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. to fine well sorted grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: *MAJOR(More Than 5) REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: A minimum of eight hawksbill crawls were observed and a no. of old body pits. Mod. beach profile with vegetation and small dune in back. Probably the most important nesting beach in the area.

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: NW Beach ISLAND Big Ambergris Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS: White to tan, fine to med. grain well sorted carbonate.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Low profile, highly vegetated beach suitable for nesting. One nest and one crawl observed during aerial survey, fishing camp on N.E. side of cay.

NAME OF BEACH: Big Sand Cay Beach ISLAND Big Sand Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS: Tan, fine to med. grains, well sorted, polished carbonate material.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Although nests were not observed during aerial survey, this is an ideal beach for nesting. Mod. profile and well vegetated.

NAME OF BEACH: Cotton Cay Beach ISLAND Cotton Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. to fine grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Although no crawl observed during aerial survey, the lack of human habitation makes it a suitable beach for nesting. Also two hawksbills were observed just offshore

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Long Bay Beach ISLAND East Caicos Island

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Med. to fine grain carbonate beach. Mod. profile with vegetation and dune

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: One hawksbill crawl observed on this beach. Other beaches may also have nesting but development on parts of the island limits this possibility.

NAME OF BEACH: East Cay Beach ISLAND East Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. to fine grains

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Possible nesting on east end of cay.

NAME OF BEACH: Fish Cay Beach ISLAND Fish Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. to fine well sorted grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: *MAJOR(More Than 5) REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS. A minimum of eight hawksbill crawls were observed and a no. of old body pits. Mod. beach profile with vegetation and small dune in back. Probably the most important nesting beach in the area.

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Sandy point Beach ISLAND Long Bay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Unknown

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: * NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) * REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Fisherman report hawksbill nesting on this beach.

NAME OF BEACH: Northeast Beach ISLAND North Caicos Island

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Unknown

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: ? MAJOR(More Than 5) REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Possible nesting beach, but could not be confirmed by aerial surveys. Fishermen report Hawksbill nesting.

NAME OF BEACH: Northeast Beach ISLAND Parrot Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH * MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. well sorted.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS:

Fishermen report possible hawksbill nesting.

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Platico Point Beach ISLAND Grand Caicos Island

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS: Fine grained, carbonate

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) REGULAR(Less Than 5) *INCIDENTAL

GENERAL COMMENTS: Fishermen report nesting on this beach.

NAME OF BEACH: Highas Cay Beach ISLAND Highas Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): *HIGH MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Med. to coarse grain, carbonate well sorted, white to tan.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: *MAJOR(More Than 5) REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Steep profile, three small pocket beaches. Three body pits and one crawl observed. Fisherman report that Highas cay is a major nesting beach.

NAME OF BEACH: East Beach ISLAND Little Ambergris Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS. Carbonate, fine-well sorted grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *Occasional fishing camp NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Fishermen report nesting on east side of Little Ambergris Cay.

Low profile beach and well vegetated.

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: South Beach ISLAND Pine Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, med. grains well sorted and well rounded. Tan with some shell fragments.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT* MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) REGULAR(Less Than 5) * INCIDENTAL

GENERAL COMMENTS: Observations have been made of an occasional Hawksbill and green sea turtle nesting on this beach. Last nest observed was during the summer of 1981.

NAME OF BEACH: North and west beaches ISLAND Providenciales

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH * MODERATE * LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, primarily fine well rounded and well sorted grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE *LIGHT *MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) * REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: No nests surveyed from air but fishermen report some nesting--species unknown. Long narrow beaches, low beach profile, and some vegetation.

NAME OF BEACH: Salt Cay Beach ISLAND Salt Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS: Unknown

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) REGULAR(Less Than 5) ? INCIDENTAL

GENERAL COMMENTS:

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: West Beach ISLAND Shot Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE *LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, fine grain sediment.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) ?REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Fishermen report hawksbill nesting on this Island.

NAME OF BEACH: West side beach ISLAND South Caicos Island

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE to LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, lt. tan, med. to fine grain

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE *LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) REGULAR(Less Than 5) *INCIDENTAL

GENERAL COMMENTS: Fishermen report some nesting on this island--no reports of nesting during 1982 season.

NAME OF BEACH: Stubbs Cay Beach ISLAND Stubs Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH *MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) REGULAR(Less Than 5) * INCIDENTAL

GENERAL COMMENTS: Unknown if nesting takes place on this Cay.

TABLE 3A (SUPPLEMENT DATA ON BEACHES)

NAME OF BEACH: Water Cay beach (North and South) ISLAND Water Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE to LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, lt. to med. grain well sorted.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE * LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) * REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Ideal nesting beaches on north and south side of island. Fishermen report nesting.

NAME OF BEACH: West and South Beach ISLAND West Caicos Island

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH * MODERATE LOW

DESCRIPTION OF SAND CHARACTERISTICS: Carbonate, lt. tan

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: NONE LIGHT TO MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: Fishermen report Hawksbill and possible green sea turtle nesting.

NAME OF BEACH: White Cay Beach ISLAND White Cay

ENERGY BEACH CLASSIFICATION OF BEACH (CIRCLE): HIGH MODERATE to LOW

DESCRIPTION OF SAND CHARACTERISTICS: Tan, lt. to med. well sorted grains.

LEVEL OF HUMAN DEVELOPMENT AND/OR IMPACT: *NONE LIGHT MODERATE HEAVY

ESTIMATED NESTING ACTIVITY: MAJOR(More Than 5) *REGULAR(Less Than 5) INCIDENTAL

GENERAL COMMENTS: One hawksbill nest observed. Ideal beach, about 85 M. long, with mod. profile and some background vegetation.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
7/7/82	Big Ambergris Cay				1			
	Bush Cay				1			
	East Caicos Island				1-2?			
	East Cay				2			
	Fish Cay				8			
	Grand Caicos, NW Beach		1					
	Highas Cay				4			
	Water Cay				17			
	West Caicos Island, North Beach				17			
	White Cay				2			

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 6. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Aerial surveys were conducted acco rding to method described in N.A.T.S. Sea Turtle Conservation Manual. Whenever possible a beach was surveyed a second time to confirm initial observations of crawls and nests.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta	50 ± 25					
Chelonia mydas	75 ± 30					
Dermochelys coriacea						
Eretmochelys imbricata	200 ± 75					
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Population estimates for Caretta caretta and Chelonia mydas are not made with a great deal of confidence. Estimates for these two species were based on individual observations made by local divers and fishermen.

Population estimate for Eretochelys imbricata is made at a higher confidence level because aerial surveys confirmed number of nesting females observed by local fishermen and divers.

Estimates for all three species would be more reliable if aerial and "ground-truth" surveys could conducted systematically over the months of May and June.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. Big Ambergris Cay, Little Ambergris Cay & Fish Cay	40	E.(all sizes) & Cm (Juv. and Sub-Adl.)	Aerial observation and interviews
2. Bottle Creek	12	Cm (Juv. and Sub.-Adl.	Aerial observation, boat observation, local interviews.
3. Highas Cay (Fringing Reef	8	Cm and E.	Aerial observation, w/w observation and interviews.
4. Grand Turk, Gibbs Cay, Cotton Cay, East Cay and Salt Cay	50	Cm and E.	Aerial observation and interviews
5. Middle (grand)Caicos & North Caicos, South Side	250-300	Cm (Juv. and a few sub-adl.), E. (few)	Aerial observation, w/w observation boat observation, interviews
6. Ocean Hole (Grand Caicos	2	Cm(Adl-Juv)	Aerial Observation, w/w observation interviews, Heylan's Report

TABLE 7. FORAGING AREAS INVENTORY

*Data insufficient to make an accurate population estimates.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TURTLE SPECIES	TAG #	AGE	WEIGHT LBS.	CARAPACE (Crv. Cm) LENGTH/WIDTH	LASTRON (Crv. Cm) LENGTH/WIDTH	TAIL TOTAL (Crv. Cm)	TAIL, Pl. to Cal./Cal. tip
Green	MU980	Juv.	11.0	26.5 x 32.0	29.5 x 27.0	6.6	4.0/2.3
Green	MU979	Juv.	23.0	45.0 x 40.0	35.5 x 32.0	6.0	4.0/2.0
Green	MU978	Juv.	13.0	32.0 x 27.0	26.5 x 24.0	5.2	3.2/2.1
Green		Juv.	-	47.0 x 40.5	37.5 x 33.0	6.9	4.2/2.5
Green		Juv.	-	42.0 x 37.5	32.0 x 29.5	5.8	4.1/1.5
Green		Juv.	18.0	43.0 x 38.0	35.5 x 31.0	6.5	3.9/2.0
Green		Juv.	16.5	43.0 x 37.5	34.0 x 29.5	6.0	4.0/2.0
Green		Juv.	17.5	43.5 x 39.0	35.5 x 30.0	5.25	3.25/2.0
Green		Juv.	11.0	40.5 x 36.0	32.0 x 29.0	6.5	4.0/2.5
Green		Sub-Adl	80.0	71.0 x 63.0	56.0 x 48.0	11.0	5.5/4.25

Table 7A Supplement: Sample of 10 turtles taken from the bottle Creek foraging habitat during the July 1982 survey.

TABLE 7B: Observations of Turtles in Foraging Habitats Made During the July 1982 Aerial Survey.

DATE	SPECIES	HABITAT TYPE	SIZE CLASS	WATER DEPTH,M	DISTANCE FROM SHORE (M)	LOCATION
7/7/82	E	Fring. Reef	JUV.	8	50	S.E. Side of Salt Cy
7/7/82	E	Fring. Reef	JUV.	10	75	"
7/7/82	Cm	Grass Flat	Juv.	4	100	Little Ambergris, S.
7/7/82	Cm	Shallow Reef	Juv.	5	100	Big Ambergris, S.E.
7/7/82	Cm	Grass Flat	Juv.	5	75	East Caicos, W.
7/7/82	E	Patch Reef	Juv.	15	200	South Caicos
7/7/82	?	Clear Botton	Juv.	15	50	Pine Cay
7/9/82	E	Fring. Reef	Juv.	10	100	West Caicos
7/9/82	Cm	Grass Flat	Juv.	4	50	Little Water Cay
7/9/82	Cm	Grass Flat	Juv.	4	55	Little Water Cay
7/9/82	Cm	Tidal Creek	Juv.	3	5	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	3	5	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	2	4	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	5	5	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	5	12	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	5	10	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	5	10	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	2	8	North Caicos
7/9/82	Cm	Tidal Creek	Juv.	2	5	North Caicos

TABLE 7B continued .....

DATE	SPECIES	HABITAT TYPE	SIZE CLASS	WATER DEPTH,M	DISTANCE FROM SHORE (M)	LOCATION
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	Grand Caicos, South
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	E	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	?	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	CH	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	?	Ocean Blue Hole	Juv.	10-200+	1,000	"
7/10/82	Cm	Deep Water Reef	Adl.	100	500	Grand Caicos, North
7/10/82	Cc	Deep Water Reef	Sub-Adl	120	600	Grand Caicos, North
7/10/82	?	Mid Water Reef	Juv.	50	200	Parrot Cay, North End
7/10/82	Cm	Fringing Reef	Juv.	20	100	West Caicos, South End
7/10/82	?	Finging Reef	Juv.	25	150	West Caicos, South End
7/11/82	?	Frining Reef	Juv.	20	20	French Cay

TABLE 7B continued....

DATE	SPECIES	HABITAT TYPE	SIZE CLASS	WATER DEPTH,M	DISTANCE FROM SHORE (M)	LOCATION
7/10/82	Cm	Grass Flat	Juv	2	10	Bottle Creek, Btw North Caicos & Grand Caicos
7/10/82	Cm	Grass Flat	Juv	2	10	"
7/10/82	Cm	Grass Flat	Juv.	2	12	"
7/10/82	Cm	Grass Flat	Juv	2	12	"
7/10/82	Cm	Grass Flat	Juv	2	12	"
7/10/82	Cm	Grass FLat	Juv	2	15	"
7/10/82	Cm	Grass Flat	Juv	2	10	"
7/10/82	Cm	Grass Flat	Juv	2	10	"
7/10/82	Cm	Grass Flat	Juv	2	8	"
7/10/82	E	Grass Flat next to Reef	Juv	4	12	Highas Cay
7/10/82	Cm	Fringing Reef	Juv	5	20	Highas Cay
7/10/82	Cm	Grass Flat	Juv	2	12	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	12	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	10	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	10	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	20	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	2	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	3	8	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	30	Bottle Creek
7/10/82	Cm	Grass Flat	Juv	2	10	Bottle Creek
7/10/82	E	Fringing Reef	Juv.	10	150	Pine Cay, North end
7/10/82	Cm	Deep Reef	Adl	40	800	Blue Hills

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta				X	X	X	X						April, May
Chelonia mydas Adl.	X	X	X	X	X	X	X	X	X	X	X	X	April, May, June
Juv.				X	X	X	X	X					
Dermochelys coriacea													
Eretmochelys imbricata	X	X	X	X	X	X	X	X	X	X	X	X	April, May, June
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS. Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Cm,Cc,E	Human poaching, crabs, vegetation roots, storm erosion	50
Hatchlings	Cm,Cc,E,	Avian predators (especially frigate birds)& Marine predators	?
Juveniles	Cm,E.	Human poaching and marine predators (primarily sharks)	20-40
Adults (in water)	Cm, E.	Human poaching, incidental capture while fishing	?
Nesting females	Cm,Cc,E.	Human poaching	20-30

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

There is no data available on the subject of natural mortality. During the July survey of the Turks and Caicos Islands no strandings were observed.

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. Cockburn Town, Grand Turk	Cm,E.	Nets and capture from chasing down from boat	All Year	?
2. Bottle Creek, North Caicos	Cm,E.	Nets and capture from chasing down by boat	All Year	?
3. South Caicos	Cm,E.	Nets and capture from boats	All Year	?
4. Salt Cay	Cm,E.	Nets and captrue from boats	All Year	?
5. Conch Bar	Cm,E.	Nets and capture from boats	All Year	?
6. Kew	?	Nets and capture from boats	All Year	?
7. Whitby	?	Nets and capture from boats	All Year	?
8. Lorimers	?	Nets and capture from boats	All Year	?

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta				
Chelonia mydas	800/ 4,000 KG			Interviews with native fishermen and observations made of turtle fishing during the 1982, July turtle survey.
Dermochelys coriacea				
Eretmochelys imbricata	50/ 400 KG			Interviews with local fishermen and observations made of turtle fishing during the 1982, July turtle survey.
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (#/kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing	80 ± 10	$12,000-18,000.00 US	Income based on a $1.00 per pound (live weight) obtained for turtles at local markets.
Processing			Fishermen process their own catch
Selling			Fishermen sell their own catch

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

Market Prices for turtle products in the Turks and Caicos Islands are as follows: Live weight ($1.00 per pound, Meat ($1.90-$2.50 per pound), Shell varies depending on species and quality (10.00-$20.00 per pound), Eggs (50 $1.00).

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
PRIDE Foundation	8	Public education, dive surveys, tagging juveniles.

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

TABLE 19. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: 8,000-10,000
2. Estimated number of nesting females: 20-30
3. Number of turtles caught at sea: 200-400
4. Other: _____

Part-time turtle fishermen usually keep one or two turtles for themselves and sell any excess turtles at local markets.

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.).

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
Ministry of Fisheries	0	0	Although there are statutes prohibiting the taking of turtles by size, species and time of year, there is virtually no legal enforcement Refer to enforcement regulations on next pages.

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TURKS-CAICOS

PART IV TURKS-CAICOS

Enforcement

...wers of a ...shery ...ficer.

16. Without prejudice to any other powers conferred upon a fishery officer by these Regulations, the Fishery Limits (Turks and Caicos Islands) Ordinance, 1969 or any other law for the time being in force, for the purpose of preventing the commission of offences under these Regulations and the apprehension of persons committing any such offences, a fishery officer shall be deemed to have the powers of a police officer.

...arch ...rrants.

17. (1) If the Magistrate or a Justice of the Peace is satisfied by information on oath that there are reasonable grounds for suspecting that an offence against these Regulations has been, is being or is about to be committed and that evidence of the commission or intended commission of such offence is to be found at any premises or in any vessel specified in such information, he may grant a search warrant authorising a fishery officer, together with any other person named in the warrant, to search such premises or vessel at any time within one month from the date of the warrant, using such force as may be reasonably necessary if entry to such premises or vessel is refused or cannot otherwise be obtained.

(2) Any person acting under the authority of a search warrant issued in pursuance of this regulation may search any person who is found on, or whom he has reasonable grounds for believing has recently left or is about to enter such premises or vessel, as the case may be, and may seize any marine products or apparatus found in such premises or vessel, or upon such person, which he has reasonable grounds for believing to be evidence of the commission or intended commission of any offence against these Regulations:

Provided that a female shall only be searched by a female.

(3) Any person who obstructs the exercise of the powers conferred by a search warrant issued in pursuance of this regulation shall be guilty of an offence.

...izure of ...ssels, gear, ...

18. (1) Where a fishery officer has reasonable cause to suspect that any vessel, gear or apparatus (of whatsoever kind) has been used in connection with the commission of any offence under these Regulations he may seize such vessel, gear or apparatus, as the case may be, and hold the same until the determination of the proceedings in respect of that offence, unless the Magistrate on application made by the owner thereof, shall otherwise direct: _53_

TURKS-CAICOS

Provided that if proceedings in respect of such suspected offence are not brought within one month of such seizure the fishery officer shall forthwith release anything so seized.

(2) Where a fishery officer has reasonable cause to suspect that any marine product has been taken in contravention of these regulations and he proposes to bring proceedings for an offence he may seize and hold the same until such proceedings, but such marine product, if of a perishable nature, may be disposed of or otherwise dealt with prior to the determination of such proceedings in such manner as the Magistrate

upon the application of the fishery officer or of the person against whom the proceedings are to be brought, may direct.

(3) Any person who wilfully destroys or attempts to destroy anything to prevent its seizure under the foregoing provisions of this regulation shall be guilty of an offence.

Forfeiture upon conviction.

19. (1) Upon the conviction of any person for an offence under these Regulations the Magistrate's Court may make such order as the court thinks fit as regards the disposal of anything seized under the powers conferred by regulation 19, and may order the forfeiture of any property so seized or any other property used in the commission of the offence of which the accused person is convicted.

(2) Without prejudice to any other power vested in the issuing authority, upon the conviction of a person who holds a licence, in respect of a third or subsequent offence, the issuing authority may suspend or revoke the licence held by that person.

Penalty for interfering with fishery protection equipment.

20. Any person who damages or interferes in any way, except for just and sufficient cause, with any vessel, gear or equipment (of whatsoever kind) used by any fishery officer for the purpose of carrying out his duties in the enforcement of the provisions of these Regulations, shall be guilty of an offence and liable on conviction to a fine of five thousand dollars or to imprisonment for twelve months, or to both such fine and imprisonment.

Trial and punishment of offenders.

21. (1) All offences under these Regulations shall be triable summarily.

(2) Any person convicted of an offence for which no other penalty is provided under these Regulations shall be liable to a fine of one thousand dollars or to imprisonment for six months, or to both such fine and imprisonment.

... intended

TURKS-CAICOS

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

Refer to next page....

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Carr, A., Meylan, A., Mortimer, J., Bjorndal, K., and Carr T. 1982. "Caicos Islands". Preliminary Survey of Marine Turtle Populations and Habitats in the Western Atlantic. NOAA Technical Memorandum NMFS-SEFC, pp36-36.

2.

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Members of the PRIDE Foundation made a major contribution to this report and to the July 1982 data gathering survey. Special thanks to Mr. Chuck Hesse and Gary Hodgkins, members of this Foundation, for their help and friendship. Also Mr. Dennis Frazle and Brent Mitchel deserve special thanks for assisting in collecting much of the data which appears in the contents of this report. Mr. Fred Berry and Professor Archie Carr were a major stimulus to this project by providing their wisdom and encouragement. Other members of the W.A.T.S. Steering Committe and technical team also deserve acknowledgement for their devotion and dedication to this project. Finally I wish to thank Jan Kitte for her editorial skills and to all the individuals living in the Turks and Caicos Islands for their hospitality and for taking an active interest in sea turtle conservation and research.

THE NATIONAL REPORT
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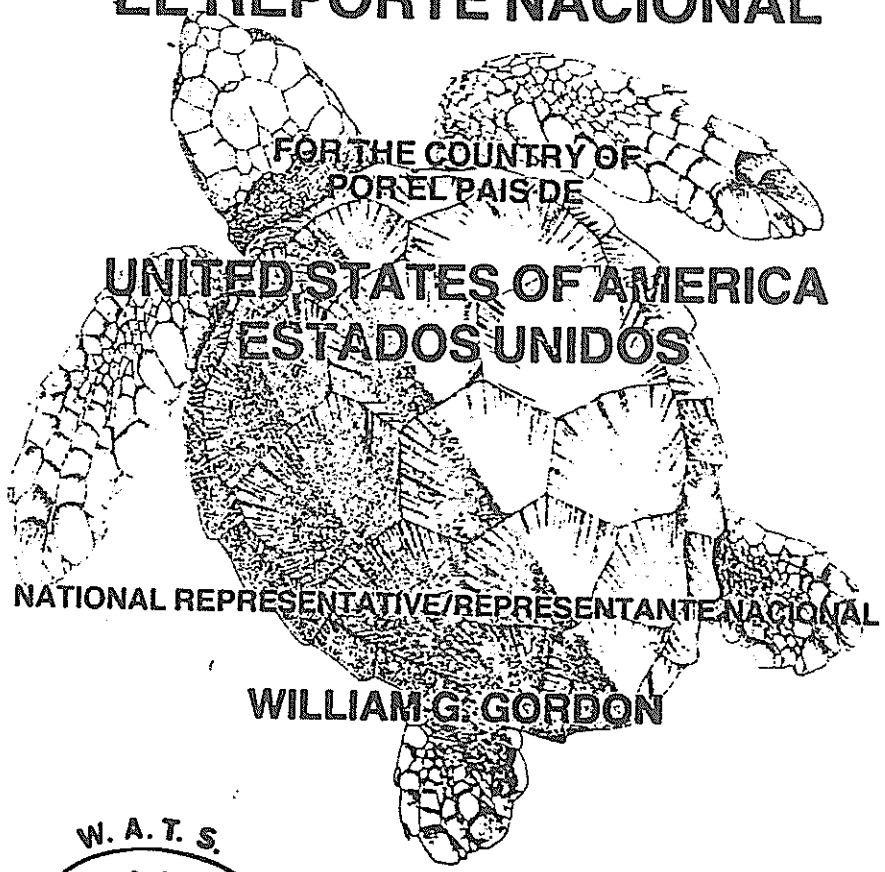

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

WILLIAM G. GORDON

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

UNITED STATES

NATIONAL REPORT PRESENTED BY

WILLIAM G. GORDON
The National Representative

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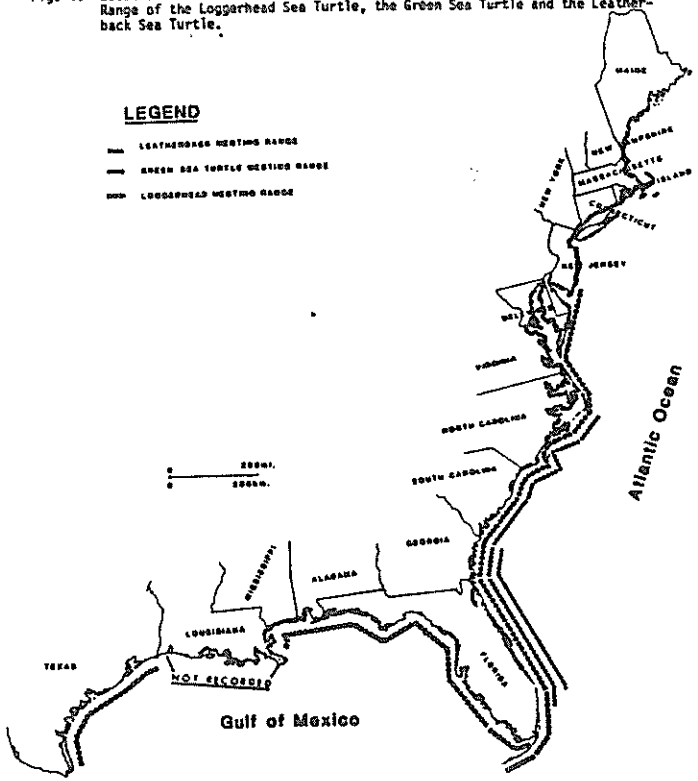
Nancy Thompson	Llewellyn Ehrhart
Theresa Wilson	

DATE SUBMITTED: 27 JUNE 1983

REVISED (January-1984) BY

John R. Fletemeyer

Fig. 1: Location of United States W.A.T.S. Study area and the Reported nesting Range of the Loggerhead Sea Turtle, the Green Sea Turtle and the Leatherback Sea Turtle.



Country _____

Length of Coastline* ..... 6493.9 Km

Km^2 of Continental Shelf Area ..... 920000 (Gulf Coast) Km
540000 (East Coast)

Seaward Extent of Jurisdictions:

Territorial Sea ..... 16 Km (Florida-Texas) Km
6 Km (For Remainder of Area)

Extended Economic Zone ..... 280 Km

Fisheries Jurisdiction ..... 280 Km

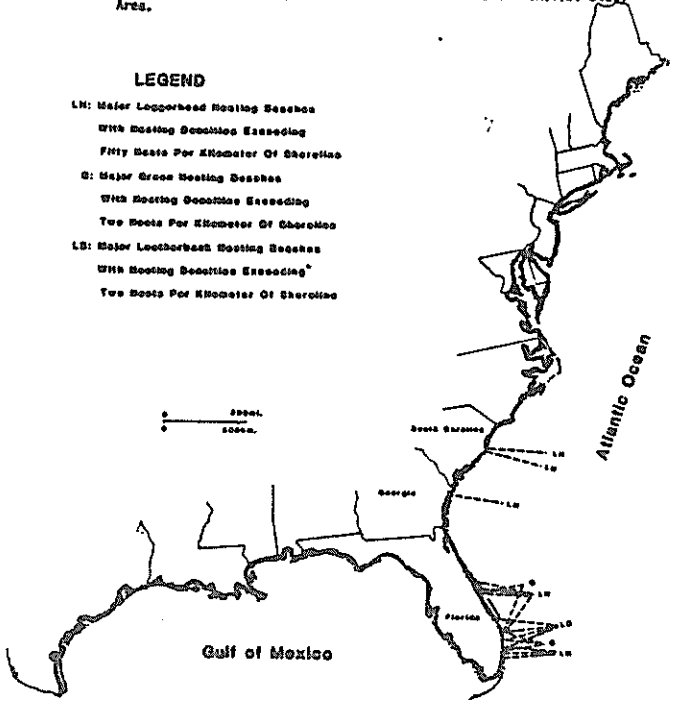
Other (Describe) _____ ... ___ Km

Table 1. GEOGRAPHIC INVENTORY

Length of Coastline (km)

Texas	620	Maryland	50
Louisiana	710	Deleward	45
Mississippi	120	New Jersey	438.5
Alabama	74.8	New York	204
Florida	2037	Connecticut	140
Georgia	176	Rhode Island	70
S. Carolina	290	Massachusetts	355
N. Carolina	484.6	New Hampshire	24
Virginia	180	Maine	475

Fig. 2: Locations of Major Loggerhead Sea Turtle, Green Sea Turtle and Leatherback sea turtle Nesting Beaches in the United Stated W.A.T.S. Study Area.



MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)	(ca 40%)	(ca 60%)	
A. High Energy			(ca 80%)
B. Low Energy			(ca 20%)
2. Reef (exposed)			(< 1%)
3. Rocks and Cliffs (combined with #4)			(< 5%)
4. Cliffs			
5. Vegetation (Total)			(ca 4950
A. Vines			?
B. Grasses			?
C. Mangroves			?
D. Coconut Trees			(1%)
E. Other Trees or Shrubs			?
F. Marshes			?
6. Mouths of lagoons, rivers, canals			180
7. Total Shoreline	(ca 60%)	(ca 40%)	6,493 Km

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

*This information was obtained from U.S. Fish & Wildlife Service 1:250,000-scale Inventory Maps--These maps do not break down vegetation into specific types.

HABITAT BOTTOM TYPES	Km^2 OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand	16,052	?
2. Mud	460	?
3. Rocks	?	?
4. Submerged Vegetation	1,402.6	?
5. Reefs (Total)	523	?
A. Fringing Reefs	?	?
B. Patch Reefs	?	?
6. Other Navagational Channels	8	?

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
TEXAS:			
Padre Island & I. Mustang Island	210	Cc, Lk	April, May, June
LOUISIANA	-	Not Recorded	Not Recorded
MISSISSIPPI:			
1. Cat Island	5.7	Cc	June
2. West Ship Island	6.5	Not Recorded	
3. East Ship Island	3.8	Not Recorded	
4. Horn Island	22.9	Cc	June
5. Petit Bois Island	11.3	Not Recorded	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

Table 2b: Shoreline characteristics by State. Data Derived from U.S. Fish and Wildlife Service 1:250,000-scale Ecological Inventory Maps (1982).

STATE	MARSH(km)	REEF(km^2)	SEA GRASS(km^2)	DUNE/BCH	RESNOURISHED BCH(km)
Florida	991	441.3	1,152.8	601	198-220
Georgia	465			206	
S. Carolina	180			156	
N. Carolina	853			339	
Maryland	225		70.6	50	
New Jersey	123.5		13.7	142	
Connecticut	23			11	
Virginia	280		26.8	183	
Deleware	92			46	
New York	7			195	
Rhode Island	62			63	
Massachusetts	28			70	
Maine	21			6	
Louisiana	1171	121.2	25.6	28.5	
Alabama	43		.6	4	
Mississippi	97		11.9	?	
Texas	282	80.6	100.6	386	
Total	4493.5	623.1	1402.6	2486	

*Marsh represents all areas which have areas of vegetation (includes magrove areas).

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
ALABAMA:			
1. Gulf Shores	15	Cc	July
FLORIDA:			
Ft. Walton Beach 1. (incl. Eglin AFB)	-	Cc, Dc ?	not recorded
T.H. Stone Memorial 2. St. Joseph State Park	19.2		not recorded
St. George Island 3. Recreation Area	-	Cc	not recorded
St. Vincent Island 4. National Wildlife	11.3	Cc	early June to mid August
5. Northern Longboat Key	8.0	Cc, Ei	late June to mid August
6. Casey Key	7.6	Cc	mid May to Early August
7. Manasota Key	12.9	Cc	late June to late July

TABLE 3. NESTING BEACH INVENTORY
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Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
8. Cayo Costa State Preserve	8.0	Cc	Mid June to Late July
9. Sanibel Island	18.5	Cc	Late May to Late July
10. Wiggens Pass State Recreation Area	13.4	Cc	Mid June to Mid July
11. Vanderbilt Beach	8.0	Cc	Not Recorded
12. Manito Beach	9.7	Cc	Not Recorded
13. Naples Area Beaches	8.0	Cc	Mid May to August 1st
14. Cape Romano	4.8	Cc	Not Recorded
15. Fort Jefferson National Monument	4.8	Cc	Mid April to Mid October
16. Everglades National Park Beaches	56.6	Cc	Mid May to Mid August
17. Bahia Honda State Recreation Area	0.8	Cc	August

TABLE 3. NESTING BEACH INVENTORY
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Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
18. Soldier Key	Not Recorded	Ei	October
19. Bill Baggs Cape Florida State Recreation Area	2.4	Cc Cm Dc	Mid May to Mid August
20. Northern Key Biscayne	9.6	Cc Cm	Early May to Late September
21. Miami Beach, Surfside, Bar Harbour, Haulover	16.1	Cc Cm	Late May to Early August
22. Broward County Beaches	36.6	Cm Cm Dc	May 1st to Mid September
23. Boca Raton Public Beach	4.2	Cc Cm Dc	Early May to Early September
24. Highland Beach	4.5	Cc Cm Dc	Mid May to Mid August
25. Palm Beach Shores	0.9	Cc Dc	Mid May to Mid August
26. Lost Tree Village	2.8	Cc Cm Dc	Early May to Mid August
27. Juno Beach	1.6	Cc Cm Dc Ei	Early May to Late August

TABLE 3. NESTING BEACH INVENTORY
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Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
28. Jupiter Island	12.3	Cc Cm Dc	Late May to Late September
29. Hobe Sound National Wildlife Refuge	5.6	Cc Cm Dc	Late April to Early September
30. St. Lucie Inlet State Recreation Area	3.4	Cc	Mid May to Mid September
31. Hutchinson Island	36.0	Cc Cm Dc	Mid April to Mid September
32. Ft. Pierce Inlet State Recreation Area	3.2	Cc Cm	Early May to Late August
33. Sebastian Inlet State Recreation Area	5.0	Cc Cm	Early June to Late July
34. St. Lucie and Indian River Counties	28.6	Cc	Not Recorded
35. South Brevard County	50.2	Cc	Mid May to Late August
36. Indialantic and Melbourne Beach	9.3	Cc Cm	Mid May to Late August
37. North Brevard County (Cape Canaveral)	50.0	Cc Cm E	Late May to Late August

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Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
38. Volusia County	8.0	Cc	Not Recorded
39. Flagler Beach State Recreation Area	0.7	Cc Cm	Late May to Late July
40. St. Johns County Beaches	66.0	Cc	Last of May to Late August
41. Ft. Matanzas National Monument	1.2	Cc	June
42. Anastasia State Recreation Area	4.0	Cc	June, July
43. Big Talbot Island	3.2	Cc	Mid May to Mid August
44. Little Talbot Island	8	Cc	Mid May to Mid August
GEORGIA			
1. Cumberland Is.	29.7	C.c. ; Dc (1 record)	May through August
2. Little Cumberland Is.	5.8	C.c.	May through August

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
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Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
3. Jekyll Is.	14.6	C.c. ; C.M. (1 record)	May through August
4. St. Simon's Is.	6.5	C.c.	
5. Sea Is.	9.6	C.c.	
6. Little St. Simon's Is.	11.4	C.C.	
7. Egg Is.	2.9	-	
8. Wolf Is.	5.6	C.c.	
9. Sapelo Is.	9.7	C.c.	
10. Blackbeard Is.	13.2	C.c. ; Dc (1 record)	
11. St. Catherine's Is.	21.1	C.c.	
12. Ossabaw Is.	18.7	C.c.	

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
13. Raccoon Key	1.8	C.c.	May through August
14. Pine & Little Wassaw Is.	3.8	C.c.	
15. Wassaw Is.	10.5	C.c.	
16. Cabbage Is.	3.0	C.c	
17. Petit Chou Is.	1.3	C.c.	
18. Williamson Is.	2.9	C.c	
19. Little Tybee Is.	5.3	C.c	
20. Tybee Is.	5.6	C.c	
SOUTH CAROLINA			
1. Turtle Is.	4.0	Cc	5/15 - 8/15

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
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Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
2. Daufuskie	8.1	Cc	5/15 - 8/15
3. Hilton Head Is.	29.0	Cc	5/15 - 8/15
4. St. Phillips/Bay Point Island	6.3	Cc	5/15 - 8/15
5. Little Capers	4.0	Cc	5/15 - 8/15
6. Pritchard Is.	4.0	Cc	5/15 - 8/15
7. Fripp Is.	6.0	Cc	5/15 - 8/15
8. Harbor/Hunting Is.	9.0	Cc	5/15 - 8/15
9. Otter Is.	4.3	Cc	5/15 - 8/15
10. Pine Is.	4.1	Cc	5/15 - 8/15
11. Edisto Is.	8.2	Cc	5/15 - 8/15

TABLE 3. NESTING BEACH INVENTORY
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Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
12. Edingsville Beach	2.9	Cc	5/15 - 8/15
13. Botany Bay Is.	7.2	Cc	5/15 - 8/15
14. Seabrook Is.	5.6	Cc	5/15 - 8/15
15. Kiawah Is.	15.8	Cc	5/15 - 8/15
16. Folly Beach	10.4	Cc	5/15 - 8/15
17. Morris Is.	5.4	Cc	5/15 - 8/15
18. Sullivan's Is.	6.3	Cc	5/15 - 8/15
19. Isle of Palms	10.0	Cc	5/15 - 8/15
20. Dewees Is.	4.0	Cc	5/15 - 8/15
21. Capers Is.	5.2	Cc	5/15 - 8/15

TABLE 3. NESTING BEACH INVENTORY
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Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
22. Bulls Is.	10.5	Cc	5/15 - 8/15
23. Raccoon Key	9.0	Cc	5/15 - 8/15
24. Lighthouse Island	3.3	Cc	5/15 - 8/15
25. Cape Is.	8.0	Cc	5/15 - 8/15
26. Pecony Is.	9.0	Cc	5/15 - 8/15
27. Cedar Is.	4.3	Cc	5/15 - 8/15
28. South Is.	4	Cc	5/15 - 8/15
29. Sand Is.	4	Cc	5/15 - 8/15
30. North Is.	13.5	Cc	5/15 - 8/15
31. Dobidee Is.	7.1	Cc	5/15 - 8/15

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Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
32. Grand Strand (all of northern coast)	71	Cc	5/15 - 8/15
NORTH CAROLINA			
1. Sunset Beach	4.0	Cc	J J
2. Ocean Isle Beach	4.8	Cc	J J
3. Holden Beach	12	Cc	J J
4. Oak Island	21	Cc	J J A
5. Baldhead Island (Smith Island)	13.0	Cc	M J J A
6. Carolina Beach Inlet to Cornoake Inlet	28	Cc	J J
7. Masonboro Inlet to Carolina Beach Inlet	13.8	Cc	J J
8. Wrightsville Beach-Maso Inlet to Masonboro Inlet	6.0	Cc	J J

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Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
9. Figure Eight Island	5.6	Cc	J J
10. New Topsail Inlet to Rich Inlet	5.6	Cc	J J
11. Topsail Beach	35	Cc	J J A
12. Onslow Beach	11.5	Cc, Cm	M J J A
13. Brown Island	5	Cc	J J A
14. Bear Island	6	Cc	M J J A
15. Bogue Banks	39	Cc	M J J A
16. Shackleford Banks	14.5	Cc	J J A
17. Core Banks Portsmouth-Cape Lookout	88	Cc	M J J A
18. Ocracoke Island	35	Cc	M J J A

TABLE 3. NESTING BEACH INVENTORY
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Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
19. Hatteras Island-Includes Pea Island 21 km N.C. Seashore	103	Cc	M J J A
20. Bodie Island	15	Cc	M J J A
21. Currituck Banks - Va. line to Whale Bone Jct.	74	Cc	J J

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Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys kempi Lk
Lepidochelys olivacea Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

This additional information for sea turtle nesting beaches in the United States has not been collected and compiled, although many local area beach descriptions do exist in several states.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	March - Sept. 1982
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi		less than 1	
Lepidochelys olivacea			

TABLE 4 - 1 NESTING CENSUS FOR BEACH TEXAS: Padre Island - Mustang Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2	1970 - 1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 2 NESTING CENSUS FOR BEACH MISSISSIPPI: Cat Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	-	1976 THROUGH 1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 3 NESTING CENSUS FOR BEACH MISSISSIPPI: West Ship Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			NO ROUTINE BEACH PATROL
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 4 NESTING CENSUS FOR BEACH MISSISSIPPI: East Ship Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	2	1976 THROUGH 1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 5 NESTING CENSUS FOR BEACH MISSISSIPPI: Horn Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			NO ROUTINE PATROLS
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 6 NESTING CENSUS FOR BEACH MISSISSIPPI: Petit Bois Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	JULY 1982
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 7 NESTING CENSUS FOR BEACH ALABAMA: Gulf Shores
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		6	Not recorded
Chelonia mydas			
Eretmochelys coriacea		less than 1 ?	Not recorded
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 8 NESTING CENSUS FOR BEACH FLORIDA: Ft. Walton Beach, including Eglin Air Force Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		11	Not recorded
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 9 NESTING CENSUS FOR BEACH FLORIDA: T.H. Stone Memorial St. Joseph Peninsula State Park
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		17	Not recorded
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 10 NESTING CENSUS FOR BEACH FLORIDA: St. George Island State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		10	Early June to Mid August.
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 11 NESTING CENSUS FOR BEACH FLORIDA: St. Vincent Island National Wildlife Refuge
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		20	Late May to Early August.
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		less than 1	May 1980
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 12 NESTING CENSUS FOR BEACH FLORIDA: Northern Longboat Key
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		50	Mid May to Early August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 13 NESTING CENSUS FOR BEACH FLORIDA: Casey Key
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		170	Late June to Late July.
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 14 NESTING CENSUS FOR BEACH FLORIDA: Manasota Key
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		6	Mid June to Late July.
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 15 NESTING CENSUS FOR BEACH FLORIDA: Cayo Costa State Preserve
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		100	Mid May to Late July.
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 16 NESTING CENSUS FOR BEACH FLORIDA: Sanibel Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		22	Mid June to Mid July.
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 17 NESTING CENSUS FOR BEACH FLORIDA: Wiggins Pass State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	42	Not recorded
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 18 NESTING CENSUS FOR BEACH FLORIDA: Boca Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	39	Not recorded
Chelonia mydas			
Eretmochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 19 NESTING CENSUS FOR BEACH FLORIDA: Vanderbilt Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		50	Mid May to August 1.
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 20 NESTING CENSUS FOR BEACH FLORIDA: Hanles Arpa Beaches
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	40	Not recorded
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 21 NESTING CENSUS FOR BEACH FLORIDA: Cape Romano
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	65	Mid April through August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 22 NESTING CENSUS FOR BEACH FLORIDA: Fort Jefferson National Monument
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1200	Early May to Early August.
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 23 NESTING CENSUS FOR BEACH FLORIDA: Everglades National Park
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		1	August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 24 NESTING CENSUS FOR BEACH FLORIDA: Bahia Honda State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		Not Recorded	Not Recorded
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 25 NESTING CENSUS FOR BEACH FLORIDA: Sand Key, Eliott Key, Islamorada and Long Key
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata		less than 1	One Nest in October.
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 26 NESTING CENSUS FOR BEACH FLORIDA: Soldier Key, Dade County
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		57	Early May to Mid August
Chelonia mydas		2	May
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 27 NESTING CENSUS FOR BEACH FLORIDA: Bill Baggs State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		39	Early May to Late September
Chelonia mydas		2	Mid June to Early June
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 28 NESTING CENSUS FOR BEACH FLORIDA: Northern Key Biscayne
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		30	Late May to Early August
Chelonia mydas		1	June.
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 29 NESTING CENSUS FOR BEACH FLORIDA: Miami Beach, Surfside, Bar Harbour, Haulover.
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		1,193	May 1st to 29 August.
Chelonia mydas		18	Early June to Late August.
Dermochelys coriacea		6	Early May to Mid June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 30 NESTING CENSUS FOR BEACH FLORIDA: Broward County Beaches
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		370	Early May to Early September
Chelonia mydas		8	Early July to Late August
Dermochelys coriacea		1	June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 31 NESTING CENSUS FOR BEACH FLORIDA: Boca Raton Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		507	Early May to Early August
Chelonia mydas		7	Late May to Early August
Dermochelys coriacea		6	Late April to Early July
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 32 NESTING CENSUS FOR BEACH FLORIDA: Highland Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		54	Mid May to Early August.
Chelonia mydas			
Dermochelys coriacea			Two false crawls in June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 33 NESTING CENSUS FOR BEACH FLORIDA: Palm Beach Shores
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		215	Early May to Mid August
Chelonia mydas		7	Mid June to Late June
Dermochelys coriacea		3	Mid April to Late May
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 34 NESTING CENSUS FOR BEACH FLORIDA: Lost Tree Village
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		340	Early May to Late August
Chelonia mydas		3	Mid July to Mid August
Dermochelys coriacea		1	Mid April to Mid July
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 35 NESTING CENSUS FOR BEACH FLORIDA: Juno Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2,109	Mid May to Late September
Chelonia mydas		10	Early June to Mid August
Eretmochelys imbricata		7	Late May to Late June
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 36 NESTING CENSUS FOR BEACH FLORIDA: Jupiter Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		1,108	Late April to 1st September
Chelonia mydas		0	Early June to Late August
Dermochelys coriacea		3	June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 37 NESTING CENSUS FOR BEACH FLORIDA: Hobe Sound National Wildlife Refuge
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			Mid May to Mid September
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 38 NESTING CENSUS FOR BEACH FLORIDA: St. Lucie Inlet State Recreational Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		3,115	Early May to Early September
Chelonia mydas		10	Mid June to Early September
Dermochelys coriacea		11	Mid April to Early July
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 39 NESTING CENSUS FOR BEACH FLORIDA: Hutchinson Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		25	Mid May to Late August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 40 NESTING CENSUS FOR BEACH FLORIDA: Ft. Pierce Inlet State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		297	Early June to Late July
Chelonia mydas		2	July
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 41 NESTING CENSUS FOR BEACH FLORIDA: Sebastian Inlet State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	725	Early June through Late August
Chelonia mydas		65	Early June through Late August
Dermochelys coriacea		2	June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 42 NESTING CENSUS FOR BEACH FLORIDA: St. Lucie and Indian River Counties
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	7,000	Mid May to Late August
Chelonia mydas		60	June through August
Dermochelys coriacea		3	June
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 43 NESTING CENSUS FOR BEACH FLORIDA: South Brevard County
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2,000	Mid May to Late August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 44 NESTING CENSUS FOR BEACH FLORIDA: Indialantic And Melbourne Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2,367	Late May to Late August
Chelonia mydas		10	Mid July to Mid August
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi		1	September 1982 Canaveral National Seashore
Lepidochelys olivacea			

TABLE 4 - 45 NESTING CENSUS FOR BEACH FLORIDA: North Brevard County (Cape Canaveral)
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	392	Not Recorded
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 46 NESTING CENSUS FOR BEACH FLORIDA: Volusia County
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		9	Late May to Late July
Chelonia mydas		1	Late June
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 47 NESTING CENSUS FOR BEACH FLORIDA: Flagler Beach State Recreation Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		50	31 May, June, July and Aug.
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 48 NESTING CENSUS FOR BEACH FLORIDA: St. Johns County Beaches
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2	June
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 49 NESTING CENSUS FOR BEACH FLORIDA: Ft. Matanzas National Monument
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2	Early June to Early July
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 50 NESTING CENSUS FOR BEACH FLORIDA: Anastasia State Recreational Area
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	0	9	May, June, July and August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 51 NESTING CENSUS FOR BEACH FLORIDA: Big Talbot Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	32	May, June, July and August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 0 - 52 NESTING CENSUS FOR BEACH FLORIDA: Little Talbot Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (0-1, 0-2, 0-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	227	May - August 1974 - 80
Chelonia mydas			
Dermochelys coriacea		less than 1	1981
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 0 - 53 NESTING CENSUS FOR BEACH GEORGIA: Cumberland Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (0-1, 0-2, 0-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	142	May - August 1964 - 81
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 0 - 54 NESTING CENSUS FOR BEACH GEORGIA: Little Cumberland Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (0-1, 0-2, 0-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	114	May - August 1972 - 79
Chelonia mydas		less than 1	1979
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 0 - 55 NESTING CENSUS FOR BEACH GEORGIA: Jekyll Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (0-1, 0-2, 0-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	0	
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 56 NESTING CENSUS FOR BEACH GEORGIA:St. Simon's Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	19	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 57 NESTING CENSUS FOR BEACH GEORGIA: Sea Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	68	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 58 NESTING CENSUS FOR BEACH GEORGIA: Little St. Simon's Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	51	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 59 NESTING CENSUS FOR BEACH GEORGIA: Wolf Island (Sea Island, No nesting)
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	49	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 60 NESTING CENSUS FOR BEACH GEORGIA: Sapelo Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	186	May - August 1968 - 81 (incomplete)
Chelonia mydas			
Dermochelys coriacea		less than 1	1981
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 61 NESTING CENSUS FOR BEACH GEORGIA: Blackbeard Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	85	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 62 NESTING CENSUS FOR BEACH GEORGIA: St. Catherine's Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	122	May - August 1978 - 80
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 63 NESTING CENSUS FOR BEACH GEORGIA: Ossabaw Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	99	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 64 NESTING CENSUS FOR BEACH GEORGIA: Raccoon Key
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	19	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 65 NESTING CENSUS FOR BEACH GEORGIA: Pine Island and Little Wassaw Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	61	May - August 1974 - 80
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 66 NESTING CENSUS FOR BEACH GEORGIA: Wassaw Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		27*	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 67 NESTING CENSUS FOR BEACH GEORGIA: Cabbage Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

* Including Petit Chou, Williamson, and Little Tybee Islands

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	*	May - August
Chelonia mydas			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 68 NESTING CENSUS FOR BEACH GEORGIA: Petit Chou Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

* Included under Cabbage Island

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	*	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 69 NESTING CENSUS FOR BEACH GEORGIA: Williamson Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

* Included under Cabbage Island

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	*	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 70 NESTING CENSUS FOR BEACH GEORGIA: Little Tybee Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

* Included under Cabbage Island

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	3	May - August
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 71 NESTING CENSUS FOR BEACH GEORGIA: Tybee Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		2	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 72 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Turtle Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		10	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 73 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Daufuskie Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		71	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 74 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Hilton Head Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		155	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 6 - 75 NESTING CENSUS FOR BEACH SOUTH CAROLINA: St. Phillips Island & Bay Point Islands
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (6-1, 6-2, 6-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		42	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 76 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Little Capers Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		125	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 77 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Pritchards Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		130	1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 78 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Frisa Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		125	1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 79 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Harbor Island & Hunting Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		203	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 81 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Otter Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		12	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 81 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Pine Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		55	1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 82 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Edisto Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		65	1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 83 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Folly Field Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		127	1981
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 84 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Botany Bay Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		24	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 85 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Seabrook Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		160	1972 - 81
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 86 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Kiawah Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		17	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 87 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Folly Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		9	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 88 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Morris Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		0	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 89 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Sullivan's Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		19	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 90 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Isle of Palms
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		5	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 91 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Dewees Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		33	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 92 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Capers Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		60	1975 - 81
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 93 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Bulls Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		115	1975 - 81
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 94 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Raccoon Key
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		207	1980 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 95 NESTING CENSUS FOR BEACH South Carolina: Lighthouse Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		1,600	1975 - 81
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 95 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Cape Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		95	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 97 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Murphy Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		120	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 98 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Cedar Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Averages)	Nests/Season (Estimated)	
Caretta caretta		150	1977 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 99 NESTING CENSUS FOR BEACH SOUTH CAROLINA: South Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		250	1977-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 100 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Sand Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		100	1977
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 101 NESTING CENSUS FOR BEACH SOUTH CAROLINA: North Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		45	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 102 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Dataloom Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		35	1980-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 103 NESTING CENSUS FOR BEACH SOUTH CAROLINA: Grand Street
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	June July 1979-82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 104 NESTING CENSUS FOR BEACH NORTH CAROLINA: Sunset Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	2	June - July 1982
Chelonia mydas		1	
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 105 NESTING CENSUS FOR BEACH NORTH CAROLINA: Ocean Isle Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	June July 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 106 NESTING CENSUS FOR BEACH NORTH CAROLINA: Holden Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	4	June, July, Aug. 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 107 NESTING CENSUS FOR BEACH NORTH CAROLINA: Oak Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	52	May, June, July, August 1977 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 108 NESTING CENSUS FOR BEACH NORTH CAROLINA: Baldhead Island (Smith Island)

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta		1	June, July 1977-80
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 109 NESTING CENSUS FOR BEACH NORTH CAROLINA: Carolina Beach Inlet to Corncake Inlet

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	3	June July 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 110 NESTING CENSUS FOR BEACH NORTH CAROLINA: Masonboro Inlet to Carolina Beach Inlet

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	2	June, July 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 111 NESTING CENSUS FOR BEACH NORTH CAROLINA: Wrightsville Beach - Mason Inlet to Masonboro Inlet

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	4	June July 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 112 NESTING CENSUS FOR BEACH NORTH CAROLINA: Figure Eight Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	June, July, August 1975 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 113 NESTING CENSUS FOR BEACH NORTH CAROLINA: New Topsail Inlet to Rich Inlet
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	15	June, July, August 1975 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 114 NESTING CENSUS FOR BEACH NORTH CAROLINA: Topsail Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	62	May, June, July, August 1974 - 82
Chelonia mydas	-	less than 1	1980
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 115 NESTING CENSUS FOR BEACH NORTH CAROLINA: Onslow Beach
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	18	June, July, August 1975 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 116 NESTING CENSUS FOR BEACH NORTH CAROLINA: Brown Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	50	May, June, July, August 1975 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 117 NESTING CENSUS FOR BEACH NORTH CAROLINA: Bear Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	10	May, June, July, August 1975 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 118 NESTING CENSUS FOR BEACH NORTH CAROLINA: Bonus Banks
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	3	June, July, August 1978 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 119 NESTING CENSUS FOR BEACH NORTH CAROLINA: Shackleford Banks
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	25	May, June, July, August 1978 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 120 NESTING CENSUS FOR BEACH NORTH CAROLINA: Core Banks (incl. Cape Lookout)

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	4	May, June, July, August 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 121 NESTING CENSUS FOR BEACH NORTH CAROLINA: Ocracoke Island

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	18	May, June, July, August 1971 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 122 NESTING CENSUS FOR BEACH NORTH CAROLINA: Hatteras Island (incl. Pea Island)

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	June, July, August 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 123 NESTING CENSUS FOR BEACH NORTH CAROLINA: Bodie Island

(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	2	June July 1979 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 124 NESTING CENSUS FOR BEACH NORTH CAROLINA: Currituck Banks (Va. line) to Whale Bone Junction
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	Not Recorded
Chelonia mydas		?	
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 125 NESTING CENSUS FOR BEACH VIRGINIA: False Cape State Park
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	July 1982
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 126 NESTING CENSUS FOR BEACH VIRGINIA: Back Bay National Wildlife Refuge
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	2	Not Recorded
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 127 NESTING CENSUS FOR BEACH VIRGINIA: Nature Conservancy
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	Not Recorded
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 128 NESTING CENSUS FOR BEACH VIRGINIA: Parramore Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	July 1982
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 129 NESTING CENSUS FOR BEACH VIRGINIA: Wallops Island
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	less than 1	July 1980
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 130 NESTING CENSUS FOR BEACH VIRGINIA: Sandbridge
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	July 1975 - 82
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 131 NESTING CENSUS FOR BEACH VIRGINIA: Chincoteague National Wildlife Refuge
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	1	1977 - 79
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 132 NESTING CENSUS FOR BEACH MARYLAND: Assateague National Seashore
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	less than 1	1980
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 133 NESTING CENSUS FOR BEACH NEW JERSEY: Island Beach State Park to Seaside Park
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta	-	less than 1	1972
Chelonia mydas			
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 134 NESTING CENSUS FOR BEACH NEW JERSEY: Ocean City
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS /1						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
May 1980	North Carolina (NC)	1						
"	South Carolina (SC)	0						
"	Georgia (GA)	0						
"	Florida East Coast (FL)	27						
June 1980	NC	2						
	SC	102						
	GA	139						
	FL	23						
July 1980	NC	14						
"	SC	158						

TABLE 4-1 AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

/1 Records of fresh nest crawls for Caretta caretta only.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

DATE	BEACHES SURVEYED	NUMBERS OF RESTING TRACKS /1 Cc	Cm	D	E	Lk	Lo	NO I. D.
July 1980	GA	62						
"	FL	109						
August 1980	NC	8						
"	SC	6						
"	GA	2						
"	FL	25						
5/26/82	NC	0						
"	SC	39						
"	GA	40						
"	FL	469						

TABLE 9-2 AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys Kempi Lk
Lepidochelys olivacea Lo

DATE	BEACHES SURVEYED	NUMBERS OF RESTING TRACKS /1 Cc	Cm	D	E	Lk	Lo	NO I. D.
6/23/82	NC	12						
"	SC	81						
"	GA	40						
6/24/82	Florida East Coast	991						
"	Florida West Coast	97						
6/25/82	Alabama	2						
"	Mississippi	0						
"	Louisiana	0						
"	Texas	0						

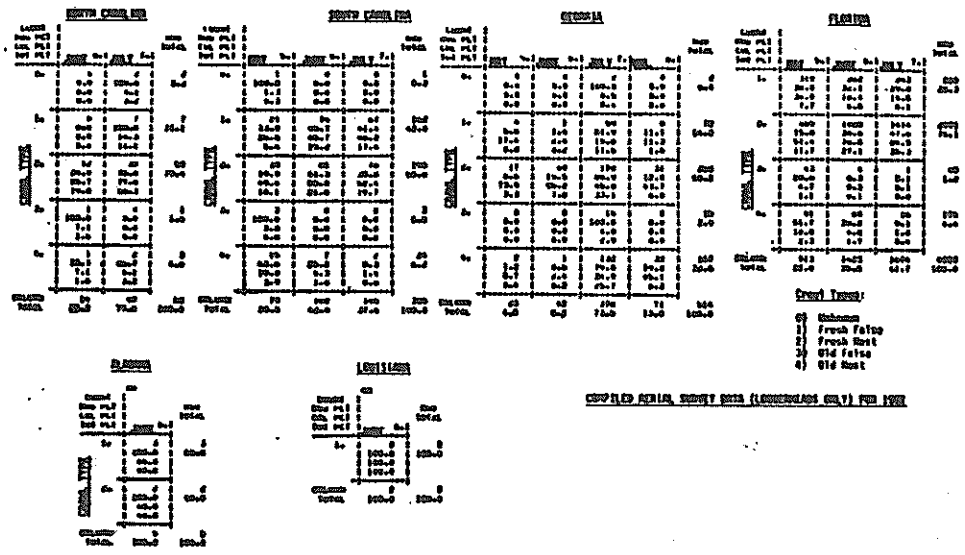
TABLE 9-3 AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys Kempi Lk
Lepidochelys olivacea Lo

DATE	BEACHES SURVEYED	NUMBERS OF RESTING TRACKS /1 Cc	Cm	D	E	Lk	Lo	NO I. D.
7/23/82	NC	38						
"	SC	76						
7/24/82	FL	1434						
7/25/82	GA	170						
8/3/82	GA	31						
	NOTE: A compiled data table for 1982 sea turtle aerial beach surveys is attached.							

TABLE 9-4 AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E
Lepidochelys Kempi Lk
Lepidochelys olivacea Lo



COMPILED AERIAL SURVEY DATA (LOUISIANA ONLY) FOR 1982

TABLE NUMBER 9 STATE (Compiled Data Table) PAGE 8

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

SYSTEM

Systematic sea turtle aerial nesting beach surveys were conducted in 1980, repeated in 1982, and are being repeated during 1983. The shoreline surveyed--North Carolina, South Carolina, Georgia, and the Florida East Coast--is the densest concentration of nesting by the loggerhead sea turtle, Caretta caretta, in the Atlantic area. The surveys are flown at about 14-day intervals from about late May through August. Ground truth is conducted at systematically selected beaches throughout the area.

A comprehensive report on these surveys is planned by the Miami Data Analysis Program of the Southeast Fisheries Center for September 1983.

UNITED STATES OF AMERICA

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Description of method of estimation of Estimated Populations of Nesting Females for the United States.

1) The estimated average numbers of total nests in one year (T) for recent years are:

State	Caretta caretta	Chelonia mydas	Dermochelys coriacea	Eretmochelys imbricata	Lepidochelys kempi
TX	1				<1
LA	0				
MS	4				
AL	1				
FL	24,059	204	43	2	
GA	1,272	<1	<1		
SC	4,136				
NC	279	<1			
VA	7				
DL	0				
MD	1				
NJ	<1				
TOTALS:	29,759	204	43	2	

2) The following factors were used for each species for the estimated average number of nests per season for females nesting that season (ns) and the average remigrational interval (ri):

	ns	ri
C. caretta	2.5*	2.5
C. mydas	2.8	2.5
D. coriacea	2.5	3.2
E. imbricata	2.5	2.5
L. kempi	1.3	1.8

* 3.3 for Georgia and South Carolina

3) The formula used was:

$\left(\frac{T}{ns}\right)$ (ri) = nesting females in the population

SPECIES \ YEAR	1982 /1	1981	1980 /1			Annual /2 Average
Caretta caretta	28,884		18,297			28,448
Chelonia mydas						182
Dermochelys coriacea						38
Eretmochelys imbricata						2
Lepidochelys kempi						less than 1
Lepidochelys olivacea						0

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

/1 Estimates from aerial surveys from North Carolina through Florida East Coast; records for fresh nest crawls of Caretta caretta only.

/2 Estimates are Annual Averages of Recent Years, primarily 1982-1977, with some records to 1964; based on beach surveys and some aerial surveys; obtained from the State Representatives for US/NATS and the US Recovery Plan for Sea Turtles draft.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km²)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
Areas of Texas through Massachusetts. 1. (*Texas-North Carolina)		Cc, Cm, Lk, Dc, Et* (approx. numbers not available)	Pelagic and beach aerial surveys, vessel surveys, incidental catch surveys from fisheries and intakes, Strandings, Scuba and other sightings.
Cape Canaveral Ship Channel on Florida East Coast 2.	6 mi long, 400 ft wide 40 ft deep.	Cc-84 to 552 estimate at any time. Cm, Lk-rare.	Vessel surveys. The most abundant concentration of Cc known.

TABLE 7. FORAGING AREAS INVENTORY

Note: The waters off the Atlantic and Gulf coasts of the United States, from inshore to well offshore and in certain inclosed waters, comprise a foraging area for sea turtles. First details of foraging distribution (EEC-FL) are being compiled from pelagic aerial surveys.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta	x	x	x	x	x	x	x	x	x	x	x	x	Mar-Nov
Chelonia mydas	x	x	x	x	x	x	x	x	x	x	x	x	Apr-Oct
Dermochelys coriacea					x	x	x	x	x	x	x		Jun-Oct
Eretmochelys imbricata	x	x	x	x	x	x	x	x	x	x	x	x	Apr-Oct
Lepidochelys kempi	x	x	x	x	x	x	x	x	x	x	x	x	May-Nov
Lepidochelys olivacea													

TABLE 8 - 1 TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

Note: Foraging activity is reduced during winter in all areas, and sea turtles are are absent from more northern areas. During colder winters, hibernation and hypothermic stunning/mortality may occur.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY /1
Caretta caretta	x	x	x	x	x	x	x	x	x	x	x	x	Dec, Oct, Mar, Feb, June
Chelonia mydas						x	x		x				
Dermochelys coriacea													
Eretmochelys imbricata		x	x	x									
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - 2 TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).
CAPE CANAVERAL CHANNEL

/1 Greatest occurrence; activity not measured

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
Texas through Massachusetts	summer spring fall	Cc, Dc	Pelagic aerial surveys have and are documenting offshore distributions seasonally.

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	Cc Cm Dc.	Tidal inundation; beach erosion. Weather (heavy rains, storms, hurricanes). Habitat destruction (buildings, seawalls, other erosion control structures; beach mining; beach cleaning). Plant roots. Invertebrate predators (ghost crabs, ants). Vertebrate predators (racoons, feral pigs, dogs, foxes, rats).	Δ
Hatchlings	Cc	Artificial lighting shoreward of nesting beaches. Ghost crabs. Birds. Fish (including sharks). Fouling or ingestion of petroleum and plastic products.	Δ2
Juveniles	Cc, Cm Lk	Fouling or ingestion of petroleum and plastic products. Sharks. Killer Whales. Hypothermia. Diseases. Chemical Pollution.	Δ
Adults (in water)	Cc Cm Dc Lk El	Sharks. Killer Whales. Hypothermia. Fouling or ingestion of petroleum and plastic products. Diseases	Δ
Nesting Females	Cc Cm Dc El Lk		Estimated less than 0.01%

TABLE 10. NATURAL MORTALITY

Δ Data insufficient for reliable estimation; a few local beach estimates range from 100% mortality to no mortality (the latter with nest-protection efforts).

Δ2 Data insufficient for reliable estimation; hatchling mortality on the beach estimated at less than 5% in local areas.

Δ3 Data insufficient for reasonable estimation.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	El
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

Additional biological data, including that noted above, is in the computerized data base for sea turtles of the Southeast Fisheries Center in Miami and Pascagoula. Extensive additional records are held in the archives of many of the research projects listed in table 21 of this report.

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate
1. NONE				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

From: EIS Listing & Protecting the Green, loggerhead & Olive Ridley under ESA '73.

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta	none	none	none	
Chelonia mydas	"	"	"	
Dermochelys coriacea	"	"	"	
Eretmochelys imbricata	"	"	"	
Lepidochelys kempi	"	"	"	
Lepidochelys olivacea	"	"	"	

TABLE 12. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (N/Kg)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

TABLE 5. U.S. Landings of Green Sea Turtles

YEAR		POUNDS (thousand)	VALUE $ (thousand)
1950		7	7
	(Unclassified)	(74)	(5)
1951		9	1
	(Unclassified)	(74)	(5)
1952		97	14
	(Unclassified)	(74)	(5)
1953		15	2
	(Unclassified)	(74)	(5)
1954		3	1*
	(Unclassified)	(34)	(3)
1955		1	1*
	(Unclassified)	(21)	(2)
1956		5	1
1957		6	1
	(Unclassified)	(1)	(1)*
1958		9	1
1959		12	1
1960		31	4
1961		36	6
	(Unclassified)	(1)	(1)*
1962		31	4
	(Unclassified)	(1)	(1)*
1963		55	9
	(Unclassified)	(2)	(1)*
1964		33	4
	(Unclassified)	(4)	(1)
1965		31	5
	(Unclassified)	(4)	(1)*
1966		31	5
	(Unclassified)	(7)	(1)
1967		154	25
	(Unclassified)	(6)	(1)
1968		64	14
	(Unclassified)	(4)	(2)
1969		14	3
	(Unclassified)	(9)	(3)
1970		421	91
	(Unclassified)	(13)	(5)
1971		133	33
	(Unclassified)	(20)	(10)

Table 5. U.S. Landings of Green Sea Turtles

YEAR		POUNDS (thousand)	VALUE $ (Thousand)
1972		237	34
	(Unclassified)	(23)	(11)
1973		34	9
	(Unclassified)	(1)	(1)*
1974		27	6
	(Unclassified)	(2)	(1)*
1975		----	----
	(Unclassified)	(4)	(1)
1976		----	----
	(Unclassified)	(1)	(1)*

* Less than 500 dollars

NOTE: "Unclassified" means landing of turtles unclassified as to species. These unclassified turtles may include some green sea turtles.

ALSO NOTE: These statistics do not include landings in Hawaii and Puerto Rico. 1976 is the latest year in which U.S. commercial landings data are available.

Source: U.S. Department of Commerce, NOAA, NMFS, Fishery Statistics of the United States.

TABLE 6. U.S. Landings of Loggerhead Sea Turtles

YEAR		POUNDS (THOUSAND)	VALUE $ (THOUSAND)
1950		45	3
	(Unclassified)	(74)	(5)
1951		43	4
	(Unclassified)	(74)	(5)
1952		81	7
	(Unclassified)	(74)	(5)
1953		48	3
	(Unclassified)	(74)	(5)
1954		18	1
	(Unclassified)	(34)	(3)
1955		3	1*
	(Unclassified)	(21)	(2)
1956		8	1*
	----	----	----
1957		7	1*
	(Unclassified)	(1)	(1)
1958		3	1*
	----	----	----
1959		7	1
	----	----	----
1960		13	1
	----	----	----
1961		6	1*
	(Unclassified)	(1)	(1)
1962		9	1
	(Unclassified)	(1)	(1)
1963		9	1
	(Unclassified)	(2)	(1)
1964		2	1*
	(Unclassified)	(4)	(1)
1965		3	1*
	(Unclassified)	(6)	(1)*
1966		4	1*
	(Unclassified)	(7)	(1)
1967		2	1*
	(Unclassified)	(6)	(1)
1968		3	1*
	(Unclassified)	(4)	(2)
1969		1	1*
	(Unclassified)	(9)	(3)
1970		1	1*
	(Unclassified)	(13)	(3)

TABLE 6. U.S. Landings of Loggerhead Sea Turtles

YEAR		POUNDS (THOUSAND)	VALUE $ (THOUSAND)
1971		27	5
	(Unclassified)	(20)	(10)
1972		8	1
1973		44	5
1974		8	1
	(Unclassified)	(2)	(1)*

*Less than 500 dollars.

NOTE: "Unclassified" means landings of turtles unclassified as to species. These unclassified turtles may include some loggerhead sea turtles.

ALSO NOTE: 1974 is the latest year in which U.S. commercial landings data are available.

Source: Department of Commerce, NOAA, NMFS, Fishery Statistics of the United States

SPECIES \ YEAR	1982*	1981*	1980*	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta	42,868 11,738	42,868 11,738	42,868 11,738	Shrimp trawling. Estimated from NMFS observer records.
Chelonia mydas	432 97	432 97	432 97	
Dermochelys coriacea	1476 505	1476 505	1476 505	
Eretmochelys imbricata				
Lepidochelys kempi	843 275	843 275	843 275	
Lepidochelys olivacea				

TABLE 13-A ESTIMATED INCIDENTAL TURTLE CATCH BY SHRIMP TRAWLING
Give estimated numbers and/or weights.

*Estimated Mean Annual Catch (upper number) and subsequent mortality (lower number)

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta	X	X	X	Boat collision. Gill nets (for shark, sturgeon, & shad). Pound nets. Power plant seawater intakes. Fish trawling. Hook & line fishing. Chanel dredging
Chelonia mydas	X	X	X	Power plant seawater intakes. Hook and line fishing. Speargun fishing. Chanel dredging.
Eretmochelys imbricata	X	X	X	Pound nets. Fish trawling. Power plant sea water intakes. Longline fishing.
Lepidochelys kempi	X	X	X	Speargun fishing. Power plant seawater intakes.
Lepidochelys olivacea	0	0	0	Pound nets. Hook and line fishing.

TABLE 13-B ESTIMATED INCIDENTAL TURTLE CATCH BY OTHER METHODS THAN SHRIMP TRAWLS.
Give estimated numbers and/or weights.

X = Data insufficient to estimate numbers caught or killed.

TABLE 13. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fisherman catching turtles.
3. Year of estimate.

1. Japanese tuna longliners incidentally catch sea turtles on longlines fished in the U.S. Fishery Conservation Zone. About 20 to 70 such vessels fish there seasonally. NMFS fishery observers record all catches on about 20% if the vessels fishing. On those observer-covered vessels, all sea turtles alive when caught are immediately returned alive to the water; the mortality of the observer sample was 24%.

2. Each Japanese longliner has a crew of about 20.

3. The Table 13 estimates are from observer records for 1979-1981.

SPECIES \ YEAR	1982	1981*	1980*	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta		53	53	Japanese Tuna Longline. NMFS observers' records at 20% fishing coverage times 5.
Chelonia mydas		8	8	Same.
Dermochelys coriacea		38	38	Same.
Eretmochelys imbricata				
Lepidochelys kempi				
Unidentified SPP.		33	33	Same.

TABLE 14. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
Give numbers and/or estimated weights.

* Average of 1979-1981 observations

TURTLE PRODUCT	YEARS 1982	1981	1980	CURRENT MARKET Price/Unit	METHODS OF DATA COLLECTION
No. of eggs					
Meat (Kg)					
Shell No./Wt.					
Skins No./Wt.					
Stuffed Juveniles					
Other					

NOTE: Sea turtle production in the United States ceased in 1978 with additional listings to the U. S. Endangered Species Act.

SPECIES _____

TABLE 15._____ OFFICIAL STATISTICS OF TURTLE PRODUCTION
Complete one of these tables for each species taken in the fishery.

TABLE 15. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

Not Applicable.

ACTIVITY	TOTAL ANNUAL NUMBERS OF PERSONS	EST. ANNUAL INCOME FROM TURTLES	COMMENTS
Fishing			
Processing			
Selling			

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES

NOTE: Since 1978, there has been no employment or income from sea turtle use or production.

TABLE 16. EMPLOYMENT DEPENDENT ON TURTLES
(Supplementary page)

In addition to marketed products, it is estimated that the following are taken annually from beaches or at sea for subsistence use:

A: Subsistence exploitation

1. Estimated number of eggs: _____
2. Estimated number of nesting females: _____
3. Number of turtles caught at sea: _____
4. Other: _____

NOTE: Subsistence exploitation is illegal, and poaching has been very rare since 1978 and for many years prior in most states.

B: Social aspects

In addition to the described fishery activities, exploitation of turtles may be permitted in some countries according to special rights or privileges extended to certain groups of people. If such specialized turtle exploitation exists, please give details (i.e., beach rights, ethnic traditions, specific seasons of the year, special permits, etc.):

No special rights of privileges are extended.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta Galveston		2000	220	ca 6 mo.	0			
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi Padre Island Galveston	13,097	9,223	7,946	6-10 months	322	95		
Lepidochelys olivacea								

YEAR 1977-------Cc
1978-1982-LA STATE TEXAS * Summary Table Attached

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

Summary of Gump's Hatchery sea turtles received and released from 1970 - Galveston, Texas

Year	Species Received	Number Received	Size at Receipt: wt. Range	Size at Receipt: wt. Mean	Size at Receipt: cl* Range	Size at Receipt: cl* Mean	Size at Release: wt. Range	Size at Release: wt. Mean	Size at Release: cl* Range	Size at Release: cl* Mean	Number Released, Location and Date	Number Retained for Broodstock or Research	Number Sent to Hatchery to Release	Total Mortality, Survival %	Inventory as of July 1 1973
1970	5/8/70	2,000	23.7-33.6	28.0	6.0-9.1	6.0	129.0-2,875.0	603.7	9.5-33.2	18.1	1,171- Cameron, Fla. 5/8/70	47**	37	97.02	83
	6/11/70						2,575.0	1,034.6	33.1	19.0	109- Padre Island Nat'l Seashore, Tx 7/1/70 Total 1,280	** 3 then later Released			2,280
1970	6/22/70	1,000	11.0-33.2	23.1	6.0-9.3	8.1	100.0-1,550.0	603.8	10.5-33.5	17.7	1,120- Taken & Retained From 1970 Yr.-class Cameron, Fla. 6/2, 6/20	71***	19	93.77	12
	6/23/70			22.2		9.3	1,550.0	1,033.7	33.5	19.2	109- Padre Island Nat'l Seashore, Tx 7/1/70 Total 1,129	*** 3 then later Released			2,226
1970	6/24/70	1,000	13.0-33.0	27.0	6.0-9.0	8.9	100.0-1,550.0	607.8	10.7-33.5	18.0	197- Aransas Bluecrab Refuge Victoria County 7/3/70	0	0	94.00	62
	7/27/70			22.0		9.0	1,550.0	1,033.1	33.5	19.0	1,575- Taken & Retained From 1970 Yr.-class. 0 Retained From 1970 Yr.-class Padre Island Nat'l Seashore, Tx 8/4/70 Total 1,729				2,670
1970	7/28/70	1,000	13.5-	27.0	8.5-	8.8	100.0-	603.8	9.7-	18.0	1121- Padre Island Nat'l Seashore, Tx	128	0	88.32	0
	8/10/70		33.1		8.7		1,000.0		33.0		8/8/70				
Total	7/8/70	5,000	11.0-	27.0	6.0-	8.0	100.0-	603.8	9.5	18.9	5,000	227	68	91.91**	119
	8/10/70		33.2		9.3		2,575.0		33.6						1,776

* = carapace length **Total survival prior to shipment - 0 released into Gulf of Mexico - 77.71%

TABLE NUMBER 17 STATE TEXAS

SPECIES	HATCHERY OPERATIONS: EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES: NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta	60,898	37,135	37,135	Same night	None			
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1981 - Cape Island

TABLE NUMBER 17 STATE SOUTH CAROLINA

SPECIES	HATCHERY OPERATIONS: EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES: NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta			about 500					
Chelonia mydas			more than 14,000					
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi							3	9
Lepidochelys olivacea								

YEAR 1971-1982 STATE Florida

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS: EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	HOLDING LIVE TURTLES: NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta	14,000 to 22,000	10,000 to 15,000	10,000 to 15,000	2 hrs. emerged	<.01	none	none	none
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1970-1982 STATE Georgia

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

Table 17: Documentation for Turtle Mariculture Operations

It is estimated that 10,000 to 15,000 loggerhead hatchlings are released each season from the combined Georgia hatchery programs on Wassaw, Ossabaw, Blackbeard, Jekyll and Little Cumberland Island. Hatching success generally ranges from .6 to .8, with a mean in the vicinity of .7. Thus, the approximate number of eggs collected each season ranges from 14,000 to 22,000.

Georgia hatcheries consist of naturally formed, exposed dunes with sufficient relief to prevent freshwater flooding (torrential rains) and tidal inundation. Hatchery areas are fenced to exclude predators but are not covered, in order to permit the full impact of ambient weather conditions during the incubation process.

Clutches of eggs are transferred to the hatchery site and reburied in simulated nest holes within two hours of being laid. Hatchlings usually emerge from the nest cavity between 2200 and 2400 hours and are released shortly after midnight. Hatchlings are placed on the beach face and allowed to crawl approximately 10 m to the water's edge. Upon reaching the water, the hatchlings disperse immediately to sea and are never seen the following day. It is assumed that most of the released hatchlings are several miles offshore by sunrise.

TABLE NUMBER 17 STATE GEORGIA

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta	16,768	12,179	12,179	Same night	None			
Chelonia mydas								
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1981-Kiawah Island

TABLE NUMBER 17 STATE SOUTH CAROLINA

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	468	93	71	1 day	24 dead	61 1		
Dermochelys coriacea								
Eretmochelys imbricata								
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1980

TABLE NUMBER 17 STATE SOUTH CAROLINA

SPECIES		HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
		EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta	1979 1980	— 3414	1290 1777	1290 1659	3 days 3 days		1981487 6	1	1
Chelonia mydas							1		
Dermochelys coriacea									
Eretmochelys imbricata									
Lepidochelys kempi									
Lepidochelys olivacea									

YEAR 1979 & 1980

TABLE NUMBER 17 STATE NORTH CAROLINA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
David S. Luginbuhl Research Institute for Endangered Species, Inc. P.O. Box 263 Ellington, CT 06029	7	Migratory activities of Dermochelys coriacea; Cold-water physiology and temperature regulation of D. coriacea; Conservation and education regarding D. coriacea.

TABLE NUMBER 18 STATE CONNECTICUT

Table 18. Public and Private Institutions Concerned with Sea Turtle Conservation/Management/Utilization. Number of people and agencies involved with sea turtles by state and type of activity.

State	No. People Involved	No. Agencies Involved	Activities: Protect Nest	Nest Survey	Stranding	Salvage	Aerial Surveys	Tagging	Relocate Eggs	Educational	Predator Control	Sonic Tagging	Hatchery	Autopsy	Data Analysis
North Carolina	33	13	2	6	7	1	2	7	6	7	0	0	3	1	0
South Carolina	22	7	1	4	4	1	1	1	1	4	2	1	1	1	0
Georgia	10	7	2	2	2	1	0	3	2	2	0	1	0	1	1
Florida	300	95	0	41	38	39	0	14	10	19	0	2	0	4	1
Alabama	3	2	0	2	2	0	0	0	0	2	0	0	0	0	0
Mississippi	2	2	0	1	0	0	0	0	0	1	0	0	0	0	0
Louisiana	2	1	0	0	0	0	0	0	0	1	0	0	0	0	0
Texas	14	4	2	3	2	1	1	1	1	3	1	1	2	1	1
Rhode Island	5	1													
Connecticut	7	1													
New Jersey	0	0													
Virginia	5	4		2	4	1	1	1				1			
Total	403	137	7	61	59	44	5	27	28	39	3	6	6	8	3

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Turtle Watch Group Dept. of Zoology University of Rhode Island Kingston, RI 02881	5	Sea Turtle Pelagic surveys " " Behavioral studies " " Population studies

TABLE NUMBER 18 STATE RHODE ISLAND

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Padre Island National Seashore		patroling, headstart, strandings
Texas Parks and Wildlife		patroling Parks, law enforcement
Aransas Wildlife Refuge		patroling Matagorda and recording strandings
Ila Loetscher's Group		promoting turtle conservation by public relations programing and patroling

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

STATE TEXAS

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
SEF Fish Center, Galveston Lab. Galveston	6	ovulation headstart techniques.
Texas A & M Univ., College Station	1	olfactory imprinting.
Brownsville Zoo, Brownsville	2	nesting, sightings, exhibit.
Padre Island National Seashore Padre	1	nestings.

TABLE NUMBER 18 STATE TEXAS

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
USFWS Lab. Tulane Univ. Ballochoco		nesting survey, oil fouling studies.

TABLE NUMBER 18 STATE Louisiana

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Gulf Islands National Seashore 3500 Park Road Ocean Spring Mississippi 39564	10	Beach surveillance and patrol
Mississippi Bureau of Marine Resources Box 959 Long Beach Mississippi 39560	5	Regulation enforcement
Gulf Coast Research Laboratory Ocean Springs Mississippi 39564	14	monitoring
Marine Education Center Hwy. 90 Biloxi Mississippi	5	monitoring

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

State Mississippi

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
NMFS Mississippi Lab. Pascagoula	4	trawl surveys, radio tracking.
Gulf Island National Seashore	1	nesting, strandings.

TABLE NUMBER 18 STATE MISSISSIPPI

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Univ. of South Alabama, Mobile	1	Stranding, nesting.
Dauphin Island Bird Sanctuary	1	nestings.
Gulf Islands National Seashore	1	nestings, strandings.

TABLE NUMBER 18 STATE ALABAMA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Florida Department of Natural Resources and its permit holders.	More than 100 permit holders with 20 names.	Nesting surveys, tagging, nest relocation, educational display, rehabilitation, head starting, stranding and salvage, research.

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Canaveral National Seashore - Titusville		nesting survey, tagging, stranding and salvage.
Hobe Sound National Wildlife Refuge, Hobe Sound		nesting survey, tagging, stranding and salvage, relocate nests.
NMFS, NOAA, Southeast Fisheries Center, Miami		rehabilitation.
Ft. Matanzas National Monument St. Augustine		nesting survey, tagging stranding and salvage, relocate nests.
Everglades National Park Homestead		stranding and salvage.
National Key Deer Refuge Big Pine Key		stranding and salvage.
Little Talbot Island State Park Jacksonville		nesting survey, relocate nests, stranding and salvage.
Flagler Beach State Recreation Area, Flagler Beach		nesting survey, relocate nests, stranding and salvage.
Anastasia State Recreation Area St. Augustine		nesting survey, relocate nests, stranding and salvage.
Washington Oaks State Gardens St. Augustine		nesting survey, relocate nests, stranding and salvage.
Volusia Div. of Recreation and Parks, District IV Administration, Ormond Beach		relocate nests, stranding and salvage.

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Jetty Park, Cape Canaveral		stranding and salvage.
Ft. Clinch State Park Fernandina Beach		nesting survey, relocate nests, stranding and salvage.
Coral Reef State Park & Key Largo, Key Largo		nesting survey, relocate nests, stranding and salvage.
Long Key State Recreation Area Long Key		nesting survey, relocate nests, stranding and salvage.
Bahia Honda State Recreation Area, Big Pine Key		nesting survey, relocate nests, stranding and salvage.
John Pennekamp Coral Reef State Park, Key Largo		relocate nests, stranding and salvage.
John U. Lloyd Beach State Recreation Area, Dania		relocate nests, nesting survey, tagging.
Sebastian Inlet State Recreation Area, Melbourne Beach		nesting survey, relocate nests.
Ft. Pierce Inlet State Recreation Area, Ft. Pierce		nesting survey, relocate nests.
Lt. Richard E. Roberts District Naturalists, Hobe Sound		relocate nests.
Dill Buggs Cape Florida State Recreation Area, Key Biscayne		nesting survey, relocate nests.
U.S. Corps of Engineers Jacksonville		turtle avoidance and repulsion techniques.

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Cape St. George State Reserve Apalachicola		nesting survey, stranding and salvage.
St. Vincent National Wildlife Refuge, Apalachicola		nesting survey, tagging.
Caladesi Island State Park Dunedin		nesting survey, relocate nests, stranding and salvage.
St. George Island State Park Eastpoint		nesting survey, relocate nests, stranding and salvage.
Higgins Pass State Recreation Naples		nesting survey, stranding and salvage, relocate nests.
USFWS Refuge Manager St. Petersburg		stranding and salvage.

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Florida Institute of Technology Jensen Beach		evaluating headstart techniques.
Univ. of Central Florida, Dept. of Biological Sciences, Orlando		nesting survey, tagging, relocate nests, salvage.
NOVA Cooperative Sea Turtle Monitoring, Dania		nesting survey, tagging, relocate nests.
Univ. of Florida Dept. of Biological Sciences, Gainesville		examination of stomach contents.
Florida International Univ. Tamiami Campus, Miami		nesting survey, relocate nests, tagging, blood antigen studies for sex determination.
Univ. of Miami, 4600 Rickenbacker Causeway, Miami		respiratory physiology study.
Florida Atlantic Univ. Dept. of Ocean Engineering, Boca Raton		underwater tagging.
Florida Inst. Technology, Jensen Beach Campus, Jensen Beach		headstart rehabilitation

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Dade Co. Public Schools Miami		educational display.
Town of Lantana Lantana		relocate nests.
Beach Maintenance Dept. (Dade Co), Miami Beach		relocate nests, salvage, nesting survey.
Key West Municipal Aquarium Key West		green turtle headstart, public display, and rehabilitation.
Vero Beach Senior High School Vero Beach		educational display.
City of Flagler Beach Flagler Beach		stranding and salvage.
City of Fernandina Beach Public Works Director, Fernandina Beach		stranding and salvage.
St. Johns County Road Dept. St. Augustine		stranding and salvage.
City of Boca Raton Chief Environmental Officer, Boca Raton		relocate nests.
Florida Power and Light, Miami		stranding and salvage.
Marine Science Education Center Mayport		nest incubation educational display.

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Environmental Studies Center Jensen Beach		educational display.
Marineland, Inc., St. Augustine		public display and rehabilitation.
Applied Biology, Jensen Beach		relocate nests, nesting survey, rehabilitation.
Longboat Key Turtle Watch, Longboat Key		nesting survey, relocate nests.
Hometco Miami Seaquarium, Miami		green turtle headstart and rehabilitation.
Scuba Club of the Palm Beaches West Palm Beach		rehabilitation.
Ocean World, Inc., Ft. Lauderdale		public display, green turtle headstart.
Sea World of Florida, Orlando		public display, rehabilitation, green turtle headstart.
Panacea Inst. of Marine Science Panacea		rehabilitation, tagging, stranding and salvage.
Bowfound Harbor Marine Inst. Big Pine Key		educational display.

TABLE NUMBER 18 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Theatre of the sea, Inc. Islamorada		educational display, green turtle headstart, rehabilitation, stranding and salvage.
Atlantic Loggerhead Turtle Res. Jupiter		nesting survey, relocate nests, tagging, nearshore tracking.
Sailfish Marina, Palm Beach Shores		green turtle headstart.
Museum of Arts and Sciences Miami		public education, rehabilitation, strandings and salvage
Turtle Krawls, Key West		public/educational display.
Tropical Audubon Society, Inc. Miami		nesting survey, relocate nests, stranding and salvage.
Capt. Hook's Marina, Marathon		rehabilitation.
The Science Museum, W. Palm Beach		artificial incubation and display, education.
Ocean Emporiums, Key West		sonic tagging and tracking.
Harbor Branch Foundation Ft. Pierce		public display/education, stranding and salvage.

TABLE NUMBER 19 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Caretta Research, Inc.- Sanibel Island		nesting survey, tagging.
Clearwater Marine Science Center Clearwater		public/educational display, rehabilitation.
The Shell Factory, Ft. Meyers		public display and rehabilitation.
Mote Marine Lab., Sarasota		public/educational display and rehabilitation
Sarasota Sea Turtle Association Nokomis		relocate nests, nesting survey, tagging.

TABLE NUMBER 19 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Mrs. Eleanor H. Fletcher, Juno Beach		relocate nests, nesting survey, educational display.
Marc Levasseur, Jupiter		relocate nests, nesting survey.
James McFin, Stuart		PCB accumulation.
Raoul E. Ionahn, Miami		oxygen transport in blood.
Susan Korzanowski, Palm Beach		relocate nests.
Veronika H. Stalcup, Hillsboro Beach		green turtle headstart.
Craig A. & Marcia Bercaw Deerfield Beach		nesting survey, tagging.
Jeanne Spaulding, South Ponte Vedra		nesting survey, relocate nests, stranding and salvage.
Howard Watts, Palm Beach		nesting survey, relocate nests, stranding and salvage.
Ms. Carol Sellers, Bahalia		nesting survey, relocate nests.
J. U. Council, St. Augustine		nesting survey, relocate nests, stranding and salvage.

TABLE NUMBER 19 STATE FLORIDA

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Peter Bendre', Melbourne		rescue & release hatchlings, stranding and salvage.
Anna Maria Turtle Watch, Holmes Beach		nesting survey, relocate nests, stranding and salvage.
Rosanna B. Parks, Delray Beach		hatchling rescue and release.
Robert E. Adsty, Fernandina Bch.		nesting survey, relocate nests, stranding and salvage.
Richie Burrbach, Ormond Beach		nesting survey, relocate nest, stranding and salvage.

TABLE NUMBER 18 STATE Florida

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
University of Georgia Ga Sea Turtle Coop. Research Prog. Dr. James I. Richardson, Director Institute of Ecology, Univ. Ga. Athens, GA 30602	2	Data inventory and computer processing, statistical analysis, project design, loggerhead population modelling, carcass network analysis, tag return/reward program, tag/tagging technology and tag number inventory, education. Director for the Little Cumberland and Cumberland tagging programs.
Georgia Department of Nat. Resources Marine Resources Division Mr. Chuck Cramon Wildlife Officer and Unit Leader Marine Mammals and Endangered Species 1200 Glynn Avenue Brunswick, GA 31520	1	Law Enforcement, Carcass Network Management, Offshore Marine Turtle Habitat Utilization, Education.
Savannah Science Museum Mr. Gerry Williamson, Museum Direc Mr. Wig Sayle, Sea Turtle Program 4405 Paulsen Street Savannah, GA 31405	2	Director of the Wassaw Island sea turtle tagging program, public education.
U.S. Dep't. of Interior Fish and Wildlife Service Mr. Glenn Carmona District Project Leader P.O. Box 8487 Savannah, GA 31401	1	Responsible for marine turtle research and conservation projects on FWS refuge lands in Georgia.

TABLE NUMBER 18 STATE GEORGIA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Coastal Georgia Audubon Society Mrs. Verna McNamara Director of Sea Turtle Activities P.O. Box 1603 Brunswick, GA 31520	1	Director of the Jekyll Island sea turtle tagging and conservation program; public education.
National Park Service Dr. Jay George Regional Director for Science and Technology Southeast Region Headquarters 75 Spring Street, S.W. Atlanta, GA 30303	2	Responsible for marine turtle research and conservation projects on NPS refuge lands in Georgia.
USDI Fish and Wildlife Service Blackbeard Island NWR Mr. Danny Wolfe Refuge Manager P.O. Box 8487 Savannah, GA 31401	1	Director of the Blackbeard Island sea turtle research and conservation program.
Environmental and Chemical Sciences Inc. Atlanta, GA	1	Electrical repulsion techniques

TABLE NUMBER 18 STATE GEORGIA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Belle Baruch Institute for Marine Biology & Coastal Research - University of South Carolina Georgetown, SC 29440 and Beaufort, SC 29920		Classroom - University of South Carolina Marine Biology. Lecture/Workshops Audio/Visual Prod. Nest protection Tissue Sampling Rehabilitation
Cape Romain National Wildlife Refuge Route 1, Box 191 Awendaw, SC 29429		Nest/Crawl Surveys Strandings Enforcement Relocation - Nest transplant operation to Chacoteaugue and Pea Is. (1973-78) Hatchery Predator Removal
The Center for Lowcountry Environments P. O. Box 1801 Charleston, SC 29402		Nest/Crawl Surveys Stranding Wire mesh Problem Identification Rulemaking Lecture/Workshops
South Carolina Sea Grant Consortium 221 Ft. Johnson Road Charleston, SC 29412		Lecture/Workshops Material Development Audio/Visual Presentations Fishery Conflicts

TABLE NUMBER 18 STATE SOUTH CAROLINA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
South Carolina Wildlife and Marine Resources Department P. O. Box 12559 Charleston, SC 29412		Predator Removal Predator Aversion Relocation Sea Turtle Recovery Team Aerial surveys (Pelagic) Tracking - (Sonic & Radio Aerial Surveys (Beach) Nest/Crawl Surveys Strandings Tagging(Carapace prototype) Research Assistance
		Intrenesting movements of female loggerheads To determine extent of carcass strandings Material Development Audio/Visual Presentations
		Enforcement Permits Incidental Capture Rulemaking
Kiawah Island Community Association P. O. Box 12910 Charleston, SC 29412		Nesting surveys, hatchery, strandings Audio/Visual presentations

TABLE NUMBER 18 STATE SOUTH CAROLINA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
South Carolina Wildlife Marine Resources Charleston, SC	1	Tagging

TABLE NUMBER 18 STATE SOUTH CAROLINA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Fox Island Wildlife Refuge	2	Note strandings, move nests for hatching on beach.
N.C. Marine Res. Ctr., Manteo	1	Note strandings, give lectures, exhibit live turtles.
Cape Hatteras Natl. Seashore Park	3-9	Note strandings, give lectures, exhibit aspects of turtles via slides, artifacts, etc.
Cape Lookout Natl. Seashore Park	6-9	Note strandings, meetings, hatchlings; inform public via lectures, exhibits on Cape Lookout; patrol beaches each night; tag turtles.
N.C. Marine Res. Ctr., Pine Knoll Shores	3	Note strandings, exhibit live sea turtles, prepare information, extension
Institute of Marine Sciences-UNC	1	Coordinate strandings, note nests, hatchlings, lecture on turtles, assist N.C. Marine Fisheries with strandings, enforcement and federal marshals, tag turtles (racer and head) for age, growth, etc. studies.
Hammock Beach State Park	2-9	Lecture to public, patrol beaches on availability of time, give lectures, protect nests.
Camp Lejeune Military Base, Base Maintenance	5	Patrol beaches, note strandings, protect nests, tag turtles, protect hatchlings.
N.C. Marine Res. Ctr., Ft. Fisher	1	Lecture, tag turtles on releases with IMS, exhibit turtles
UNC Wilmington	1	Research into ORV effects on turtles
Baldhead Island Comp.	1	(1982 only) monitor nesting
N.C. Marine Fisheries	3	Fly count for observations, enforce law, handle stranding with IMS
N.C. Wildlife Resources Comm.	2	Fly coastline 1979 (small segments 1981, 1982), some ground truth.

TABLE NUMBER 18 STATE NORTH CAROLINA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Virginia Institute of Marine Sciences Gloucester Point, VA 23062	2	Marine turtle stranding, network, mortality, information and radio tracking.
Back Bay National Wildlife Refuge Pembroke Office Park Pembroke #2 building, Suite 215 Virginia Beach, VA 23462		Marine turtle stranding, sighting, and nesting information.
Chincoteague Nat'l. Wildlife Refuge P.O. Box 62 Chincoteague, VA 23336		Marine turtle stranding, sighting, and nesting information.
Nature Conservancy Coastal Reserve		Marine turtle stranding, sighting.

TABLE NUMBER 18 STATE VIRGINIA

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Marine Mammal Stranding Center Historic Gardner's Basin Atlantic City, N.J.		

TABLE NUMBER 18 STATE NEW JERSEY

Number of State Parks and National Wildlife Refuges and Official Sea Turtle Sanctuaries in states to Texas; only two sanctuaries are regularly patrolled by enforcement personnel.

	State Parks	Federal and Wildlife Refuges	Official Sea Turtle Refuges [b]	Regular Enforcement
Virginia	4	3	1-2[a]	2
North Carolina	4	1	0	0
South Carolina	6	4	1[aa]	0
Georgia	19	9	0	0
Florida	2	0	0	0
Alabama	1	0	0	0
Mississippi	2	5	0	0
Louisiana	3	6	0	0
Texas	41	31	3[aaa]	2

[a] - Only official sea turtle sanctuary in United States is located off Brown Boar and Onslow Beaches, N.C. under Reg. C.R. 113-132, 113-134, 113-138, 113-181, 113-182, 113-226, 143B-206 and Marine Fisheries .0114.

[aa] - Emergency sea turtle sanctuarys can be decreed by N.C. Marine Fisheries under statute G.S. 113-134, 113-181, and Marine Fisheries Regulation 15NCAC 3B .0111. such as off Baldhead Island, April 1983.

[aaa] - Includes Grays Reef National Marine Sanctuary offshore of Georgia.

TABLE 19. Sanctuaries and Refuges.

NAME AND LOCATION	AREA km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
All Georgia coastal islands	111 km. linear distance	All sea turtles, their nests, eggs, and hatchlings are protected under Georgia's Non-game Program and the U.S. Endangered Species Act of 1972.	Most beaches are protected by all night patrols. Poaching is present but not serious.
All Georgia estuarine and nearshore waters.	735 km²	U.S. Endangered Species Act of 1972.	Incidental catch and mortality is uncontrolled and unenforceable.
Gray's Reef National Marine Sanctuary	44 km²	Habitat protection.	Patrolled by GA DNR personnel. Enforcement good.

TABLE 19. SANCTUARIES AND REFUGES STATE GEORGIA

NAME AND LOCATION	AREA km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Cape Romain National Wildlife Refuge	19,000	All wildlife species	Fish & Wildlife Service Agents and Refuge personnel adequate
Tom Yawkey Wildlife Center	60,000	All wildlife species	S.C. Wildlife & Mar. Res. Dept. officers not adequate
Santee Coastal Reserve	121,410	All wildlife species	Same as above

TABLE NUMBER 19 STATE SOUTH CAROLINA PAGE 8

NAME AND LOCATION	AREA km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
N. C. Sea Turtl. Sanctuary off Ramanchs Beach and Onslow Beach from Bogue Inlet to New River Inlet		Protect one of best nesting sites in North Carolina from over shrimping effects	N. C. Marine Fisheries enforcement, decreed each year by law (Statute .0111, .0114) 1 June-1 September
			Also enforced by military out of Camp Lejeune and Coast Guard.
N. C. Marine Fisheries			Emergency decree sanctuaries (Statute 15NCAC 3B .0111

TABLE NUMBER 19 STATE NORTH CAROLINA PAGE 10

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Barnegat National Wildlife Refuge Barnegat, N.J.	43.2	Endangered Species Act	Park Rangers
Holgate National Wildlife Refuge Holgate, N.J.	28.3	Same	Park Rangers
Brigantine National Wildlife Refuge Brigantine, N.J.	88.9	Same	Park Rangers

TABLE NUMBER 19 STATE NEW JERSEY PAGE 11

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
Island Beach State Park Seaside Park, N.J.	13.6	Endangered Species Act	State Rangers
Sandy Hook National Park Sandy Hook, N.J.	21.3	Same	Park Rangers
Barnegat National Wildlife Refuge Barnegat, N.J.	43.2	Same	Park Rangers
Holgate National Wildlife Refuge Holgate, N.J.	28.3	Same	Park Rangers
Brigantine National Wildlife Refuge Brigantine, N.J.	88.9	Same	Park Rangers

TABLE NUMBER 19 STATE NEW JERSEY PAGE 6

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS OR LEVELS OF ENFORCEMENT
National Marine Fisheries Service National Oceanographic and Atmospheric Administration U. S. Department of Commerce Washington DC 20235	(variable)	(multiple)	Enforcement level high. See supplementary table attached.
Fish and Wildlife Service U. S. Department of Interior Washington DC 20240	"	"	"
Other Federal agencies involved are Coast Guard, Navy, National Parks Service, Customs.			
Many state agencies, Texas through Massachusetts, are involved, as well as county and city agencies.			

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fi[illegible] Ministeries, Police, Coast Guard, etc.)

The following information pertains to enforcement activities (violations cited, Prosecutions). The majority of the cases cited concern sea turtle violations, however a few pertain to whale violations.

YEAR*	1977	1978	1979	1980	1981	1982	1983 (To May)
No. of Citations	491	395	109	124	169	103	28
(Separate Cases)	478	283	101	109	112	79	19
Civil	479	295	85	113	110	88	14
Criminal	2	99	24	11	59	14	14
No. of Prosecutions	358	213	42	45	99	40	3 (Balance Pending)

* Decline in citations and prosecutions may reflect a decrease in endangered species enforcement activities in the US, due to increased fishery management regulation requirements.

TABLE 20. REGULATORY AUTHORITY — Supplementary Table of Enforcement Activity, 1977-1983

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

All sea turtles in United States waters are protected by Federal Law from take or harassment.. Importation of sea turtles or their products into the U. S. is prohibited.

The Federal regulatory legislation is:

1) Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

   a) Adopted March 3, 1973 in Washington D.C.
   b) Ratified January 7, 1975 in Washington D.C.
   (all sea turtles listed on appendix 1)

2) Endangered Species Conservation Act of 1969
(Public Law #PL 91-135;83, Stat. 275)

3) Endangered Species Act of 1973
(PL 93-205; 87, Stat. 884, effective 28 Dec., 1973

a) Amendments	Effective Date
PL 94-325	30 June, 1976
PL 94-359	12 July, 1976
PL 95-212	19 December. 1977
PL 95-632	10 November, 1978
PL 96-159	28 December, 1979
PL 97-305	13 October, 1982

Listed as Endangered Species:
Lepidochelys kempi
Eretmochelys imbricata
Dermochelys coriacea
Chelonia mydas (Florida & Pacific Mexico)
Lepidochelys olivacea (Pacific Mexico)
Listed as Threatened Species:
Chelonia mydas (elsewhere than above)
Lepidochelys olivacea (elsewhere than above)
Caretta caretta

NATIONAL MARINE FISHERIES SERVICE has jurisdiction for sea turtles in the water.

FISH AND WILDLIFE SERVICE has jurisdiction for sea turtles on land.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Policy 2) Beach monitoring 3) Nest protection Education: 1) Material development 2) Curriculum 3) Audio/visual presentations Regulation: 1) Problem identification 2) Rulemaking-submit comments	1981	Cont.	Michael Weber, STRP Coordinator Sea Turtle Rescue Fund Center for Environmental Education 624 9th St., N.W. Washington, D. C. USA 2001 202/737-3600
Research: 1) Channel dredging 2) Beach renourishment	1980	Cont.	Jonathan D. Moulding, Ecologist U.S. Army Engineer District, Jacksonville Environmental Resources Branch P.O. Box 4970 Jacksonville, FL 32232 904/946-2286

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
NATIONAL:			
Regional Coordination: 1. Kemp's Ridley Headstart 2. Strandings 3. Tagging 4. Nest/crawl surveys, population analysis. 5. Fishery conflicts 6. tracking (satellite/radio) 7. Biochemical identification (sea turtle meats and oils) Aerial Surveys: 1. Quantify turtle populations for Western Atlantic Turtle Symposium	1978	Cont.	Fred Berry, Marine Mammal & End. Sp. Program Manager National Marine Fisheries Service Southeast Fisheries Center 75 Virginia Beach Drive Miami, FL USA 33149 305-361-4276 With research conducted at the following labs: Beaufort, N.C. (Don Hoss); Charleston, S.C. (Sylvia Braddon); Panama City, FL (Larry Ogren); Bay St. Louis, MS (Wil Siedel); Galveston, TX (Ray Wheeler)
Regulation: 1. Problem identification 2. Rulemaking 3. Sea turtle recovery plan 4. Consultation Education: 1. Material development	"	"	Chuck Oravetz, Fisheries Administrator National Marine Fisheries Service Southeast Region 9450 Koger Blvd., Duval Bldg. St. Petersburg, FL USA 33702 813/893-3366

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Protection of turtles found in water management project areas	"	"	William F. Adams, Biologist U.S. Army Engineer District, Wilmington P.O. Box 1890 Wilmington, NC 28402 919-343-4748
Research: 1) Kemp's ridley cooperative program (US/Mexico) 2) Nest relocation	1977	Cont.	Jack Woody, David Bowman U.S. Fish and Wildlife Service Region 2 P.O. Box 1306 Albuquerque, N.M. USA 87103 505/766-2323

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Regional Coordination (Wildlife refuges from Va. to La.) 2) Beach monitoring 3) Nest protection 4) Sea Turtle Recovery Team	1957	Cont.	Otto Florshutz, East Coast Biologist U.S. Fish and Wildlife Services P.O. Box 581 Washington, N.C. 27889 919/941-1483
Research: 1) Beach monitoring 2) Nest protection Monitored areas include: Wassaw Island NWR, Blackbeard Island NWR, Savannah NWR, Tybee Island NWR, Harris Neck NWR, Wolf Island NWR, Pinckney Island NWR.	1974	Cont.	John Davis, John Hoffman, Dennis Wolf U.S. Fish and Wildlife Services South Carolina/Georgia Coastal Complex for Wassaw Inland National Wildlife Refuge & Blackbeard Island National Wildlife Refuge P.O. Box 8487 Savannah, GA 31412 912-944-4415
TEXAS:			

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research:* 1) Translocation of eggs 2) Hatchery *see U.S. Fish & Wildlife, Albuquerque			Texas Parks and Wildlife Padre Island National Seashore
Research: 1) Beach monitoring 2) Captive breeding 3) Public relations			Ida Lootscher, Turtle Lady South Padre Island, TX 78597

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
FLORIDA:			
Research: 1) Beach monitoring (Jupitor Island, FL)	1969	Cont.	Frank Lund Atlantic Loggerhead Turtle Research P.O. Box 541 Jupiter, FL 33458 305/546-7934
Research: 1) Regional coordinator 2) Beach monitoring 3) Nest protection	1981	Cont.	Robert Autrey, Regional Coordinator 1912 Sunrise Dr. Fernandina Beach, FL 32034 904/261-7609
Research: 1) Beach monitoring 2) Nest protection Education: 1) Beach walk	1977	Cont.	Richard E. Wolf, Chief Environmental Officer Boca Raton, City of Environmental Division 201 West Palmetto Park Road Boca Raton, FL 33432 305/393-7960
Research: 1) Beach monitoring 2) Nest protection Education: 1) Beach walks 2) Audio/visual shows 3) Exhibits	1978	Cont.	Donald Guitou, Superintendent Canaveral National Seashore Box 2583 Titusville, FL 32780 305/867-4675
Research: 1) Beach monitoring 2) Nest protection 3) Wildlife Preservation 4) Habitat preservation Education: 1) Lecture/workshop 2) Audio/visual presentation Regulation: 1) Enforcement	1980	Cont.	Capt. Carl R. Nielson Cape Florida State Recreation Area 1200 South Crandon Blvd. Key Biscayne, FL 33149 305/361-5811

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring 2) Nest protection Education 1) Lecture/workshop	1968	Cont.	Charles LeRuff, Jr., Director Caretta Research, Inc. P.O. Drawer E Sanibel, FL 33957 813/472-1041
Research: 1) Rehabilitation Education: 1) Public display 2) Classroom	-	-	Dennis Kellenberg, Exec. Director Clearwater Marine Science Center 749 Windward Passage Clearwater, FL 33515 813/447-0990
Research: 1) Beach monitoring 2) Strandings Education: 1) Beach walks 2) Lecture/workshops	1979	-	Jim Cleary, Ranger Delnor-Wiggins Pass State Recreation Area 11100 Gulf Shore Boulevard North Naples, FL 33940 813/597-6196
Research: 1) Beach monitoring 2) Tagging 3) Aerial surveys	1975	-	Rick Dawson Everglades National Park Resource Management and Visitor Protection Division and South Florida Research Center P. O. Box 279 Homestead, FL 33030 305/245-5264
Research: 1) Beach monitoring 2) Sea turtle Recovery team 3) Worldwide consultation Education: 1) Material development 2) Lecture/workshop			Peter L. H. Pritchard, Vice President Florida Audubon Society 1101 Audubon Way Maitland, FL 32751 305/647-2615

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Regional Coordination a) Nest/crawl surveys b) Strandings Regulation:	1972	-	J. Alan Huff Florida Department of Natural Resources Bureau of Marine Science and Technology 100 8th Avenue, S.E. St. Petersburg, FL 33701 813/896-8626
1) Issue state and federal permits 2) Rulemaking 3) Problem identification			
Research: 1) Regional coordination a) Headstarting b) Beach monitoring c) Organize groups & compile data	1962	Cont.	Ross Witham, Green Turtle Headstart Program Florida Department of Natural Resources Stuart Field Station P.O. Box 941 Jensen Beach, FL 33457 305/334-1667
Research: 1) Beach monitoring 2) Nest protection 3) Laboratory Education: 1) Classroom	1981	Cont.	George Dalrymple Florida International University Department of Biological Science Miami, FL 33199
Research: 1) Habitat protection (through land acquisition)			Jim McKinley Florida Nature Conservancy 1331 Palmetto Avenue Suite 205 Winter Park, FL 32789 305/628-5887

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection 3) Rehabilitation 4) Sea turtle recovery team 5) Habitat preservation 6) Laboratory	1972	Cont.	Rose Wilcox, Chief Ecologist Florida Power & Light Company Environmental Affairs Department P. O. Box 529100 Miami, Florida 33152 305/552-3561 Ed Mayer Applied Biology, Inc. P.O. Box 974 Jensen Beach, FL 33457 305/334-3729
Education: 1) Lecture/workshops	1972	Cont.	James C. Cato, Director Florida Sea Grant College Building 803 University of Florida Gainesville, FL 32611 904/392-5870
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection	1978	-	Karl Saith, Senior Park Technician Fort Matanzas National Monument Route 1, Box 105 St. Augustine, FL 32084 904/471-0116
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings	1980	-	Mike Barr, Chairman Fort Pierce Inlet State Recreation Area 2200 Atlantic Beach Boulevard Ft. Pierce, FL 33450 [illegible]

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection	1973	-	Mike Murphy, Manager Hobe Sound National Wildlife Refuge P. O. Box 645 Hobe Sound, FL 33455 305/546-6141
Research: 1) Headstarting	1956	Cont.	Ross Witham, Director House of Refuge Historical Society of Martin County 825 N. E. Ocean Blvd. Stuart, FL 33494 305/225-1961
Research: 1) Regional coordination 2) Beach monitoring a) Nest/crawl surveys b) Strandings 3) Nest protection a) relocation Education: 1) Lecture/workshop 2) Museum activities	1980	-	Christine Schieb, Museum Naturalist Jacksonville Museum of Arts and Sciences 1025 Gulf Life Drive Jacksonville, FL 32207 904/396-7062
Research: 1) Beach monitoring a) Tagging b) Nest/crawl surveys c) Strandings 2) Nest protection a) Hatchery	1979	-	Capt. Torrey H. Johnson, Superintendent John U. Lloyd Beach State Recreation Area 6503 North Ocean Drive Dania, FL 33004 305/923-2833

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Headstarting 2) Rehabilitation Education: 1) Public display	-	-	Glenn Wallace, Director Key West Municipal Aquarium P.O. Box 1237 Key West, FL 33040 305/296-2051
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection Education: 1) Lecture/workshop	1981	-	Susan Korzenowski 217 List Road Palm Beach, FL 33480
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection Education: 1) Lecture/workshop	-	-	Little Talbot Island State Park P.O. Box 246 Ft. George, FL 32226 904/251-3231
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection Education: 1) Lecture/workshop	1977	-	Catherine Kitfernald Longboat Key Turtle Watch c/o McGraw P.O. Box 336 Longboat Key, FL 33548 813/548-0336
Research: 1) Beach monitoring a) Strandings 2) Headstarting a) Adopted Hatchlings 3) Rehabilitation	1939	-	Robert L. Jenkins, Curator Mainland Research Laboratory Route 1, Box 122 St. Augustine, FL 32084 904/471-1111

TABLE 21. NATIONAL RESEARCH PROJECTS

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Headstart 2) Rehabilitation Education: 1) Classroom	1973	-	Frank Pittman Martin County Schools' Environmental Studies Center 2900 N.E. Indian River Drive Jensen Beach, FL 33457 305/334-1262
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection a) Wire mesh b) Hatchery c) Predator control	1979	-	Robert C. Lee, Assistant Refuge Manager Merritt Island National Wildlife Refuge P.O. Box 6504 Titusville, FL 32780 305/867-4820
Research: 1) Beach monitoring a) Strandings 2) Nest protection(relocation)	1980	Cont.	Jim Hoover, Landscape Supervisor Metro Dade Beach Operations 7929 Atlantic Way Miami Beach, FL 22141 305/868-7075
Research: 1) Headstarting (Green's & Kemp's ridley) 2) Nest protection a) Hatchery 3) Rehabilitation Education: a) Public displays b) Classroom	-	-	Martha Burhmaster, Education Miami Seaquarium 4400 Rickenbacker Causeway Virginia Key, Florida 33149 305/361-5705
	1957	-	William M. Taft, Director Mote Marine Laboratory 1600 City Island Park Sarasota, FL 33577 813/388-4441

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings	1981	-	Steven Klett, Refuge Biologist National Key Deer Refuge Box 510 Big Pine Key, Florida 33043 305/872-2239
Education: 1) Classroom	1971	-	Jim Thomas, Science Director Newfound Harbor Marine Institute Route 3, Box 170 Big Pine Key, FL 33043 305/872-2331
Research: 1) Distribution (underwater Observations) Education: 1) Classroom 2) Lecture/workshops	1973	-	Norine Rouse, Director Norine Rouse Scuba Club of the Palm Beaches 4708 N. Dixie West Palm Beach, FL 33407 305/844-2466
Research: 1) Beach monitoring a) Tagging b) Nest/crawl surveys c) Strandings 2) Laboratory a) Tissue sampling	-	-	John Fletemeyer NOVA University 8000 North Ocean Drive Davie, FL 33004 305/475-7487
Research: 1) Headstart (Green) 2) Rehabilitation Education 1) Public display	1979	-	Craig Smith, Director Ocean World 1701 S. E. 17th St. Ft. Lauderdale, FL 33316 305/525/6612

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Laboratory	-	-	Peter Lutz, Graduate Prof. Rosenstell School of Marine & Atmospheric Science Univ. of Miami 4600 Rickenbacker Causeway Miami, FL 33149 305/350-7325
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection(relocation)	-	-	Maurice Woolverton Sarasota Sea Turtle Association 811 Casey Key Road Nokomis, FL 33555
Research: 1) Headstart (Green) 2) Education a) Public display b) Lecture/workshop	-	-	Bill Clifton, Education Director Sea World 7007 Sea World Drive Orlando, FL 32809 305/351-3600
Research: 1) Headstarting (Green & Loggerhead) 2) Rehabilitation Education: 1) Public display	1978	-	Dave Ornsdorff, Sup. of Marine Mammals and Turtles Sea World's Shark Institute Layton Long Key, FL 305/664-9101
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection a) Relocation b) Predator removal Education: a) Beach walks	1980	-	Lt. Beasley Sebastian Inlet State Recreation Area P. O. Box 728 Sebasso, FL 32970 305/589-3754

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection a) Relocation b) Rulemaking Education: 1) Public display 2) Lecture/workshop 3) Museum activities 4) Material development Regulation: 1) Problem identification	1971	-	Eleanor Fletcher The Science Museum and Planetarium of Palm Beach County 4901 Dreher Trail North West Palm Beach, FL 33405 305/832-1988
Research 1) Beach monitoring a) Tagging b) Nest/crawl surveys c) Strandings 2) Nest protection a) Relocation b) Wire mesh c) Predator control Regulation: 1) Enforcement	1973	-	Martin Penny, Refuge Manager St. Vincent National Wildlife Refuge P.O. Box 447 Apalachicola, FL 32320 904/653-8808
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings	1980	-	Bill Black Tampa Bay National Wildlife Refuge 9721 Executive Center Drive, Suite 114 St. Petersburg, FL 33702 813/893-3651
Research: 1) Headstarting (Green) 2) Rehabilitation 3) Strandings Education: 1) Public display 2) Lecture/workshop 3) Classroom	1947	-	Rod Hamm, Director of Information and Special Projects Theater of the Sea Box 407 Islamorada, FL 33036
Research: 1) Beach monitoring a) Tagging b) Nest/crawl survey c) Stranding Education: 1) Lecture/workshop	-	-	Robert L. Kelley, President Tropical Audubon Society 5130 Sunset Drive South Miami, FL 33143 305/666-5111

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring a) Tagging b) Nest/crawl surveys c) Strandings d) Aerial surveys 2) Population ecology 3) Nest protection (relocation) 4) Tracking 5) Sea turtle recovery team	1973	-	Llewelyn Ehrhart, Prof. University of Central Florida, Dept. of Biological Science P. O. Box 25000 Orlando, FL 32816 305/275-2148
Research: 1) Regional coordination (tag data) 2) WATS survey & census 3) Extensive international consultation	1957	Cont.	Dr. Archie Carr, Graduate Research Prof. Univ. of Florida Department of Zoology 223 Bartram Hall Gainesville, FL 32611 904/392-1250
Education: 1) Public display 2) Lecture/workshop 3) Beach walks			Terry Pitts, Park Manager Washington Oaks State Gardens Route 1, Box 128-A St. Augustine, FL 32084 904/445-3161
Georgia:			

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach monitoring a) Strandings	1980	-	John Crawford Little St. Simons Island P. O. Box 1096 St. Simons, Island, GA 31522 912/264-1414
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection a) Predator removal	-	-	Eleanor Torrey West, Director Cumberland Island Loggerhead Sea Turtle Project The Greenbrier Foundation P.O. Box 13397 Savannah, GA 912/233-4904
Research: 1) Beach monitoring a) Strandings	1973	-	Carol Ruckdeschel P. O. Box 796 St. Marys, GA 31558
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings	1979	-	Sapelo Island DNR Game and Fish Div. Sapelo Island, GA 31327
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection a) Hatchery b) Relocation c) Predator control 3) Tracking 4) Fishery conflicts	1973	-	Savannah Science Museum 4405 Paulsen Street Savannah, GA 31405

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Wassaw Island Loggerhead Research and Conservation Project	15 May Annually	15 Oct	Mr. Win Beyle Savannah Science Museum 4405 Paulsen Street Savannah, GA 31405
Jekyll Island Loggerhead Research and Conservation Project	15 May Annually	15 Oct	Mrs. Verna McNamara Coastal Georgia Audubon Society P. O. Box 1603 Brunswick, GA 31520
Little Cumberland Island Loggerhead Research and Conservation Project	15 May Annually	15 Oct	Dr. James I. Richardson Institute of Ecology University of Georgia Athens, GA 30602
Cumberland Island Loggerhead Research and Conservation Project	15 May Annually	15 Oct	Dr. James I. Richardson (sea turtle advisor) Dr. Susan Bratton, Unit Director National Park Service Cooperative Research Unit Institute of Ecology, University of Georgia Athens, GA 30602

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Education: 1) Classroom 2) Public display	-	-	David Gillespie, Director of Education Skidaway Institute University of Georgia Marine Extension Service P. O. Box 13687 Savannah, GA 31406 912/356-2496
Research: 1) Aerial surveys 2) Fishery conflicts 3) Population ecology 4) Wildlife inventory Education: 1) Lecture/workshops 2) Classroom Regulation: 1) Problem identification	-	-	Southeastern Wildlife Service c/o Hilburn O. Hillestad 113 Hoyte St. Athens, GA 30602
	-	-	St. Catherines Island Midway, GA 31320
Research: 1) Fishery conflicts 2) Lecture/workshops	-	-	David Harrington University of Georgia Marine Extension Service Bay Street Brunswick, GA 912/264-7268
South Carolina:			

TABLE 21. NATIONAL RESEARCH PROJECTS

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Laboratory 2) Rehabilitation Education 1) Classroom 2) Lecture/workshop 3) Audio/visual presentations	1973	-	Rhett Talbert, Researcher Belle Baruch Institute for Marine Biology & Coastal Research University of South Carolina Georgetown, S.C. 29440 803/546-3623
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection a) Nest relocation b) Predator control c) Hatchery	1969	-	George Cannie, Refuge Manager Cape Romain National Wildlife Refuge Rt. 1, Box 191 Awendaw, S.C. 29429 803/928-3368
Research: 1) Beach monitoring a) Nest/crawl surveys b) Strandings 2) Nest protection 3) Tracking 4) Fishery conflicts Education: 1) Lecture/workshops Regulations: 1) Problem identification 2) Rulemaking	1981	-	Bo Bricklemeyer, Director The Center for Lowcountry Environments P. O. Box 1081 Charleston, SC 29402 803/577-3696
Research: 1) Wildlife inventory 2) Habitat preservation	1979	-	La Bruce Alexander The Nature Conservancy South Carolina Field Office P.O. Box 5475 Columbia, S. C. 29250 803/254-9049

TABLE 21. NATIONAL RESEARCH PROJECTS
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PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Education: 1) lecture/workshops			David Dornmeyer, President MACCAMAW AUDUBON SOCIETY P.O. Box 263 Murrells Inlet, SC 29576 803/651-3532
NORTH CAROLINA:			
Research: 1) Beach Monitoring a) nest/crawl surveys b) strandings 2) nest Protection (relocation) Regulation: 1) enforcements 2) permits	1977		Clay Gifford, CAPE HATTERAS NATIONAL SEASHORE Route 1, Box 675 Manteo, NC 27954 919/473-2112
Research: 1) Beach Monitoring a) tagging b) nest/crawl surveys c) strandings 2) Nest Protection (relocation)	1978		Riley Haggard, Project Coordinator CAPE LOOKOUT NATIONAL SEASHORE P.O. Box 690 Beaufort, NC 28516 919/728-2121
Research: 1) Laboratory 2) Regional Coordination (strandings) Regulation: 1) Rulemaking (S/T Sanctuary)	1979	-	Frank Schwartz INSTITUTE OF MARINE SCIENCES University of North Carolina 3407 Arendell Street Morehead City, NC 28557 919/726-6841

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
*See NC Wildlife Resources Commission	-	-	Deborah Crouse, Endangered Species Biologist NORTH CAROLINA NATURAL HERITAGE PROGRAM P.O. Box 27687 Raleigh, NC 27611 919/733-7795
Education: 1) info. development 2) lecture/workshop	-	-	Lundie Hauldin, Marine Education Specialist NORTH CAROLINA SEA GRANT 105 1911 Building North Carolina State University Raleigh, NC 27650 919/737-2454
Research: 1) pelagic surveys Education: 1) museum activities 2) lecture/workshop	1978	-	Ray Ashton, Director of Education NORTH CAROLINA STATE MUSEUM OF NATURAL HISTORY 101 Halifax Street P.O. Box 27647 Raleigh, NC 27611 919/733-7450
Research: 1) Beach Monitoring a) aerial surveys b) nest/crawl surveys c) strandings 2) Regional Coordination 3) Nest Protection Education: 1) lecture/workshop	1980		Stuart Critchen, Habitat Conservation Coordinator NORTH CAROLINA WILDLIFE RESOURCES COMMISSION 512 N. Salisbury Raleigh, NC 27611 919/733-7638
Research: 1) Beach Monitoring a) nest/crawl surveys b) strandings Regulation: 1) Enforcement	-	-	Joe Newman, Enforcement Officer NORTH CAROLINA WILDLIFE RESOURCES COMMISSION Wildlife Enforcement Office P.O. Box 10695 Southport, NC 28461 919/278-5714

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Education: 1) Curriculum	-	-	Alice Linder, Environmental Education Consultant SOUTH CAROLINA DEPARTMENT OF EDUCATION Rutledge Building Columbia, SC 29201 803/758-2652
Research: 1) Fishery Conflicts Education 1) lecture/workshop 2) material development 3) Audio/visuals	-	-	C. A. Peter Granger, Program Leader SOUTH CAROLINA SEA GRANT CONSORTIUM 221 Fort Johnson Road Charleston, SC 29412 803/795-6350
	1977	-	Sally Hopkins, Tom Murphy SOUTH CAROLINA WILDLIFE AND MARINE RESOURCES DEPT. P.O. Box 12559 Charleston, SC 29412 803/795-6350

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: *	-	-	Dave Herrema APPLIED BIOLOGY INC. DeKalb Professional Building 2754 N. Decatur Road Suite 11, Lower Level Decatur, GA 30033
* see Florida Power & Light			
Research: 1) Beach Monitoring a) tagging b) nest/crawl survey c) strandings 2) Nest protection a) relocation b) hatchery 3) Fishery conflicts 4) Wildlife inventory 5) Habitat preservation Education: 1) Lectures/workshop 2) Audio/visual 3) Patrol assistance	1975	Cont	Verna McNamara, Vice President COASTAL GEORGIA AUDUBON SOCIETY P.O. Box 1603 Brunswick, GA 31521 912/635-2568
Research: 1) Regional coordination (state activities) Regulation: 1) Problem identification Education: 1) Lecture/workshop	1973	Cont	Hans Baumhauer, Coastal Director GEORGIA CONSERVANCY The Coastal Office 4405 Paulsen Street Savannah, GA 31405 912/355-4840
Research: 1) Regional Coordination (Georgia)	1976	-	Dr. Robert Reimold, Director GEORGIA DEPARTMENT OF NATURAL RESOURCES Coastal Resources Division 1200 Glynn Avenue Brunswick, GA 31523 912/588-2968
Research: 1) Data base quality control 2) Computer processing 3) Regional coordination 4) Tracking 5) Fishery conflicts	1978	-	Jim Richardson, Director GEORGE MARINE TURTLE RESEARCH PROGRAM Institute of Ecology University of Georgia Athens, GA 30602 404/542-2968

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NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: (con't) 6) Tagging technology 7) Tag reward network 8) Laboratory 9) Aerial Surveys 10) Population Ecology (modeling) Education: 1) Lecture/workshop 2) Research assistance 3) Audio/visual presentations Regulation: 1) Problem identification 2) Rulemaking			

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NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Sonic and Radio Tracking of Nesting Caretta caretta	1977 -	1979	Thomas M. Murphy,Jr. S. C. Wildlife & Marine Resources Dept. P. O. Box 12559 Charleston, SC 29412
Abiotic and Biotic Factors Affecting Nest Failure of Caretta caretta	1977 -	1979	Sally R. Hopkins (same address as above)
Feasibility of Raccoon Aversion Therapy on Caretta caretta	1977 -	1979	Sally R. Hopkins (same address as above)
Assess the effectiveness of various methods of raccoon removal	1980 -	1982	Sally R. Hopkins (same address as above)
Determine distribution of loggerhead turtle nesting & to standardize the methodology for aerial beach survey	1980 -	1982	Sally R. Hopkins (same address as above)

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Assess the feasibility of aerial pelagic survey for marine turtles	1980 -	1982	
Assess the extent of incidental catch mortality by radio telemetry of carcasses	1980 -	1982	Thomas M. Murphy, Jr. (Same address as above)
Document the number of loggerhead turtles which strand in S. C.	1980 -	1982	Sally R. Hopkins (Same address as above)

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) wildlife inventory 2) habitat preservation	1978	-	Frederick W. Annand, Assistant Director THE NORTH CAROLINA NATURE CONSERVANCY P.O. Box 805 Chapel Hill, NC 27514 919/967-7007
Regulation: 1) enforcement Education: 1) public display (state fair)	-	-	Danny Nicely, Division of Enforcement NORTH CAROLINA DIVISION OF MARINE FISHERIES Route 1, Box 564-A Newport, NC 28570 919/726-1505
Education: 1) public display 2) lecture/workshop 3) strandings	1977	-	Rod Smith, Director NORTH CAROLINA MARINE RESOURCES CENTER/BOGUE BANKS Atlantic Beach, NC 28512 919/726-0121
" "	" "	-	NORTH CAROLINA MARINE RESOURCES General Delivery Kure Beach, NC 28449
" "	" "	-	NORTH CAROLINA MARINE RESOURCES CENTER/ROANOKE ISLAND P.O. Box 967, Airport Road Manteo, NC 27954

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NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Research: 1) Beach Monitoring a) nest/crawl surveys b) strandings 2) Nest protection (hatchery)	1972	-	Ron Hight, Refuge Manager PEA ISLAND NATIONAL WILDLIFE REFUGE P.O. Box 150 Rodanthe, NC 27968 919/987-2394
VIRGINIA:			
Research: 1) Regional coordination a) sightings b) strandings 2) Fishery conflicts a) pound nets 3) Tracking	1979	-	Jack Musick, Rich Byles VIRGINIA INSTITUTE OF MARINE SCIENCE Gloucester Point, VA 23062 804/642-2111
CONNECTICUT:			

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

NATIONAL REPORT FOR THE UNITED STATES OF AMERICA

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Chondro-osseous morphology of Dermochelys coriacea	1979	-	Andara G.J. Rhodin, Yale Univ., New Haven, Ct. and Harvard Univ., Cambridge, Mass.
Satellite tracking of Dermochelys coriacea	1980	-	Chris Luginbuhl, Ellington, Ct.
Comparative marine turtle osteology and pathology	1980	-	Andara G. J. Rhodin, Yale Univ., New Haven, Ct. and Harvard Univ., Cambridge, Mass.

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

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RALPH BOULON, JR.

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

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24 NOV. 1982

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

U.S. Virgin Islands

NATIONAL REPORT PRESENTED BY

Ralf Boulon, Jr.
The National Representative

Address: Division of Fish and Wildlife
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St. Thomas, U.S. Virgin Islands 00802

NATIONAL REPORT PREPARED BY

Ralf Boulon, Jr., Division of Fish and Wildlife
with assistance from
Evonne Small, National Park Service

DATE SUBMITTED: November 15, 1982

1 Please submit this NATIONAL REPORT no later than 1 December 1982 to: IOC Assistant Secretary for IOCARIBE, % UNDP, Apartado 4540, San Jose, Costa Rica.

Country U.S. Virgin Islands (St. Thomas, St. Croix, St. John and Offshore Cays)

Length of Coastline* 277.9Km

Km² of Continental Shelf Area 1,972Km

Seaward Extent of Jurisdictions:

Territorial Sea 4.83Km

Extended Economic Zone . . . . . Less than 321.8Km

Fisheries Jurisdiction 321.8Km

Other (Describe) Customs Zone . . . 19.3Km

Endangered Species Importation 4.83 Km
Marine Mammals Jurisdiction 321.8 Km

TABLE 1. GEOGRAPHIC INVENTORY

* Coastline length is the measurement of the national seaward boundary of a country; i.e., the distance from border to border for a coastal country and the distance around an island country.

MARINE SHORELINE CHARACTERISTICS*	Km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)			80.0
A. High Energy (Seasonal: November to March)	11.50	1.75	
B. Low Energy	47.75	19.00	
2. Reef (exposed) (Not included in total shoreline)	23.75	-	23.75
3. Rocks — Combined	131.9	25.0	164.1
4. Cliffs			
5. Vegetation (Total)			
A. Vines†			
B. Grasses†			-
C. Mangroves	33.8	-	33.8
D. Coconut Trees†			
E. Other Trees or Shrubs†			
F. Marshes†			
6. Mouths of lagoons, rivers, canals (Not included in total shoreline)	6.55	-	6.55
7. Total Shoreline	232.15	45.75	277.9

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

HABITAT BOTTOM TYPES	Km² OF HABITAT	
	INSIDE 25m (SHOREWARD)	OUTSIDE 25m (SEAWARD)
1. Sand		
2. Mud		
3. Rocks		
4. Submerged Vegetation		
5. Reefs (Total)		
A. Fringing Reefs		
B. Patch Reefs		
6. Other		

TABLE 2A. MARINE HABITAT INVENTORY OF BOTTOM TYPES

This information is sketchy at present. An overall review of habitat bottom types on the insular shelves of the U.S. Virgin Islands is unobtainable at the present time.

St. Croix and Offshore Cays

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Buck Island	1.2	Cm, D, E	May to October
2. New Fort Beach	.2	D, Cm*	May to October
3. Shoy's Beach	2.1	D, E, Cm*	May to October
4. Green Cay Beach	.2	E, D	May to October
5. Prune Beach	.8	E, D	May to October
6. Coakley Bay	.6	E, D	May to October
7. Teague Bay	.7	E	May to October
8. Smuggler's Cove	.2	E, Cm*	May to October
9. Knight Bay	.4	Cm*	May to October
10. Boiler Bay	.3	E	May to October

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

*Report questionable. Species id on basis of crawl size.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11. Teytaud's Beach	.4	E	May to October
12. East End Bay	.3	E	May to October
13. Isaac Bay	.7	E, D	May to October
14. Jack Bay	.7	E, D	May to October
15. Grapetree Bay	.2	E, Cm*	May to October
16. Turner Hole	1.1	E, Cm*	May to October
17. Rod Bay	.8	E, Cm*	May to October
18. Robin Bay	1.7	E, Cm*	May to October
19. Halfpenny Bay	.8	E	May to October
20. Manchioneel Bay	2.1	E, D, Cm*	May to October

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
21. Canegarden Bay	1.7	E	May to October
22. Manning's Bay	.7	Cm*	May to October
23. Sandy Point	5.4	D, E, Cm*	May to October
24. La Grange	.7	E, Cm*	May to October
25. Sprat Hole	1.1	E	May to October
26. Butler Bay	.2	E	May to October
27. Ham's Bay	.3	E	May to October
28. Maroon Hole	.1	E, Cm*	May to October
29. Davis Bay	.3	E, D, Cm*	May to October
30. North Star	.3	E	May to October

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List beaches in geographic sequence.
Provide additional information on following page.

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Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
31. Cane Bay	.9	E	May to October
32. Rust Op Twist	.2	E	May to October
33. Salt River (West)	.2	E, Cm*	May to October
34.			
35.			
36.			
37.			
38.			
39.			
40.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

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Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Neltiebery Bay	1.2	E, D	June to November
2. Little Hans Lollik	.04	E, D	July to November
3. Coconut Bay, Hans Lollik	1.0	E	June to November
4. Dry Bay, Hans Lollik	.04	E	June to November
5. Little Bay, Hans Lollik	.04	E	October
6. Sandy Bay, Inner Brass	.08	E	June to November
7. Penn Bay	.07	E	June to November
8. Caret Bay	.08	E	July to November
9. Botany Bay	.06	E, D	July
10. Santa Maria Bay	.06		July to October

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List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

St. Thomas and Offshore Cays (Con't.)

	NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11.	Bordeaux Bay	.05	E	July to September
12.	West Cay Bay	.05	E	July
13.	Mandahl Bay	.07	E	July
14.	Hull Bay	.10	E	July
15.	Cluculua Bay	.04	E	August to September
16.	Dog Island	.03	E	August
17.	Great St. James Island	.04	E	November
18.				
19.				
20.				

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

St. John (Con't.)

	NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
11.	Eastern Reef Bay	.245	E	June to September
12.	Genti Bay	.558	E	July to December
13.	Western Reef Bay	.544	E	June to November
14.	Cocoloba Point	.130	E	June to November
15.				
16.				
17.				
18.				
19.				
20.				

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

St. John

	NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1.	Caneel Hawksnest	.208	E	August to October
2.	Jumbi Bay	.101	E	August to October
3.	Trunk Bay	.439	E	July to September
4.	Windswept	.176	E	June to August
5.	Maho Bay	.214	E	September
6.	Francis Bay	.499	E	July and August
7.	Salt Pond Bay	.208	E	June to December
8.	Greater Lameshure Bay	-	E	July and August
9.	Little Lameshure Bay	.184	E	May to August
10.	Europa Bay	-	E	September

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

All sand beaches in the Virgin Islands are white carbonate sands composed primarily of Halimeda plates, mollusc shell fragments, echinoderm test fragments and coral skeletal fragments. Terrigenous materials are insignificant. Particle sizes almost all fall within the range of 1 to 4 phi. Beach profiles are fairly consistent with some change on the north shore beaches during the winter (Nov. to Mar.) when storm in the North Atlantic produce sea swells of 1 to 3 meters. Beach profiles become steeper in this wave regime and many late nests can be subject to inundation.

Backbeach vegetation is also quite uniform throughout the Virgin Islands. The most common vegetation elements are listed below in order of descending commonality:

1. Coccoloba uvifera
2. Thespesia populnea
3. Conocarpus erectus
4. Portulaca oleraceae
5. Suriana maritima
6. Acacia macracantha
7. Elaeodendrum xylocarpum
8. Guilandia crista
9. Sporobolus virginicus

*As the number of beaches in the U.S. Virgin Islands is extremely high, this section will be discussed in terms of generalities rather than specifics.

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Artificial lighting and boating activities may be a problem on the following:

A. St. John:

1. Caneel Hawksnest - lights
2. Trunk Bay - boats
3. Maho Bay - boats and lights
4. Francis Bay - boats
5. Salt Pond Bay - boats
6. Chocolate Hole - boats and lights

B. St. Thomas:

1. Mandahl Bay - lights
2. Hull Bay - boats and lights
3. Great St. James Island - boats

C. St. Croix:

1. New Fort Beach - lights
2. Shoy Beach - lights
3. Teague Bay - lights and boats
4. Smugglers Cove - lights
5. Boiler Bay - lights
6. Grape Tree Bay - lights
7. Turner Hole - lights
8. Rod Bay - lights
9. Halfpenny Bay - lights
10. Mannings Bay - airport
11. La Grange - lights (Hess)
12. Sprat Hole - lights and boats
13. Butler Bay - lights
14. Hams Bay - lights
15. Cane Bay - lights
16. Rust-Op-Twist - lights
17. Turquoise Bay - lights
18. Judith's Fancy - lights

Table 4 (Con't.)

Beach	Dates of Data Collection	Dermochelys coriacea	Eretmochelys imbricata	Chelonia mydas*
St. Croix†				
1. Buck Island	1980 to 1982	1982-2	1980-45 1981-35 1982-40 to 45	
2. New Fort	1976 to 1978	2-3		3
3. Shoy Beach	1976 to 1978	1-2	2-3	
4. Green Cay	1976 to 1978	2	15	
5. Prune Bay	1976 to 1978	9	2-3	
6. Coakley Bay	1976 to 1978	15-20	5-10	
7. Teague Bay	1976 to 1978		2-3	
8. Smugglers Cove	1976 to 1978		2-3	2-3
9. Knight Bay	1976 to 1978			3-5
10. Boiler Bay	1976 to 1978		1-3	
11. Teytaud Beach	1976 to 1978		1-3	
12. East End Bay	1976 to 1978		3	
13. Isaac Bay	1976 to 1978	1-2	7-8	
14. Jacks Bay	1976 to 1978	1-2	25	
15. Graptree Bay	1976 to 1978		3-5	3-5
16. Turner Hole	1976 to 1978		1-2	1-2
17. Rod Bay	1976 to 1978		5	
18. Robin Bay	1976 to 1978		5	
19. Halfpenny Bay	1976 to 1978		5	
20. Manchioneel Bay	1976 to 1978	10	10	10
21. Cane Garden Bay	1976 to 1978		4-5	
22. Mannings Bay	1976 to 1978			1-2
23. Sandy Point#	1981 1982	26+ 19		
24. LaGrange	1976 to 1978			3-5

Table 4. Nesting census for each V.I. nesting beach.

Beach	Dates of Data Collection	Dermochelys coriacea	Eretmochelys imbricata	Chelonia mydas*
St. John:				
1. Caneel Hawksnest	1980 to 1982		1980-2 1981-1 1982-0	
2. Jumbi Bay	1980 to 1982		1980-5 1981-0 1982-4	
3. Trunk Bay	1980 to 1982		1980-0 1981-6 1982-0	
4. Windswept	1980 to 1982		1980-0 1981-7 1982-0	
5. Maho Bay	1980 to 1982		1980-0 1981-1 1982-0	
6. Francis Bay	1980 to 1982		1980-0 1981-3 1982-0	
7. Salt Pond Bay	1980 to 1982		1980-0 1981-11 1982-?	
8. Gt. Lameshure	1980 to 1982		1980-0 1981-0 1982-1	
9. Little Lameshure	1980 to 1982		1980-1 1981-0 1982-4	
10. Europa Bay	1980 to 1982		1980-0 1981-0 1982-1	
11. Eastern Reef Bay	1980 to 1982		1980-2 1981-1 1982-3	
12. Genti Bay	1980 to 1982		1980-0 1981-3 1982-0	
13. Western Reef	1980 to 1982		1980-0 1981-1 1982-10	
14. Coccoloba Pt.	1980 to 1982		1980-5	

Table 4 (Con't.)

Beach	Dates of Data Collection	Dermochelys coriacea	Eretmochelys imbricata	Chelonia mydas
St. Croix (con't.)				
25. Sprat Hole	1976 to 1978		1-2	
26. Butler Bay	1976 to 1978		1-2	
27. Hams Bay	1976 to 1978		1-2	
28. Maroon Hole	1976 to 1978		5	5
29. Davis Bay	1976 to 1978	3	3	4
30. North Star	1976 to 1978		5	
31. Cane Bay	1976 to 1978		3	
32. Rust-Op-Twist	1976 to 1978		3	
33. Salt River	1976 to 1978		3-5	
34. Turquoise Bay	1976 to 1978		5	
35. Judith's Fancy	1976 to 1978		5	
36. Little Bay	1976 to 1978		?	
St. Thomas:				
1. Weltjeberg Bay	1979 to 1981	1979-1	1979-4 1980-3 1981-1	
2. Little Hans Lollik	1979 to 1981	1980-1	1979-5 1980-13 1981-6	
3. Coconut Bay, Hans Lollik	1979 to 1981		1979-8 1980-10 1981-3	
4. Dry Bay, Hans Lollik	1979 to 1981		1979-15 1980-23 1981-12	
5. Little Bay, Hans Lollik	1979 to 1981		1979-2 1980-0 1981-0	

Table 4 (Con't.)

Beach	Dates of Data Collection	Dermochelys coriacea	Eretmochelys imbricata	Chelonia mydas
St. Thomas (con't.)				
6. Sandy Bay, Inner Brass	1979 to 1981		1979-8 1980-8 1981-6	
7. Penn Bay	1979 to 1981		1979-3 1980-3 1981-3	
8. Caret Bay	1979 to 1981		1979-8 1980-7 1981-6	
9. Botany Bay	1979 to 1981	1981-1	1979-6 1980-7 1981-2	
10. Santa Maria Bay	1979 to 1981		1979-3 1980-1 1981-0	1980-2
11. Bordeaux Bay	1979 to 1981		1979-1 1980-8 1981-5	
12. West Cay Bay	1979 to 1981		1979-0 1980-2 1981-2	
13. Mandahl Bay	1979 to 1981		1979-0 1980-4 1981-0	
14. Hull Bay	1979 to 1981		1979-0 1980-0 1981-1	
15. Cluculze Bay	1979 to 1981		1979-4 1980-0 1981-2	
16. Dog Island	1981		5	
17. Gt. St. James Island	1979		6	

* - All C. mydas identifications are based on crawl width.

† - Figures for St. Croix may indicate total number of nests due to observers not able to determine number of renestings.

‡ - Sandy Point figures for Leatherbacks are the result of intensive DFW studies.

TABLE 5. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

See enclosed copy of

Boulon, Jr., R.H. and D.A. Olsen. 1981. Virgin Islands Turtle Resources: Aerial Census Results 1979-1981. Final Report for NMFS Grants NA-79-GA-A-00133 and NA-80-GA-A-00055, 23 pp.

SPECIES \ YEAR	1982	1981	1980	1979	1978	1977
Caretta caretta						
Chelonia mydas						
Dermochelys coriacea	19 (Sandy Pt.)	26 (Sandy Pt.)				
Eretmochelys imbricata	10 (St. J) 15 (Buck I)	14 (St. J) 10 (Buck I)	7 (St. J) 14 (Buck I)			
Lepidochelys kempi						
Lepidochelys olivacea						

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
Summarize the estimated number of nesting females for the years indicated and describe methods of estimation on the next page.

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

Records were kept for all crawls on beaches on St. John and Buck Island, St. Croix, showing the number of nests and the time intervals between crawls. Beaches on St. John are short, ranging from 101 m to 558 m, and nesting was sparce enough that by tabulating the number of days between nestings (i.e. two versus 16) one could reasonably estimate the number of nesting females per individual beach. Figures in the table represent totals for each year.

On Sandy Point, nearly total number of Leatherbacks were actually observed nesting and tag monitoring gave almost precise number of nesting females.

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
Francis Bay, St. John 1.	1.5	C.m. - 6-7 E - 4-5	Direct weekly observation from a boat and beach.
Maho Bay, St. John 2.	1	C.m. - 3-4 E - 3-4	Direct weekly observation from a boat and beach.
Cwheel Bay, St. John 3.	2	C.m. - 1-2 E - 4-5	Direct weekly observation from a boat and beach.
Cruz Bay, St. John 4.	1	E - 4-5	Direct weekly observation from a boat and beach.
Brown Bay, St. John 5.	1	E - 2-3	Direct weekly observation from a boat and beach.
Hawksnest Bay, St. John 6.	1	C.m. - ? E - 4-5	Direct weekly observation from a boat and beach.

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

NAME OF AREA (or give coordinates)	APPROX. AREA (Km^2)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
Salt Pond Bay, St. John 7.	.75	E - 3-4	Direct weekly observation from a boat and beach.
Magens Bay, St. Thomas 8.	4	C.m. - 107 E - 57	Mark and recapture estimates using Schnabel Population Estimator formula.
Red Hook, St. Thomas 9.	1.5	C.m. - 47	Mark and recapture estimates using Schnabel Population Estimator formula.
Thatch Cay, St. Thomas 10.	1	C.m. - 33	Mark and recapture estimates using Schnabel Population Estimator formula.
Little St. James Island 11.	1	C.m. - 59	Mark and recapture estimates using Schnabel Population Estimator formula.
Smith Bay, St. Thomas 12.	.5	C.m. - 18	Mark and recapture estimates using Schnabel Population Estimator formula.

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													Approximately equally distributed.
Chelonia mydas													
Dermochelys coriacea													Approximately equally distributed.
Eretmochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

7-1 to 12

TABLE 8 - TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

Based on a combination of periodic observations and sporadic sampling, the overall numbers of turtles present on each foraging area at any one time are approximately the same. No clear peaks in activity are apparent.

LOCATION (Give Lat. & Long. coordinates)	DATE	SPECIES AND EST. NOS. (Abbreviations)	COMMENTS
64° 54' W, 18° 26' N	5/8/79	D - 2	Seen swimming on surface.

TABLE 9. NON-FORAGING TURTLES AT SEA.
Please provide any information available on the incidence of turtles in offshore areas.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	E	Buck Island, St. Croix (1980-81): mongoose predation.	50-60% of nests
	E	St. John (1980-81): mongoose, wild dog and beach erosion	23% of total eggs
	E	St. John (1981): beach erosion during emergence.	2.2%
Hatchlings	E	St. John (1981): Ocypode quachatus predation on one hatchling.	---
Juveniles	E	Found dead on St. Thomas beach (1974). Cause of death unknown.	
Adults (in water)	E	Scutes from an approximately 28 kg. Hawksbill turtle were found in the stomach of a 4 meter tiger shark (1982).	
Nesting females		None.	

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

LIFE STAGE UNIT	SPECIES (abbrev.)	CAUSES*	EXTENT OF MORTALITY (% of unit)
Nests/eggs	D	Sandy Point, St. Croix (1981-82). Beach erosion: 1981-	34% of nests
		1982-	23% of nests
Hatchlings	D	Sandy Point, St. Croix (1982). Crabs, night herons, mongoose -	6%
		Vehicular compaction	2%
Juveniles			
Adults (in water)			
Nesting females			

TABLE 10. NATURAL MORTALITY

* Natural mortality causes may include: Beach erosion of nests; egg and/or nestling predation by crabs, wild animals, sea birds, etc.; disease; sharks and other predators at sea; etc.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

St. John Hawksbill Nests:

Numbers of undeveloped or sterile eggs ranged from 0-37 and represented 5.9 percent of the eggs in the nests. No distorted, undersized yolkless eggs were found in any of the nests; shells of yolkless eggs were the same size as shells of fully developed eggs.

Mongoose Predation:

A total of 15 nests were raided by the exotic mongoose Herpestes auropunctatus during the 1980 and 1981 season. Upon physical inspection of the nest area, an estimate was made of the total number of eggs or hatchlings that had been taken by mongooses in 10 of the 15 predations. The total from those 10 nests was at least 663. Contents of the other five nests were completely destroyed by the mongoose, making two counts impossible. If clutch size in the five nests was typical of all nests, mongooses took an additional 710 eggs (average clutch size of 142 x 5 nests). The best estimate of total eggs laid in 1980 and 1981 was 8,789. Mongooses, therefore, took 23 percent of the total egg production.

Mongooses dug into nests at three different phases of the nesting cycle: within two to three dyas of egg deposition, at the time of hatching in the nest cavity, and during the emergence of hatchlings from the sand's surface. Mongoose in the Virgin Islands are predominately diurnal feeders; the majority of the predation occurred the morning after the nocturnal primary emergence of the hatchlings. The late emergent or straggler hatchlings still in the nest cavity are probably the usual prey of the mongoose. If a mass emergence were to occur after dawn, mongooses could consume most, if not all, of the hatchlings from that nest.

Dog Predation:

In 1980 protective six-inch-square wire mesh was placed over eight nests on beaches where three nests had been previously totally destroyed by feral and/or domestic dogs. One of the three nests was destroyed 29 days after the eggs were laid indicating that dogs are quite perceptive of turtle scent. Therefore, the enclosures were left in place until after hatchling emergence was noted. The wire did not inhibit the emergence of hatchlings.

(Con't.)

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

Meteorological Sources of Mortality:

Turtle nest habitats on St. John are narrow strips of sandy land nearly at sea level. These habitats are thus particularly vulnerable to strong sea swells associated with tropical storms during August to November and northern winter storms from November to April. Four nests were inundated and lost in 1980 and one in 1981.

See also report by E. Small on St. John Hawksbill turtle nesting.

For Leatherback turtle information, see enclosed report on Leatherback Sea Turtle Research in the Virgin Islands.

The remains of a Hawksbill turtle were recovered from the stomach of a 12-foot tiger shark caught in 300 fathoms of water off the south coast of St. Thomas. The post vertebral scute measured 15.88 cm.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta						1		
Chelonia mydas						20		
Dermochelys coriacea								
Eretmochelys imbricata						7		
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1981

TABLE 17 - TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta						1		
Chelonia mydas						26		
Dermochelys coriacea								
Eretmochelys imbricata						7		
Lepidochelys kempi								
Lepidochelys olivacea								

US VIRGIN IDS

YEAR 1982

TABLE 17 - TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
Division of Fish and Wildlife 101 Estate Nazareth St. Thomas, U.S. Virgin Islands 00802	Six	1. Leatherback nesting biology, Sandy Point, St. Croix. 2. In-water Hawksbill and Green mark and recapture population study.
Virgin Islands National Park P.O. Box 7789 St. Thomas, U.S. Virgin Islands 00801	Two	1. Hawksbill nesting biology, St. Croix. 2. Hawksbill nesting biology, Buck Island.

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NOMBRE Y LUGAR	AREA Km^2	RAZONES PARA SU PROTECCION	TIPO Y EFECTIVIDAD DE LA VIGILANCIA Y CUMPLIMIENTO DE LA LEY
Virgin Islands National Park St. John, U.S. Virgin Islands (Includes beaches and adjacent waters)		U.S. National Park Service	Routine patrols. British V.I. fishermen still occasionally take turtles near St. John
Buck Island Reef National Monument St. Croix, U.S. Virgin Islands (Includes beach and adjacent waters)		U.S. National Park Service	Routine patrols. Poaching of nests is still a problem.
Proposed St. Thomas Marine Sanctuary (Includes waters and coastlines)		To preserve an area of diverse marine communities.	To be patrolled by Department of Conservation and Cultural Affairs enforcement personnel.

TABLA 19. SANTUARIOS Y REFUGIOS

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
National Marine Fisheries Service U.S.V.I. Law Enforcement Division Room 140-A, Federal Building St. Thomas, U.S. Virgin Islands 00801	None specifically identified.	One	Highest level in the U.S. Virgin Islands
Virgin Islands National Park Box 7789, Charlotte Amalie St. Thomas, U.S. Virgin Islands 00801	$14,000	One	
Department of Conservation and Cultural Affairs Bureau of Environmental Enforcement No. 86 Estate Frydenhoj St. Thomas, U.S. Virgin Islands 00802	None specifically	None specifically	
Buck Island Reef National Monument P.O. Box 160, Christiansted St. Croix, U.S. Virgin Islands 00820	$4,000	0.3	

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list National, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

1. U.S. Endangered Species Act of 1973. To conserve species of fish, wildlife and plants that are in danger of extinction.

2. Virgin Islands Code, Chapter 9A, Title 12, Section 318. To contribute to the preservation of marine turtles in the Caribbean Area.

3-498

to the Commissioner. Such report shall contain the number of pounds and the value of each kind of edible seafood caught by him with such boat or devices for the twelve (12) months ending on the preceding June 30, and the number and value of the devices, if any, used in such catching or taking, and the number of persons employed therein. The Commissioner shall annually, on or before August 15, provide such owner or licensee, upon his application, with suitable blank forms for such reports, so arranged that each month's catch may be separately recorded thereon; and in filling out such reports, such owner or licensee shall give, so far as practicable, the above required results of each month's fishing.

(b) In lieu of said annual report, the Commissioner may require an owner or licensee to submit a monthly report of such facts listed herein as the Commissioner may deem advisable.

(c) The license and/or vessel registration of any person who willfully fails to make a report or willfully makes a false report shall be suspended and a new license or registration shall not be issued until such report is made.

(d) Any person who willfully violates any provision of this section shall be punished by a fine of not less than ten ($10) dollars nor more than one hundred ($100) dollars.—Added Nov. 21, 1972, No. 3330, § 2, Sess. L. 1972, p. 496.

§ 316. Closed seasons

(a) The Commissioner shall announce, at least forty-five (45) days in advance, the beginning of each of the closed seasons prescribed in the regulations issued pursuant to this chapter for the protection of one or more species of fish as herein defined.

(b) The transportation and sale of a species of fish which is the subject of a closed season shall be allowed up to the seventh day after the commencement of the closed season in order to permit the liquidation of stock caught before the beginning of such closed season.

(c) The fishing, sale, transportation and utilization of all species not expressly included in the closed seasons established by rules and regulations hereunder shall be permitted at any time throughout the year. The sale and transportation of canned or otherwise preserved species which have been caught before the beginning of the respective closed seasons is also permitted.—Added Nov. 21, 1972, No. 3330, § 2, Sess. L. 1972, p. 497.

§ 317. Fish for scientific, educational and breeding purposes

The Department and any other person or organization with the written permission of the Commissioner, may catch or cause to be caught, for scientific or educational purposes or for fish culture, any fish or marine organism at any time, from the jurisdictional waters of the Territory, and may sell or cause to be sold what not otherwise prohibited by law, all or such part of the catch that has been taken and as may not be necessary for scientific or educational purposes or for fish culture. The proceeds, if any, from these sales shall be deposited in the Fisheries and Wildlife Fund.—Added Nov. 21, 1972, No. 3330, § 2, Sess. L. 1972, p. 497.

§ 318. Protection of marine turtles, nests and eggs; penalties

(a) It is the intent of the Legislature of the Virgin Islands to contribute to the preservation of marine turtles in the Caribbean area, said turtles now being close to extinction.

(b) It shall be unlawful for any person to take, kill, possess, mutilate or in any way destroy any loggerhead, leatherback, hawksbill, ridley or green turtle or other sea turtle, or take or possess any part thereof while such turtle is on the beaches of the Territory at any time, or to take or possess any such turtle in the Territorial waters during the months of May through September, inclusive, of each year and at such other times as the Commissioner may by rule and regulation prescribe. It shall be unlawful to import, trade, sell or in any way deal in young sea turtles of any kind; Provided, however, That the Commissioner may issue written permission to any licensed or publicly owned zoo or exhibitor of marine life to capture such young turtles for purposes of live exhibition.

(c) No person may take, possess, disturb, mutilate, destroy, cause to be destroyed, sell, offer for sale, transfer, molest or harass any sea turtle nest or eggs at any time.

(d) Any person violating any provision of this section is guilty of a misdemeanor and shall, upon conviction thereof, be punished by a fine not less than one hundred ($100) dollars nor more than six hundred ($600) dollars, or by imprisonment for a period not to exceed one (1) year, or by both such fine and imprisonment.—Added Nov. 21, 1972, No. 3330, § 2, Sess. L. 1972, p. 498.

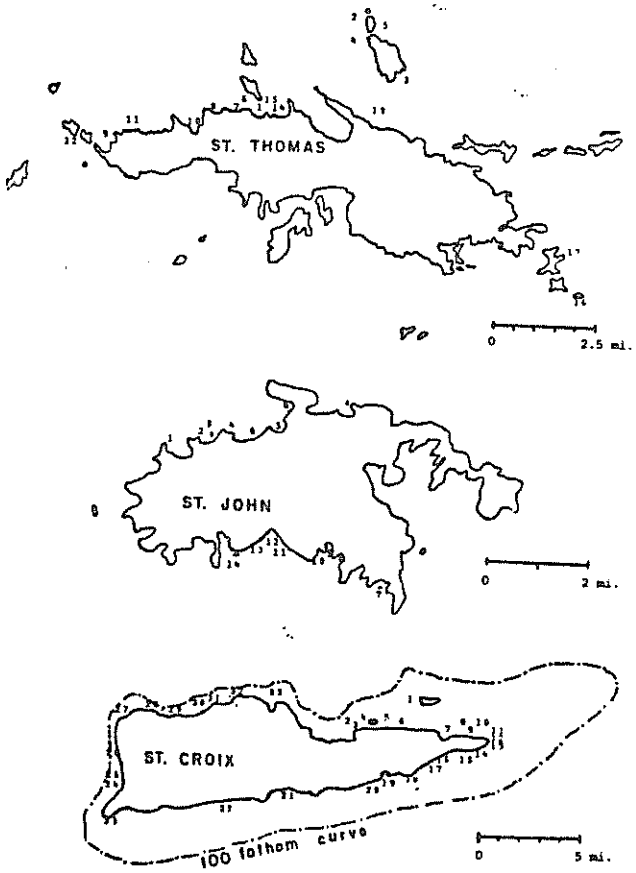
§ 319. Lobsters; regulations; penalties

(a) It is intent of the Legislature of the Virgin Islands to place

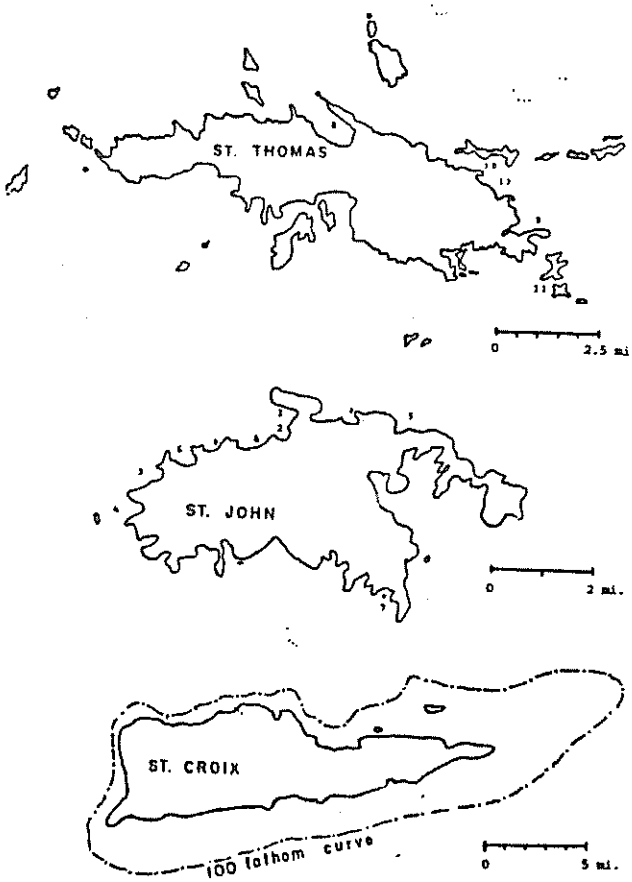
PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
Leatherback Turtle Nesting Biology, Sandy Point, St. Croix	1981	Ongoing	Division of Fish and Wildlife 101 Estate Nazareth St. Thomas, U.S. Virgin Islands 00802 Ralf Boulon, Jr.
In-water Hawksbill and Green Turtle Population Dynamics Study	1981	Ongoing	Division of Fish and Wildlife 101 Estate Nazareth St. Thomas, U.S. Virgin Islands 00802 Ralf Boulon, Jr.
Sea Turtle Nesting at the V.I. National Park and Buck Island Reef National Monument	1980	Ongoing	Virgin Islands National Park Box 110, Cruz Bay St. John, U.S. Virgin Islands 00830 Evonne Small

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

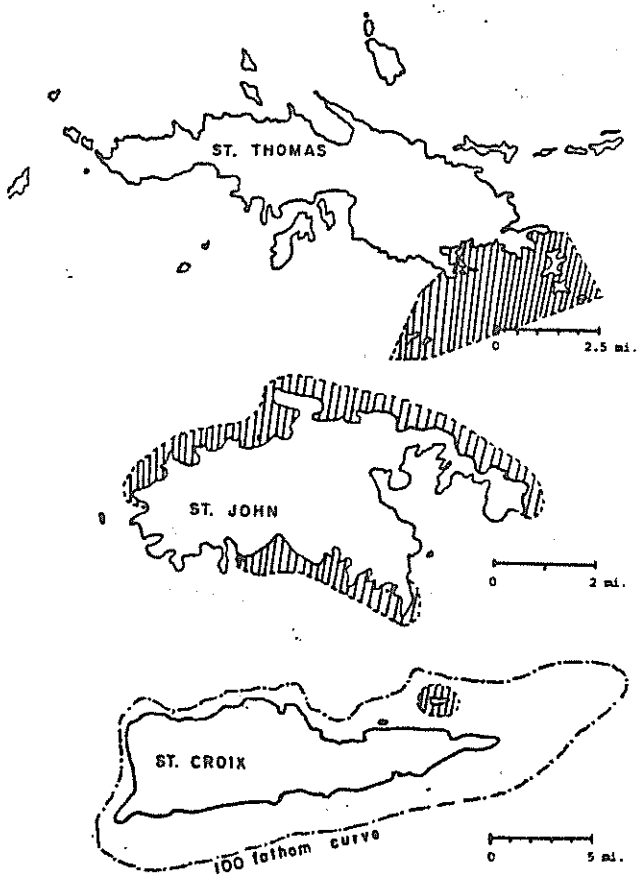
Map A: Country map showing nesting sites described in Table 3.



Map B: Country map showing foraging areas described in Table 7.



Map D: Country map showing sanctuaries and refuges described inTable 19.



REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. Carr, D. and P.H. Carr. Undated. Survey and reconnaissance of nesting shores and coastal habitats of marine turtles in Florida, Puerto Rico and the U.S. Virgin Islands. Report to National Marine Fisheries Service.

2. Boulon, R.H., Jr. and D.A. Olsen. 1982. Virgin Islands Turtle Resources: Aerial census results 1979-1980. Report to National Marine Fisheries Service. 23 pp.

3. Boulon, R.H., Jr., H.O. Hillestad, K. Eckert. 1982. Leatherback sea turtle research in the Virgin Islands: A preliminary analysis of data. Report to U.S. Fish and Wildlife Service. 7 pp.

4. Boulon, R.H., Jr. and D.A. Olsen. In Prep. Population Biology of Green and Hawksbill turtles in the U.S.V.I. based on an in-water tagging study. Report to USFWS - Endangered Species Program.

5. Small, Evonne. 1982. Sea turtle nesting at Virgin Islands National Park and Buck Island Reef National Monument. 1980 and 1981. U.S. Department of the Interior, National Park Service, NPS-SER Research/Resource Management Report No. _____. 54 pp.

6. Baker, G.S. 1981. Recovery Plan for St. Croix population of the Leatherback turtle (Dermochelys coriacea). U.S. Fish and Wildlife Service, 20 pp.

7. Philibosian, R. 1975. Disorientation of Hawksbill turtle hatchlings, Eretmochelys imbricata, by stadium lights. Copeia No. 4:824.

8. Ogden, J.C., et al. In Press. Diel foraging patterns in juvenile Green turtles (Chelonia mydas) in St. Croix. J. Exp. Mar. Biol. Ecol.

9. Towle, E.L. 1978. Report on sea turtle nesting, sighting, eggs and hatchlings for 1978 in the U.S. Virgin Islands and a recommended research methodology for dealing with hatchling disorientation on the beach (with specific reference to Leatherback nests at Sandy Point, St. Croix). Report to National Marine Fisheries Service, 29 pp.

THE NATIONAL REPORT
EL REPORTE NACIONAL

FOR THE COUNTRY OF
POR EL PAIS DE

VENEZUELA

NATIONAL REPRESENTATIVE/REPRESENTANTE NACIONAL

HARRY ORTEGA

W. A. T. S.
S. T. A. O.

Western Atlantic Turtle Symposium
Simposio de Tortugas del Atlantico Occidental

17-22 July/Julio 1983
San Jose, Costa Rica

W. A. T. S.
S. T. A. O.

WESTERN ATLANTIC TURTLE SYMPOSIUM

San Jose, Costa Rica

July 1983

NATIONAL REPORT FOR THE COUNTRY OF

VENEZUELA

NATIONAL REPORT PRESENTED BY
Peter C. H. Pritchard for
Harry Ortega
The National Representative

Address: Director
Direccion General Sectorial
de Administracion del Ambiente
Ministerio del Ambiente y de los Recursos
Naturales
Torre Sur - Piso 28, Centro Simon Bolivar
Caracas, Venezuela

NATIONAL REPORT PREPARED BY

Peter C. H. Pritchard
Maitland, Florida

DATE SUBMITTED: July 17, 1983

MARINE SHORELINE CHARACTERISTICS*	km OF SHORELINE		
	UNDEVELOPED	DEVELOPED**	TOTAL
1. Sand Beach (Total)			
A. High Energy			
B. Low Energy			
2. Reef (exposed)			
3. Rocks			
4. Cliffs			
5. Vegetation (Total)			
A. Vines			
B. Grasses			
C. Mangroves			
D. Coconut Trees			
E. Other Trees or Shrubs			
F. Marshes			
6. Mouths of lagoons, rivers, canals			
7. Total Shoreline			

PLEASE SEE DESCRIPTION OF ENTIRE SHORELINE AS GIVEN IN "TURTLES OF THE SPANISH MAIN" (REPORT TO NMFS, 1981).

TABLE 2. COASTAL HABITAT INVENTORY OF MARINE SHORELINE

* Refer to SEA TURTLE MANUAL (Aerial Survey)
** Human development or use (See MANUAL)

NAME OF BEACH	LENGTH IN KM	SPECIES NESTING (Use abbreviations)*	MONTHS OF RECORDED NESTING
1. Isla de Aves.	Ca. 1.3 km.	Cm	MAY-AUGUST (mainly AUGUST).
2. Archipelago Los Roques	many small beaches. Total length unknown	Cm E Cc	MAY-DECEMBER (mainly JULY-OCT.)
3. Edo. SUCRE	Many small Coral beaches, total length unknown	Cm E D	JUNE (at least).
4.			
5.			
6.			
7.			
8.			
9.			
10.			

TABLE 3. NESTING BEACH INVENTORY
List beaches in geographic sequence.
Provide additional information on following page.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 3. NESTING BEACH INVENTORY
(Supplementary page)

Please give additional information about each nesting beach identified in Table 3. Include information on color of sand, particle size, beach profile, backbeach vegetation, artificial lighting, etc.

Almost the entire western part of the coast of Venezuela is sand beach. This vast shoreline, which starts with the desert coast at the Colombian border and extends to densely forested areas in and east of the Golfo Triste area, extends for many hundreds of kilometers but has very few nesting turtles. A detailed description of the shoreline of Venezuela, as seen from a survey aircraft, is given in the addendum "Turtles of the Spanish Main." Mainland turtle nesting in Venezuela is concentrated on small, cove beaches between rocky headlands in Edo. SUCRE, and on offshore islands including Los Roques, Isla de Aves, and Isla La Tortuga. The long mainland beaches are hardly used at all.

SPECIES	NUMBER OF NESTS		DATES OF DATA COLLECTION
	Nests/Night (Average)	Nests/Season (Estimated)	
Caretta caretta			
Chelonia mydas	16 in 3 nights, i.e. 5.33.	174 pits prior to JUNE 24.	JUNE 24 - 27.
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - [1?] NESTING CENSUS FOR BEACH Isla de AVES
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	670 [illegible], 70% [illegible] to have nests, in 60 days, i.e. about 8 per night	500-1000 ~750	July, August 62 days
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1979 NESTING CENSUS FOR BEACH Isla de AVES
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta			
Chelonia mydas	Extremely variable, e.g. 21 nesting turtles on July 27; none [illegible] June 30-July 4	76 turtles tagged + 9 amigrants in 137 days.	
Dermochelys coriacea			
Eretmochelys imbricata			
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1980 NESTING CENSUS FOR BEACH Isla de AVES
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

SPECIES	NUMBER OF NESTS: Nests/Night (Average)	NUMBER OF NESTS: Nests/Season (Estimated)	DATES OF DATA COLLECTION
Caretta caretta		7	APRIL-JUNE 1979 60 days
Chelonia mydas		2-3	
Dermochelys coriacea			
Eretmochelys imbricata	<1	APRIL: 1 MAY: 1 JUNE: 4 JULY: 10 AUGUST: 12 SEPT: 17 OCT: 10	APRIL-DEC 1979 225 days
Lepidochelys kempi			
Lepidochelys olivacea			

TABLE 4 - 1979 NESTING CENSUS FOR BEACH Islas Los ROQUES 8002
(name)

Please complete one of these tables to summarize census data for each beach listed in Table 3. Number tables sequentially (4-1, 4-2, 4-3, etc.) as enumerated in Table 3.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS: Cc	Cm	D	E	Lk	Lo	NO T. D.
JUNE 8 '83	COAST OF VENEZUELAN PART OF GUAJIRA PENINSULA	–	–	–	–	–	–	–
JUNE 10 '83	COAST OF EDO. FALCÓN, STARTING IN MARACAIBO FLEW TO LA TORTUGA ISLAND.	–	4	1	1	–	–	–
JUNE 11 '83	Isla la TORTUGA	–	–	–	?	–	–	–
JUNE 12 '83	Isla la TORTUGA to Isla MARGARITA	–	1	–	–	–	–	–
JUNE 13 '83	Isla MARGARITA to Isla BLANQUILLA; via Edo. SUCRE to TRINIDAD	–	6	3	1	–	–	–

TABLE 5. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

TABLE 6. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Leatherback (D) nests seen at: 20 km. E. SAN JUAN DE LOS CAYOS (FALCÓN)
NEAR PUY PUY (SUCRE)
3 km. W. MORRO DE PUERTO SANTO (SUCRE)
LAGUNA TOTUMO (SUCRE)

Green Turtle (Cm) nests seen at: NEAR AGUIDE, FALCÓN
15 km. W. SAN JUAN DE LOS CAYOS, FALCÓN
NEAR SABANAS ALTAS, FALCÓN
NEAR CHUSPA (MIRANDA)
NEAR MACURUCUTO (MIRANDA).
PLAYA DE ZALAYA
PUY PUY
LAGUNA TOTUMO
PUNTA CABELLO NEGRO
PUNTA EL FRAILE
MORRO DE LABRANCHE
} SUCRE

Hawksbill (E.i.) nests seen at: 10 km. W. SAN JUAN DE LOS CAYOS, FALCÓN
CANOA, SUCRE.

DATE	BEACHES SURVEYED	NUMBERS OF NESTING TRACKS						
		Cc	Cm	D	E	Lk	Lo	NO I. D.
July 18 1981	CARACAS coast to PARAGUANÁ PENINSULA	—	—	—	—	—	—	—
July 24 1981	CARACAS east to GUARIA, thence Isla MARGARITA	—	4?	—	—	—	-	-

TABLE 6. AERIAL BEACH SURVEY SUMMARY
Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

Species Abbreviations:
Caretta caretta Cc
Chelonia mydas Cm
Dermochelys coriacea D
Eretmochelys imbricata E

TABLE 6. AERIAL BEACH SURVEY SUMMARY
(Supplementary page)

Give any additional information available from aerial surveys. Information should include ground truth observation if conducted.

1981

TURTLE NESTS (PROBABLY C.m.) WERE SEEN AT 30 km. SE of HIGUEROTE (Edo. MIRANDA). (ONE)
N. coast of EDO. SUCRE, AS SHOWN ON MAP IN "TURTLES OF THE SPANISH MAIN" (SIT).

TABLE 6. ESTIMATED POPULATIONS OF NESTING FEMALES.
(Supplementary page)

Please give brief details on methods of estimation for Table 6.

These cannot yet be given, even in preliminary form, as actual numbers. However, only E.i. and C.m. have significant breeding populations in Venezuela. C.c. and D.c. nest so rarely that only a handful (<10) of confirmed nesting records for either in available for Venezuela, and L.o., although not rare on feeding grounds, has never been reported nesting in Venezuela.

The only large nesting "colony" in Venezuela is that of C.m. at Isla de Aves. Numbers fluctuate greatly both from season to season, and from night to night within a season. However, typically 200-300 individuals probably nest in a season, with less than 800 adult females in the whole population. However, this is very preliminary.

The Hawksbill nests on La Roque could be made by less than 20 mature females. Numbers nesting on La Tortuga and La Blanquilla are not yet known.

NAME OF AREA (or give coordinates)	APPROX. AREA (km²)	SPECIES FORAGING (Use abbreviations & approx. numbers)	NATURE OF EVIDENCE (Observation, fishery, incidental catch)
1. GULF OF VENEZUELA	INDETERMINATE BECAUSE LIMITS UNCERTAIN	C.m. (numbers unknown).	Return of tags by fishermen. Turtles were tagged in Costa Rica
2. ISLA MARGARITA to TRINIDAD	" "	L.o. (numbers unknown).	Return of tags by fishermen. Turtles were tagged in SURINAM
3.			
4.			
5.			
6.			

TABLE 7. FORAGING AREAS INVENTORY

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	D
Eretmochelys imbricata	E
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ MONTH	J	F	M	A	M	J	J	A	S	O	N	D	MONTHS OF GREATEST ACTIVITY
Caretta caretta													
Chelonia mydas	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	PROBABLY YEAR ROUND.
Dermochelys coriacea													
Eretmochelys imbricata													
Lepidochelys kempi													
Lepidochelys olivacea													

TABLE 8 - 1 TURTLE SPECIES PRESENT ON FORAGING AREAS.
Please complete one of these tables for each of the areas identified in Table 7. Number each table as enumerated in Table 7 (7-1, 7-2, etc.).

8-2: L. olivacea present in MARGARITA / TRINIDAD area in all months except JUNE and DECEMBER, so presumably year-round

TABLE 10. NATURAL MORTALITY
(Supplementary page for additional biological data)

Please report below, and on additional pages if necessary, additional data obtained or available such as measurements (length, width, weight) of adult females, adult males, hatchlings, numbers of eggs per nest, hours of nesting, hours and conditions of hatchling, etc.

DIMENSION OF ADULT FEMALES ON ISLA AVES ARE IN GOMÉZ, J.L., 1980: INFORME FINAL del PROYECTO No 43 (FUDENA, CARACAS; 92pp.). MEAN LENGTH OF NESTING ♀'s is 107.7 cm; mean weight 173 kg.

NESTING ON ALL KNOWN VENEZUELAN BEACHESIS PURELY NOCTURNAL.

DATA ON NATURAL MORTALITY ARE NOT AVAILABLE, APART FROM DOCUMENTATION OF LOSS OF ALL EGGS IN BEACHES AT ISLA AVES BY HURRICANE DAVID, AUG. 29 1979. (LOSS OF ESTIMATED 55,280 EGGS).

NAME OF PORT OR SITE	SPECIES LANDED (Use abbrev)	FISHING GEAR USED	MONTHS OF LANDINGS	NUMBERS & WEIGHTS (Estimate)
1. PENINSULA de PARAGUANA (EASTERN SIDE)	C.m.	UNKNOWN IMMATURE and MATURE TURTLES LAUGHT, SOLD LOCALLY AND AVAILABLE IN RESTAURANTS, E.C. IN	—	—
2. Isla LA TORTUGA	C.m. E.C. C.c.	NETS, PROB. NESTING FEMALES CORD. TAKEN ALSO, E.C. TAKEN FOR SHELLS - SOLD ON ISLA MARGARITA AND ELSEWHERE. C.m. TAKEN FOR FOOD. C.c. RARE - ONLY ONE OLD SKULL SEEN.	—	—
3.				
4.				
5.				
6.				
7.				
8.				

TABLE 11. LANDING SITES FOR TURTLES & TURTLE PRODUCTS

Species Abbreviations:

Caretta caretta	Cc
Chelonia mydas	Cm
Dermochelys coriacea	Dc
Eretmochelys imbricata	Ei
Lepidochelys kempi	Lk
Lepidochelys olivacea	Lo

SPECIES \ YEAR	1982	1981	1980	METHOD OF DETERMINATION
Caretta caretta				DATA NOT AVAILABLE (TRADE IS ILLEGAL)
Chelonia mydas				
Dermochelys coriacea				
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 18. TOTAL ANNUAL TURTLE LANDINGS IN NUMBERS AND WEIGHTS (B/Wt)
Do not include turtles caught incidental to other fishing operations (e.g., shrimp trawling).

SPECIES \ YEAR	1982	1981	1980	TYPE OF FISHING ACTIVITY & METHOD OF ESTIMATION
Caretta caretta				OVERALL ESTIMATES IMPOSSIBLE,
Chelonia mydas				BUT SIGNIFICANT NUMBERS OF L.O. CAUGHT BY TRAWLERS IN EASTERN
Dermochelys coriacea				VENEZUELA.
Eretmochelys imbricata				
Lepidochelys kempi				
Lepidochelys olivacea				

TABLE 19. ESTIMATED INCIDENTAL TURTLE CATCH
Give estimated numbers and/or weights.

TABLE 19. ESTIMATED TURTLE CATCH BY FOREIGN FISHERMEN
(Supplementary page)

Please describe the type of foreign fishing in your waters and provide estimates for:

1. Number of foreign vessels catching turtles.
2. Number of foreign fishermen catching turtles.
3. Year of estimate.

TAKE OF NESTING C.M. BY BOATS FROM St. LUCIA, MARTINIQUE) ETC. WAS SIGNIFICANT AT ISLA DE AVES UNTIL PERMANENT MILITARY BASE PLACED THERE IN 1979. IT HAS NOW STOPPED COMPLETELY.

TABLE 20. OFFICIAL STATISTICS OF TURTLE CATCH AND PRODUCTION
(Supplementary page)

Please provide any additional data on turtle products produced in your country. Include manufactured products such as tortoise shell novelties, etc., if such data are available.

CAPTURE OF SEA TURTLES IS ILLEGAL IN VENEZUELA HOWEVER, PRODUCTS OF LOCALLY-CAUGHT C.m. and E.i ARE STILL SOLD, AND SOME EXPORT PROBABLY OCCURS.

SPECIES	HATCHERY OPERATIONS					HOLDING LIVE TURTLES		
	EGGS COLLECT.	EGGS HATCHED	NO. RELEASED	AGE AT RELEASE	NO. RETAINED	NO. OF JUVS.	ADULT FEMALES	ADULT MALES
Caretta caretta								
Chelonia mydas	4 NESTS	3 NESTS NOT AVAILABLE (ONLY DUG PREVIOUS YEAR)	NOT AVAILABLE					
Dermochelys coriacea								
Eretmochelys imbricata		Ca. 5600	Ca. 4800	11-17 MONTHS				
Lepidochelys kempi								
Lepidochelys olivacea								

YEAR 1979-82 (AGGREGATE DATA.) HEAD-STARTING AT LOS ROQUES.

TABLE 17 - ___ TURTLE MARICULTURE OPERATIONS
This table quantifies activities concerned with turtle culture for either conservation, population enhancement experiments, or commercial use. Activities to be included are "headstarting", re-nesting, incubation and release, etc.
Prepare separate table for each year of available data.

INSTITUTION OR ORGANIZATION NAME AND ADDRESS	NO. OF ACTIVE MEMBERS	ACTIVITIES IN PROGRESS
FUNDACION. LOS ROQUES. (CARACAS)		SEA TURTLE STUDIES AND HEAD-STARTING IN ARCHIPIELAGO LOS ROQUES
FUDENA (FUNDACION PARA LA DEFENSA DE LA NATURALEZA) (CARACAS).		SEA TURTLE MONITORING ON ISLA DE AVES.
INSTITUTO NACIONAL de PARQUES MINISTERIO del AMBIENTE de LOS RECURSOS NATURALES RENOVABLES CARACAS VENEZUELA		

TABLE 18. PUBLIC AND PRIVATE INSTITUTIONS CONCERNED WITH TURTLE CONSERVATION/MANAGEMENT/UTILIZATION

NAME AND LOCATION	AREA Km²	REASON (s) FOR PROTECTION	TYPE AND EFFECTIVENESS OF ENFORCEMENT
MEDANOS de CORO (BASE OF PENINSULA DE PARAGUANÁ.)	90,280 HECTARES	NAT. PARK, MAINLY FOR HUGE SAND DUNE FORMATIONS. (SOME GREEN TURTLES)	
MORROCOY NAT. PARK (Edo. FALCÓN)	46,000 HECTARES.	NAT. PARK FOR CORAL REEFS AND ISLANDS (HAWKSBILL HABITAT).	
MOCHIMA (SUCRE & ANZOATEGUI)	94,935 Ht.	NAT. PARK.	
LAGUNA de TACARIGUA (MIRANDA)	18,400 Ht.	NAT. PARK.	
HENRI PITTIER (ARAGUA & CARABOBO)	107,800 Ht.	NAT. PARK, MAINLY FOR RAIN/CLOUD FOREST BUT INCLUDING COASTLINE	
LAGUNA de LA RESTINGA (ISLA MARGARITA)	10,780 Ht.	NAT. PARK	
ISLA de AVES.		SEA TURTLE NESTING. (WILDLIFE REFUGE)	

TABLE 19. SANCTUARIES AND REFUGES

NAME AND ADDRESS OF ORGANIZATION	BUDGET ALLOCATION TO TURTLES	NO. OF STAFF ASSIGNED TO TURTLES	COMMENTS ON LEVELS OF ENFORCEMENT
MINISTERIO del AMBIENTE y de los RECURSOS NATURALES RENOVABLES. (MARNR)			

TABLE 20. REGULATORY AUTHORITY
Indicate all entities with statutory responsibilities (e.g., Fisheries Departments and Ministeries, Police, Coast Guard, etc.)

TABLE 20. REGULATORY AUTHORITY
(Supplementary page)

Please list national, regional, and local legislation concerning turtle management and conservation. List title, date, and stated purpose.

LEY de PROTECCION de la FAUNA SILVESTRE (AUG 11, 1970).
(TURTLES INCLUDED UNDER REPTILES IN ARTICLE 2, ANNEX 1).

CITES (VENEZUELA is a SIGNATORY).

"LISTA OFICIAL de ANIMALES de CAZA" (Resolution No. 276 of MIN. of AG. and LIVESTOCK; NOV. 13 1970) includes all SEA TURTLES, WHICH RECEIVE COMPLETE PROTECTION AS OF NOV. 28, 1979.

REPORTS AND PUBLICATIONS

The following is a list of the major reports and publications concerned with national turtle resources (list author, date, title, and publisher).

1. "TURTLES of the SPANISH MAIN" (PETER C.H. PRITCHARD, FPI; UNPUBLISHED).
2. ANON, 1980: PROTECCION y RECUPERACION de POBLACIONES de TORTUGAS MARINAS en el ARCHIPIELAGO LOS ROQUES. FUND. LOS ROQUES, 5 pp.
3. BROWNELL, W. and C. GUZMAN. 1976. ECOLOGIA de la ISLA de AVES, con ESPECIAL REFERENCIA a los PECES. MEM. SOC. CIENC. NAT. LA SALLE, 36 (98): 191-168.
4. BUITRAGO, J. 1981. LAS TORTUGAS MARINAS de LOS ROQUES, VENEZUELA. CRIA en CAUTIVERIO con FINES de REPOBLACION. 24 pp.
5. CARIBBEAN CONSERVATION CORP. 1980. SURVEY and PRELIMINARY CENSUS of MARINE TURTLE POPULATIONS IN THE WESTERN ATLANTIC. REPORT TO NMFS. 74 pp.
6. CARR, A.F., M.H. CARR and A.B. MEYLAN. 1978. THE ECOLOGY AND MIGRATIONS OF SEA TURTLES, 7. THE WEST CARIBBEAN GREEN TURTLE COLONY. BULL. AMER. MUS. NAT. HIST. 162(1): 1-46.
7. DONOSO-BARROS, R. 1964a. NOTA SOBRE LEPIDOCHELYS KEMPI EN LAS COSTAS de CUMANA. LAGENA, 2: 20-21.
8. ——— 1964b. ANOTACIONES SOBRE LAS TORTUGAS MARINAS DE VENEZUELA. LAGENA, 3: 26-31.
9. FLOEB, C. 1966. NUEVOS REGISTROS de LEPIDOCHELYS KEMPI (GARMAN) EN LA COSTA ORIENTAL DE VENEZUELA. LAGENA 12: 37-39.
10. ——1969. NOTA SOBRE REPTILES ACUATICOS DE VENEZUELA Y SU IMPORTANCIA ECONOMICA. LAGENA 21: 21-22.
11. ——— AND D.E. HOIT. 1966. NOTA SOBRE LA TORTUGA VERDE O DE SOPA EN LOS ALREDEDORES DE CUMANA. LAGENA, 6: 37-39.
12. MALDONADO, A. 1981. PROYECTO TORTUGAS. ACTIVIDADES NOV-DIC 1980. MINFO, 11 pp.
13. OSREN, LARRY. 1980. TRIP REPORT- COSTA RICA, VENEZUELA & GUYANA. FEB. 28 - MARCH 8, 1980. 16 pp.
14. ROZE, J. 1955. LAS TORTUGAS MARINAS de VENEZUELA. REV. FECUARIA, APR. 1955: 9-11.

PROJECT TITLE	DATES START	DATES END	NAME & ADDRESS OF INSTITUTION & CHIEF INVESTIGATOR
(STUDY OF TURTLES ON ISLA de AVES).	SEASONAL (APRIL-AUGUST)		FUDENA. JOSÉ LAIZ BLANCO, then JOSÉ L. GÓMEZ CARAEDANO
(STUDY of TURTLES ON Islas LAS ROQUES	SEASONAL (APR.-DEC)		FUNDACION LOS ROQUES.
AERIAL SURVEY OF NESTING BEACHES	1981, 1983		NMFS CONTRACT - TO PETER C.H. PRITCHARD FLORIDA AUDUBON SOCIETY 1101 AUDUBON WAY MAITLAND, FLA 32751, USA.

TABLE 21. NATIONAL RESEARCH PROJECTS
List turtle research activities funded within your country.

APPENDIX B

TURTLE CONSERVATION REGULATIONS IN VENEZUELA

Wildlife protective regulations in Venezuela are promulgated under the "Ley de Proteccion a la Fauna Silvestre" (Wildlife Protection Law), passed August 11, 1970. Although turtles are not specifically named in the text of the law, they are included in the section on Reptiles in Article 2, Annex 1.

Venezuela became a signatory to the Convention on International Trade in Endangered Species of Fauna and Flora (CITES) in 1976. This Convention prohibits international trade in species listed in its Appendix I and requires exporting countries to issue permits and determine that such trade is not likely to jeopardize the species for export of species listed under Appendix II. The categories correspond roughly to "endangered" and "threatened" lists of the U.S. Department of the Interior or the International Union for the Conservation of Nature. Currently, all of the marine turtles (Cheloniidae and Dermochelidae) are listed under Appendix I, and all tortoises and Podocnemis expansa and P. unifilis are in Appendix II.

The Official List of Game Animals ("Lista Oficial de Animales de Caza") was published as Resolution no. 276 of the Ministry of Agriculture and Livestock (Ministerio de Agricultura y Cria) on November 13, 1970. This list included the following turtle species: *Lepidochelys olivacea, Eretmochelys imbricata, Dermochelys coriacea, Caretta caretta, Chelonia mydas, Podocnemis expansa, P. vogli, P. unifilis, Peltocephalus dumerilianus, Geochelone carbonaria,* and *G. denticulata*. This list presumably represents all those turtles that are large, common, and palatable enough to be worth hunting; it excludes the chelids, *Kinosternon, Pseudemys, Rhinoclemmys,* and *Podocnemis erythrocephala*.

Although Resolution no. 276 did not in itself establish protection for listed species, on November 28, 1979 the Ministry of the Environment and Renewable Natural Resources (Ministerio del Ambiente y de los Recursos Naturales Renovables, hereafter MARNR) established complete protection for all of the above species except for *Podocnemis unifilis* and *P. vogli*. MARNR established a hunting season of February 1 to March 31 for these two species, for holders of licenses of type A and C, and a season of February 15 to March 31 for holders of license type B. A daily limit of one animal and a bag limit of two was established. The total closed season on *Podocnemis expansa* was extended for five years (until 1983) by MARNR Resolution no. 103, passed on May 22, 1978.

Green turtles (*Chelonia mydas*) in Venezuela received substantially improved protection under the designation of Isla Aves, the principal national nesting ground (see Plate 44D), as a Wildlife Refuge (Refugio de Fauna Silvestre) on November 30, 1972. The establishment of a permanent military garrison within a hurricane proof structure on the island, although aesthetically unfortunate, also ensured enforcement of the protective legislation. Historically, turtles on Isla Aves have been raided regularly by crews of small boats arriving without permission from various islands of the Lesser Antilles.

In addition, turtles in Venezuela receive protection under various protected lands designations. These include 26 national parks (totalling 7,317,663 hectares), 13 national monuments (20,745 ha), ten forest reserves (11,678,267 ha), three faunal refuges (56,328 ha), and one faunal reserve (227,795 ha). All exploitative activities are prohibited in the first, second, and fourth categories above; such activities may be permitted, under controls and permits, in forest and faunal reserves.

National parks and other protected lands in Venezuela are currently being inventoried under a joint Nature Conservancy Fundacion para la Defensa de la Naturaleza program, under the direction of Carlos Gremone. This study is to determine the percentage of each major ecosystem type in Venezuela that is within the boundaries of protected lands, and to make recommendations for further acquisition of underrepresented ecosystem types. Existing national parks cover a wide variety of ecosystems. By far the largest is Parque Nacional Canaima, in southwestern Venezuela, which includes many dramatic "tepuis" (known as "mesas" in North America). This park includes several turtle species within its borders, including *Phrynops geoffroanus* and both species of tortoise.

TURTLES OF THE SPANISH MAIN

BY

Peter C. H. Pritchard, Ph.D

Summary of knowledge and results of surveys of sea turtles and their nesting beaches in Venezuela

FLORIDA AUDUBON SOCIETY

1101 Audubon Way
Maitland, Florida 32751

TABLE OF CONTENTS

	PAGE
DESCRIPTION OF THE COAST	1
SEA TURTLE POPULATIONS IN VENEZUELA	3
AERIAL SURVEYS	12
SUMMARY OF FLIGHT LOG: Caracas west to Paraguana Peninsula	14
SUMMARY OF FLIGHT LOG: Caracas east to Güiria, west to Isla Margarita	16
SURVIVAL OUTLOOK FOR VENEZUELAN TURTLES	20
RECOMMENDATIONS FOR FUTURE WORK	21
LITERATURE	22

DESCRIPTION OF THE COAST

The mainland coast of Venezuela follows an approximately east-west course and extends between the latitudes of 60° W and 73° 30' W. The coast lies entirely within the tropics, being between 10° and 12° north of the Equator, and it comprises the eastern half of the southern boundary of the Caribbean Sea. The coast of eastern Venezuela is very arid, and is dominated by the huge, paired, narrow-necked, dessicated peninsulas of Guajira and Paraguana, which enclose the Gulf of Venezuela. The Gulf has an open connection at its southern end with the freshwater Lake Maracaibo, the largest lake in South America. East of Paraguana Peninsula, whose southern base is composed of sterile, rolling sand dunes reminiscent of the Sahara Desert, the climate becomes progressively more moist, several permanent rivers reach the sea in the short stretch of coast between Tucacas and Puerto Cabello, and between Tucacas and Chichiriviche the otherwise nearly continuous beach is interrupted by a spectacular complex of mangrove islands, some of which have small beaches, that together comprise the Morrocoy National Park.

In the Central Part of the Venezuelan coast, the coastal mountains reach to the seashore. In this area, which lies between Puerto Cabello and Higuerote, there are numerous small beaches but few large ones. The rainfall is not uniform, but in parts the hills are covered with dense forest growth, while others that receive less rain have bare areas of red soil between the trees and shrubs.

East of Higuerote, as far as Barcelona, the coast is flat, although low hills reach increasingly near the coast as one proceeds east. The entire coast is marked by an almost continuous beach, with sporadic towns and cities of variable size, and huge areas immediately behind the beach dedicated to the monoculture of coconuts. In places natural vegetation still exists.

Between Barcelona and Cumaná, the coast is hilly and very dry, much of the soil appearing bare. A number of hilly islands are found along this stretch of coast, and a few small beaches may be seen on both the islands and mainland.

East of Cumaná, the Gulf of Cariaco extends eastward for about 75 kilometers, being bounded on the northern side by the Araya Peninsula. The water in the Gulf of Cariaco is dark blue and deep, the Araya Peninsula is composed of red, eroded hills with extremely sparse vegetation. Towards the base of the Peninsula, however, the hills are more vegetated and fertile. There are a few small, gravelly beaches on the southern shore of the Araya Peninsula. To the east, the lagoon peters out into a complex of mangrove swamps with inflowing brown-water rivers, followed by dense tropical forest. As one approaches the Gulf of Paria from the eastern end of the Gulf of Araya, the forest continues, in places dominated by palms, and elsewhere very swampy. The Peninsula de Paria, forming the north shore of the Gulf of Paria, is a relatively narrow but rather high mountain ridge, thickly clad with tropical rainforest. Along the Gulf coast of the peninsula, the shoreline is dominated by mangrove forests but there are occasional small beaches.

The east-west coast of about 300 km that forms the northern shore of the combined peninsulas of Araya and Paria has steep forest-clad hills with no coastal plain, but the ragged, serrated coast includes numerous fishing villages and small beaches.

From the western corner of the Gulf of Paria to the Guyana border about 400 km to the south-east, the coast is dead flat for miles inland, and is totally dominated by the huge estuary and delta of the Orinoco River. This extremely complex coast is primarily fringed by mangroves, which in many areas show evidence of drastic erosion and natural changes in the coastline. There are no sand beaches in this area (though, as mentioned above, there are some small ones on the northern shore of the Gulf of Paria), and the water is very muddy and of reduced salinity.

In striking contrast to all other countries of northern South America, the offshore waters of Venezuela are dotted with islands, many of large size. The principal islands and archipelagoes, from west to east, are as follows: Aruba, Curaçao, Bonaire; Aves; Los Roques; Orchila; La Tortuga; Blanquilla and Los Hermanos; Margarita; Cubagua and Coche; Los Frailes; Los Testigos; and Trinidad. Aruba, Curaçao, and Bonaire are not politically Venezuelan but are included in the Netherlands Antilles, and Trinidad is part of the British Commonwealth. These islands, with the exception of Trinidad, are rather or very arid. The smaller islands are all very flat, but the larger ones, including Trinidad, Margarita, and the Netherlands Antilles, have significant elevation.

Politically included within Venezuela - and one of the most important turtle nesting islands in the Atlantic system - is tiny Aves Island, located about 500 km to the north of Carúpano (Edo. Sucre). Aves is a mere sandbank of negligible altitude, and has a coastline that changes from year to year and that may even be split in two after hurricanes. Aves is the only emergent point of the Aves Ridge, a vast submarine geological formation in the eastern Caribbean.

SEA TURTLE POPULATIONS IN VENEZUELA

Although nesting of sea turtles on the mainland coast of Venezuela is sparse, the waters and islands of Venezuela provide either feeding or breeding habitat for several populations of a number of species of sea turtles. According to presently-available knowledge, these may be summarized as follows:

i) The nesting population of the green turtle, *Chelonia mydas*, on Aves Island. This population appears to migrate to feeding grounds in the Lesser Antilles and the Dominican Republic.

ii) A feeding population of the green turtle, *Chelonia mydas*, in the Gulf of Venezuela, derived from the breeding population at Tortuguero, Costa Rica. Although generally separated, members of populations i) and ii) may occasionally be found in the same areas.

iii) A feeding population of the olive ridley, *Lepidochelys olivacea*, in western Venezuela (Sucre, Nueva Esparta, and Delta Amacuro) derived from nesting grounds in Surinam.

iv) Populations of the hawksbill turtle, *Eretmochelys imbricata*, both breeding on and feeding near many of the islands off the Venezuelan coast, especially the smaller and less inhabited ones.

v) A low density breeding population of the green turtle, *Chelonia mydas*, of unknown migratory habits, in Estado Sucre.

vi) A very small breeding population of the loggerhead, *Caretta caretta*, in the Los Roques Archipelago, and with rare nesting elsewhere on the islands and the mainland of Venezuela.

In addition to the above, the leatherback, *Dermochelys coriacea*, nests in quite good numbers in Trinidad and is caught sporadically in Venezuelan waters but no nesting in Venezuelan territory has been recorded. It has, however, been found nesting in both Guyana and Colombia, and in great numbers in Surinam and French Guiana.

i) Green turtles nesting on Aves Island.

Aves Island is a tiny, rock-cored, footprint-shaped sandbar located almost 500 km north of the coast of Estado Sucre, Venezuela, and about 200 km west of Guadeloupe, its coordinates being 15° 40'N, 63° 36'W. The island is of fluctuating form. It is only about 520 meters long, and 200 meters wide at its widest part (at the northern tip). The green turtle colony on Aves Island has been discussed in a considerable body of literature, relevant references include Hummelinck (1952), Lazell (1967), Maloney and Schubert (1968), Zuloaga (1955), Rainey (1971), Brownell and Guzman (1974), and Laiz Blanco (1979).

While Aves has been visited by voyagers for decades, the first systematic study of the Aves Island green turtle colony was that of Rainey in 1971-74. Rainey found turtles nesting on Aves from June through August, as is typical of the northern hemisphere marine turtle colonies.

In 1971 he counted 174 nest pits made prior to his arrival on June 24, and tagged 16 nesting turtles during the subsequent three nights. Mean carapace length was found to be 42.4" (107.7 cm) and mean weight 380 lbs (173 kg). The Aves Island turtles are thus distinctly larger than those nesting at Tortuguero, Costa Rica, and closer in size to the South American mainland nesters in Surinam and Guyana.

After a hiatus of several seasons, FUDENA re-initiated an Aves Island turtle tagging program in 1979. In that year, the research team spent 89 days on the island, arriving in July and departing in October but being forced to leave for a time by the passage of Hurricane David on August 29. Maps were drawn showing the change in form of the island before, immediately after, and 44 days after the passage of the hurricane, which denuded the island of sand, washed away all turtle eggs, and ruptured the narrow isthmus connecting the northern and southern parts of the island so that for a brief period Aves consisted of two separate islands.

Various turtles tagged in earlier years by Rainey and his co-workers were found, but these results have not been analyzed. 670 nesting emergences were recorded in July and August, the vast majority in the latter month, and an estimated 70% of these resulted in nestings. Laiz Blanco (1979) estimated that as many as 55,280 eggs were destroyed by the hurricane on August 29. The nesting took place all around the island, with only modest variation in density from one section to another. A few hatchling emergences were witnessed during July and August, corresponding to early-season nesting in May and June.

Long distance recoveries of green turtles tagged while nesting on Aves Island are summarized by Carr, Carr and Meylan(1978) and by Caribbean Conservation Corporation (1980). Recovery locations recorded included Miskito Keys, Nicaragua (2); Isla Mujeres (Mexico); Dominican Republic (several); Isla La Tortuga, Grenada; Grenadines, Martinique (2); and Guadeloupe. The possibility cannot be discounted that some of the recoveries reported from Lesser Antillean Islands such as Martinique and Guadeloupe were in fact made from vessels poaching in waters and beaches of Aves Island itself, with the recovery location falsified by the finders to prevent self-incrimination.

ii) Green turtles in the Gulf of Venezuela.

Although green turtle nesting has not been reported in the Gulf of Venezuela, the species is often encountered there, and is caught for human consumption in both the Guajira and Paraguana Peninsulas. Both immature and mature turtles are caught; a number of the mature females found have borne tags indicating that they had previously nested at Tortuguero, Costa Rica. Western Venezuela thus appears to be an outlying feeding area for the Tortuguero breeding colony, which is the largest breeding congregation of green turtles in the Caribbean and which primarily utilizes feeding grounds off the coasts of Nicaragua, Panama, and Colombia with occasional recoveries of tagged animals as far away as Campeche, Key West, and Puerto Rico (Carr, Carr and Meylan, 1978).

During the period of 1956-1976, seventeen Tortuguero green turtles were recovered in the Gulf of Venezuela, and eight more on the Central Venezuelan coast, between Los Roques off Caracas and Guiria on the south coast of the Paria Peninsula (Carr, Carr and Meylan, op. cit.). Specific localities recorded as of 30 June 1977 for these Tortuguero-Venezuelan migrants were:

Tag No.	Date Tagged	Place of Recovery	Date of Recovery
1958	8 Sept. 1961	Las Cortes de Cojoro Venezuela	January 1963
1667	17 Aug. 1961	Castillete, Venezuela	25 July 1963
2254	19 Aug. 1964	Isla de Margarita	Nov. 1965
1726	2 Aug. 1961	Between Colombian and Venezuelan coasts	7 May 1966
2688	2 Aug. 1963	12 mi. south of Isla El Gran Roque	June 1968
4437	10 Aug. 1967	3 mi. north of Zapara Island, Gulf of Venezuela	24 April 1968
6880	24 July 1969	Coastal waters of western Gulf of Venezuela	22 Feb. 1971
6870	11 Sept. 1970	Castillete, Peninsula de la Guajira	8 April 1971
7529	10 Aug. 1971	Punta Salina, Peninsula de Paraguana, Estado Falcon	3 Jan. 1972
7029	16 Sept. 1970	Punta Salina, Los Roques	16 Mar. 1972
6836	29 Aug. 1970	Cojoro, Peninsula Guajira	July 1972
6953	14 Aug. 1973	Cojoro, Guajira Pen., Gulf of Venezuela	2 Jan. 1973
6359	11 Sept. 1968	Guiria, Golfo de Paria	8 April 1973
6036	17 Aug. 1972	Cojoro, Guajira Pen.	12 Dec. 1972
7053	21 Aug. 1972	Cojoro, Guajira Pen.	12 Dec. 1972
6538	1 Aug. 1972	Cojoro	Summer 1973
6403	31 July 1972	Cojoro	Summer 1973
H135	28 Aug. 1972	Cojoro	Summer 1973
6836	4 Aug. 1970	Cojoro	Summer 1973
6870	10 Sept. 1973	Eastern part of Paraguana Penn.	8 Aug. 1974
1178	4 July 1960	Isla de Margarita	16 June 1972
4421	9 Sept. 1967	Isla de Tortuga	22 Nov. 1969
6818	27 July 1969	Isla de Tortuga	15 July 1970

The occurrence of the green turtle and other marine turtles on the Paraguana Peninsula was discussed in an undated newspaper article by Arteaga entitled "Las Tortugas de Adicoa" (El Nacional, Caracas). I made a visit to the Peninsula in February 1978, and found several carapaces of green turtles that had been caught and butchered locally. Two of these that had been preserved measured 104.1 x 77.5 cm (i.e. mature) and 84.1 x 63.8 cm (i.e. immature). I also found six intact shells near a ghost town on the mouth of the lagoon opposite Santa Rita. One was adult (105.4 x 83.2 cm), while the remainder were immature (somewhat distorted, but generally 60-75 cm in length).

Interviews were conducted with local inhabitants regarding turtle nesting in the area. Long-time German residents in Punta Fija said that turtles were not found in significant numbers on the western side of the Paraguana Peninsula, and if they nested there at all there could not be many. In Adicora, on the eastern side of the Peninsula, great confusion was found with common names of turtles, cawana being used for either the loggerhead or the leatherback, and carey being applied to both the hawksbill and the male green turtle. This confusion of common names was also apparent in the popular article by Arteaga cited above. Nevertheless, one Adicora resident convincingly described the nesting of a green turtle nearby, and he had two shells in his yard to confirm his species identification. Another informant reported that the penis of the male green turtle is sometimes dried and used for medicinal and aphrodisiac purposes, and he showed us one such dried organ.

Concentrations of foraging sea turtles of unrecorded species have also been recorded from the Golfo Triste area south of Cayo Sombrero (near the city of Tucacas), according to G. Cuellar (pers. comm. to L. Ogren, 1980).

iii) Feeding grounds of the olive ridley, *Lepidochelys olivacea*, in eastern Venezuela.

Lepidochelys olivacea (mistakenly identified as *Lepidochelys kempi*) was first recorded in Venezuela by Donoso-Barros (1964a, 1964b), who cites the only locality record available to him for the country as "Cumaná". Subsequently, Flores (1966) reported three Venezuelan specimens, including two carapaces from Piritu de Barlovento and a nearly mature live female from Isla La Tortuga, though he persisted in the misidentification as *L. kempi*; the correct identification is immediately apparent from the photographs, which show a turtle with seven left costals and six right costals, a condition common in *olivacea* but unknown in *kempi*. Flores cited local vernacular names for *olivacea* as "Tortuga manila" and "Tortuga bastia". The subadult female specimen had carapace dimensions of 57.5 x 55.5 cm and the stomach contained traces of vegetation, bony fish, cartilaginous fish, and gastropods.

At about the same time as these discoveries, I first encountered and recorded the nesting of *Lepidochelys olivacea* in Guyana, and Schulz found the same species nesting in larger numbers in eastern Surinam. (Pritchard, 1966, Schulz 1964). Subsequently Schulz and I cooperated in a tagging program for *olivacea* on the Surinam beaches that resulted in considerable data on migratory destinations of post-nesting females. 3,359 tagged animals yielding a total of 72 long-distance recoveries (Pritchard, 1973, 1976). Recoveries from Venezuela are listed in the table below.

VENEZUELAN RECOVERIES OF TAGGED *LEPIDOCHELYS OLIVACEA* AS OF JULY 1977

Tag	Date Tagged Surinam	Place of Recovery	Date of Recovery
E135	June 7 '68; Ei	10 m. from NE part of Isla Margarita	Aug. 3, 1970
E300	May 31 '67; Ei	Punta Barima (8° 15'N, 60° 20'W)	Aug. 1, 1967
E332	June 3 '67; Ei	Puerto Santo, Edo. Sucre; "en la playa"	ca Aug. 1975
E543	June 13 '67; Ei	Golfo de Paria, 3 m. SE Guiria, Edo Sucre	Oct. 5,1972
E585	June 13 '67; Ei	3 m. W of Los Testigos	May 18,1970
E593	June 13 '67; Ei	2 miles off Soldado Rock in Cedros Current off E coast of Trinidad	Feb. 4, 1969
E823	June 13 '68, Ei	near Isla Margarita	May 10, 1969
E936	June 17 '68, Ei	25 m north of Trinidad	Feb. 13, 1969
E881	June 17 '68; Ei	15 m. S of Punta Espada, Golfo de Venezuela	Nov. 4, 1971
E1120	June 25 '68, Ei	11/2 m. No of Carupano	Sept. 18, 1968
E1184	June 28 '68, Ei	Las Castas de Punta Piedras, Edo. Nueva Esparta	Jan. 20, 1970
E1209	June 23 '68, Ei	8 m. N Cabo Negro Margarita	Oct. 28, 1970
E1280	June 23 '68, Ei	11° 22'N, 63° 43'W (near Carupano)	Jan. 22, 1971
E1336	July 10 '68; Ei	Boca de Serpiente	April 19,1975
E1629	May 5 '69, K.P.	Boca de Serpiente	March 25, 1975
E2665	June 15 '69, Ei	1 m. off south coast of Trinidad (s. of Sparia)	ca Jan 1973
E2764	June 10 '69; Ei	10 m N Isla Los Frailes (11° 34'N, 63° 45'W)	July 23, 1970
E2953	Apr. 22 '69; Bob	Los Frailes Archipelago	Nov. 12, 1969
E4348	May 25 '79; Ei	2 m off nw coast of Trinidad	Oct. 28, 1972
E5080	June 26 '70, Ei	1/2 m off eastern coast of Margarita I.	ca May 1972
E5148	June 10 '70; Ei	6m m off Toco Toco, Trinidad	July 12, 1971
E5293	June 27 '70; Ei	off Los Cuevas, N west of Trinidad	April 1977
E5298	June 27 '70; Ei	1 m E Pt. Galera, N. Trinidad	March 9, 1972
E5589	July 1 '79, Ei	12 m SE Isla Margarita	Jan. 10, 1972
E5848	July 14 '71; Ei	63° 65'E m 11° 15'N (near Carupano)	March 1972

E5654	June 2 '71; Ei	63 30'N, 10 58'N (near Carupano)	Sept. 1971
E5719	June 30 '71; Ei	Trinidad	March 1974
E5816	July 7 '71; Ei	Gulf of Paria, several m off Point Ferun	Nov. 26, 1971
E7173	June 20 '72, Ei	Pampatar, Isla Margarita	Feb. 26, 1976

(Ei = Eliamti, K.P. = Krofaja Pasi, Bab. = Baboonsanti)

Flores (1969) reports this species (which he erroneously identified as *Lepidochelys kempi*) from the vicinity of Cumaná (Estado Sucre), La Tortuga, and Islas Piritu (Estado Anzoategui).

These recoveries are clearly concentrated in the area around the Orinoco delta and the areas to the north and west to which the Orinoco waters are carried by the Equatorial Current. There is only one Venezuelan recovery west of Isla La Tortuga, but this specimen (E981) reached as far as the mouth of the Gulf of Venezuela, only fifteen miles from the Colombian border. Occasional specimens have actually been caught in Colombian waters; Nicéforo Maria (1953) and Tufts (1972) report on the same individual, initially misidentified as *kempi*, from Cartagena, Colombia. Other outlying olive ridleys have been recorded from 3 miles west of San Juan Harbor, Puerto Rico (Caldwell, 1959), and from Gibara, Cuba (Aguayo, 1953). An immature olive ridley has been recorded from Martinique and reports have been received of migrating individuals between Isla Saona and the Dominican Republic (Caribbean Conservation Corporation, 1980).

An important factor relevant to the potential study of olive ridley distribution by means of aerial surveys is that the Western Atlantic populations do not seem to share the East Pacific *olivacea* habit of floating or sleeping on the surface for extended periods. This habit makes East Pacific ridleys particularly easy to survey (and to capture), but I have never seen Atlantic *olivacea* floating or sleeping on the surface, and I know of no published record of others having made such an observation. The floating habit may possibly represent an attempt by ridleys in relatively cool East Pacific waters to elevate their body temperature by allowing the central part of the carapace to be held above the surface of the water and thus receive unfiltered insolation; the characteristic high, flat topped shell of *olivacea* would appear to be well adapted for this strategem.

Olive ridleys have never been recorded nesting in Venezuela. However, Bacon (1973) summarizes nesting information for this species in Trinidad as follows:

1. Tracks on Matura Beach (animal not seen), August 1959
2. Hatchling found on Manzanilla Beach, August 1969
3. Tracks and nest on Matura Beach (animal not seen), March 1970.
4. Adult female nesting on Matura Beach, May 1970

Immature ridleys are sometimes caught around Isla Margarita. A carapace of a specimen from the north coast seen in the Collection, Isla Margarita, Instituto Oceanografico was 69.3 cm wide, and had seven pairs of costal scutes.

Isla Blanquilla, a flat, arid island about 100 km NNW of Isla Margarita, is likely to be another significant nesting site for the hawksbill. This island has no permanent inhabitants, though fishermen camp there from time to time. It is surrounded by superb reefs and many fine beaches. During a very brief visit to the island, on Feb. 21, 1978, with not more than an hour on the ground, I was able to find the remains of several hawksbill turtles that had been killed by visiting fishermen. An attempt to survey the island more thoroughly on the 1981 survey was thwarted by mechanical problems with the aircraft (which fortunately took place on the flight to Isla Margarita rather than the scheduled next leg of the flight to uninhabited and waterless Isla Blanquilla). However, Blanquilla should be considered a high priority for a hawksbill nesting and feeding habitat survey.

Roze (1954) reports that the hawksbill comes to the beaches of Isla Margarita on occasion for purposes of egg laying, and hawksbills caught in the waters around the island provided the basis for a local carey industry. Roze (1955) offers an earlier comment on this industry, with thoughts on the relative merits of extracting the carey from live and from killed hawksbills.

It is vital that studies be conducted of turtle nesting (particularly hawksbill nesting) on other islands of the Venezuelan coast, including Orchila (east of Los Roques) and La Tortuga, due west of Isla Margarita. La Tortuga island lacks permanent inhabitants, is of large size (about 11 x 22 km), and has a beach along its entire northern side.

Hawksbill nesting on the Venezuelan mainland is extremely sparse. However, an informant at Güiria, on the Gulf of Paria coast of eastern Estado Sucre, stated that the hawksbill was one of two species that regularly nested in that area in August. Bjorndal (in Caribbean Conservation Corporation, 1980) similarly heard reports of hawksbill nesting on beaches of the Gulf of Paria. This coincides in a general way with the peak nesting of hawksbills at Shell Beach, in Guyana some 70 km from the Venezuelan Border (Pritchard, 1969), although the other species that use the beach (greens, leatherbacks, and ridleys) do so considerably earlier in the year. It is interesting that this extremely atypical habitat (muddy, estuarine water) should provide habitat for the hawksbill, a species typical of coral reefs, but Shell Beach may be the best nesting ground for this species on the South American mainland.

Very small numbers of hawksbills have been found at Aves Island. Brownell and Guzman (1974) reported having encountered six specimens in Aves Island waters in the course of four expeditions, though none had been seen nesting. All were immature, weighing between 10 and 20 kilos each. Laiz Blanco (1979) mentioned another Aves Island hawksbill, 1,905 g in weight and 265 mm in carapace length.

iv) Populations of the Hawksbill turtle, *Eretmochelys imbricata*

In Venezuela, populations of this species appear to be concentrated on offshore islands, from which the quality and quantity of information available ranges from very good to non-existent.

In the Netherlands Antilles, hawksbills are almost extinct (de Boer et al,1979), though they may have existed in somewhat greater abundance in the past.

In the Los Roques Archipelago (a complex of mangrove, beach and reef islands about 150 km due north of Caracas) extensive studies have been conducted in the last two or three years on hawksbill populations, and these have included an ambitious "head starting" program. The islands are a National Park and scientific studies here are administered by the "Fundacion Los Roques", based in Caracas; there is a field research station in the archipelago, the Estacion de Biologia Marina Dos Mosquises. Intensive studies on the sea turtle population were initiated in 1979, and continue. Several mimeographed reports are available on the first season's work (Maldonado, 1981, Buitrago, 1981; Anon, 1980). Findings may be summarized as follows:

Hawksbills nest in modest numbers on many islands of the Archipelago, nesting taking place from May to December but with the great majority of emergences taking place in July to October (peak month September). Absolute numbers are low, in 1979, one nest was recorded in April, one in May, four in June, ten in July, twelve in August, seventeen in September, ten in October, four in November, and one in December. The most used nesting islands were identified as Dos Mosquises, La Pelona, Cayo de Agua, Bekeve, Salesky, Carenero, Cayo de Sal, and Cansky. These islands are concentrated in the western side of the archipelago, the islands in the east, although much larger, are extensively mangrove bordered with little beach.

Although the area is a National Park there are still resident fishermen who constitute an ongoing threat to turtle nests; most nests that are not found almost immediately by the research and conservation team are raided by egg collectors. The prefered course of action by the conservation team in finding a fresh nest is to camouflage it or dig a small hole to give the impression that the eggs have already been taken. Broken eggshells scattered around the nest complete the impression of a "raided" nest. Other nests are [illegible] station for artificial incubation and head starting. In 1979, 21 nests were camouflaged only two of these were robbed. Of 20 [illegible] found in 1980, 16 had already been robbed (2 green turtle nests, 12 hawksbills).

There have been two long-distance recoveries of turtles "head started" at the Los Roques facility. One of these was a hawksbill, hatched on Los Roques 8/11/74 and released 27/12/75 when it measured 30.2 x 21.4 cm and weighed 3.35 kg. It was captured in Jamaica on October 21, 1976.

The other was an Aves Island green turtle, artificially incubated and hatched at Los Roques 10/11/73 and released 15/9/74 when it measured 19.8 x 15.9 cm and weighed 875 g. It was caught at Santos, São Paulo, Brazil, on 29/8/76, at which time it measured 33 x 28 cm and weighed 4 kg. It was retained for the Santos Aquarium. This is one of the longest turtle movements on record, however, whether a turtle would naturally embark on a journey of that nature is uncertain, since the turtle entered the sea at an unnatural location and age.

v) Breeding colony of the green turtle, *Chelonia mydas*, in Estado Sucre.

Several published reports draw attention to the nesting of green turtles in Estado Sucre. Flores and Hoit (1965) mention an individual that was captured while nesting at 2 a.m. on October 18,1965 at Playa Naiguata, near Cumaná. It laid 160 eggs and the carapace measured about 112 x 90 cm, the estimated weight was 150 kg.

Laiz Blanco (1979) reported on a aerial survey of the beaches of the Peninsula de Paria, and found a single turtle track and three beaches that appeared suitable for nesting.

Ogren (1980) mentioned an aerial survey in Estado Sucre in August 1979, reported to him by G. Cuellar, Head of Projects for FUDENA. This survey took place between Carupano and San Juan de los Galdonas, and only a single turtle track was seen. The coast was reported to consist of small stretches of beach, separated by rocky cliffs.

In the course of my 1981 aerial survey, the northern coast of Estado Sucre was the only place in which we found regular turtle tracks. Seven fresh nests were seen, nearly all on beaches immediately east of Cabo Tres Puntas. The three beaches at the eastern end of the peninsula mentioned by Laiz Blanco (op. cit.) were not surveyed.

Detailed information on the location of the nests seen and the beaches along the coast of Estado Sucre may be obtained from the flight log and the maps appended herewith. Although identification of the species that made the nests is uncertain, my judgement is that they were made by green turtles; they were certainly not leatherback or ridley nests.

A few green turtles nest in northern and western Trinidad, which is a geological extension of the Peninsula de Paria, separated by just a few miles of ocean at Boca del Dragon. Bacon (1973) records green turtle nesting from Mayaro, Matura, Matelot, and Big Bay, Trinidad. Following the mainland coast to the south-east from the Gulf of Paria, the next beaches of any kind are in north-western Guyana (Shell Beach, where moderately dense nesting by green turtles takes place (Pritchard, 1969).

A fisherman interviewed on Isla Margarita on 21 February 1978 declared that he considered the following beaches on Isla Cubagua (between Isla Margarita and the mainland) to be possible nesting sites for *Chelonia mydas*: La Caldera; Corral el Barlovento; Corral del Sotovento, and possibly Punterenas.

Several shells of immature green turtles were seen for sale on Isla Margarita; three of them had the following dimensions: 61.3 x 52 cm, 41.9 x 36.5 cm; 47.0 x 37.5 cm. Prices ranged from 25 to 40 Bolivares.

Some turtle nesting was reported to take place on Playa Manzanilla, Isla Margarita, but the species was uncertain.

vi) Nesting by the loggerhead turtle, *Caretta caretta*, in Venezuela.

The loggerhead is rather scarce in Venezuela, and only a few nesting records are available. This contrasts with the Colombian coast, where *Caretta* is the commonest nesting turtle, however, east of Venezuela, in the Guianas, the loggerhead has never been recorded nesting in Guyana or French Guiana, and only a single

specimen has been found nesting among thousands of leatherbacks, olive ridleys, and green turtles in Surinam. In Trinidad, Bacon and Maliphant (1971) report a single nesting by the loggerhead, at Las Cuevas Beach, in 1970, however, the photograph of this turtle, although somewhat indeterminate, looks more like a hawksbill, and the carapace length (85 cm) is more typical of that of a nesting hawksbill than a loggerhead.

A few loggerheads nest in the Los Roques Archipelago, though the predominant turtles there are hawksbills. Bultrago (ms) recorded seven loggerhead nestings in Los Roques during the 1979 season - five in May, one each in April and June.

Flores (1959) reported that the loggerhead is frequently observed in the waters of Sucre and Isla Margarita, Venezuela, and that it nests on sandy shorelines of coasts and the islands of eastern Venezuela. I saw three loggerhead skulls in the collections of the Instituto La Salle on Isla Margarita; the largest of these 27.8 cm wide and 24.5 cm in basicranial length, is equal to the largest skull of this species that I have seen.

AERIAL SURVEYS

Two major aerial surveys were conducted in the course of the consultancy reported herein. The first of these started from Caracas and proceeded west, maintained high altitude until Puerto Cabello, and then followed the coast at a low level to Coro and completely around the Paraguana Peninsula. No sign of turtles nesting was seen on this flight; because of this and extreme turbulence the journey from Punto Fijo to Maracaibo was completed at high altitude. The second flight started from Caracas, again maintaining high altitude for some time following take off, and descended to low survey altitude at Higuerote. The survey continued to the east, passing along the southern shore of the Peninsula de Paria. A landing was made in Güiria, after which we crossed to the north coast of the peninsula, and flew west along the coast, finally crossing the narrow water separation to Isla Margarita where a landing was made and the flight abandoned because of battery failure in the aircraft. One turtle nest was seen on the coast of Anzoategui and several in Sucre, described in detail in the flight log. It is unfortunate that aircraft failure prevented survey of the coasts of Isla Blanquilla and Tortuga as had been intended.

Certain other data are available from Venezuelan surveys other than these two. On 25 March 1977 Pedro Trebbau and I flew the coast of the Orinoco delta and onward to Guyana at an altitude of about 300 feet, in seach of the reputed beach of "Punta Playa", on which leatherback nesting was supposed to occur. However, the entire coast was composed of mud and eroding mangrove forest throughout the delta area and the first beach encountered was Shell Beach, Guyana. The latter is a uniquely important nesting area, not so much for the absolute number of turtles utilizing it, as for the fact that it is an important site for no fewer than four species (leatherback, green, olive ridley, and hawksbill).

Pedro Trebbau also reported to me that he had flown the coast of Aragua and the Distrito Federal west of Caracas on Feb. 19, 1981, in search of a downed aircraft. The flight covered the shoreline from Maiquetia to Puerto Cabello. However, despite an intensive visual search of the coast and water surface from a low altitude, no traces of sea turtles or their nests was seen.

A more positive observation was reported by Leopoldo Garcia of the Parque Zoologico "El Pinar" in Caracas. Garcia reported that in the course of an aerial survey in May 1981, he had observed a group of green turtles swimming in and out of a trench through a limestone reef offshore from Las Salinas, in the Distrito Federal between Chichiriviche and Catia La Mar. The turtles were estimated to be between 50 and 100 cm. in carapace length, and were between 9 and 15 in number, at least five being of adult size.

SUMMARY OF FLIGHT LOG: Caracas west to Paraguana Peninsula

DATE: July 18, 1981

PILOT: Luis Arturo Ayala M.D.

COPILOT: Pedro Trebbau D.V.M.

OBSERVERS: Peter C.H. Pritchard, Ph.D.
J. Robert McMorris
Luis Arturo Ayla Jr.

AIRCRAFT: Piper Twin-Engine Low-wing Monoplane; Registration YV-1562P

(This type of aircraft was less than ideal for aerial surveys, being rather fast and with low wings, so observers were forced to sit in the rearmost seats and look backwards).

9.26 a.m.	Take-off, El Centro Airport, Caracas. Required by air traffic regulations to fly over high mountainous section west of Caracas; descended to observation altitude near Puerto Cabello.
9.46	Cliffs and forest-covered hills, with occasional yellow sand beaches, relatively or completely inaccessible; some pebble beaches.
9.48.18	Puerto de Cata. Sandy Bay with development including two highrises.
9.48.50	Longer beach but with town behind.
9.49.20	Another curved beach, isolated. Still forest-covered behind coast. Bahia de Turiamo - some beaches in bay, but small; shoreline mostly rocks. Steep cliffs.
9.53.15	Mangrove inlet with complex border. Isla Larga and Isla Alcatraz: beaches along southern shores, with yachtsmen and vacationers.
9.55.45	Puerto Cabello. Large port city.
9.57.20	Beaches extend outside city, but in many areas fronted by rocks (on seaward side).
9.57.53	Wrecked ship.
9.58.23	Cement factory.
9.58.45	Refinery. Beach starts after refinery.
9.59.25	Power station with riprap-bordered cooling water channels.
10.00	More beach; another refinery.
10.01.16	Boca de Yaracuy (small town at river mouth). Beach front development, bathers. Beach huts until 10.03.21.
10.05.00	Boca de Aroa - beachfront town. Beachfront development, highway. Developed all the way to Tucacas.
10.07.20	Tucacas. Mangroves and small beaches. Flew over Morrocoy National Park - extensive complex of mangrove islands, coral reefs, and small beaches; small groups of people seen on most of the best beaches.
10.11.30	Cliffs with more beach, and extensive coconut groves. Passed beach in front of the Chichiriviche Lagoon.
10.12.42	Chichiriviche - coastal town. Long, empty beach after the town, with coconut plantations.
10.15.30	More beach and coconut plantations. Much driftwood on shore.
10.16.10	Boca de Toyuco (coastal town). Muddy water west of river mouth; much driftwood on beach. Beach flat, continuous, with flat land behind beach. Highway 1/2 mile inland. One scarlet ibis seen.
10.19.40	San Juan de los Cayos (coastal town). Beachfront development. Very wide beach beyond town, with development. Coconut plantation. Two scarlet ibis seen.
10.21.50	Beach with natural vegetation (low scrub forest); eroding cliffs; muddy water.
10.25	Long beach with few huts, and coconut grove.
10.26.10	High cliffs, narrow beach. Water still muddy.
10.27 1/2	Small town. Circled until 10.29. Five scarlet ibis.
10.30.24	Cliffs
10.32	Beach with human footprints.
10.32.40	Huge coconut grove on point.
10.35	Beach with huge coconut grove.
10.36.40	Good beach.
10.38	Good beach, with hill behind; some coconut palms.
10.39	Long beach, high dunes, coconuts, some muddy water.
10.41	More beach, coconuts. Streaks of muddy water in sea.
10.44	Puerto Cumarebo (coastal city with airport). Much beach. Flight becoming turbulent. Cliffs, cactus.
10.54.30	Landed at Coro airport.
11.30.15	Took off from Coro; headed north along Paraguana Peninsula. Flight still rough and turbulent. Long rock-bordered beach along neck of peninsula, much sand, dunes, etc. Highway about 300 yards inland (4-lane with median).
11.37	More beach, without rock frontage; highway becomes single.
11.39	Dry ash lagoons inland. Endless beach - looks good for turtles, but no tracks.
11.40.55	Houses and huts on beach.
11.41.30	More houses and huts; also off-road vehicle tracks.
11.42.50	Adicora (coastal town); beachfront development.
11.44	Town, beach development, lagoon.
11.45.23	Offshore rocks and reef. Town on coast. Whole peninsula visible - all flat except for two isolated peaks of great altitude (2723 feet).
11.47	Huge sand flats, reef-fronted beaches.
11.48	Town. Turbulence getting worse.
11.48.50	Beach gives way to rock.
11.51.40	Wide beach, sandy point. Isolated rocky patches. Tracks of vehicles and people. huts on beach.
12.02	Beach front development.
12.09	Climb, to cross Golfete de Coro; no turtles seen and too turbulent for notes, so continued fast and at high altitude to Maracaibo.

SUMMARY OF FLIGHT LOG: Caracas east to Güiria, west to Isla Margarita

Date: July 24,1981

Pilot: Carlos Palmer

Observers: Peter C.H. Pritchard, Ph.D.
Ledy Cecilia Acosta

Aircraft: Cessna 182 High-wing, four seat monoplane

Take Off Time: La Carlota (Caracas) 8:43 a.m.

Required by flight traffic regulations to fly over mountains east of Caracas directly to Higuerote. Much light cloud at 5,000 feet, scattered higher cloud.

9.03 a.m.	Descending to Higuerote. Long beach extended from point north of Higuerote, with considerable beachfront development.
9.05.30	Wide beach with much driftwood. Sea brown and muddy with effluent from rivers. Inland flat, undeveloped, with scattered green trees near the coast becoming thicker inland.
9.07.10	River mouth; muddy effluent. Beach otherwise continuous.
9.07.45	Small coastal town, low density, with recreational beach. One or two high-rises, scattered development, several beach access roads.
9.08.50	River mouth. Recreational beach, extensive coconut groves
09.50	End of beachfront development. Some young coconuts planted behind beach. Wheel tracks on beach. Swamp inland, with many dead trees.
9.11.25	Town at entrance to lagoon. More beach. Water now less muddy. Some coconut groves. Dune vegetation and open water in alternating parallel strips behind beach, with lagoon full of mangrove islands.
9.13.25	Coconut groves continue, with some beach houses. Many frigate birds and boobies around aircraft.
9.17	Lagoon ends in a series of mangrove islands in long strips. Beach and coconut plantations continue.
9.17	Fresh turtle track seen, possibly green turtle.
9.19	Many frigate birds.
9.19.15	Small town situated on a river mouth.
9.20	River mouth, more coconut groves. Tractor tracks on beach.
9.21	Shrimp boat seen about one mile offshore. Huge coconut grove extends about one mile inland. Plane getting too high- descends from 600 feet to 400 feet.
9.26.10	Playa Pintada airport. Small city, more beach (medium - energy wave action, yellow sand).

9.27.15	Lagoon begins. Narrow beach strip between lagoon and sea, with development and recreation, many swimmers.
9.30	Development ends but coconut grove continues.
9.30.20	Coconut grove ends.
9.30.50	Sandbar at entrance to lagoon, with brown and muddy water.
9.34.30	River mouth, muddy effluent. Next lagoon begins. Beach continues with scattered coconut palms, narrow strip of vegetated dunes between the sea and lagoon. No development; cattle tracks.
9.37.30	Aircraft forced to ascend to higher altitudes over Puerto Piritu. Beach continues uniformly.
9.39	Puerto Piritu. Lagoon mouth with effluent of muddy water. Had to fly still higher as we approached Barcelona (Military Regs).
9.41	Beach continues, with undisturbed bush behind.
9.42	Old beach ridges visible inland from present beach. Beach looks excellent, but we were too high to see in detail.
9.50	Barcelona. Aircraft at 6700 feet. Big port city, with complex islands offshore. Beach ends at Barcelona.
9.53	Hilly islands, with very little beach and what beach does exist covered with huts. Islands look dry and sterile, with sparse vegetation.
9.59	Passing "Isla Caracas" with some small uninhabited crescent beaches. Islands again hilly and arid.
10.02	A few isolated crescent beaches visible before Cumaná.
10.05.30	Flying over tip of Peninsula de Araya. A few beaches around tip but sporadic development and very dry inland. Flight path along southern shore of Peninsula de Araya.
10.07.02	Town with boats and pier. Coast with dry hills; water dark blue and looks deep. Some dark, gravelly beaches - do not look suitable for turtle nesting. Red, eroded hills with extremely sparse vegetation.
10.11.10	Entrance to small inlet or bay. Water still looks dark blue and deep.
10.14	Hills becoming more densely vegetated and fertile. Occasional greyish, gravelly, narrow beaches, occasional coves with boats.
10.17	Beaches getting longer and sand becoming more yellow. Very low energy system, well protected, with no visible waves.
10.17.50	Small fishing village.
10.19	Hills becoming lower, occasional lagoons, shoreline made up of beaches and mangroves.
10.21.30	River mouth, small town, many fishing boats (small, open type).
10.22.44	White sandy point with salt lagoon. Lagoon terminates in mangroves. Brown water with inflowing rivers and muddy marshes.
10.26.30	Overland crossing to Gulf of Paria. Some excellent intact rainforest visible to left.

10.37	Carupano Airport visible several miles due north. Countryside hilly, covered with nice forest.
10.41.10	Flying over El Pilar.
10.44	Dense forest dominated by a species of tall palm. Hills to left.
10.45	Extensive swamps.
10.47	Coastal swamp forests, intact on right side of aircraft (i.e. to south), with brown estuaries. Gulf of Paria - muddy, brown water. Mangrove and hardwood bordering shorelines, intact for miles inland on both sides. Very nice.
10.53.45	Flying along south side of Peninsula de Paria. Signs of coastal erosion - tall mangroves leaning over at shoreline.
10.54	Mud flats. Cloud very low (1,000 feet).
10.56.30	Dramatic line in water between muddy river water and dark, clear, tea colored sea water.
10.58	First small beach seen.
10.59	Several small sandy beaches, several outflows of very muddy water.
11.00	Narrow yellow beach fairly continuous.
11.02	Coastal village.
11.03	Another village. Continuous narrow sandy beach, with swamp forest behind. Port of Güiria visible, with breakwaters to create harbor. Forest surrounds, with tall *Cereus* cacti visible.
11.08	Landed at Güiria. Talked with a one eared informant at airport, who said that there were a lot of turtles around Güiria, and both the Carey and one other species nested in the area around August.
11.24	Take-off from Güiria; went north across peninsula to north coast. Peninsula is thickly covered with rain forest and slopes up to a ridge near the north coast which plunges abruptly into the sea. Thick clouds over the hills. Occasional, totally isolated thatched huts.
11.33	Reach north coast. Small cove beaches with wave action visible even from high altitude. Water deep and clear.
11.34.13	Turtle Track (fresh). Several beaches with small villages behind.
11.36.51	Another Turtle Track.
11.38	Another Track. These appear to be medium-sized fresh nesting tracks, probably greens but possibly hawksbills.
11.38.25	Another Track.
11.39.50	Another Track.
11.39.50	Long beach with huts at point. Hills behind, mainly rock cliffs behind beach.
11.41	Small town, beaches. Still steep hills plunging down to the sea.
11.43	Fresh nest at end of beach.
11.43.30	Village.
11.44.30	Large village, beach, steep rocky islands.
11.46.40	Small village, beach.
11.48	Village and beach, with rocks, many boats (about 30) off shore in tight group, presumably fishing.

11.49	Beach.
11.50.35	Five beaches, two with houses. Cliffs behind.
11.53	Large town, beach in cove.
11.54.30	El Morro de Puerto Santo (town at base of narrow-necked peninsula; lots of boats in harbor in western side of neck.
11.57	Passing Carupano offshore.
11.59	Passing long beach behind Carupano. Some rocky outcrops.
12.02	3-4 very long beaches (1.3 miles each). Deep cove with three beaches. Steep hills with sparse cactus forest.
12.03	Town in cove.
12.05	Turtle Track on end of beach. Two boats at sea operating a large circle net, about 80 yards in diameter.
12.05.42	Town in deep, wide cove.
12.08.30	Several beaches separated by rocks. Passed over Morro de Chacopata (peninsula) and gained height for flight to Isla Margarita. Severe acidic, burning smell developed during this flight, on landing in Margarita it transpired that the battery was dry, burned out, and so hot that the plastic fittings were melting. Peter Pritchard and the other observer abandoned the flight at this point; pilot called for a pickup truck for a boost to start his engine, and returned to Caracas.

SURVIVAL OUTLOOK FOR VENEZUELAN TURTLES

For many decades, the Aves Island green turtle nesting colony was subject to sporadic, perhaps sometimes intensive, poaching of breeding adults and eggs by fishermen and sailors from the Lesser Antilles. This caused an almost certain major decline in the breeding population over the years, though quantification is difficult - especially since the numbers of adult green turtles that reach breeding condition in any given season is variable and impossible to predict, so that "good" and "bad" nesting years may have little bearing on the overall status of the population. The colony was probably headed for extinction had it not been for the establishment of a permanent military base, the "Base Cientifico Naval Simon Bolivar", on Aves Island in early 1979. This construction, built on high pilings on the reef to avoid disturbance to the terrestrial ecosystem, is described and illustrated by Branch (1981); a permanent garrison ensures that poaching of turtles and eggs on the island no longer takes place, and prospects appear to be good. There is still capture of turtles on the feeding grounds, and tag may allow this loss to be quantified, but the intensity is ulikely to be disastrous. Natural constraints on recruitment, such as the ghost crabs on Aves Island that eat hatchling turtles, and periodic removal of the sand on the island by hurricanes, continue but should be tolerable. However, the island is constantly changing in size and shape, and if at any time the sand beaches were to disappear permanently, the turtle colony would doubtless disappear, though what the egg-bearing female turtles would do in an eventuality of that nature is interesting to contemplate.

The turtle colonies that feed partially in Venezuelan waters, the Tortuguero green colony and the Surinam ridley colony, are both currently well protected on their nesting grounds. The ridleys are probably principally threatened by incidental capture by the shrimp trawlers that abound in the waters off the Guianas; whether the decline in numbers on the nesting beach at Eilanti, Surinam, during the last fifteen years is attributable to this, to recruitment failure during the many years of total egg exploitation, or to a shift of the nesting turtles away from the eroding beach at Eilanti to better sites to the west, is still not determined. However, according to the usual index of numbers of females nesting on known grounds, the olive ridley colony in Northern South America is in serious trouble. The Tortuguero green turtle colony is no longer subject to industrial-level exploitation anywhere in its range, as far as known, and it is probable that the subsistence and village-level take from Nicaragua to Guajira (and Paraguana) is tolerable, though one should not be complacent.

Prospects for the hawksbill colonies nesting in Venezuela (principally on the islands) are probably poor. Even in the Los Roques Archipelago, which is a national park, virtually all nests are raided by local resident fishermen unless the conservation crew from FUDENA is able to get them first. Displacement of all residents to areas outside the national park is a major desideratum, but may be difficult to achieve. The situation on the other Venezuelan islands where hawksbills nest remains to be determined, some islands are protected by their isolation, or by the very low numbers of nesting turtles that make them unprofitable to hunt, but wherever there are people there is likely to be egg robbing.

The small nesting colony of green turtles in Estado Sucre appears to be subject to significant predation, but this has yet to be quantified. The area is remote and difficult to patrol, but there are numerous small villages along the north coast of the Peninsula de Paria where the turtles nest, and this juxtaposition is unlikely to be beneficial to the turtles.

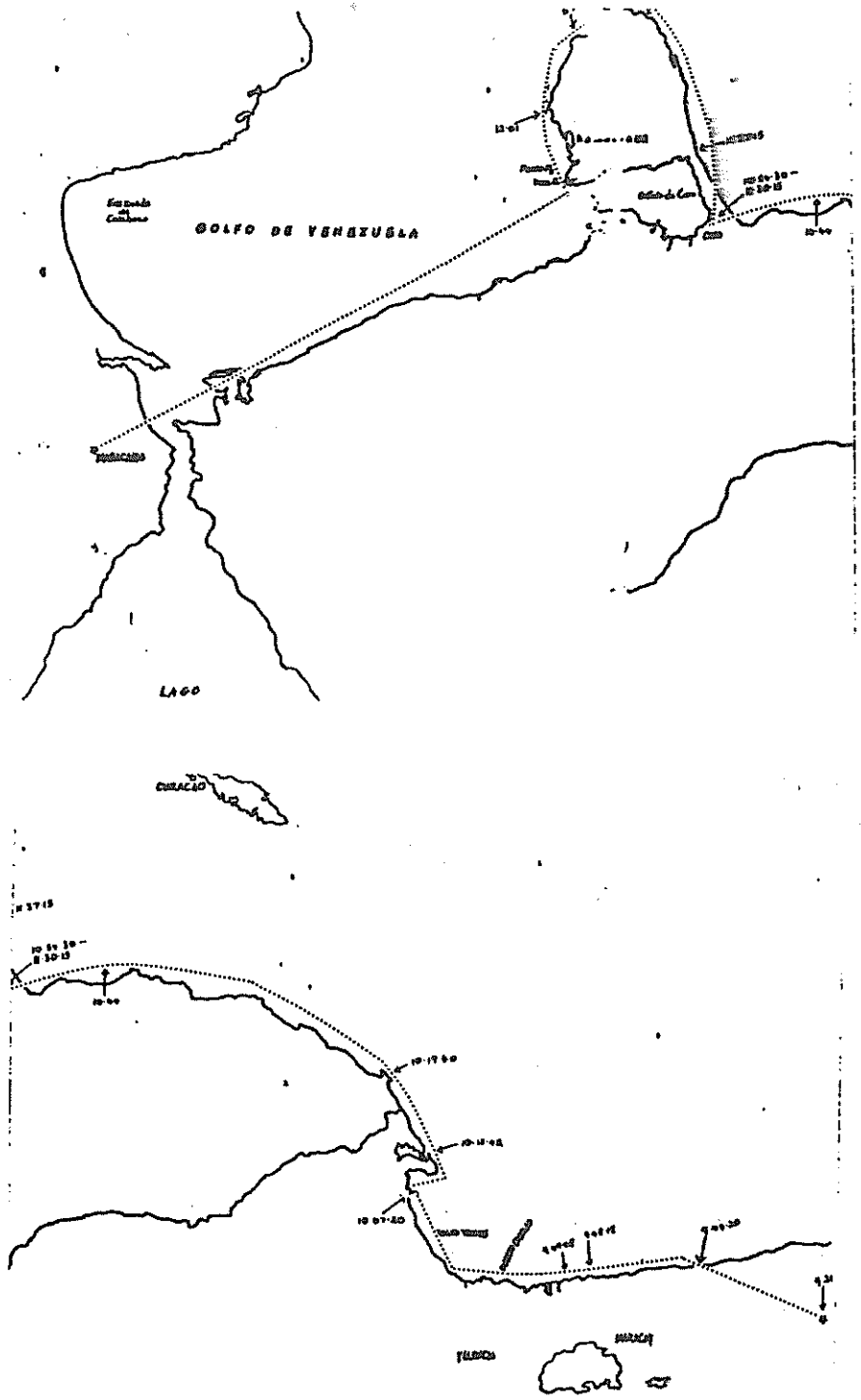
RECOMMENDATIONS FOR FUTURE WORK

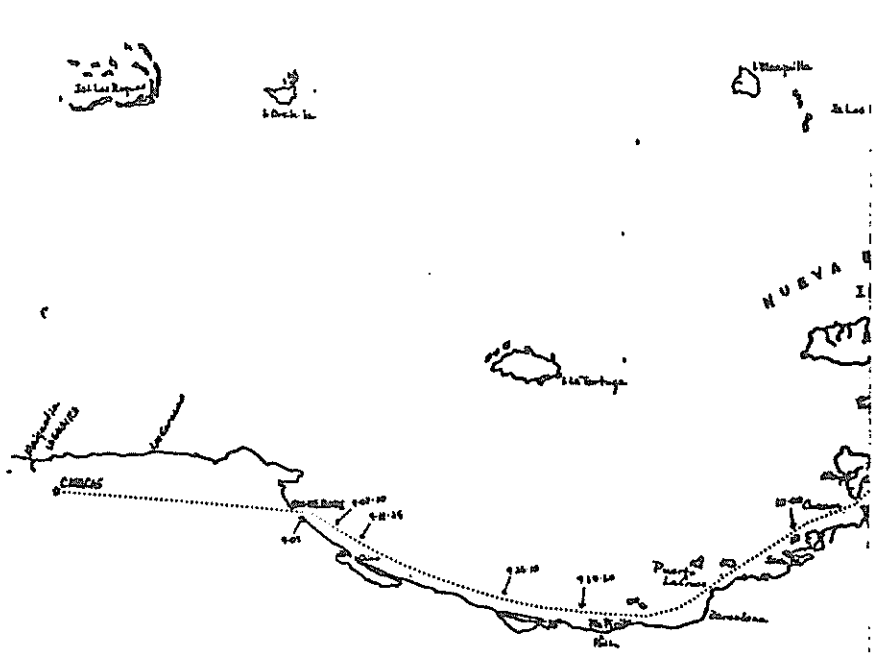
It is unlikely that the central Venezuelan coast will yield significant numbers of nesting sea turtles, and it is therefore not recommended that resources be committed to ongoing aerial surveys there except on an opportunistic basis. However, the Guajira Peninsula remains unsurveyed on either the Venezuelan or Colombian sides, and this should be done, both aerially and on ground, as soon as feasible.

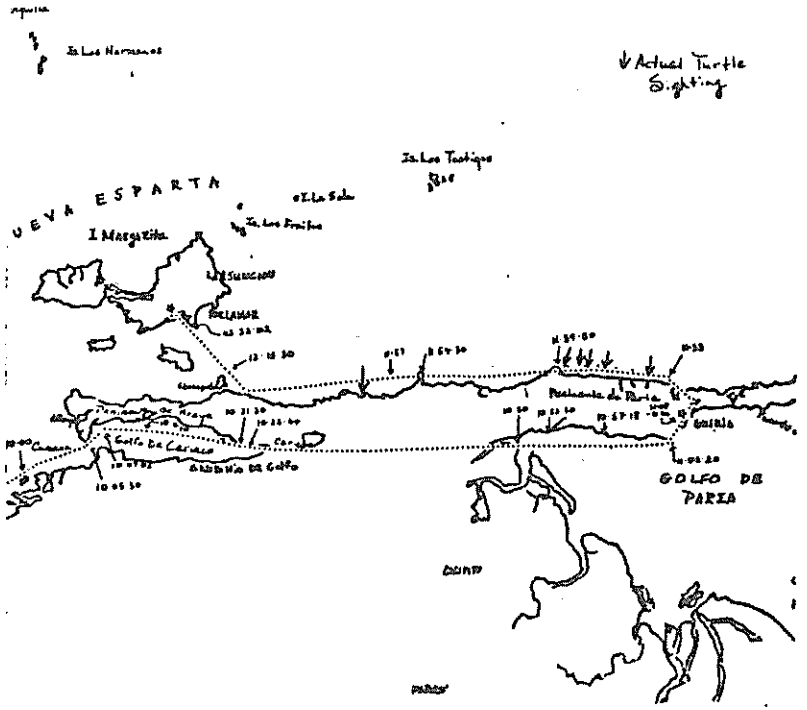
The beaches of the Peninsula de Paria require further investigation. Surveys so far have revealed that both green turtles and hawksbills nest there, and efforts should be made to quantify this. Such studies will need to rely initially upon aerial surveys, since the large number of small beaches on the peninsula are separated from each other by difficult terrain. Aerial identification of prime beaches and interviews with local villagers and fishermen is the recommended procedure.

A high priority is survey of the islands of Blanquilla, La Tortuga, and Orchila. These remote islands have much apparently undisturbed beach and aquatic habitat for sea turtles, and preliminary information suggests that turtles are there.

It is also strongly recommended that the existing study and conservation programs on the islands of Aves and Los Roques be continued and augumented as necessary.







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