UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
SEFC, Panama City Laboratory
3500 Delwood Beach Road
Panama City, FL 32407-7499

May 8, 1985 F/SEC5:LHO:rb

TO: F/M - Carmen J. Blondin

THRU: F/SEC - Richard J. Berry
F/SEC5 - Eugene L. Nakamura

FROM: F/SEC5 - Larry H. Ogren

SUBJ: Trip Report - Foreign Travel to Costa Rica, C.A., March 24 - April 9, 1985, Phase 1[1/]

Purpose

1. To assist Dr. Harold Hirth, University of Utah, principal investigator, obtain information on the reproductive biology and migration of the leatherback sea turtle, Dermochelys coriacea, in the western Caribbean;

2. to conduct aerial surveys of Costa Rica's east coast beaches and determine the nesting effort for the leatherback and nest distribution and density for WATS II sea turtle status report; and

3. to provide technical training for Costa Rican biologists in sea field biology methodology.

Background

The Costa Rican leatherback rookery in Limon Province, Caribbean coast, has not been studied since 1957. Ogren conducted a short-term beach survey late in the season (June) on nesting behavior and obtained other general life history information on incubation period and hatchling behavior (Carr and Ogren, 1959). Hirth requested that I assist him establish a field camp on this coast to tag nesting turtles, and collect eggs for later experiments on neonate orientation and predation studies because of my past experience.

Chronology of Events

- March 24-26. Enroute to Costa Rica. Met with representatives of the Caribbean Conservation Corporation in San Jose and participants of WATS I (Cruz and Koberg). Made arrangements for the hiring of four Costa Ricans for the green sea turtle tagging team in July-September. These students-fishermen will replace the usual North American taggers previously utilized for the main turtle work conducted every season at Tortuguero. Several Costa Ricans and biologists-students from other Latin countries have participated in the past years, but recruitment of locals for this program has not been very successful to date despite efforts to encourage their participation. Koberg and University

1/ No cost travel. Funded by New York Zoological Society grant.

of Costa Rica biologists (Chavez) will attempt to provide the cadre of dedicated personnel that will continue to form the nucleus of the tagging/conservation project personnel at the Caribbean coast station. In addition, Hirth and Ogren will provide technical training for a graduate student of the University of Costa Rica, at the leatherback rookery this season.

- March 27. Flew from San Jose to Tortuguero by way of Limon. Conducted an aerial survey of the beaches to determine the area of highest leatherback nesting density for locating our base of operations. Most of the nesting activity was concentrated north of Parismina, 30 miles north of Limon, and within the boundries of Parque Nacional Tortuguero (see enclosures).

- March 28 - April 8. Established a base camp 15 miles south of Tortuguero at the southern boundary of the national park. The park service graciously provided us with quarters at their station at Jalova. From here, we conducted nightly tagging patrols north into the park 5 km and south to below Parismina. Turtles were measured and tagged while nesting, nests were marked for collection in the morning, and other pertinent field observations were made. In the morning, eggs were collected and reburied at a central location duplicating distance from sea and depth of the natural nest. The beach was surveyed to determine, if possible, total number of nests that were laid the previous night.

- April 8-9. Ogren departed camp at Jalova for Tortuguero and San Jose--and U.S. First phase of work completed; plans were made to return in May to assist in tagging, expand search for re-nesting turtles tagged previously and conduct orientation experiments with the hatchlings. An aerial survey was made on April 8 of the nesting beach. More nesting activity was evident (as we had perceived during our nightly patrols), and it was still concentrated north of Parismina and in the national park. Earlier aerial surveys indicated the nesting activity shifted to the south around Matina later in the season. This feature will be investigated in the next phase on May 15.

Summary

It is fortunate that most of the leatherback nesting is concentrated in the national park. This is a very remote beach with no inhabitants, and far from Limon. We saw no other people on the beach we patrolled, except for Easter weekend when a few Costa Ricans camped, fished, and swam at Jalova. Within the park boundaries, it was apparent to us that all the nests remained undisturbed. However, south of Jalova it was a different situation. Egg collecting is intense. Nueveros, as the egg hunters/collectors are called, go out every night in search of eggs. It is doubtful that any nests can survive this depredation. From Parismina to Limon, coconut farms and small villages are common. The beaches can be reached by "roads" and by the waterway system. The Nueveros travel by foot, horse, mule, and outboard driven cayucos and johnboats. The market remains high. Subsistence demand is small or nonexistent; most eggs are eaten raw for their alledged aphrodisiacal properties[2/]. This same pressure on the rookery was observed 28 years ago, and apparently it has not diminished, but is increasing in the southern portion as the coastal population increases and the beaches become more accessible. Adults are not killed or molested;

2/ Jueveros receive 24 colones per dozen eggs from local buyers. In the larger cities further away from the coast, eggs sell for 10 colones apiece at the cantinas (48 colones/1 dollar U.S.).

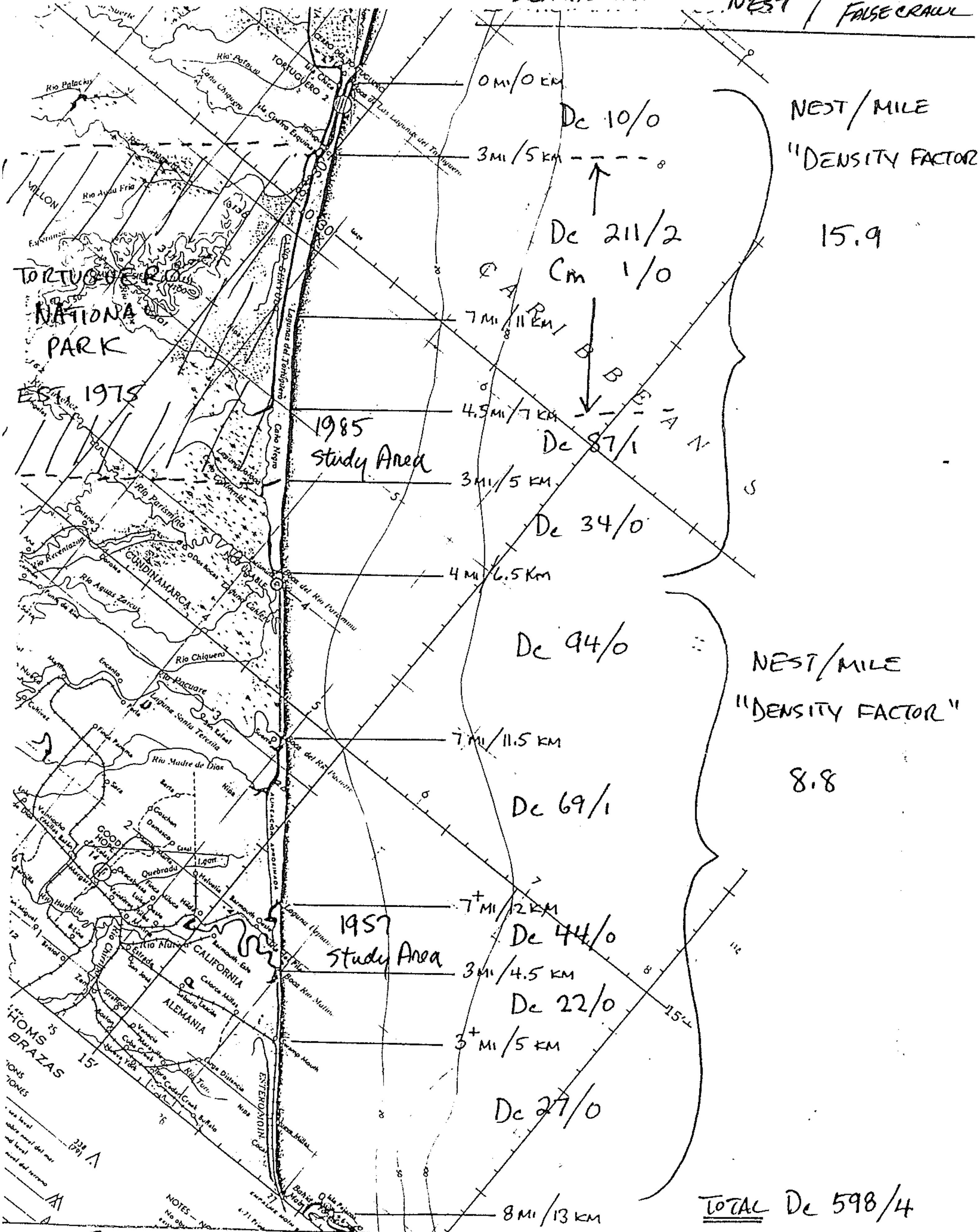
only the meat of the green and hawksbill is eaten. It is very fortunate for the leatherback that the national park affords protection to the early season nesters (if that is the case).

After completion of this study about June 10, a final report will be drafted for future publication by Hirth and Ogren.

Enclosures (2)

cc:
F/SECx3 - Fred Berry

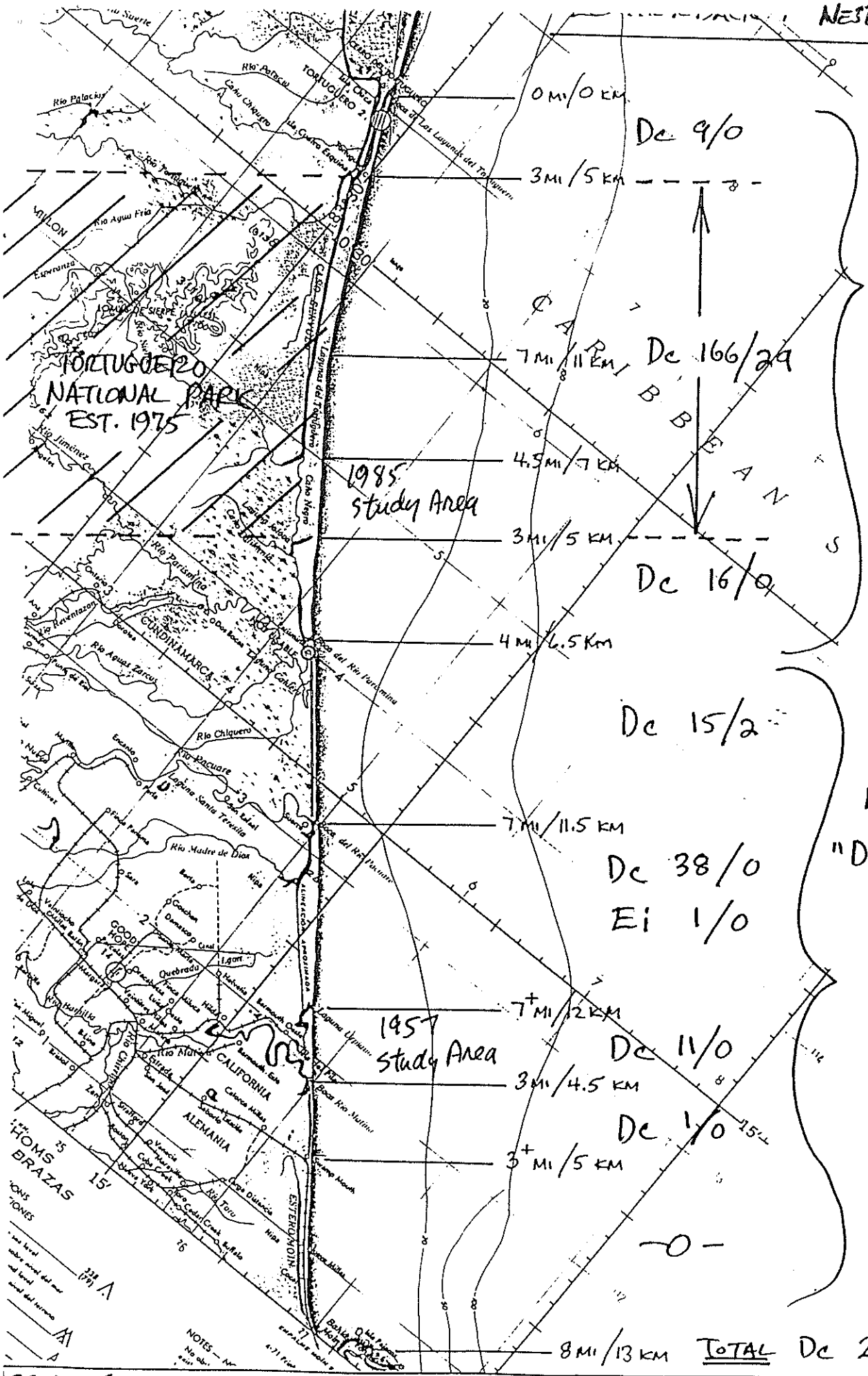
LEATHERBACK NEST / FALSE CRAWL



AERIAL SURVEY: 8 APRIL 1985, 0825–0850 HRS ...

LEAQUERBACK

NEST-TRACK / FALSE CRAW



ERIAL SURVEY: 27 MARCH 1985