TRIP REPORT--RANCHO NUEVO, MEXICO
April 12-19, 1978

Larry H. Ogren, F125

An emergency situation developed April 10, 1978, concerning the joint Mexican-U.S. program to protect the Atlantic ridley sea turtle (Lepidochelys kempi). A report from Mexico, via the U.S. Regional Fisheries Attache for Latin America, stated that ridley sea turtles would be nesting near Rancho Nuevo, Tamaulipas State, very soon. The Mexican-American recovery team had planned to be at the rookery beach the following week, but personnel could not be mobilized quickly enough to change the schedule. The U.S field party was enroute from Florida to Texas to pick up vehicles, camping equipment, and biological supplies.

The NMFS and FWS regional coordinators for the recovery program decided it was necessary to send someone familiar with sea turtles to Mexico immediately. A great deal of effort had gone into the planning of this project and it was essential to monitor the entire breeding season's nesting strength and protect the eggs. This warranted an interim action. Accordingly, Tom Carr of Gainesville, Florida, and myself were asked to go to Rancho Nuevo as soon as possible. Our objective was to patrol the beach and record the number of nesting turtles, and, with the assistance of Mexican marines, transplant the eggs to a secure area. Our duties would end when the permanent field team arrived.

When Tom Carr and I arrived in Mexico City on April 12, we called the U.S. Fisheries Attache, Mr. Rolf Juhl. He relayed the message that a detachment of marines would meet us at Rancho Nuevo. A "norte," or north wind was blowing and Mr. Juhl was informed that the "arribada," or arrival of ridley turtles on the beach, usually coincided with this kind of weather. It was urgent that someone be on the beach now. We flew to Tampico that evening, and the following morning drove to Rancho Nuevo, 278 km north of Tampico. (See enclosure: map and sketch of area.)

No one was at the site of the seasonal turtle camp located at Barra la Coma, 4 km east of Rancho Nuevo. A local cowboy informed us that three employees with the agriculture department spent the previous day and night on the beach. He did not recognize them and he stated that neither the marines nor biologists had come to the camp yet. Most of the camp was destroyed by strong winds last year and had not been rebuilt for the 1978 turtle season. He went on to say that there had been no "arribada" this year, but that some "loras," or ridleys might nest after the "norte" ends in the next few days. He had found only about four turtle nests this year. They nested singly and could have been other species that occasionally occur here (green, loggerhead, or hawksbill).

We inquired about turtles at a small fishing village near Barra del Tordo, 20 km south of Barra la Coma. The local fishermen were familiar with the "lora" turtle and confirmed our finds that none had nested this year. They told us that the "loras" were so plentiful years ago you could walk on turtle backs all the way to Barra la Coma. Jokingly, they said if we wanted any eggs this year we would have to out run them, the cowboys at Rancho Nuevo, and the coyotes and javalinas. However, they were aware that some protection for the "lora" existed, and that every year marines guarded the beach at Rancho Nuevo and that biologists collected the eggs.

Although it was apparent we would have difficulty patrolling 30 km of beach without an off-the-road vehicle, we did reconnoiter sections of the beach from Rancho Nuevo to Barra del Tordo by foot, outboard motor boat, and a VW sedan. We also negotiated the rental of horses at Rancho Nuevo in the event the turtles began to nest.

During the next three days we made numerous contacts with local fishermen, cowboys, and various horsemen patrolling the beach. They were quite candid and kept us informed about the turtle situation. The "norte" had abated and no turtles nested. The interest in the anticipated "arribada" in the fishing village at Barra del Tordo was surprising. People from as far inland as Sota la Marina would arrive by bus and inquire if any "loras" had nested. It was obvious the Rancho Nuevo rookery was vulnerable to increasing poaching pressure from the south end of the contiguous beach via the almost completed highway from Aldama. A myriad of other routes to the rookery beach that by-pass the road to Barra la Coma exist. For example, the Rio San Rafael and interconnecting lagoon all the way to Brazilita, and the numerous cattle-horse trails leading across the intermittently flooded lagoon system to the north of Barra del Tordo. Despite the protection afforded the Rancho Nuevo rookery, the pervasive poaching of turtles and eggs continues.[1] We were assured by the fishermen that the "arribada" would come sometime in the first week of May, as it had in past years.[2] It was said to be the best time.

On April 17 we met the U.S. field party encamped at Barra la Coma. They had arrived the previous night and were accompanied by Dr. Peter Pritchard. They had just returned from surveying the southern section to Barra del Tordo--no turtle sign. We accompanied them in two vehicles to Barra de Vicente. A family on horseback was seen, but no sign of any turtles. Deep cattle tracks were abundant on this section of the beach platform where the turtles usually nest. The impact of cattle being driven on the beach needs to be studied.

After discussing with the field team some of the problems that developed with the beach vehicles, the need to watch their south flank, and advising them of the nearest gasoline station and telephone, both located at Aldama, Tom Carr and I departed. The enthusiasm of this field team, and mobility they had to offer, should be of great help to the Mexican biologists. One cannot stress the importance of covering the entire beach with strategically located patrols if the recovery program is to be successful.

We flew to Mexico City the following day, and on the morning of our departure from Mexico City, April 19, we telephoned our final report to Mr. Rolf Juhl.

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[1]The difficult task to protect the remaining breeding population of the Atlantic ridley has been the responsibility of a few dedicated Mexican biologists. They are to be commended for their efforts to man this remote field station every season over the past decade or more. Their problems are not unique--limited resources and pervasive poaching. The same problems exist in the United States.

[2]The first ridley turtles nested on or about May 2, after we had left. About 200 nested, but 45 nests were lost to poachers and coyotes.

ADDENDA

Other information which might be of some interest follows:

1. We also visited an experimental turtle culture operation located on the beach .5 km north of Barra del Tordo. Two Mexican biologists from the National Fisheries Institute, Division of Aquaculture were caring for about 126 young Atlantic ridley turtles. They had received them last July from the Rancho Nuevo hatchery project. In fact they had obtained 2,000 hatchlings at the time. These were the survivors.

They said they had problems with bacterial infections and lacked a sufficient volume of salt water to circulate through the 28 small tanks. A gasoline motor/pump supplied water to the system from the surf zone. However, the pump had broken down and water had to be carried by hand in buckets.

They were feeding the survivors ground up filet of fish (mullet, ladyfish, and sheepshead). We did not determine if a vitamin and mineral supplement was provided. Most of the young turtles had lesions and what appeared to be fungal and/or bacterial infections. Some individuals had large sections of their carapace eroded away. The biologists were aware of this problem but apparently were not successful in controlling the disease.

It was not clear what their objective was in raising these turtles in captivity.[1] They did not mention they were "head starting" them, but implied that they would continue to rear them in captivity and to "farm" them. Mortalities were high, however, with a survival rate of only 6% after 8-9 months.

2. The small fishery located at Barra del Tordo was primarily directed towards the harvesting five marine or estuarine species or species groups: (1) oysters, (2) red snapper, (3) shark, (4) mixed-estuarine food fishes (croakers, drums, mojarras, and snook), and (5) bait for the snapper-shark fishery (herrings, ladyfish, and other non-food estuarine species).

The oyster fishery utilized both tongs and hand collecting methods; the latter method predominated, especially in the very shoal lagoonal flats across the river. Narrow, flatbottomed wooden 15-18' skiffs reminiscent of pirogues, but with square sterns, were used by the oystermen. A long pole, paddle shaped at one end, was used to propel the craft. Some of the catch was consumed locally and some trucked out to nearby towns.

The red snapper (and shark) fishery was the largest of the five. Approximately 35-40 fishing units operated out of the area. Each unit consisted of two fishermen, an outboard motor boat, and two or more bottom long lines of

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[1]The Rancho Nuevo project is basically a rescue operation. The eggs are transplanted in a secure, fenced in beach area at Barra la Coma. After the eggs hatch in about two months, the young are allowed to crawl to the sea. This is an accepted management practice if most of the natural nests laid that season will be destroyed by man or natural agencies.

100 hooks each. The boats were about 22-25' long and 5-6' wide with an abruptly rising sheer to the bows. The semi-v hull appeared to be very seaworthy. Most were extremely well constructed; heavily ribbed, carvel planked, flaring broadly in the bows. A fiberglass replica of this wooden model was also in use. The fiberglass skiffs are built in Mexico City. The boats were powered by 40-48 HP Yamaha outboards; a few 40 HP Evinrudes were present. The target species was red snapper, Lutjanus campechanus, and secondarily, shark (mostly Carcharhinus and Sphyrna spp.). The small, dinner plate size snappers are called "huachinango." They are very much in demand by the restaurants in Tampico and Mexico City. The larger red snappers were simply called "pargo," the general Spanish word for snapper. Two species of grouper were caught; they appeared to be the gag, Mycteroperca microlepis, and the scamp, M. phenax. The grouper were not sold but consumed by the fishermen. The sharks were gutted, headed, and finned; the carcass is marketed in the larger cities i.e., Mexico City. The fins are sold for soup. The boats depart between 7-8 a.m. and return around 5-7 p.m. They carry a block of ice each for the days catch. After negotiating a very narrow shoal pass, less than 50' wide, they proceed offshore to the 100 m contour where rough bottom occurs. Sometimes they run up the coast 20 km, then offshore 10 km to the snapper banks. They frequently encounter turtles certain times of the year and attempt to catch them by hand. Sometimes they are successful. They probably deploy the bottom long line, despite frequent entanglements with reefs and loss of gear, because they lack depth recorders to precisely locate rough bottom and fish. At least some of the hooks will be fishing on a reef. The "huachinango" were not biting well when we were there--too early in the season they said. However, several boats landed 2 boxes (50 kg each) of snappers each time they went out. The fishermen sell their snapper catch to the fish camp owner/distributor for 18 peso/kilo. In addition to this "wage," the fishermen are provided with a boat, gear, ice, bait, fuel, and food and lodging on the beach. The two major limiting factors of this fishery are weather and bait; otherwise the boats run out everyday they can. The motors were new and crated spare motors were in storage. Mechanical breakdown did not appear to be a problem.

The bait and estuarine food fish fishery was operated from the small wooden "pirogues" and the collecting gear was monofilament gill nets and cast nets. We observed a failure in this fishery one night that resulted in none of the snapper boats going to sea the next day because of lack of bait.

Conversation with Ignacio, proprietor of Hotel and Snapper Fishing Camp, Barra del Tordo at southern end of the arribada beach, April 1978:

Question - What turtles occur on this beach?

Answer - The one that has a soft shell, gets big, I don't know its name; one with green fat; one with a pretty shell, it's small; the lora, the one that comes in the arribada - it's my favorite to eat, and the eggs are the most delicious.

Q - When do they come?

A - The arribada (Lora) starts during these days, as soon as the norte comes and starts to blow steadily.

Ignacio (cont.)

I came here 18 years ago, and when the arribada happened, I could walk from turtle back to turtle back all the way to La Coma. You wouldn't believe it.

Q - And the others, when do they come?

A - Oh, May through July.

Q - Do the snapper fishermen see turtles out in the sea in front of the beach when the arribada is here?

A - Well, they don't go out when the norte is blowing.

Ignacia (cont.)

But when the winds go down, yes they see plenty, so many they can catch them by hand and do. How delicious!

Q - Can we go up that lagoon over there by motor boat and look for those pretty red herons, and maybe pass over to the beach for a swim?

A - (He asked the boatman what the tide was doing, and was told it would be up at 3 p.m.)
Sure, at 3 this afternoon we'll take you up to do whatever you want.

Q - How far can we go?

A - Oh, about 4 km more or less, but if the norte comes the water will rise in the river and lagoon and we will take the big boat all the way to Brazilita and you can get out on to the beach anywhere along the way wherever you want.

Q - Will there be turtles then, and can we look at one?

A - Sure, man, the easiest way to get lots of turtles is to take the big snapper boat up the lagoon and land behind the beach and just fill the boat with Loras and eggs; and you can see them and eat them or take pictures or do whatever you like.

(One of the snapper fishermen joked: "It will be a race to beat the coyotes and cowboys to the turtles.")

Ignacio agreed, and said, "Yes man, and all those jodidos that come by bus, and yes, the coyotes and javalinas, man!"

Q - Senor, that sure is a nice highway that comes down here, why its better than the one from Tampico to Aldama! Isn't that amazing?

A - Oh listen man, when I came here 18 years ago there were only 3 houses, fisherman you know, and the road from Aldama. God save us, it took 6 to 7 hours in a 4-wheel drive, and in the wet season, well, you just stayed where you were until it passed.

Q - Well, what happened?

A - The governor, he comes here and he likes it a lot. He likes to bring his family and friends and fish and hunt or just play on the beach and have parties. He used to stay under this little rancho you're sitting under at this moment. He loves to eat snapper, and turtles and their eggs, and he was the one who made possible this hotel, which we've just finished this week, and the road that comes here and the boats, all there is! Oh that man is good, and he's a very close friend of mine you know.

Q - Will he come soon, perhaps to see this arribada?

A - Oh sure, man! When the arribada happens we always have fresh turtle meat and eggs for him. He likes that the best that there is.

Ignacio's discussion with three male bus arrivals from Soto La Marina Saturday morning, apparently friends, laborer class:

First man - Ay Don Ignacio how goes everything with you.

Second and Third men - Salude Don Ignacio

Ignacio - Oh, welcome senores. How are you and your lovely families?

First man - Fine, fine, everything's fine at home. And the turtles? And the arribada? Are we here in time?

Ignacio - They haven't come, nothing came yet.

Second man - And the norte?

Ignacio - Well it came but not one lora, not one! But there will be another soon and with it the turtles! Come, let's get a beer ....

(They disappeared into the kitchen).

Conversation with Luis Gonzalez at Rancho Nuevo

Q - Have any turtles come to the beach for this year's arribada?

A - No, as of yet there has been no arribada; but four turtles have come up between La Coma and Tordo, since the first week in March.

Q - What kind do you think they were?

A - I'm not sure, maybe greens, but I think some people around these parts got the eggs, all of them, right away.

Q - They tell me someone protects the turtles that come to this beach. Do you know about that?

A - Yes, there are marines and some biologists who stay at the encampment down there at the beach ... La Coma ... did you see? But they haven't come yet, although there were three inspectors there last weekend. From Tampico I think. They only stayed two days.

Conversation with Juan "Pescador" snapper fishermen at Barra del Tordo

Q - After the norte starts to go down do you ever go out in your boat?

A - Sure, I've been out there at all times of the norte, from start to finish.

A second snapper fisherman - Sure, like last week we were out when the norte came for nearly nine hours. You couldn't see land even when we were 500 meters out. The air looked white.

Q - Do you ever see the arribada turtles during those times?

A - Both fishermen said "Sure." Juan continued, "Sometimes you see a lot."

Q - Can you catch them?

A - Yes, we grab them by the flipper right out of the water - lots of them!

The rest of fishermen agreed, and teased Juan about the time he once tried to grab one that pulled him right out of the boat.

Q - How far up this river (San Rafael). can one get in a motor boat?

A - Oh way up there, I guess about 30 kilometers maybe 40.

Ignacio and a bait fisherman agreed and said "Oh it's probably farther than that."

Conversation with two horsemen on beach about 3 kms north of Tordo, headed toward Rancho Nuevo:

Q - Have you seen any turtles or nests?

A - No nests, but we just saw a turtle in the surf about 100 mtr. back there (Pointed toward Tordo)

Q - What kind was it?

A - Lora, I think; she wasn't up long; she wanted to come out to put her eggs on the beach.

Q - Where did you come from?

A - Rancho Nuevo. We're just taking a little walk down to the Bar. (Tordo)

Q - How long does it take by horse?

A - About three hours each way, more or less. (points to a stack of fiberglass bags on one of the horses). We found all these bags washed up on the beach, from a shipwreck I guess, and we're picking them up on the way back. So it will take us a lot longer to get home.

Conversation with an old man from Rancho Nuevo, whom we were giving a ride to Aldama, as we passed over the San Rafael river on highway 180:

Q - This is the San Rafael River isn't it?

A - Yes it is.

Q - Can you pass on it by boat?

A - Yes, I did it once. I went all the way to Tordo when, years ago, it was better than the road there. It's a fine river.

Conversation with aquaculture personnel at turtle (ridley) nursery camp some 500 meters north of Barra del Tordo:

Q - What kind of turtles are these?

A - Lora, caguama, the turtle that comes with the arribada.

Q - How old are they?

A - Eight months.

Q - Where did you get them?

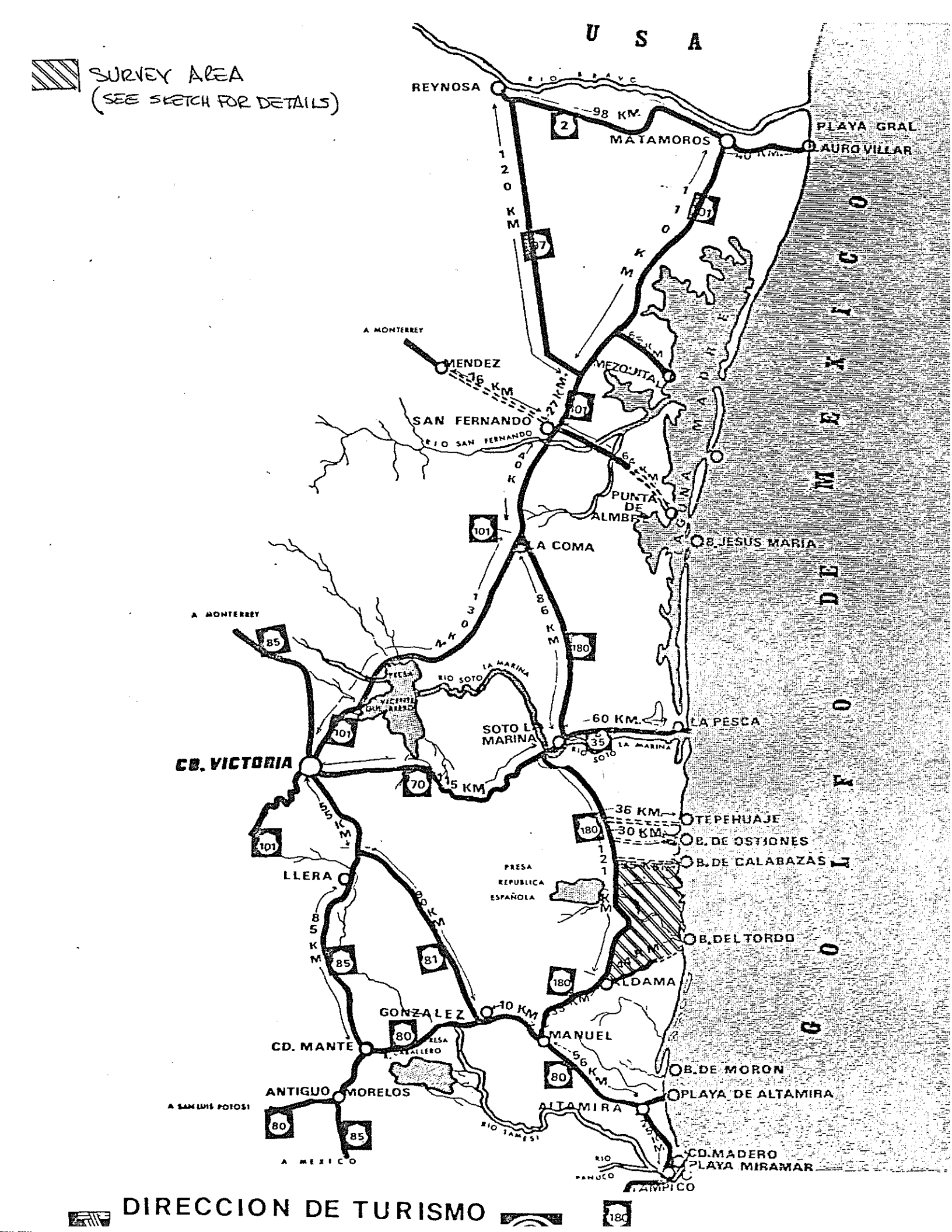
A - From the turtle camp at La Coma. They work with us out of an office in Tampico. They raise them to let go in the sea and we are more like a farm, you know.

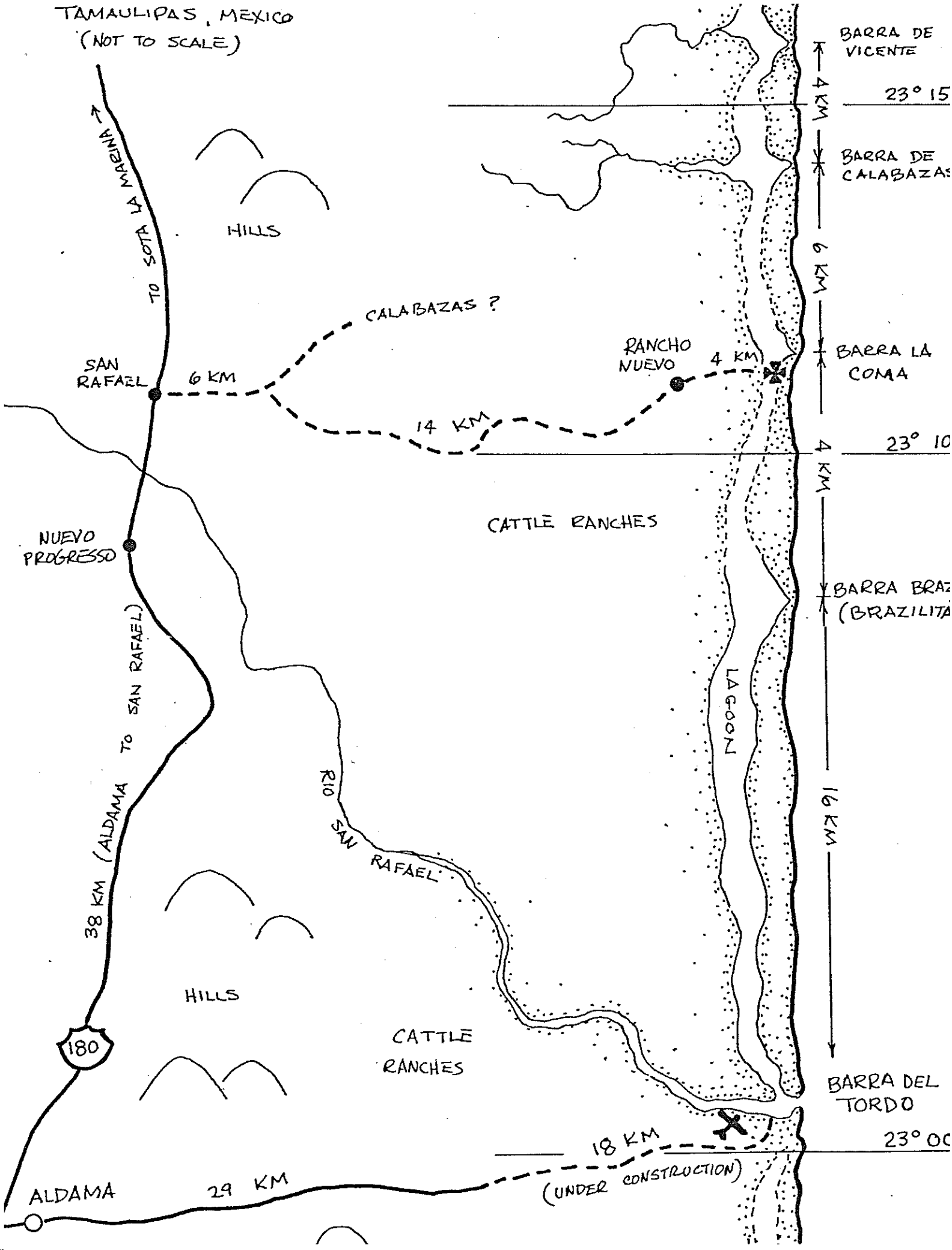
Q - How many are there in these tanks?

A - About 150. We had 2000 eight months ago. All the rest died.

Q - Why do they die?

A - Oh some kind of bacteria, and chemical imbalance, I guess. If we circulated the water more like they do at our other farms I think they would live.


SURVEY AREA
(SEE SKETCH FOR DETAILS)
U S A
REYNOSA
RIO BRAVO
98 KM.
2
MATAMOROS
PLAYA GRAL
AURO VILLAR
40 KM.
120 KM
97
101
110 KM
A MONTERREY
MENDEZ
16 KM
22 KM.
MEZQUITAL
SAN FERNANDO
RIO SAN FERNANDO
60 KM
SIERRA MADRE ORIENTAL
PUNTA DE ALMEJA
LA COMA
B. JESUS MARIA
A MONTERREY
85
113 KM
86 KM
180
RIO SOTO LA MARINA
PRESA VICENTE GUERRERO
SOTO LA MARINA
60 KM.
LA PESCA
35
CD. VICTORIA
70
115 KM
36 KM.
TEPEHUAJE
30 KM.
B. DE OSTIONES
B. DE CALABAZAS
LLERA
PRESA REPUBLICA ESPAÑOLA
121 KM
B. DEL TORDO
85 KM
81
ALDAMA
GONZALEZ
10 KM
MANUEL
CD. MANTE
PRESA EL CABALLERO
56 KM
B. DE MORON
ANTIGUO MORELOS
PLAYA DE ALTAMIRA
A SAN LUIS POTOSI
ALTAMIRA
RIO TAMESI
A MEXICO
RIO PANUCO
CD. MADERO
PLAYA MIRAMAR
TAMPICO
GOLFO DE MEXICO
DIRECCION DE TURISMO


TAMAULIPAS, MEXICO
(NOT TO SCALE)
TO SOTA LA MARINA
HILLS
CALABAZAS ?
SAN RAFAEL
6 KM
RANCHO NUEVO
4 KM
14 KM
NUEVO PROGRESSO
CATTLE RANCHES
38 KM (ALDAMA TO SAN RAFAEL)
RIO SAN RAFAEL
LAGOON
HILLS
180
CATTLE RANCHES
ALDAMA
29 KM
18 KM
(UNDER CONSTRUCTION)
BARRA DE VICENTE
23° 15
4 KM
BARRA DE CALABAZAS
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BARRA LA COMA
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BARRA BRAZ
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16 KM
BARRA DEL TORDO
23° 00

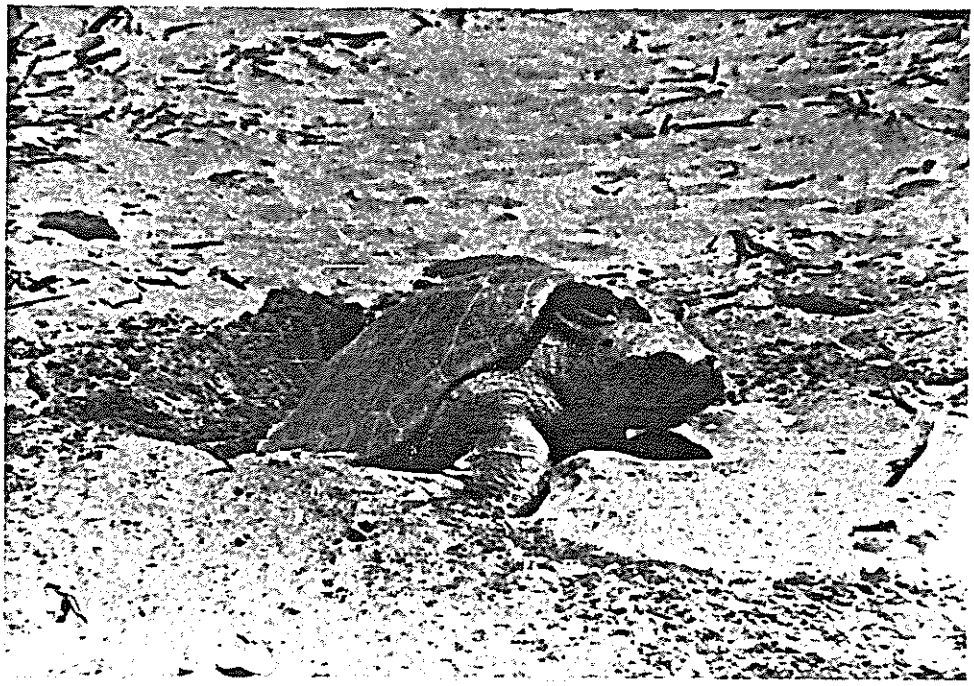

Figure 1. An Atlantic ridley nesting on the beach near Barra la Coma. The local name for this species is "lora," or parrot. As few as 200 or 300 nested here during the last two seasons. (Photo by Peter Pritchard)

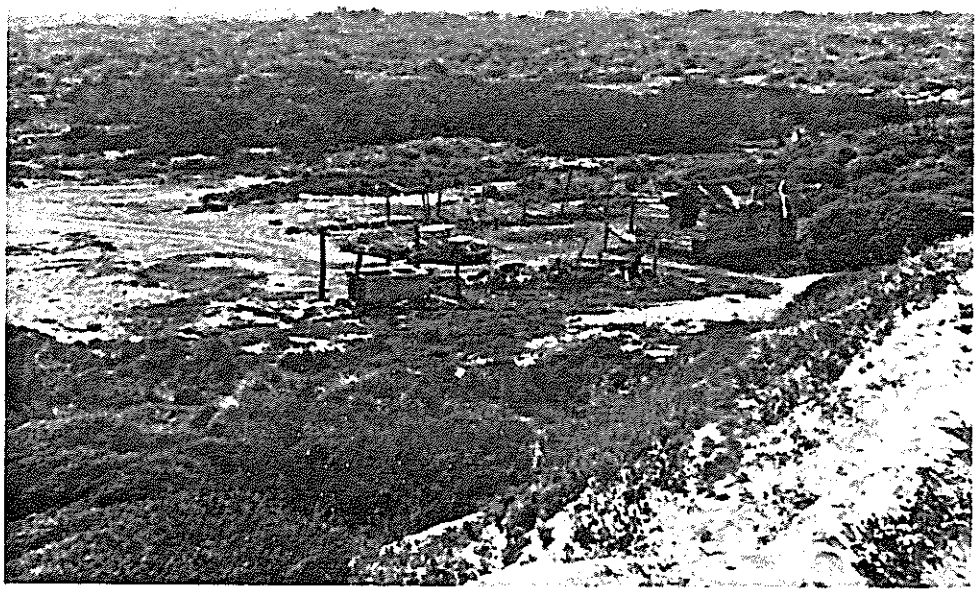

Figure 2. The seasonal turtle campsite at Barra la Coma, 4 km east of Rancho Nuevo.

Figure 3. The rookery beach at Barra la Coma. For security reasons and protection from predators, nests are transplanted inside the posted area--fencing material will be strung when the camp is rebuilt.

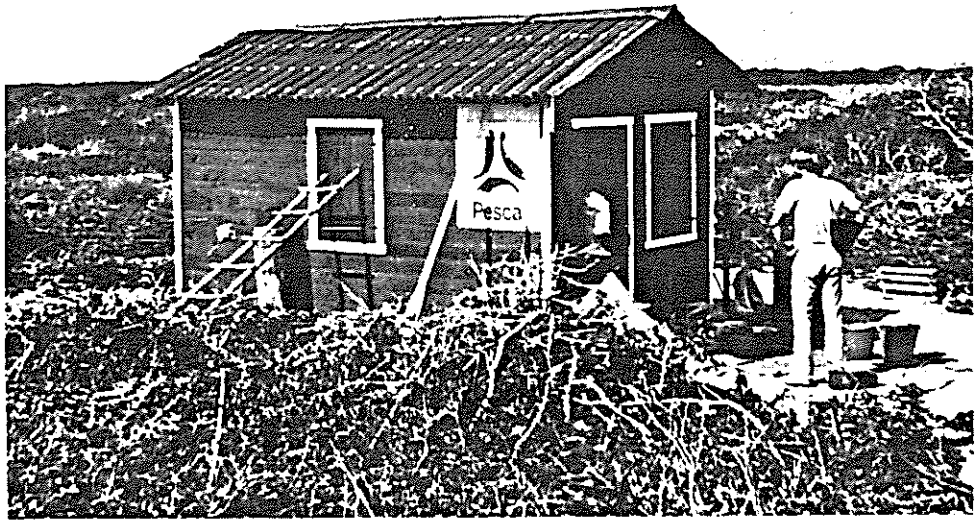

Figure 4. The Atlantic ridley aquaculture project near Barra del Tordo. The building is the biologists' quarters.

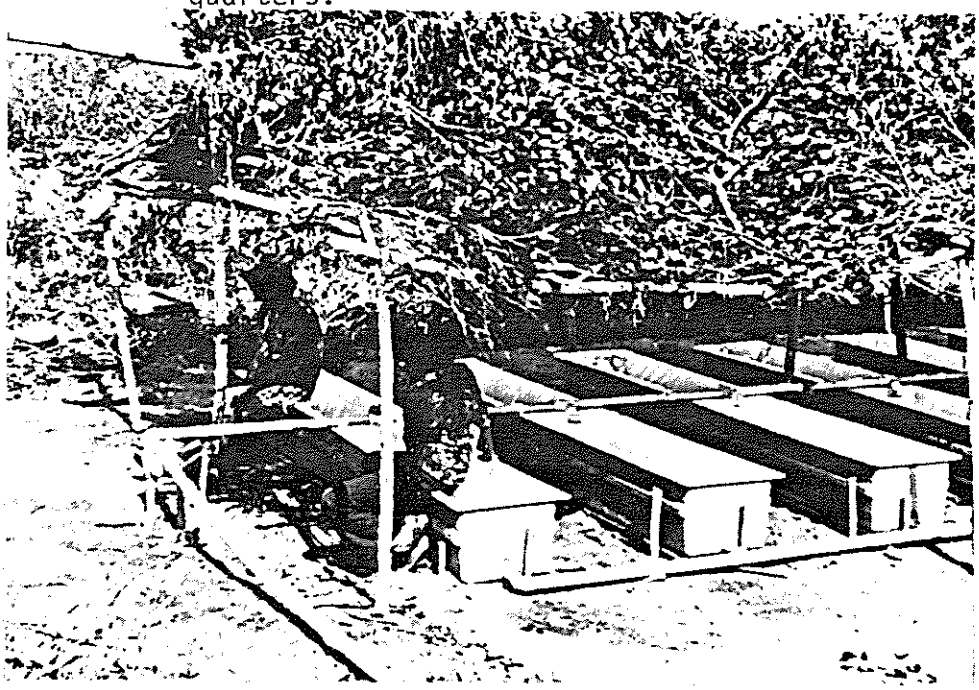

Figure 5. Fiberglass holding tanks for rearing hatchling turtles. Sea water is pumped from the surf zone through plastic pipes.

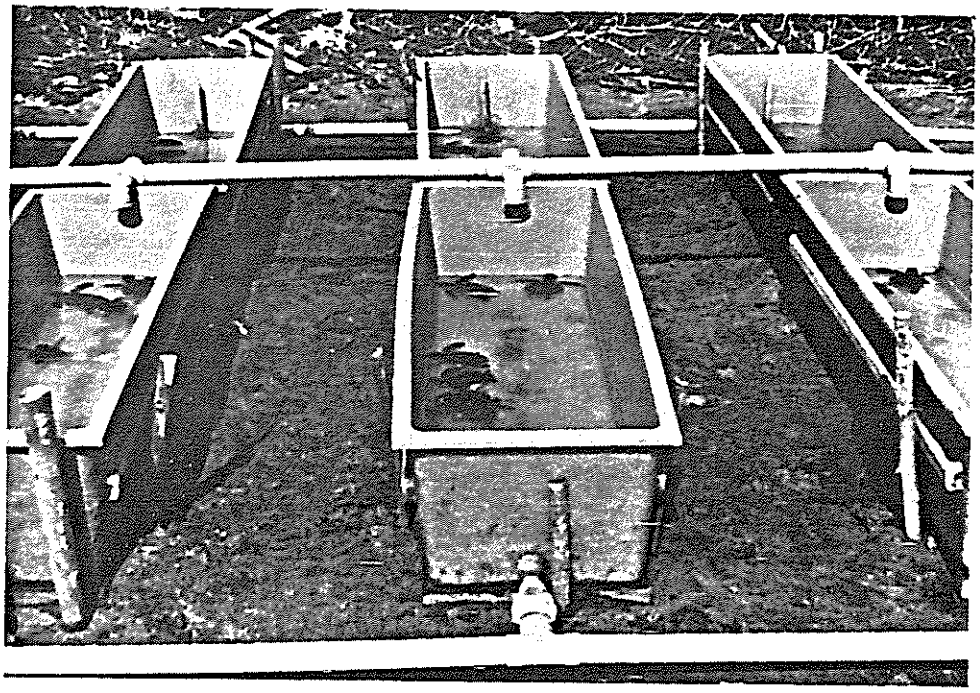

Figure 6. Survivors from the original stock of 2,000 neonate turtles received from the Rancho Nuevo hatchery in July, 1977.

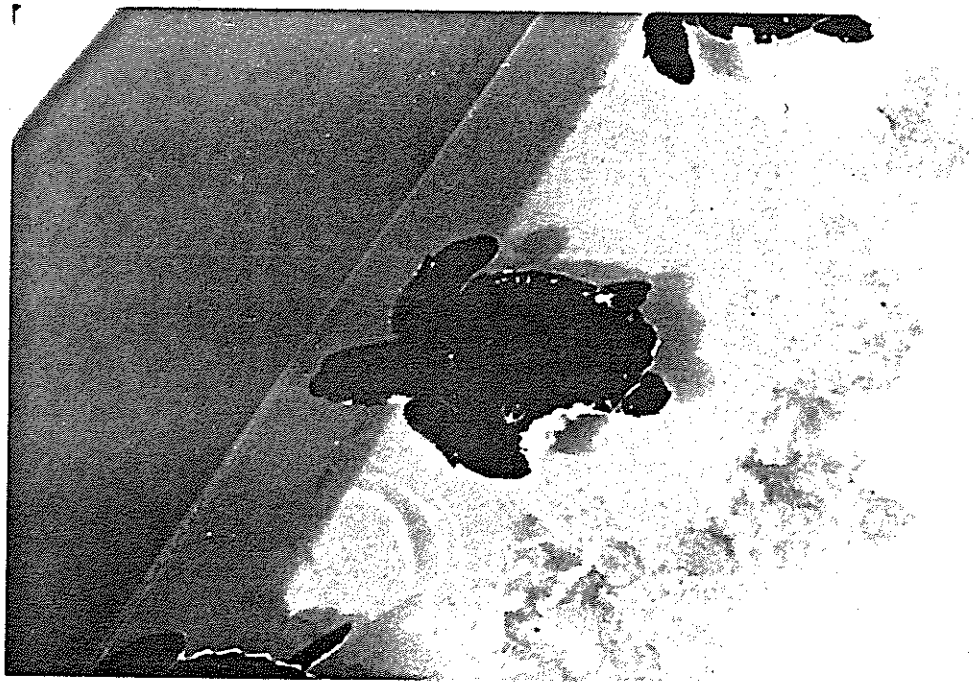

Figure 7. Bacterial and/or fungal infections were believed to have caused the heavy mortality.

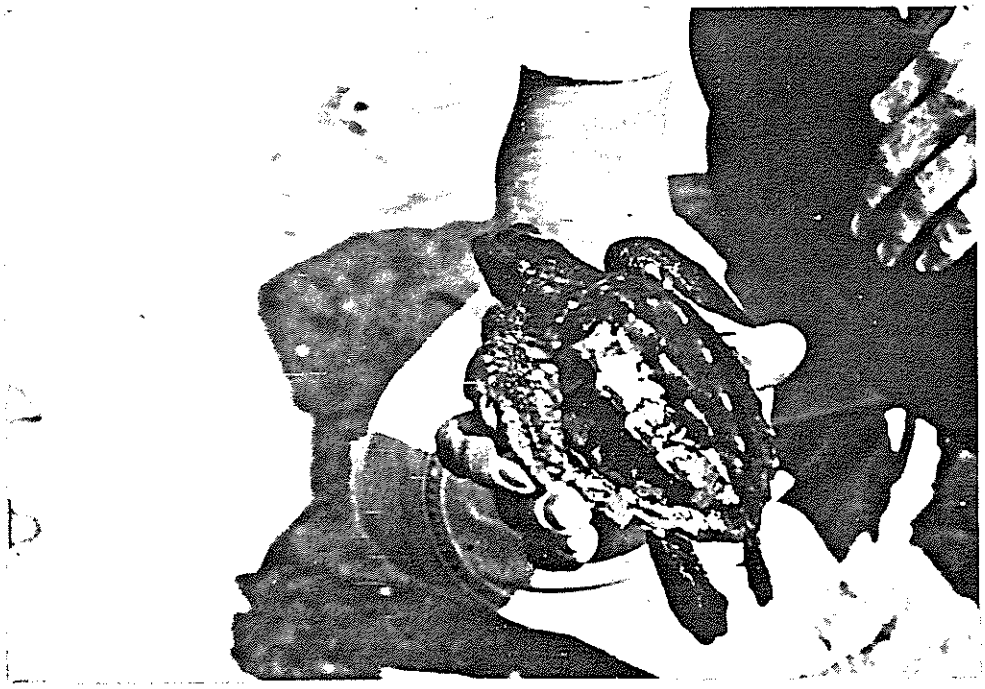

Figure 8. Typical color pattern of juvenile ridley turtles. They retain this dark coloration until they are about 12-15 inches long (shell length).

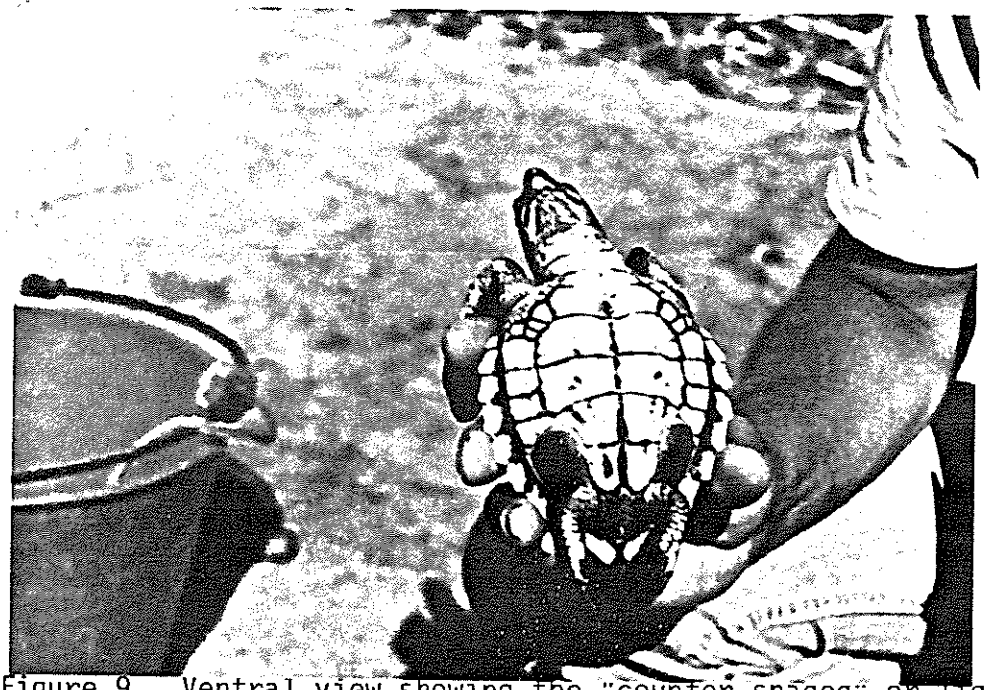

Figure 9. Ventral view showing the "counter-shaded" or light colored undersurfaces--a possible adaption to their epipelagic habits. However, a few individuals were observed to have a darkly pigmented plastron (bottom shell).

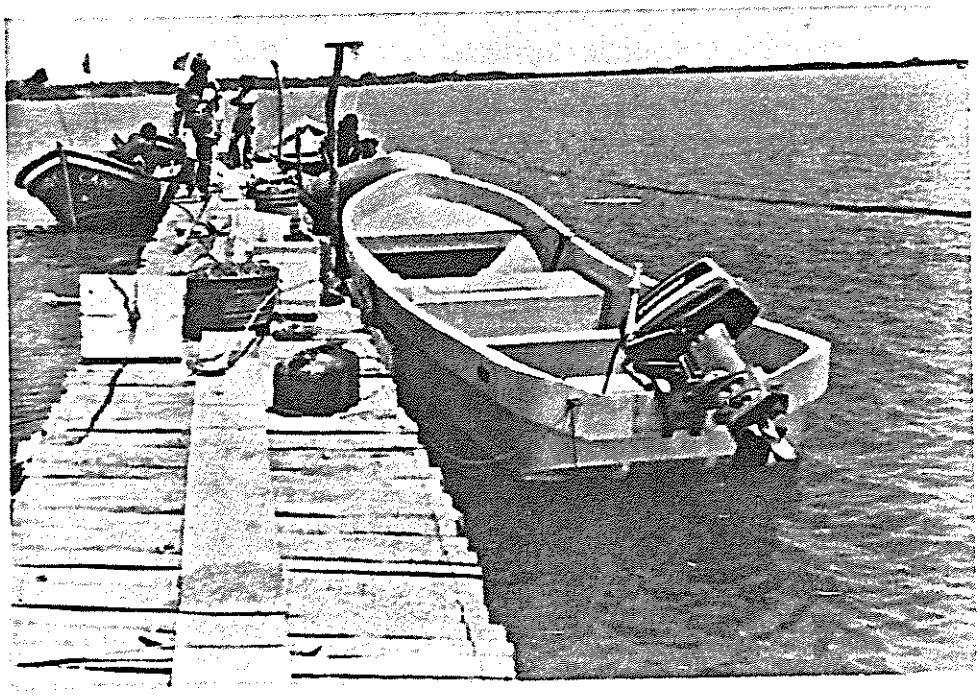

Figure 10. Outboard motorboats utilized by the snapper/shark fishermen of Barra del Tordo. The brightly painted wooden skiffs are being replaced by these fiberglass models.

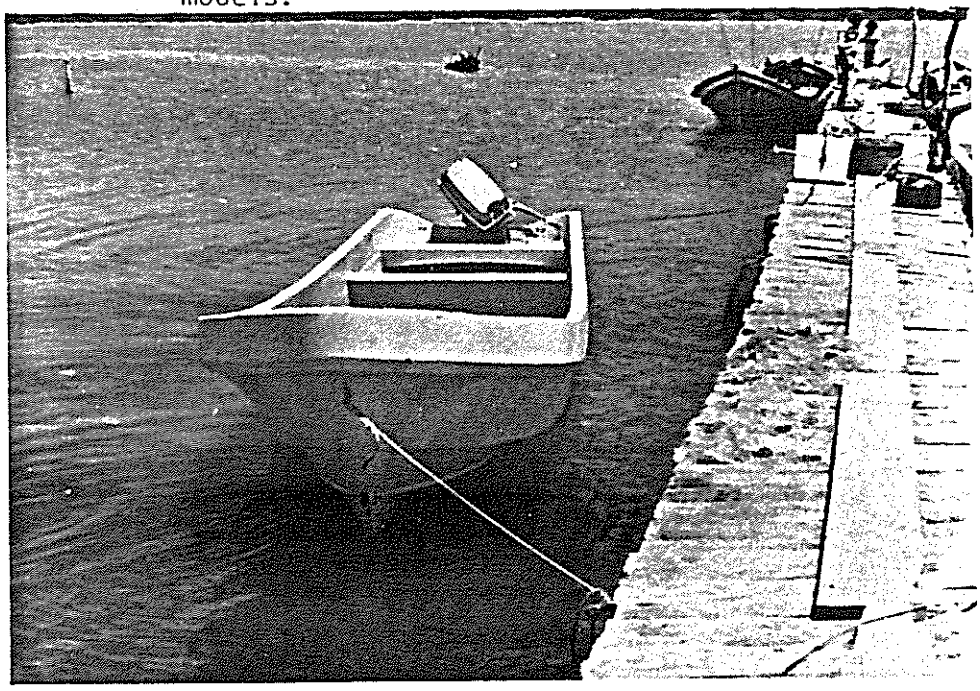

Figure 11. Front view of the popular fiberglass model.

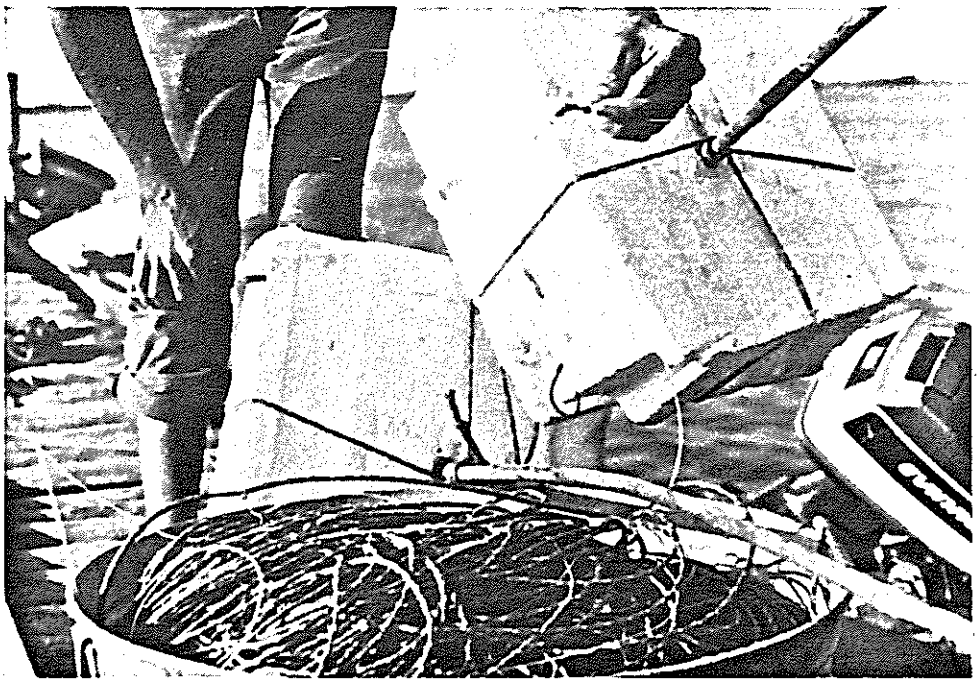

Figure 12. Bottom long line used in snapper fishery. One hundred "circle" hooks are attached at intervals by a combination monofilament-wire gangen. Two small weighted grapple hooks are used to the hold line on the bottom...both ends of which are buoyed.

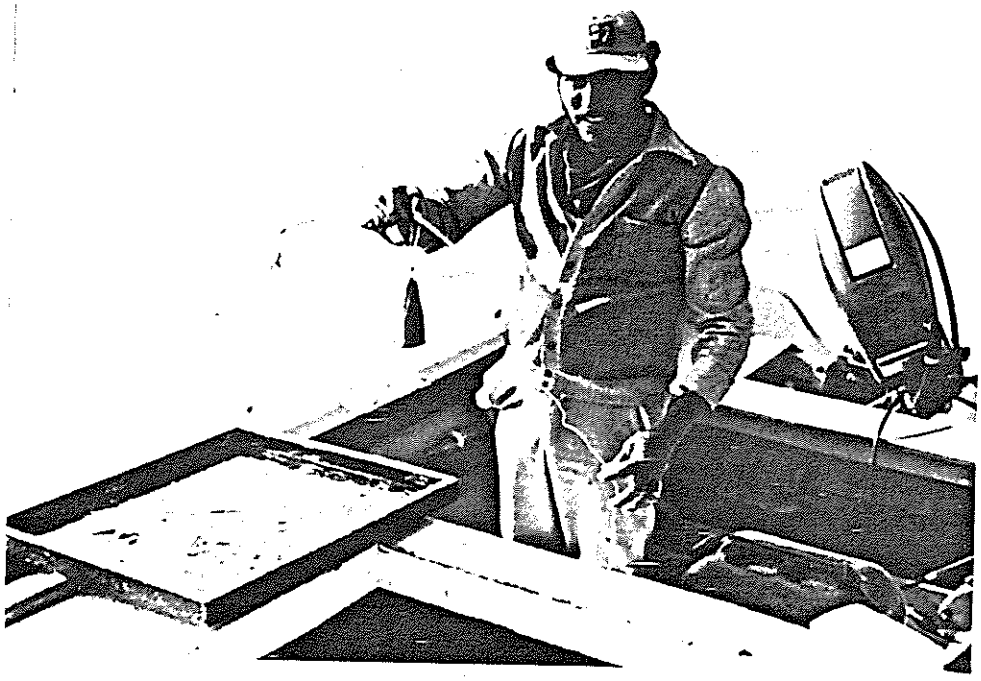

Figure 13. The double-hook spreader rig is used to locate the fish on the reef. It may also be fished while the long line is soaking.

Figure 14. A box of "huachinango" or small red snapper, Lutjanus campechanus.

Figure 15. A "pargo" or large red snapper. Not as much in demand as the smaller sized individuals.