NATIONAL MARINE FISHERIES SERVICE

UNITED STATES DEPARTMENT OF COMMERCE

2000 PROGRESS REPORT TO THE NATIONAL MARINE FISHERIES SERVICE IN PARTIAL FULFILLMENT TO GRANT # NA96FE0306 FOR THE MEXICO / UNITED STATES OF AMERICA POPULATION RESTORATION PROJECT FOR THE KEMP´S RIDLEY SEA TURTLE

GLADYS PORTER ZOO

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Presented by:
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INTRODUCTION

Over the last twenty-one years, the Mexican and U.S. biologists working with the Kemp's ridley sea turtle have learned a lot about the biology of nesting sea turtles. When the project began, it basically was at ground zero. We now know that although some turtles nest in subsequent seasons, the majority of them nest every other year. We know that each female nests on average from 2.6 to three times per female per season, laying a clutch of one hundred or so eggs which require from forty-two to sixty-two days incubation depending on the temperatures.

We have now verified turtles which were originally tagged on the Eastern seaboard of the U.S. as having returned to Mexico to lay their eggs. We have recorded experimentally head-started turtles nesting on Padre Island National Seashore, USA, and the same turtles at Rancho Nuevo in Mexico during the same nesting season. Apparently, the experimentally imprinted head-started turtles were able to navigate to Padre island National Seashore and were also able to socially facilitate with wild ridleys returning to the Tamaulipas coastline's historic nesting grounds.

Normally, the Kemp's ridley or "tortuga lora", as it's called in Spanish, begins nesting around the second week in April, but starting in 1998, they began nesting in March. Mild winters with unseasonably warm water temperatures may facilitate this reproductive readiness and subsequent egg laying by the turtles.

Kemp's ridley turtles will return to nearly the same spot on the beach where they nested in previous seasons, however, if they are disturbed, they possess the behavioral "plasticity" to move several kilometers up or down the beach to a new nest site.

This season, the first Kemp's ridley nests were recorded on March 17 in the Rancho Nuevo and Tepehuajes Field Stations.

In past years we were unaware that a few “loras” will and do nest at night even though the norm for this species is diurnal (or daytime) nesting. Our first beach patrol or “recorrido” as it is called in Spanish, began at 8:00 am C.S.T. for years and years and that was early enough to find the first nesting turtles of the day. Two years ago, our first beach patrol began encountering crawls (tracks) and nests which were apparently from late in the afternoon of the previous day or perhaps from the night time or early morning hours. The first “recorrido” kept being moved to an earlier and earlier hour and eventually turtles were found nesting at 5:30 am during the cover of darkness. Needless to say, this has caused us to readjust our thinking and our patrol schedules. It is critical to our effort to see as many turtles as is humanly possible given the constraints of manpower and equipment. We have to actually encounter the turtles in order to check for tags or tag returns, or to tag the turtles, and to determine internesting intervals. This tagging information also helps us to know how often the individual turtle nests each season, the fertility rate of the eggs, and an entire suite of other data.

The scope of the project this year was essentially the same as in preceding seasons. The United States field assistance group, the INP and Tamaulipas' State Government crews, under the supervision of trained sea turtle biologists aided in beach patrols ("recorridos"), tagging turtles with monel metal tags in the trailing edge of the left foreflipper, and passive integrated transponder ("PIT") tags were also injected into the muscle tissue through the dorsal side of the foreflipper. 990 monel metal tags were applied on nesting females and 776 specimens were tagged with "PIT" tags. Relevant data were recorded; subsequently, most of the egg clutches were translocated to facsimile nests within protective corrals.

This season, 6,178 nests were protected, 5,842 in corral, 134 in Styrofoam boxes and 202 *in situ* for a total of 589,644 protected eggs. Up to August 20, 391,578 hatchlings have been released from the coasts of Tamaulipas and Veracruz into the Gulf of Mexico. For detailed data, see the summary data analysis.

SUMMARY DATA ANALYSIS
Lepidochelys kempi
2000 Nesting Season
Up to August 20

Rancho Nuevo

Recorded nests: 3,778

Corral: 3,651 Box: 23 *In Situ*: 60
Taken by predators: 34 Stolen: 10

Protected eggs: 358,735 Hatchlings released: 230,952

Emergence rate: 64.3%

Tepehuajes

Recorded nests: 1,620

Corral: 1,531 Box: 11 *In Situ*: 62
Taken by predators: 4 Stolen: 12

Protected eggs: 152,325 Hatchlings released: 104,727

Emergence rate: 68.7%

Barra del Tordo

Recorded nests: 434

Corral: 401 Box: 6 *In Situ*: 9
Taken by predators: 17 Stolen: 1

Protected eggs: 40,341 Hatchlings released: 25,316

Emergence rate: 62.7%

La Pesca

Recorded nests: 142

Corral: 123 Box: 3 *In Situ*: 15
Taken by predators: 0 Stolen: 1

Protected eggs: 12,256 Hatchlings released: 10,538

Emergence rate: 85.9%

Altamira

Recorded nests: 130

Corral: 90 Box: 17 *In Situ*: 18
Taken by predators: 5 Stolen: 0

Protected eggs: 11,674 Hatchlings released: 8,750

Emergence rate: 74.9%

Veracruz

Recorded nests: 106

Corral: 2 Box: 70 *In Situ*: 34
Taken by predators: Data Not Available
Stolen: Data Not Available

Protected eggs: 9,126 Hatchlings released: 7,381

Emergence rate: 80.8%

Tampico

Recorded nests: 62

Corral: 44 Box: 4 *In Situ*: 4
Taken by predators: 0 Stolen: 10

Protected eggs: 5,187 Hatchlings released: 3,914

Emergence rate: 75.4%

TOTALS

Recorded nests: 6,272

Corral:	5,842
Box:	134
In Situ:	202
Taken by predators:	60
Stolen:	34

Protected nests: 6,178 **Protected eggs: 589,644**

Hatchlings released: 391,578 **Estimated emergence rate: 67%**

INFRASTRUCTURE REPORT FOR GRANT # NA96FE0306 - 2000

The State Government of Tamaulipas, through its Secretaría de Desarrollo Urbano y Ecología, Dirección General de Recursos Naturales y Medio Ambiente, secured a site for the new barracks / ecoeducation sea turtle center at La Pesca, in the municipality of Soto La Marina, Tamaulipas, Mexico. These barracks are now fully functional.

Work on the Altamira, Tamaulipas barracks is well underway. These barracks will be fully functional by the end of September 2000 (*see pictures which follow)*.

The thrust of these two facilities is to educate tourists in areas of direct contact with sea turtles in order to diminish negative impacts. In addition, creating highly educational displays and activities in these locations should divert human visitation from the epicenter of Kemp's ridley nesting sites at Rancho Nuevo, Tepehuajes and Barra del Tordo.

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