

PADRE ISLAND NATIONAL SEASHORE
KEMP'S RIDLEY SEA TURTLE PROJECT
1989 REPORT

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BACKGROUND

During each summer, from 1978 to 1988, approximately 2,000 Kemp's ridley sea turtle (Lepidochelys kempi) eggs were shipped to Padre Island National Seashore (PAIS) from Rancho Nuevo, Mexico in an experimental attempt to establish a secondary breeding colony of this species through imprinting. Of the 22,507 eggs received, 17,358 (77.1%) hatched and 15,875 hatchlings were shipped to the National Marine Fisheries Service Laboratory for head starting. Overall, approximately 12,000 yearlings were released into the Gulf of Mexico after 9 to 12 months of head starting. To date, no Padre Island imprinted turtles have been confirmed to have returned and nested at PAIS. However, it is unknown how many have survived after release and none may have attained adulthood yet.

Pursuant to a decision made by the Kemp's Ridley Sea Turtle Working Group, no additional Kemp's ridley eggs will be transferred to PAIS from Rancho Nuevo, Mexico for incubation and imprinting. Now the primary objective of the PAIS Kemp's ridley project is to identify if Kemp's ridleys return to nest at PAIS. Public education programs, beach patrols and protection and monitoring of nesting sea turtles and nests will be continued at the park for the foreseeable future. This report summarizes these efforts during 1989.

BEACH PATROLS FOR NESTING SEA TURTLES AND TRACKS

Beach patrols for nesting sea turtles, tracks and nests began at PAIS in 1986 and continued during 1987, 1988 and 1989. Patrols travelled from the Ranger Station to the Mansfield Channel and back, approximately 193 km. An average of 3.0 patrols were

conducted each week from mid-April through August 1989. Although 4-wheel drive vehicles were used for the majority of patrols, a National Guard "hummer" (a military all-terrain vehicle) and Coast Guard Auxiliary fixed-wing aircraft were used once a week during the later portion of the 1989 patrol season. Aerial patrols were conducted at elevations of 24.3 to 42.7 m and speeds of 80 to 120 knots.

Two sets of sea turtle tracks were found during beach patrols at PAIS in 1989. No other confirmed sea turtle tracks or nesting females were reported or found at the park (or in Texas) this year. However, vehicular malfunctions forced cancellation of a number of park patrols during the first half of the patrol season. Since it was exceptionally windy during that time it is possible that some nesting went undetected. Also, heavy concentrations of sargassum washed onto Texas beaches from April through August and may have obscured sea turtle tracks.

The first set of sea turtle tracks was detected at 1100 h on 3 June 1989 and was located at the 86.1 km marker on PAIS. The tracks were probably from a Kemp's ridley since they were 58 cm wide and the flipper impressions were alternating. The tracks terminated in the soft sand and no nest cavities or eggs were found. The area was marked and revisited during the projected hatching period. After 60 days, a 3.7 m diameter area where the tracks were hypothesized to have intersected was excavated to a depth of 30.5 cm. However, no eggs were found and hence it was probably a false crawl.

The second set of tracks was found at 1010 h on 12 July 1989 and was located at the 68.7 km marker on PAIS. The tracks were probably from a green sea turtle (Chelonia mydas) since they were 140 cm wide and relatively deep and the flipper impressions were opposite. Interestingly, the first confirmed nesting of a green sea turtle on the Texas coast occurred on 13 July 1987 at the 68.1 km marker on PAIS when tracks and 2 eggs were found at that site

(Shaver 1989). The tracks found in 1989 were very prominent and 2 false nest cavities were located. However, no eggs were found. The area was marked and revisited during the projected hatching period, but no signs of emergence were found. Hence, it was probably a false crawl.

PUBLIC EDUCATION AND VISITOR REPORTS OF SIGHTINGS

Efforts to educate the public about the Kemp's ridley project continued this year. Since PAIS is 105 km long and extensive areas are often devoid of park personnel, it is imperative that park visitors assist with turtle detection and report sightings. Therefore, great emphasis was placed on alerting park visitors of the potential for nesting Kemp's ridleys and urging them to look for nesting turtles and tracks.

Kemp's ridley posters detailing the need to report sea turtle nestings were displayed at PAIS and other local parks and establishments. Beach signs, alerting visitors to report live sea turtle sightings immediately, were posted again this year at the park. The PAIS Kemp's ridley handout was revised and available at a number of locations within the park again this year. The new PAIS Visitor Center opened in July and contained a display about the Kemp's ridley project and a continuous playing video tape about the project.

A new addition to the project this year was the preparation of magnetic signs that were affixed to beach patrol vehicles. The signs stated that the vehicle was conducting a turtle patrol and that all live sea turtle sightings should be reported. The signs were received very positively and resulted in the filing of a number of sighting reports.

A visitor reported seeing 6 sea turtles on the beach near the Mansfield Channel during the day on 9 July 1989. They said that the turtles were seen heading back towards the water and possibly

had nested. The area was thoroughly investigated but apparently the report was a hoax or relayed incorrectly since no evidence of the turtles or tracks was found. All other sighting reports were of turtles in the surf and around the Port Mansfield jetties. Most of the reports of turtles in the surf were of juvenile and subadult loggerhead turtles (Caretta caretta). Most turtles seen around the Mansfield Channel were probably juvenile and subadult green and loggerhead turtles.

PARK TRAINING AND PARTICIPATION IN THE SEA TURTLE PROJECT

All park employees were shown photographs of nesting sea turtles and tracks and instructed to report all sightings. All were trained to collect sighting reports from visitors so that the sightings could be located and investigated further if necessary. All members of the Environmental Services Division and volunteers working with the turtle project were listed on scientific permits and trained to conduct nesting sea turtle patrols and to detect and respond to turtle sightings. In most instances two of these individuals conducted the beach patrols. However, they also accompanied members of the Ranger and Maintenance Divisions on all of their patrols to the Mansfield Channel. The primary personnel that participated in beach patrols during 1989 were: Jay Cox, Ardis Hunter, Rick Kalister, Jo Tirrell and Rudy Villarreal. Once again the participation of volunteers greatly increased patrol coverage.

FUTURE PLANS

Public education programs, beach patrols and protection and monitoring of nesting sea turtles and nests will be continued at the park during 1990. Attempts will be made to continue aerial and hummer patrols and volunteer participation in this project.

LITERATURE CITED

Shaver, D.J. 1989. Green sea turtle geographic distribution. Herp. Rev. 20(1):14.