

KIAWAH ISLAND

2013 Annual Turtle Patrol Project Report

I. Nesting

A. Coverage

1. Kiawah Island – The beach on Kiawah Island is patrolled each day by a team of four (4) members utilizing a truck provided by the Town of Kiawah Island. Patrolling this year began on Monday, May 13th. The patrol enters the beach via the Beachwalker County Park vehicle access, travels west to Captain Sam's Inlet, turns and travels east past the Ocean Course Clubhouse as far as the truck can safely go. The first nest of the year was found on May 12th, Mother's Day. It was a loggerhead nest and was the 1st recorded in the state this year.
2. Nesting patrol members investigate and record every track found every day. Patrols begin as soon as it is light enough to safely drive on the beach. Members are randomly assigned a 4-day tour. Nests are marked in accordance with Department of Natural Resources (DNR) guidelines.
3. Each driver is an experienced patrol member and has the responsibility to ensure all procedures are followed. Each driver is licensed by the Town to drive on the beach. Drivers are assigned a minimum of two 4-day tours. The driver determines the final location of each nest.

B. Located/Relocated Nests

1. Every track is examined. Crawls are followed to potential nest sites/body pits. Every crawl and nest site receives a GPS reading. Nests are marked and numbered consecutively. Every false crawl is recorded and has a GPS reading. A numbered short stake is used when all signs indicate a nest exists, but one is not found. A large number of abnormal high tides throughout the season hampered efforts to find tracks and body pits. This resulted in a larger number of wild nests.
2. When deemed necessary, nests are relocated. Department of Natural Resources (DNR) guidelines for nest relocation are followed. The driver supervises the relocation effort from removal of eggs from the original site, preparation of the nest chamber and properly placing the eggs in the new nest. Each relocated nest is marked, screened if necessary and GPS recorded.
3. For the 4th year, an egg was removed from each nest for DNA purposes. A total of 402 nests were recorded – the highest total ever. Dead hatchlings or eggshells were recovered from wild and short stake nets for DNA study. Three (3) nests counted from Sandy Point with approval from DNR.

C. Method of Marking Nest

1. Each nest is marked with a numbered post, set two (2) feet east of the center of the nest chamber. The post has an orange cap, black numbers and a turtle nest decal. All are white PVC posts and are removed from the beach at the end of the season.
2. All information relevant to each nest is entered in the log book. Each day's activities (each nest and crawl is recorded on a separate card) is given to the patrol member responsible for entering the information In the data base at SEATURTLE.ORG

D. Nest Monitoring

1. Monitoring of laid nests is performed each day. The nesting patrol is responsible for the first 30 days of the season after the first nest is marked.
2. By mid-June, the hatching patrol is activated. The beach is divided into six (6) one-mile zones. These members are assigned to a zone and for seven consecutive mornings, they walk and observe every nest in the assigned zone. A log book entry is completed each day for each nest. The book is passed on to each following team.
3. As each nest is checked daily, changes of any type (depredation, tide over wash, sand build up, etc.) is observed and recorded. Recorded data is included in the nest history.

II. HATCHING

A. Determining Emergence Activity

1. The patrol hatching teams begin thirty (30) days after the first nest is located and marked. This activity continues until the last nest in each zone is evaluated.
2. Incubation time is annotated on each nest card. Emergence activity is determined by seeing hatching tracks and a nest chamber depression/crater and hatching tracks.

B. Method Used to Inventory Nests

All nests are evaluated. The majority of inventories are conducted three (3) days after emergence activity is observed. If such activity is not observed, the inventory will be conducted seventy-five (75) days after the nest was located and entered into the patrol report. All inventories are conducted in accordance with DNR guidelines.

C. Time of Day Inventories Performed

Inventories are conducted as soon as possible after daybreak.

III. PROBLEMS

A. Predators

1. Thirty three (33) nests were predated – the largest number recorded on the Island. A total of 1732 eggs were counted (estimated) as lost. Animal tracks at most of the nests indicated most of the losses were the result of coyote activity. The animals were never seen. Most of the nests were raided the night they were laid. Seven or eight were raided at times after the first night. Some evaluated nests were also raided as the re-buried shells and unhatched eggs were found outside the nests. This is the second season of coyote activity.
2. Ghost crabs have been the primary predator in the recent past. No nests were lost to crab activity, although many nests were dug into.
3. Fire ants were a minor problem this year.
4. Nests were screened after predation. Some freshly laid nests were relocated a short distance away from the original locations.
5. No measures were taken to control fire ants.

B. Lighting

1. No lighting issues were reported this year.
2. If the patrol is notified, the location is visited. If the location is a rental property, the rental agency is also contacted. Handout information can be found in rental units and is provided by the agencies.
3. The Town of Kiawah Island has a local ordinance addressing turtle season lighting rules. There is also a dog leash ordinance. Enforcement is handled by the Town Code Enforcement and Beach Patrol personnel.

C. Over Wash and Erosion

1. Extreme high tides seemed to be the norm this year. The beach is flat and the tides have no obstacles before reaching the dunes.
2. Twenty-eight (28) nests were noted as being over washed multiple times. The majority of these nests were successful.
3. The beach is maintained in a natural state with no man made barriers.

D. Crowd Management

1. No problems/difficulties occurred this season.

2. Crowd control was not a problem. Non-patrol individuals present for evaluations were responsible, polite and attentive.
3. When requested, patrol members provide information and answer questions. Inquiries about patrol activities, especially inventories are directed to committee members.

E. Beach Obstructions

N/A

IV. EDUCATION

- A. No formal scheduled education activities are conducted. Most questions are asked and answered at nest inventories.
- B. The Town of Kiawah Island Environmental Committee has provided materials about island wildlife to include sea turtles. This information is available at the Town Hall and is also available from the nesting patrol.
- C. N/A
- D. Information is provided at every opportunity during nest location and hatching inventory activities. Inventories always draw on-lookers, who may number as many as 30 to 40 people.

V. PROJECT ORGANIZATION

- A. The patrol is supervised by a committee of eight members - headed by the permit holder. It meets five to six times a year. Years of experience of the members ranges from twelve (12) to twenty (20) years. There also are drivers and zone captains. Each captain is responsible for overseeing the activities and training of the zone members. All training is conducted to DNR standards. This year the patrol numbered two hundred (200) members.

B. Level of Involvement

1. The team driver is responsible for analyzing crawls, probing activity, determining relocation, preparing new chambers, gathering data and submission of data on a daily basis. He/she supervises team members in all these activities.
2. The beach is patrolled each day for crawls. Discovery of and information about crawls is also reported to patrol members by the Town of Kiawah Island Beach Patrol, residents and beach goers. Each and every report is investigated. Probing, marking and re-location of nests are accomplished by patrol members.
3. Nest inventories were completed for each nest to include wild nests. Experienced members are responsible for this activity and will instruct newer, inexperienced members. Training is supervised by zone captains and/or committee members.

4. A nest card is maintained for each nest until that nest is inventoried. All information is submitted to the individual responsible for data entry to SEATURTLE.ORG or DNR. This submission begins with the discovery of tracks and marking of the nest to the conclusion of the nest inventory. Data entry is the responsibility of the permit holder and his computer geek.
5. This is the second year members of the Beach Patrol were involved in stranding activities. This was a logical progression as these individuals are usually the one to find and report a stranding and also are responsible for burying the strandings on the beach.

VI. CONCERNS AND RECOMMENDATIONS

The major concern is the destruction of and loss of nests and eggs by the newest predator – the coyote. The number of eggs lost to the predator approached 1200. The concern is that this activity will continue next season and may increase. Reports of coyotes on other islands suggest the possibility of undermining the efforts of not only the patrol but others as well in the conservation of loggerhead nests. This should be a major concern of DNR.

VII. OTHER ISSUES AND CONCERNS

N/A