



United States Department of the Interior
FISH AND WILDLIFE SERVICE



Back Bay National Wildlife Refuge
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NESTING LOGGERHEAD SEA TURTLE ACTIVITY REPORT 2001

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Prepared for Department of the Army
U.S. Army Corps of Engineers
Norfolk, VA

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NESTING LOGGERHEAD SEA TURTLE ACTIVITY AT BACK BAY NATIONAL WILDLIFE REFUGE - 2001

I. ABSTRACT

This paper presents results from the 9th Annual Study (using Army Corp of Engineers funds) of nesting by the Atlantic loggerhead sea turtle (*Caretta caretta*) along the Atlantic Ocean coastline in Virginia Beach, Virginia during 2001. All surveys were implemented by staff of the Back Bay National Wildlife Refuge, Virginia Beach, Virginia, throughout the sea turtle nesting season. Two seasonal, full-time biological technicians were hired to search twenty-five miles of beach along the northern periphery of the nesting range of the Atlantic loggerhead.

Refuge biologists investigated two loggerhead sea turtle crawls during the 2001 nesting season. The first successful nesting for the 2001 nesting season occurred on Back Bay NWR, 0.2 miles south of Little Island City Park, on the North Mile. This first nest consisted of 127 eggs. A second crawl was detected on False Cape State Park, seven miles south of the Back Bay NWR beach access ramp. It yielded a nest of 115 eggs. This nest and the female loggerhead were located by Virginia Institute of Marine Science (VIMS) personnel on July 2, 2001, during a night patrol. They captured the nesting adult female and applied a flipper tag and satellite transmitter. No nests or crawls were located along the oceanfront of Sandbridge, the Virginia Beach Resort Area, or Fort Story during 2001. Night patrols were conducted from June 15 to August 15 by VIMS personnel. Only one loggerhead sea turtle was captured this year.

~~Four~~ ^{five} attached appendices also include: 1) Year 2001 Sea Turtle Strandings, 2) Year 2001 Sea Turtle Nest Relocations, 3) A Marine Science Museum Hatchling Report for 2000-2001, 4) Article on the Release of VMSM Year-Old Hatchlings 5) A 2001 Summary of Costs Associated with this program.

II. INTRODUCTION

The Atlantic leatherback, the Atlantic loggerhead, the Atlantic green, and the Kemp's Ridley sea turtle are the four sea turtles regularly seen in Virginia waters (Keinath, Musick, and Byles 1987). All of these are federally listed as either threatened or endangered (50CFR1981). The loggerhead, (*Caretta caretta*) is the only recurrent sea turtle species nesting on beaches of the Atlantic Oceanfront in Virginia Beach. Pollution, exploitation, poor fishing practices, and habitat modifications have aided in the loggerhead decline. Since sea turtles come ashore only to lay eggs (Dodd 1988), nesting provides the most convenient opportunity for monitoring and research.

The twenty-five miles of beach searched for loggerhead sea turtle use this year, occurs along the northern extent of the established nesting range for this species in the United States. Loggerhead activity often occurs during the summer in and around the Chesapeake Bay. The Chesapeake Bay serves as a developmental feeding area for juvenile loggerheads (Lutcavage and Musick 1985; Keinath, Musick and Barnard 1989).

Loggerhead females generally nest on a 2 to 4 year cycle, and lay from one to six nests a season (Ehrhart 1979; Dodd 1988). The re-nesting interval varies from 12 to 16 days, with an average of 14 days (Frazer 1984; Dodd 1988). Sea turtles generally return to the same area to lay successive clutches of eggs, usually within a 5 km radius of the first nest (Dodd 1988).

For nine successive years, personnel of the Back Bay National Wildlife Refuge (BBNWR) have been patrolling the Virginia Beach Resort oceanfront in search of loggerhead sea turtle nests. This has been made possible by funding provided to the Refuge by the U.S. Army Corps of Engineers (the Corps/ACOE), in conjunction with their study of beach replenishment impacts to nesting sea turtles. During the summer of 1993, the first cooperative agreement was established between the Corps and the Refuge. Through this agreement, the Corps provided funding to the Refuge, to determine the extent of nesting sea turtle use along the Virginia Beach oceanfront. The Refuge then hired and trained seasonal biological technicians to patrol this oceanfront and detect sea turtle crawls and other nesting signs. Because the loggerhead sea turtle is a federally listed Threatened species, the Refuge has researched nesting activities and managed nesting populations since the early 1970's. The U.S. Fish and Wildlife Service employs protective measures and funds research projects that aid in the conservation of this federally threatened species, often in partnership with other federal and state agencies.

During 2001, the Corps provided the Refuge with \$ 20,706.35 (\$15,004.60 labor for 2 Biological Technicians) for the nesting sea turtle study (Ref. Appendix 5). Thirty-eight percent of the funding was absorbed by the USFWS Denver Finance Center for administrative costs, while the remaining sixty-two percent was dedicated to salaries of the two seasonal biological technicians hired to patrol the oceanfront. Additional miscellaneous equipment, materials, all-terrain-vehicle repairs and maintenance, gas and oil, and additional support staff for turtle patrols were absorbed by the Refuge budget.

III. MATERIALS AND METHODS

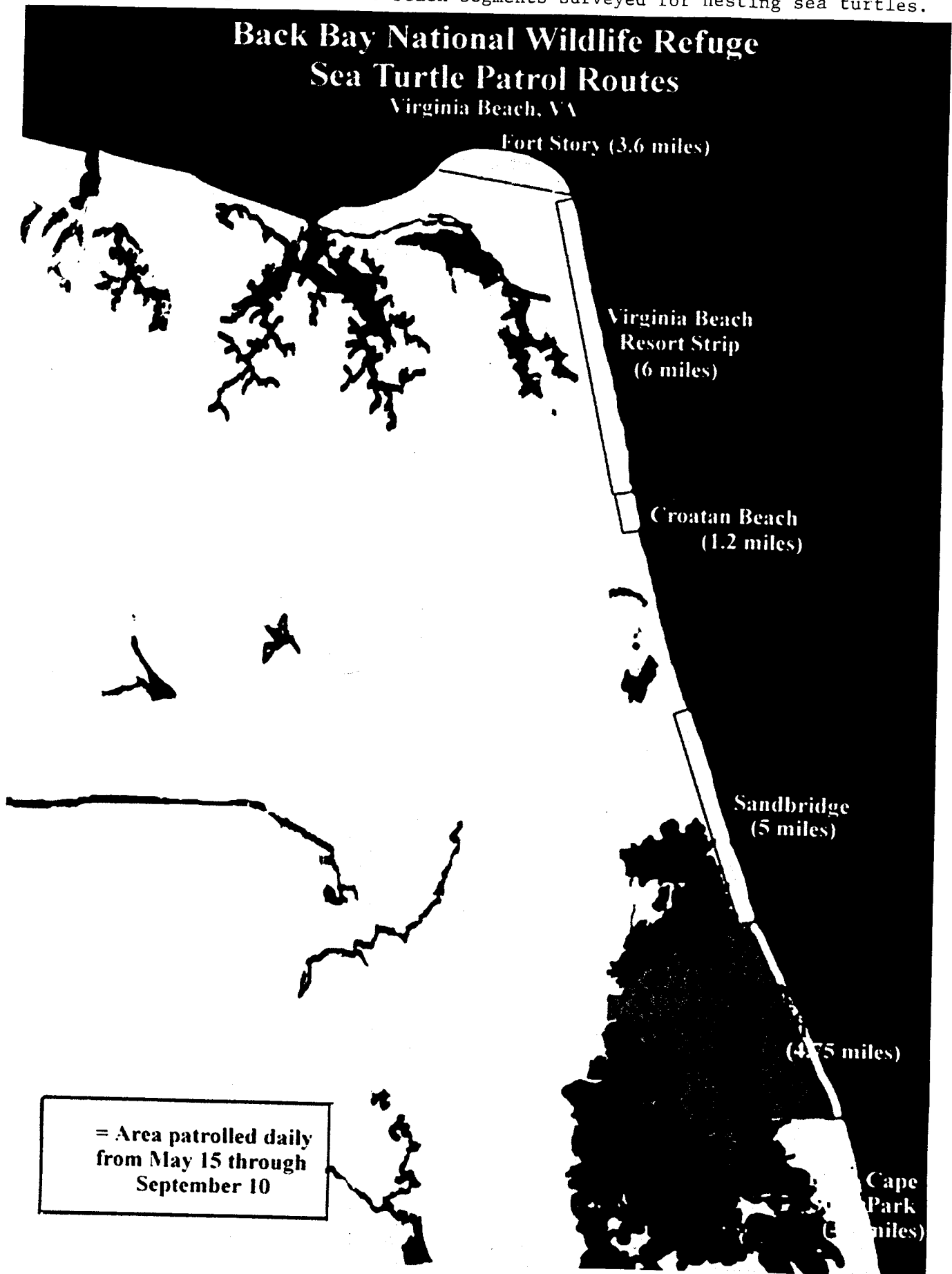
Trained seasonal biological technicians and permanent Refuge staff logged over 500 hours managing and collecting information on sea turtle nesting for the 2001 sea turtle nesting season. Refuge staff did not conduct night patrols as in previous years, therefore, the hours logged in sea turtle duties have decreased. As during past years, Refuge personnel conducted sea turtle crawl and stranding surveys, via all-terrain-vehicles (ATVs) on 28 miles of ocean-front beach, from the City resort area to the North Carolina border. Those beach routes included the following segments (from north to south): (1) Fort Story; (2) the Virginia Beach Resort Strip; (3) Croatan Beach; (4) the Town of Sandbridge; (5) Back Bay National Wildlife Refuge; and (6) False Cape State Park. All routes were patrolled on a daily basis, seven days a week. Figure 1 illustrates these patrol routes.

Surveys were conducted by ATV every morning from May 21 through September 8, along beach routes #4-6, above. Patrols along the Fort Story to Rudee Inlet and Croatan Beach route (#1-3 above) were conducted every morning from May 21 through August 31, starting at 0530 hours; in order to search as much beach as possible before the City of Virginia Beach's "Beachscapers" groomed the Resort beaches and wiped out crawl signs. Patrols took place above the high tide line while traveling in one direction, and along the water's edge the other direction. Whether the high or low beach was patrolled first was decided by whether the tide was rising or falling. Area coverage along Sandbridge Beach and one or two portions of Fort Story, varied with high tides, since beach narrowness, bulkheads, beach erosion and high winds made portions of the beach inaccessible by ATV on some patrol days. On those occasions, Refuge staff would walk out to such areas from adjacent roads and view the missed area through binoculars.

Refuge biological staff provided a training session for City Beachscapers maintenance crew supervisors on June 6, 2001, at the City maintenance facility. The training was intended to educate the three attending supervisors on sea turtle crawl recognition and sea turtle biology; in order to facilitate cooperation between the two agencies. We hope that encountered turtle crawls will be reported to Back Bay NWR staff. Leaflets and brochures were distributed for supervisors and their employees. Although we were disappointed that the actual field personnel carrying out the beachscaping work were not present, we were satisfied to get some response. Past years' attempts to set up training were unsuccessful. This session was set up with the assistance of David Schulte of the COE.

In previous years, night patrols were scheduled to capture a nesting loggerhead laying its second clutch of the season for a period of ten days. Virginia Institute of Marine Science (VIMS) staff conducted night patrols from June 15th to August 15th, 2001. They captured a nesting loggerhead during the early morning of July 2, 2001, and applied a flipper tag and satellite transmitter before releasing it. The nesting female was restrained using a box container constructed by Back Bay Refuge Biologist Sara Williams of exterior plywood and fastened together with door hinges. This portable "restraining container" stands three feet high and safely and effectively restrains a turtle when fence posts are placed around the outside.

Figure 1. Shows beach segments surveyed for nesting sea turtles.



All sea turtle crawls were photographed and documented. Metric tape was used to measure crawl widths at three points where tracks were distinct. An average of the three measurements represented the crawl width of the nesting female. Each "body-pit" periphery was marked with wire flags and then carefully searched and excavated for the egg chamber/nest excavated by the loggerhead. When eggs were discovered, they were carefully counted and removed. Depth measurements were taken of the top and bottom of the egg chamber, from the beach surface. The eggs were then transported in coolers to a protected hatchery site within the sand dunes of Back Bay National Wildlife Refuge. At the hatchery site, all eggs were transferred into a predator-proof cage in the reverse sequence as removed from the original nest. The relocated nest was then re-buried at the same depth as the original nest. Refuge employees checked the nest twice daily, starting two weeks prior to the expected hatch date for signs of hatching and to collect ground temperature readings. When a concave depression was detected on the surface of the nest, a refuge staff member and/or trained volunteers were placed on duty from 2200 to 0400 hours to watch for hatchling emergences. Hatchlings were then released on the beach, at the base of the foredunes and allowed to crawl into the surf.

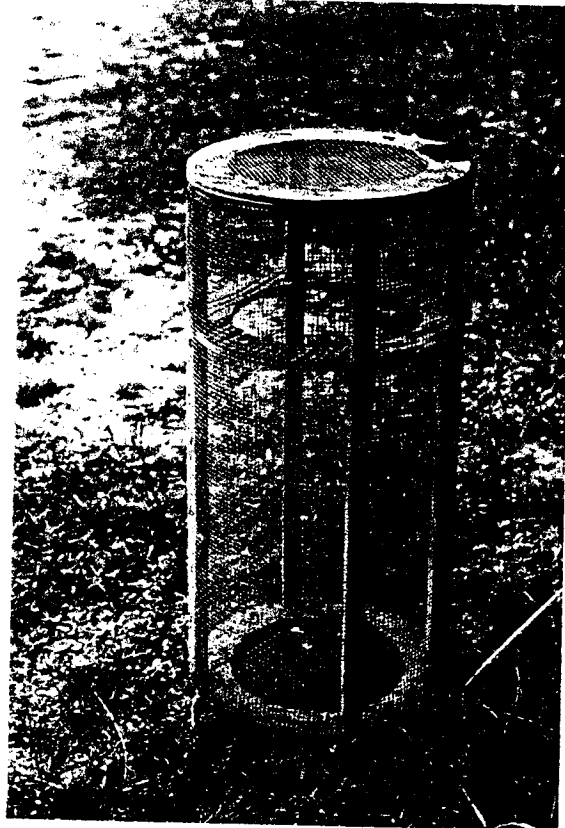


Photo 1. All nests were relocated into this "Nesting Container" and reburied, to protect the eggs from predation.

In addition to patrolling for turtle nests, Refuge personnel collected data on sea turtle strandings in the surveyed areas. All stranded animals were dead. Each stranding was measured and examined for trauma and cause of death. Tissue and/or humerus samples were not collected as of June 27, 2001 as requested by Virginia Marine Science Museum (VMSM). Patrollers contacted the VMSM Stranding Team for additional data collection and carcass removals on all beaches, except for Back Bay NWR and False Cape State Park. Completed "Sea Turtle Stranding and Salvage Network-Stranding Report(s)" were sent to VMSM and VIMS, where reports were entered into the National Marine Fisheries Service's (NMFS) national stranding database. Copies of those reports are included in this report as Appendix 1, Section D, Part IV, "Results and Discussion," and provide good stranding details.

IV. RESULTS AND DISCUSSION

A. AREA COVERAGE

The possibility of undetected sea turtle nests exists along the Fort Story-Croatan Beach segment; since beach cleaning is conducted by City beach maintenance crews, every morning between 0230 to 0900 hours. This tractor maintenance smooths out Resort beaches, making crawl detection impossible. Although Refuge beach patrols start at 0530 hours, City workers often have already smoothed some portions of the Resort beach. However, Refuge staff feel that the best possible coverage is being maintained in view of existing programs. Refuge biological staff maintained contact with City "Beachscapers" on the beach, and handed out information on sea turtle crawl recognition, nesting, and who to contact should they locate a crawl. In addition, an organized educational program was presented to the City Beach Maintenance Supervisors in June. Their response was positive.

VIMS conducted night patrols of approximately 9 miles of Refuge and False Cape State Park (FCSP) beaches from June 15 to August 15, 2001. They successfully captured a nesting loggerhead on July 2, 2001, and a flipper tag and satellite transmitter were applied.

B. NESTING ACTIVITIES AND CAPTURE RESULTS

Nesting sea turtle surveys of the Fort Story and Resort beaches yielded no sea turtle nests or crawls. One nest was located on Back Bay NWR by Refuge staff and another nest at False Cape State Park was discovered by VIMS personnel this year. Information regarding the nest and crawl were recorded on "Nest Relocation Data Sheets," (Ref. Appendix 2).

Biological Technician, Christopher Wicker, discovered a crawl on June 16, 2001 during a routine morning patrol around 0800 hours. Biological Technician, Michael Christine Farrell, Refuge Biologist, Rachel Cliche, Senior Biologist, John Gallegos and Biological Intern, Laura Edwards responded and assisted in excavating Crawl #1/Nest #1. One hundred and twenty-seven (127) eggs were excavated at 1020 hours and removed from the nest cavity. Eggs were carefully moved to a safer, "nursery" location within the Back Bay National Wildlife Refuge, placed into predator-proof cages, and re-buried.



Photo 2. Crawl #1/Nest #1 - Female loggerhead tracks leading to two body pits. The western-most body pit (also the exit crawl) had eggs, while the other was a "false nest".

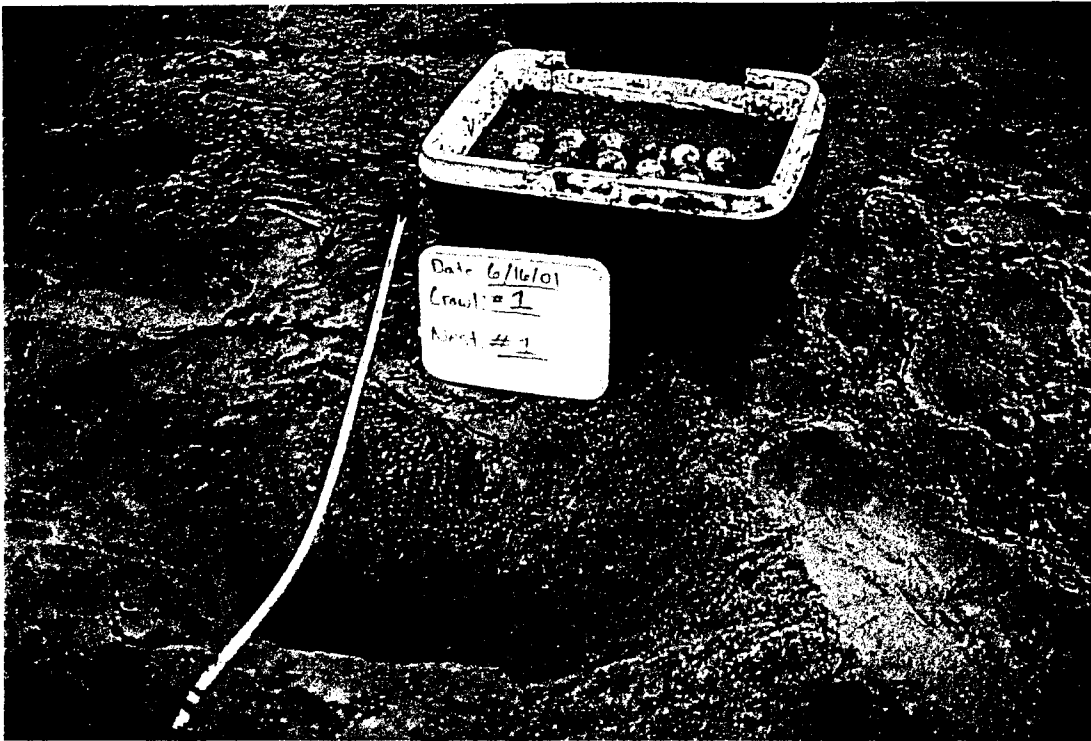


Photo 3. Crawl #1/Nest #1 - The eggs were counted and layered in a cooler in the same order in which they were deposited, with sand surrounding the eggs. Top and bottom nest cavity depths and nest cavity length, were also recorded to aid in imitating the original nest.

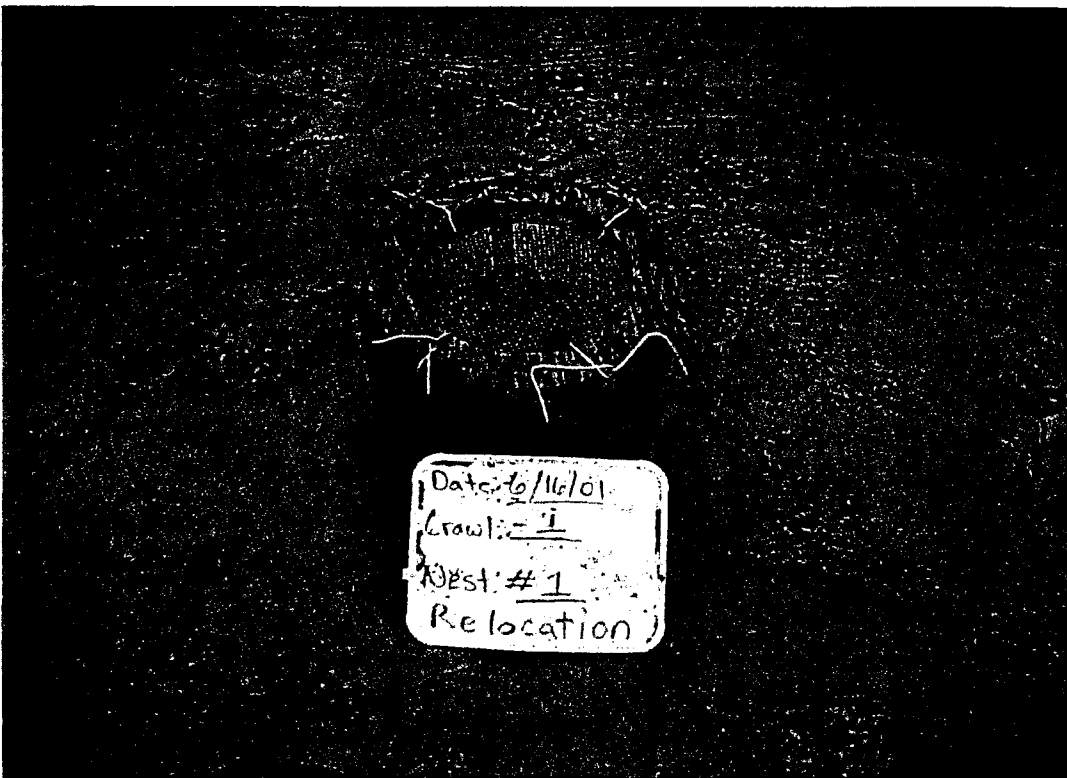


Photo 4. Crawl #1/Nest #1 - At the nursery site the eggs are buried in a predator proof cage using the measurements and sand taken from the original nest.

Crawl number two was reported by VIMS night patrol staff on July 2, 2001 at 0430 hours. The crawl was located 7 miles south of the Back Bay ramp on False Cape State Park . Refuge employees and volunteers investigated the crawl at 0600 hours. Early morning rain had obliterated some sections of the crawl, but tracks leading to a turn around point were identified between the fore (low) beach and back (upper) beach. A decision was made to relocate the nest because of its proximity to the high tide line, and frequent 4WD vehicle use in the vicinity. The nest (#2) was located and excavated. One hundred and fifteen (115) eggs were removed from the nest cavity and relocated into the Refuge nursery.

VIMS night patrol staff captured the female loggerhead after she finished laying her eggs. A satellite transmitter was attached to the carapace and inconel tags attached to the flippers by VIMS employee Kate Mansfield, before releasing it into the ocean. Photographs were taken of the crawl, the nest-site, the excavation, and captured Loggerhead sea turtle with transmitter. Measurements of the crawl and the nest cavity were also taken. The following table summarizes the chronology of the two loggerhead sea turtle nests:

Table 1. 2001 Loggerhead Sea Turtle Nesting Chronology

Nest #	Date of Nesting	Location	Total # of Eggs Laid	Expected Hatch Date	Actual Hatch Date	Length of Incubation (days)
1	16-Jun-01	BBNWR	127	15-Aug-01	24-Aug-01	69 days
2	02-Jul-01	FCSP	115	31-Aug-01	09-Sep-01	69 days
Total			242			



Photo 5. Crawl #2/Nest #2 - Loggerhead eggs can be seen within the nest cavity.



Photo 6. Crawl #2/Nest #2 - 115 eggs were carefully excavated to a cooler for a safe journey to the nursery site.

C. HATCH RESULTS

Refuge personnel excavated and relocated two loggerhead sea turtle nest during 2001. Soil and air temperatures were taken at the nursery site during the twice daily checks of a nest, 10-14 days prior to the expected hatch date.

Hatch success for Nest #1 was high, with a total of 110 loggerhead hatchlings (of 127 eggs) released into the Atlantic Ocean from the refuge beach. Refuge volunteers released 105 hatchlings during 2200 to 2330 hours on August 24, and one more hatchling at 0200 hours on August 25. Four additional hatchlings emerged on August 25 and were released by refuge staff at 1000 hours.

Hatch success for Nest #2 was not as high, with 93 hatchlings (of 115 eggs) emerging. Eighty-nine hatchlings were released into the Atlantic Ocean via the refuge beach; while four were transferred to the Virginia Marine Science Museum in the care of Elizabeth Firchau, for scientific growth rate observations and public education. Those four turtles will be released into the Atlantic Ocean after one year, as during past years.

The four hatchlings donated to the Virginia Marine Science Museum (VMSM) in 2000 were released into the Gulf Stream on November 1, 2001. Biologist, Rachel Cliche accompanied the VMSM volunteers for the release of the one year old juveniles. A summary of hatchling growth and development was prepared by Mark Swingle, VMSM Curator of Stranding Program and Acquisitions and is included as Appendix 3.

Table 3 provides an egg analysis for the 2001 nests. The 2001 hatch rate (the total number of hatchlings including any dead hatchlings/total number of eggs laid) was 84.7%.

All eggs remaining in the two nests after their excavation in early winter, were opened and examined. Two dead hatchlings were found in Nest #1. The cause of death was undetermined. A deformed embryo was found in an unhatched egg in Nest #2. The embryo was developmentally advanced and missing its left front flipper (other three flippers were fully developed). The embryo is stored in the Refuge freezer.

As during some prior years, the number of unhatched eggs counted from excavated nests did not match with the number of eggs counted during the relocation procedure. We suspect that some unhatched, addled eggs burst while still in the ground, and provide the appearance of hatched eggs. Details are portrayed in Table 2, below.

Table 2. 2001 Loggerhead Sea Turtle Egg Analysis Summary

Nest #	# Eggs Laid	# Eggs Hatched	# Eggs Predated	# Eggs Addled*	# Eggs w/Dead Embryos	Eggs Laid minus Hatched	# Excavated Unhatched***
1	127	110	0	8	1	17	11
2	115	93	0	19	3**	22	22
Totals	242	203	0	27	6	39	33

*Addled eggs have rotted and show no embryonic development.
 **One dead embryo was almost fully developed, but missing the left front flipper. It is in storage in the Refuge freezer.
 ***These are the number of unhatched eggs counted after the nest was excavated to compare with the number of eggs laid.

Vandalism of the nursery site in 1999 and the presence of grass roots in 2000 required a new nursery site for the 2001 nesting season. Footprints of various animals including horse, deer, raccoon and fox were seen around the nursery area. ATV tracks were also present, however, no apparent disturbance to the nest occurred.

D. STRANDING RESULTS

On May 22, 2001 Refuge seasonal employees (interns and biotechnicians) and biological staff met with Wendy Walton and other staff from the VMSM Stranding Team for training on sea turtle and marine mammal stranding data collection. This session provided training on collecting carapace measurements, flippers, and flipper muscle tissue samples from stranded, dead, sea turtles, with instructions on using the new National Marine Fisheries Service (NMFS) stranding forms. Samples collected by the Refuge are prepared by the VMSM Stranding Team and later analyzed by the NMFS lab in Beaufort, NC, for a better understanding of sea turtle population dynamics along the East Coast. Samples were not taken this year upon request by VMSM due to a backlog of samples from the previous year.

Refuge personnel encountered a moderate number of sea turtle strandings this year. All stranded turtles were dead. Each stranding was measured, examined for injuries, and spray-painted to prevent illegal carapace collection. Some turtle strandings were removed from the beach and buried on the Refuge. Most strandings were simply pulled up as close to the dunes as possible. NMFS "Sea Turtle Stranding and Salvage Network - Stranding Report(s)" were only completed for Back Bay NWR and False Cape State Park (FCSP). The VMSM Stranding Team collected NMFS stranding data from Fort Story, the Virginia Beach Resort Area, and Croatan beaches; although Refuge employees also collected location, species, and carapace measurements during morning patrols for Refuge files.

From May 21st to September 9th, 27 sea turtle strandings were discovered: 4 on Back Bay NWR, 6 on FCSP, 5 in the town of Sandbridge, and 12 on the Fort Story/Atlantic Oceanfront. Of the 27 turtle strandings, there were: 24 Loggerheads, 2 Kemp's Ridleys, and 1 leatherback. The average length of stranded loggerheads was 80.1 cm, from notch to tip (Range= 52 cm-117 cm). Of the two Kemp's Ridley carapace lengths, one measured 11.9 cm (notch to notch) and 12.1 cm (notch to tip); and the other measured 55.3 cm (notch to tip). Measurements for the leatherback were not taken since it was floating in the surf and too heavy to move onto shore. Stranding result reports are provided to the NMFS by VIMS, and copies sent to the VMSM. Copies of 2001 Stranding Reports are included as Appendix 2.

F. NEST SUCCESS

Nest Success was determined by dividing the number of eggs in a nest that were reburied during relocation by the number of hatchlings hatched from the eggs. The Nest Success Rate is defined as: the number of hatchlings successfully released/total number of eggs in nest. The Nest Success Rate was 83.8% during 2001; slightly lower than the Hatch Rate (84.7%), due to some hatchlings (discovered during the post-hatch nest excavation) not leaving the nest cavity. Nest success for 2001 is detailed in Table 3, below.

Nest success is dependent upon many known and unknown factors. A fair amount of miscellaneous sea turtle nest data is on file at Back Bay NWR.

Table 2. 2001 Loggerhead Sea Turtle Nest Success Summary

Nest #	# Eggs Laid	# Eggs Hatched	# Live Hatchlings	# Dead Hatchlings	# Hatchlings Released	# Unhatched Eggs	Nest Success**
1	127	110	110	2	110	17	87%
2	115	93	93	0	89*	22	80%
Totals	242	203	203	2	199	39	

*Virginia Marine Science Museum received four live hatchlings on 10-Sept-01 for growth research and public education.
 **Nest success refers to the number of hatchlings released (including those received by VMSM).

V. CONCLUSIONS

Virginia Beach, Virginia provides crucial nesting habitat along the northern edge of the loggerhead sea turtle nesting range. Open beaches represent the only habitat available to nesting females in this area. Loggerhead sea turtles have been found to nest along the entire shoreline of Virginia Beach though most nests are concentrated along the twelve miles of beach from Back Bay National Wildlife Refuge to False Cape State Park, the only beaches that are not developed in the form of housing, hotels, or bulkheads and have never been renourished. Nests have occurred and may occur again on beaches from Fort Story south to the Virginia/North Carolina state line. These beaches and nests must be monitored and protected if the Virginia nesting population of loggerhead sea turtles is to be effectively maintained and managed and as long as offshore impacts to potential nesting Loggerhead females continue. Stranding data indicates that there may have been some negative impacts to the Loggerhead population using this area during 2001.

During this year's monitoring program, one Loggerhead sea turtle nest was discovered along the Back Bay NWR ocean-front and another along False Cape State Park's ocean-front, and relocated to a remote nursery site on Back Bay NWR. The nest located on Back Bay NWR yielded 110 Loggerhead hatchlings that were released shortly after emergence from the nest. The second nest located on False Cape State Park produced 93 hatchlings. All hatchlings were released into the ocean from Back Bay NWR, except for four hatchlings from Nest #2, taken by VMSM for research and educational purposes. The nesting female was captured at Nest #2. It was tagged and tracked via satellite transmitter by VIMS.

Four, one-year-old Loggerheads from a Refuge nest in 2000, were also released into the Gulf Stream by the Marine Science Museum, on November 1, 2001 in the presence of a VMSM volunteer and Refuge Biologist Rachel Cliche. Such an introduction may give a boost to the local breeding population. In addition, during the course of the daily patrols, 37 stranded sea turtles were discovered. This data and collected tissue samples, should provide new and valuable information on sea turtle demographics and population structure along the Eastern Seaboard.

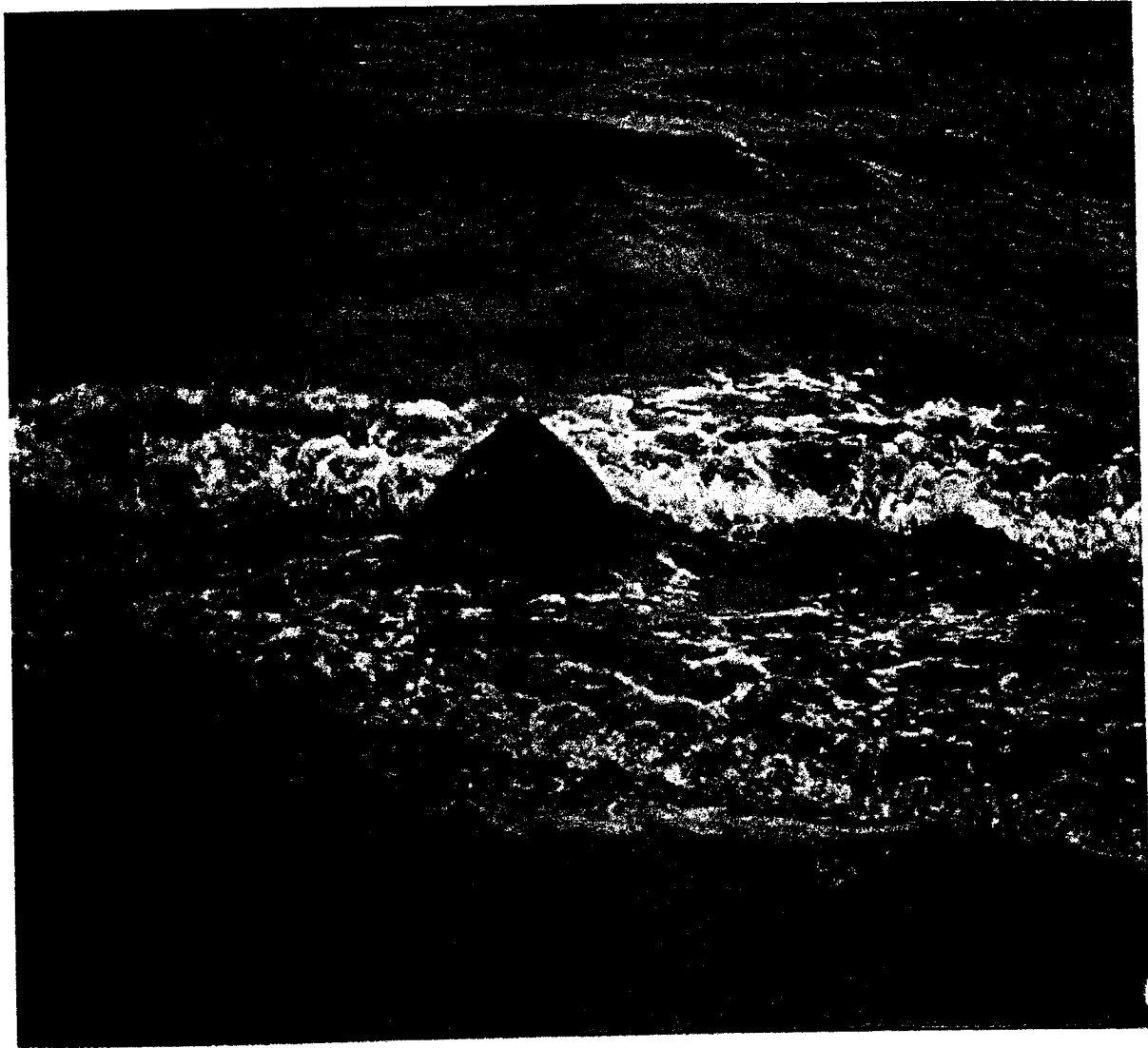


Photo 7. Crawl #2/Nest #2 - This loggerhead female was captured by VIMS personnel after successfully nesting on the beach at False Cape State Park. Here it has been released. Note the transmitter attached to its back.

V. LITERATURE CITED

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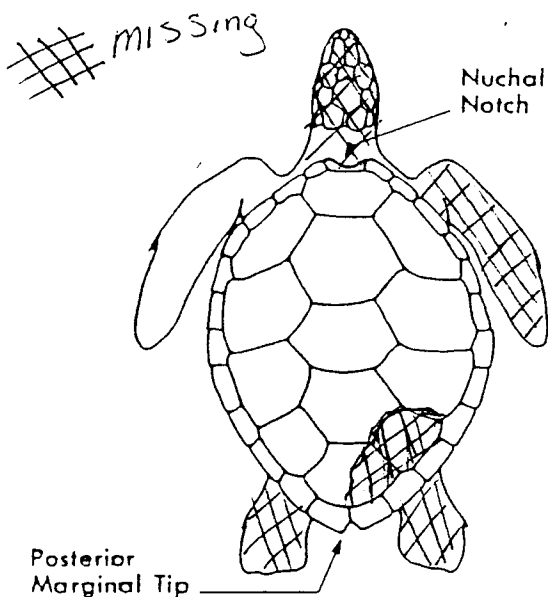
APPENDIX 1

SEA TURTLE STRANDING REPORTS

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 14 December 2001
 Turtle # By Day 1
 Observer's Full Name Rachel Cliche
 Location 1/4 mile from Back Bay NWR
Beach Ramp in SWF at low tide
 Species CC
 Condition 3
 Remarks Carcass was fairly intact - just
back right side missing a little. Barely
any of the turtle's body was inside (carcass
Decomposed (left front) flipper near camp
- maybe? - but not within.

Curved Length (cm) 20" = 81.78cm
 Curved Width (cm) 19" = 78.74cm
 } Turtle was in SWF
 } quickly got these
 } measurements before
 } my feet got too wet!
 } Then converted meas



CODES:

SPECIES:

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

CONDITION OF TURTLE:

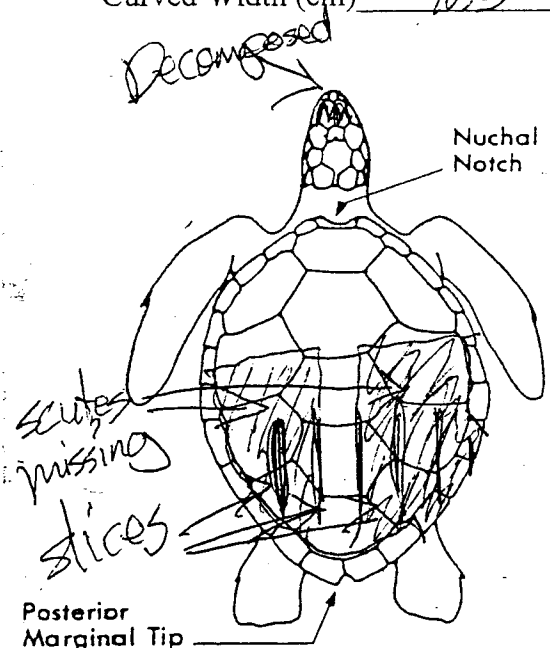
- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

Back Bay National Wildlife Refuge Sea Turtle Stranding Report

Date 09-08-01
 Turtle # By Day 01
 Observer's Full Name Christopher Wikker
 Location 2456 Sandfiddler St

Species CC
 Condition 3
 Remarks Bloated, six slices present on
carapace, scutes missing where slices
are, anterior of head decomposed
may be female due long tail.

Curved Length (cm) 100.2 (tip), 95 (notch)
 Curved Width (cm) 90.5



CODES:

- SPECIES:**
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified

- CONDITION OF TURTLE:**
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

SEA TURTLE STRANDING AND SALVAGE NETWORK – STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First Rachel M.I. M Last Cliche
 Affiliation Back Bay NWR
 Address 4005 Sandpiper Rd.
Virginia Beach, VA 23456
 Area code/Phone number 757 721 2412

STRANDING DATE:

Year 2001 Month 09 Day 07
 Turtle number by day 01

Field #:

State coordinator must be notified within 48 hrs;

this was done by phone (757)437-6159

email fax (757)437-4933

SPECIES: (check one)

- CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Photos taken? Yes No

Species verified by state coordinator? Yes No

SEX: (check one)

- Immature, undetermined
 Female Male

How was sex determined?

- Necropsy
 Tail length (adult only)

Length of tail beyond carapace _____ cm / in

STRANDING LOCATION:

State Virginia County Virginia Beach
 Descriptive location (be specific) Sandbridge

Latitude _____ Longitude _____

CONDITION: (check one)

- 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

FINAL DISPOSITION: (check one)

- 1 = Left on beach where found; painted? Yes* No(5)
 2 = Buried: on beach / off beach;
 carcass painted before buried? Yes* No
 3 = Salvaged: all / part(s), what/why? _____
 4 = Pulled up on beach/dune; painted? Yes* No
 6 = Alive, released
 7 = Alive, taken to rehab. facility, where? _____

- 8 = Left floating, not recovered; painted? Yes* No
 9 = Disposition unknown, explain _____

*If painted, what color? _____

TAGS: Contact state coordinator before disposing of any tagged animal!!

Flipper tags present? Yes No
 Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No
 If found, record number / tag location

Coded wire tag scan? Yes No
 If positive response, record location (flipper)

Checked for living tag? Yes No
 If found, record location (scute number & side)

CARAPACE MEASUREMENTS: (see drawing)

Using calipers *See below* Circle unit

Straight length (NOTCH-TIP) _____ cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

Straight width (Widest Point) _____ cm / in

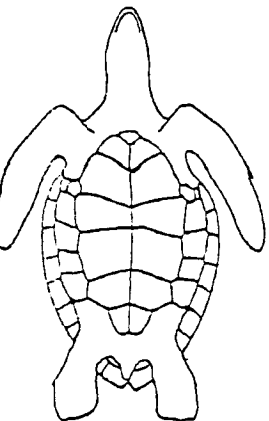
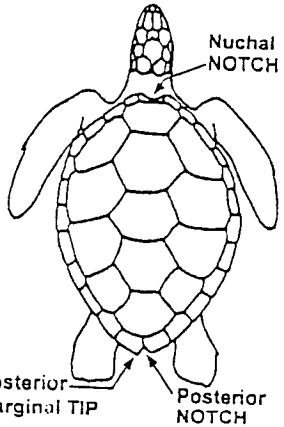
Using non-metal measuring tape Circle unit

Curved length (NOTCH-TIP) _____ cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

Curved width (Widest Point) _____ cm / in

Weight actual / est. _____ kg / lb



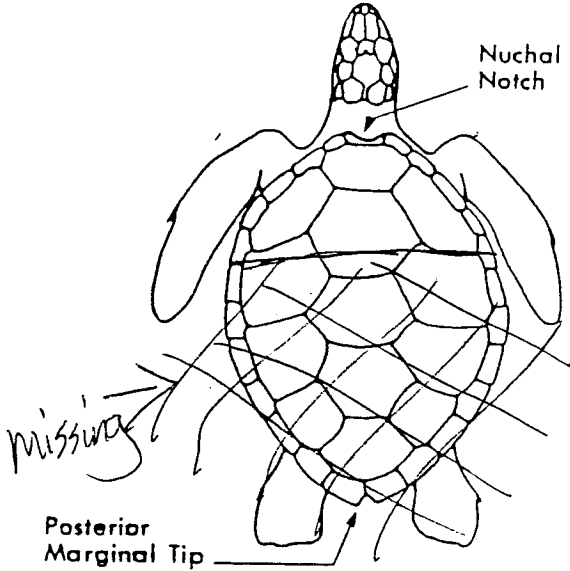
Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

to ENTIRE carcass; No wounds that I
could see. Was floating in surf;
unable to measure or move. Very
bloated and HUGE. UMSSM had already
responded the day before, it just washed back
in again.

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 08-30-01
 Turtle # By Day 1
 Observer's Full Name Christopher Wicker
 Location 57th Street, behind Ramada Inn
 Species CC
 Condition 3
 Remarks Posterior of body is missing as indicated below.
 * Could this be the same turtle Rachel Piche found on 8-27-2001?

Curved Length (cm) N/A
 Curved Width (cm) N/A

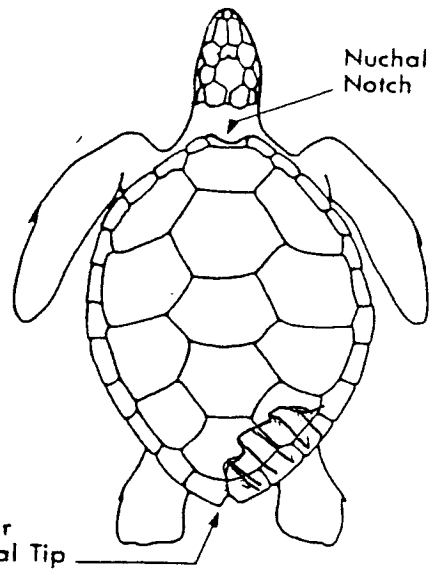


- CODES:**
- SPECIES:**
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified
- CONDITION OF TURTLE:**
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 8/28/2001
 Turtle # By Day 1
 Observer's Full Name Rachel Cliche
 Location Fort Story - near lighthouse
about 100ft SE of overlook.
 Species CC
 Condition ~~0~~ 1
 Remarks Entire carcass, buried in
sand. Barnacles present top of
carapace and edges, ^{chunk} ~~chunk~~ taken out
of back of carapace.

Curved Length (cm) 6.83 m → 68.3 cm
 Curved Width (cm) 6.22 m → 62.2 cm



- CODES:**
- SPECIES:**
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified

- CONDITION OF TURTLE:**
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 08-25-01

Turtle # By Day 1

Observer's Full Name Christopher Wicker

Location 47th Street @ Oceanfront

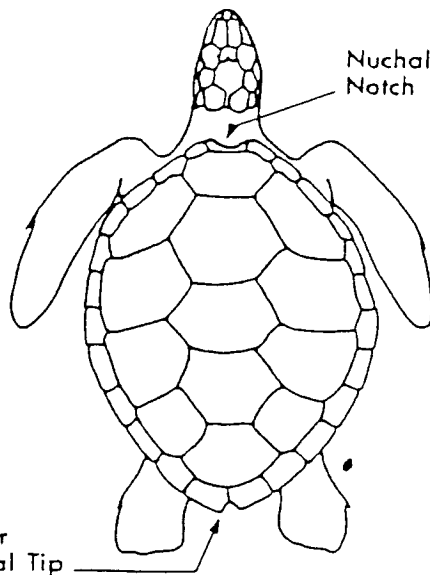
Species CC

Condition 3

Remarks Body broken in pieces; skull, four flippers, and some pieces of carapace are present along with decomposed organs. Measurements not taken due to broken carapace.

Curved Length (cm) N/A

Curved Width (cm) N/A



CODES:

SPECIES:

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

CONDITION OF TURTLE:

- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

Faxed to UMSM

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First Christopher M.I. S Last Wicker
 Affiliation Back Bay National Wildlife Refuge
 Address 4005 Sandpiper Rd., VA Beach, VA 23456
 Area code/Phone number (757) 721-2412

STRANDING DATE:

Year 2001 Month 08 Day 25
 Turtle number by day 01

Field #: _____
 State coordinator must be notified within 48 hrs;
 this was done by phone (757)437-6159
 email fax (757)437-4933

SPECIES: (check one)

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Photos taken? Yes No
 Species verified by state coordinator? Yes No

SEX: (check one)

- Immature, undetermined
 - Female Male
- How was sex determined?
 Necropsy
 Tail length (adult only)
 Length of tail beyond carapace _____ cm / in

STRANDING LOCATION:

State VA County VA Beach
 Descriptive location (be specific) 0.3 mile south of Back Bay Beach Access Ramp
 Latitude _____ Longitude _____

CONDITION: (check one)

- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

FINAL DISPOSITION: (check one)

- 1 = Left on beach where found; painted? Yes* No(5)
- 2 = Buried: on beach / off beach; carcass painted before buried? Yes* No
- 3 = Salvaged: all / part(s), what/why? _____
- 4 = Pulled up on beach/dune; painted? Yes* No
- 6 = Alive, released
- 7 = Alive, taken to rehab. facility, where? _____
- 8 = Left floating, not recovered; painted? Yes* No
- 9 = Disposition unknown, explain _____

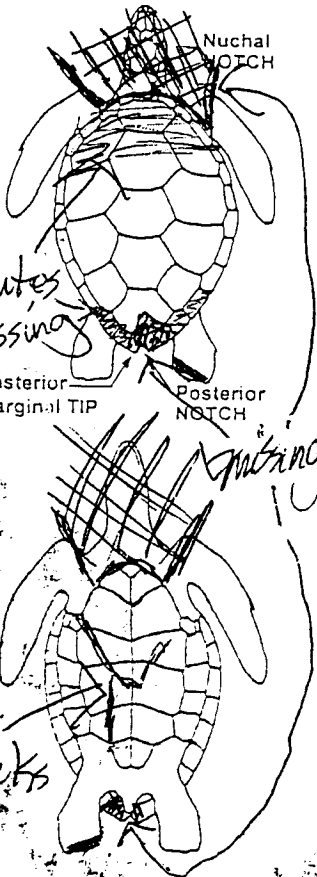
*If painted, what color? orange

TAGS: Contact state coordinator before disposing of any tagged animal!!

Flipper tags present? Yes No
 Check all 4 flippers. If found, record tag number(s) / tag location / return address _____
 PIT tag scan? Yes No
 If found, record number / tag location _____
 Coded wire tag scan? Yes No
 If positive response, record location (flipper) _____
 Checked for living tag? Yes No
 If found, record location (scute number & side) _____

CARAPACE MEASUREMENTS: (see drawing)

Using calipers Circle unit
 Straight length (NOTCH-TIP) _____ cm / in
 Minimum length (NOTCH-NOTCH) _____ cm / in
 Straight width (Widest Point) _____ cm / in
 Using non-metal measuring tape Circle unit
 Curved length (NOTCH-TIP) 55.3 cm / in
 Minimum length (NOTCH-NOTCH) N/A cm / in
 Curved width (Widest Point) 56.1 cm / in
 Circle unit
 Weight actual / est. _____ kg / lb



Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

head is missing, posterior tip of carapace is missing, cracks present on plastron.
scutes absent from frontal carapace.

taxed To VMSIY

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:
 First John M.I. _____ Last Gallegos
 Affiliation Back Bay National Wildlife Refuge
 Address 4005 Sandpiper Road
Virginia Beach, VA 23456
 Area code/Phone number (757) 721-2412

STRANDING DATE:
 Year 2001 Month 08 Day 16
 Turtle number by day 01
 Field #: _____
 State coordinator must be notified within 48 hrs;
 this was done by phone (757)437-6159
 email fax (757)437-4933

SPECIES: (check one)
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified
 Check Unidentified if not positive. Do Not Guess.

STRANDING LOCATION:
 State VA County VA Beach
 Descriptive location (be specific) 0.4 miles from North Carolina border - on False Cape State Park
 Latitude _____ Longitude _____

CONDITION: (check one)
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

FINAL DISPOSITION: (check one)
 1 = Left on beach where found; painted? Yes* No(5)
 2 = Buried: on beach / off beach;
 carcass painted before buried? Yes* No
 3 = Salvaged: all / part(s), what/why? _____
 4 = Pulled up on beach/dune; painted? Yes* No
 6 = Alive, released
 7 = Alive, taken to rehab. facility, where? _____
 8 = Left floating, not recovered; painted? Yes* No
 9 = Disposition unknown, explain _____
 *If painted, what color? Orange

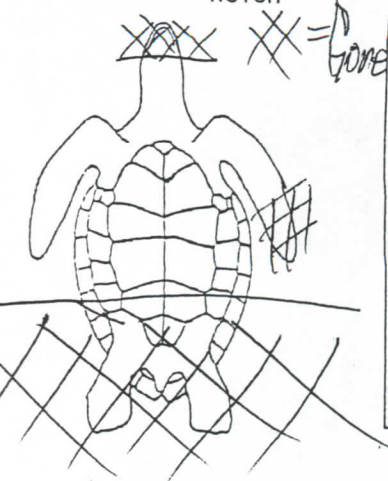
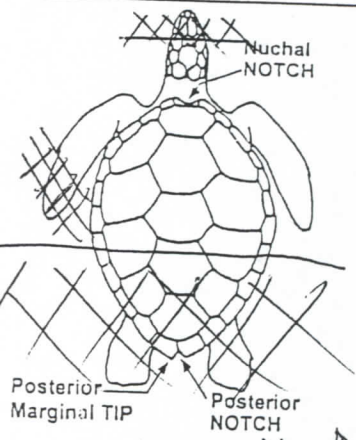
Photos taken? Yes No
 Species verified by state coordinator? Yes No

SEX: (check one)
 Immature, undetermined
 Female Male
 How was sex determined?
 Necropsy
 Tail length (adult only)
 Length of tail beyond carapace _____ cm / in

TAGS: Contact state coordinator before disposing of any tagged animal!!
 Flipper tags present? Yes No
 Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No
 If found, record number / tag location _____
 Coded wire tag scan? Yes No
 If positive response, record location (flipper) _____
 Checked for living tag? Yes No
 If found, record location (scute number & side) _____

CARAPACE MEASUREMENTS: (see drawing)
 Using calipers Circle unit
 Straight length (NOTCH-TIP) _____ cm / in
 Minimum length (NOTCH-NOTCH) _____ cm / in
 Straight width (Widest Point) _____ cm / in
 Using non-metal measuring tape Circle unit
 Curved length (NOTCH-TIP) N/A cm / in
 Minimum length (NOTCH-NOTCH) N/A cm / in
 Curved width (Widest Point) 36 cm / in
 (29 cm = plastron width)
 Weight actual / est. _____ kg / lb



Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.
Most of body, front of head and distal ends of flippers missing

Copy: Original sent to VMSM

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First Michael M.I. C Last Farrell

Affiliation Back Bay National Wildlife Refuge

Address 4005 Sandpiper Rd., VA Beach, VA 23456

Area code/Phone number (757) 721-2412

STRANDING DATE:

Year 2001 Month 07 Day 10

Turtle number by day 01

Field #: _____
State coordinator must be notified within 48 hrs:

this was done by phone (757)437-6159

email fax (757)437-4933

SPECIES: (check one)

CC = Loggerhead

CM = Green

DC = Leatherback

EI = Hawksbill

LK = Kemp's ridley

UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Photos taken? Yes No

Species verified by state coordinator? Yes No

SEX: (check one)

Immature, undetermined

Female Male

How was sex determined?

Necropsy

Tail length (adult only)

Length of tail beyond carapace _____ cm / in

STRANDING LOCATION:

State Virginia

County VA Beach

Descriptive location (be specific)

~ 2 miles N. of ~~First~~ Landing beach access on False Cape S.P.

Latitude 36.588206

Longitude -75.876152

36°36'28.79"

75°52'54.70"

CONDITION: (check one)

0 = Alive

1 = Fresh dead

2 = Moderately decomposed

3 = Severely decomposed

4 = Dried carcass

5 = Skeleton, bones only

FINAL DISPOSITION: (check one)

1 = Left on beach where found, painted? Yes* No

2 = Buried: on beach off beach
carcass painted before buried? Yes* No

3 = Salvaged: all / partial, why? _____

4 = Pulled up on beach/dune, painted? Yes* No

6 = Alive, released

7 = Alive, taken to rehab. facility, where? _____

8 = Left floating, not recovered, painted? Yes* No

9 = Disposition unknown, explain _____

*If painted, what color? Flor. Orange

TAGS: Contact state coordinator before disposing of any tagged animal!!

Flipper tags present? Yes No

Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No

If found, record number / tag location

Coded wire tag scan? Yes No

If positive response, record location (flipper)

Checked for living tag? Yes No

If found, record location (scute number & side)

Unable to do so due to partial turtle

CARAPACE MEASUREMENTS: (see drawing)

Using calipers _____ Circle unit

Straight length (NOTCH-TIP) _____ cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

Straight width (Widest Point) _____ cm / in

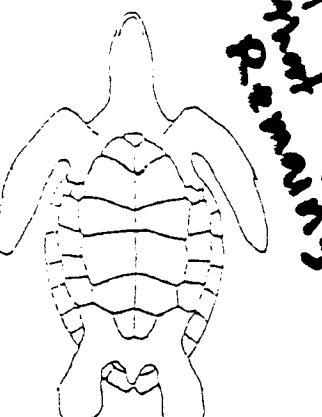
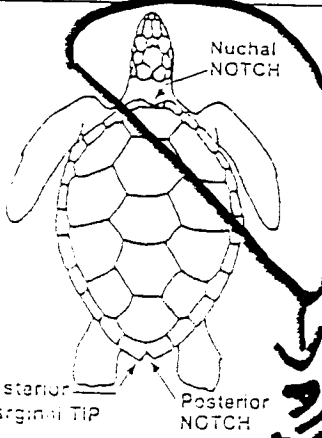
Using non-metal measuring tape _____ Circle unit

Curved length (NOTCH-TIP) _____ cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

Curved width (Widest Point) _____ cm / in

Weight actual est. _____ g / lb



Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibionts, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

* only head & Right front flipper remains.

- head size of turtle (& flipper sizes) makes me believe it was a young turtle

- barnacles all over

- checked for hook in throat = Nothing

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 7-8-07
 Turtle # By Day 01
 Observer's Full Name Christopher Walker
 Location 29th Street

Species CC
 Condition 3
 Remarks Deflated, skin decomposed, scutes missing from carapace, skull visible

Curved Length (cm) 66 (notch), 66 (tip)
 Curved Width (cm) 65

CODES:

SPECIES:
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified

CONDITION OF TURTLE:
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

Copy: original sent to VMSM

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First KELLY M.I. A Last CHASE

Affiliation BACK BAY NWR

Address 4005 SANDPIPER RD., VA. BEACH, VA

Area code/Phone number (757) 721-2412

STRANDING DATE:

Year 2001 Month 07 Day 08

Turtle number by day 01

Field #:

State coordinator must be notified within 48 hrs.

this was done by phone (757)437-6159

email fax (757)437-4933

SPECIES: (check one)

CC = Loggerhead

CM = Green

LC = Leatherback

E = Hawksbill

K = Kemp's ridley

UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Photos taken? Yes No

Species verified by state

coordinator? Yes No

SEX: (check one)

Immature, undetermined

Female Male

How was sex determined?

Necropsy

Tail length (adult only)

Length of tail beyond carapace _____ cm / in

STRANDING LOCATION:

State VIRGINIA

County VA. BEACH

Descriptive location (be specific): ~ 1 MILE FROM 33NWR BEACH ENTRANCE

Latitude 36° 39' 43.77"

Longitude 75° 54' 22.95"

CONDITION: (check one)

0 = Alive

1 = Fresh carcass

2 = Moderately decomposed

3 = Severely decomposed

4 = Dried carcass

5 = Skeleton, bones only

FINAL DISPOSITION: (check one)

1 = Left on beach where found (paint? Yes No)

2 = Buried on beach off beach

carcass painted before buried Yes No

3 = Salvaged all part of carapace

4 = Pinned up on beach (one painted? Yes No)

5 = Alive, released

7 = Alive, taken to rehab. facility where?

8 = Left floating, not recovered (painted? Yes No)

9 = Disposition unknown, explain _____

If painted, what color? ORANGE

TAGS: Contact state coordinator before disposing of any tagged animal!!

Flipper tags present? Yes No

Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No

If found, record number / tag location

Coded wire tag scan? Yes No

If positive response, record location (flipper)

Checked for living tag? Yes No

If found, record location (scute number & side)

CARAPACE MEASUREMENTS: (see drawing)

Using calipers Circle unit

Straight length (NOTCH-TIP) _____ cm

Minimum length (NOTCH-NOTCH) _____ cm

Straight width (Widest Point) _____ cm

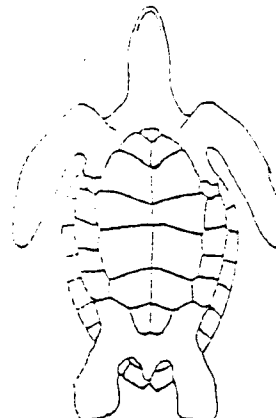
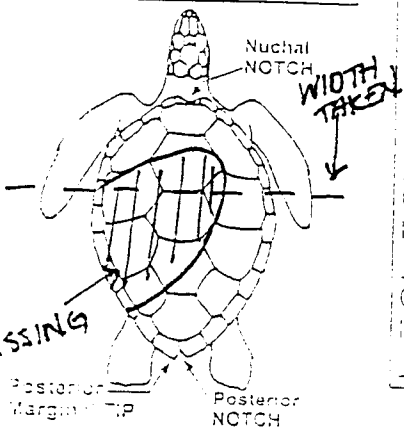
Using non-metal measuring tape Circle unit

Curved length (NOTCH-TIP) 105.4 cm

Minimum length (NOTCH-NOTCH) 100.3 cm

Curved width (Widest Point) 94 cm

Weight actual wet _____ g



Mark wounds / abnormalities on diagrams at left and describe below. Note fur or oil, gear or debris entanglement, propeller damage, epibiotic papillomas, emaciation, etc. Please note if no wounds / abnormalities are found.

MISSING SHELL ON R. SIDE (POSS. P/C OF PROPELLER DAMAGE)
SHATTERED AROUND MISSING PART. INTERNAL PARTS
MISSING/DECOMPOSED. SHELL WAS MISSING IN PARTS
OF ALL MEASUREMENTS.

Copy: Original sent to VMISM

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First Christopher M.I. S Last Walker
Affiliation Back Bay National Wildlife Refuge
Address 4005 Sandpiper Rd., VA Beach, VA 23456

Area code/Phone number (757) 721-2412

STRANDING DATE:

Year 2007 Month 07 Day 07
Turtle number by day 07

Field #:

State coordinator must be notified within 48 hrs:
this was done by phone (757)437-6159
 email fax (757)437-4933

SPECIES: (check one)

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Photos taken? Yes No

Species verified by state coordinator? Yes No

SEX: (check one)

- Immature, undetermined
- Female Male

How was sex determined?

- Necropsy
- Tail length (adult only)
- Length of tail beyond carapace _____ cm / in

STRANDING LOCATION:

State VA County VA Beach

Descriptive location (be specific)
7 mi north of N/C, 1.7 south of E/SF portland border

Latitude 36° 36' 28.79" Longitude 75° 52' 54.70"

CONDITION: (check one)

- 1 = Alive
- 2 = Fresh dead
- 3 = Moderately decomposed
- 4 = Severely decomposed
- 5 = Dried carcass
- 6 = Skeleton, bones only

FINAL DISPOSITION: (check one)

- 1 = Left on beach where found; painted? Yes* No
- 2 = Buried: on beach off beach
carcass painted before buried? Yes* No
- 3 = Salvaged: all portion; unknown
- 4 = Picked up on beach/dune; painted? Yes* No
- 5 = Alive, released
- 6 = Alive, taken to rehab. facility, where? _____
- 7 = Left floating, not recovered; painted? Yes* No
- 8 = Disposition unknown, explain _____
- 9 = Disposition unknown, explain _____

*If painted, what color? orange

TAGS: Contact state coordinator before disposing of any tagged animal!!

Flipper tags present? Yes No
Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No
If found, record number / tag location

Coded wire tag scan? Yes No
If positive response, record location (flipper)

Checked for living tag? Yes No
If found, record location (scute number & side)

CARAPACE MEASUREMENTS: (see drawing)

Using calipers Circle unit

Straight length (NOTCH-TIP) _____ cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

Straight width (Widest Point) _____ cm / in

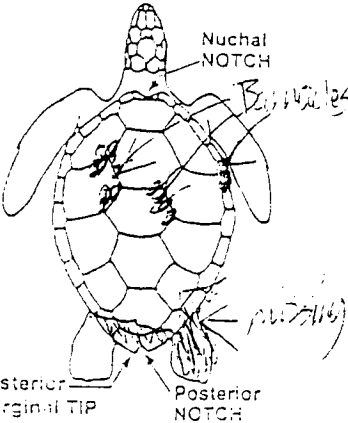
Using non-metal measuring tape Circle unit

Curved length (NOTCH-TIP) 52 cm / in

Minimum length (NOTCH-NOTCH) _____ cm / in

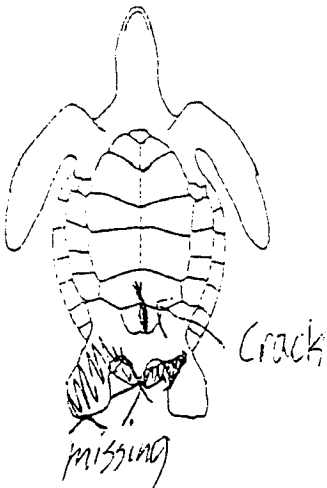
Curved width (Widest Point) 52.6 cm / in

Weight actual est. _____ kg / lb



Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibionts, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

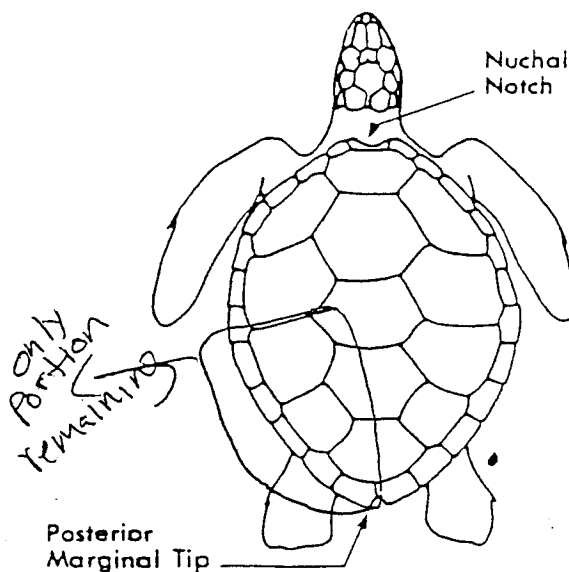
Not blanked collection for at carapace missing right hand flipper missing, left hand flipper present but cut at the joint crack @ posterior tip of plastron insides visible through missing posterior carapace



Back Bay National Wildlife Refuge Sea Turtle Stranding Report

Date 6/26/01
 Turtle # By Day 1
 Observer's Full Name Michael C. Farrell
 Location Little Island City Park
N ~ 2 miles from pier ~ 7 miles ^(N) from
 Species CC EB order
 Condition 3, Sev. Decomp.
 Remarks basically a pile of mush
only partial plastron
only partial carapace
head (skeletal) still remains

Curved Length (cm) NA
 Curved Width (cm) NA



CODES:

SPECIES:

CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified

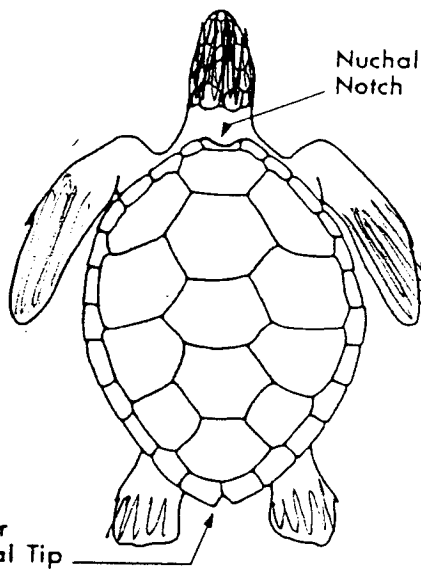
CONDITION OF TURTLE:

0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 6-26-01
 Turtle # By Day 1
 Observer's Full Name Christopher Wether
 Location 22nd St on Oceanfront's resort strip beach
 Species CC
 Condition 3
 Remarks no head, body deflated
shell seems to be hollow
Measurements not taken b/c it's on surf

Curved Length (cm) N/A
 Curved Width (cm) N/A



CODES:

SPECIES:

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

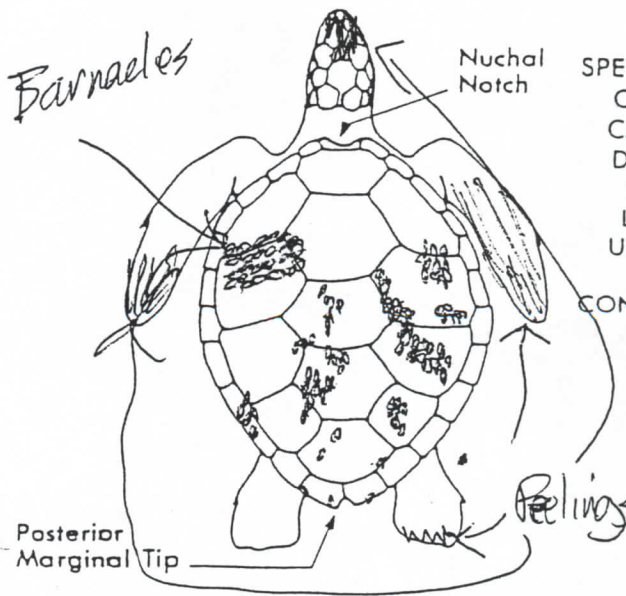
CONDITION OF TURTLE:

- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 6-26-01
 Turtle # By Day 2
 Observer's Full Name Christopher Witek
 Location On Croatan beach behind 836
S Atlantic Ave
 Species CC
 Condition 3
 Remarks Blatant, no obvious wounds,
peelings at flippers and head

Curved Length (cm) 80.8 (crotch), 84 (tip)
 Curved Width (cm) 75.6



- CODES:**
- SPECIES:**
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified
- CONDITION OF TURTLE:**
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

2424
SANDHAVEN

Back Bay National Wildlife Refuge Sea Turtle Stranding Report

Date 6-25-01

Turtle # By Day 1

Observer's Full Name Christopher Wicker

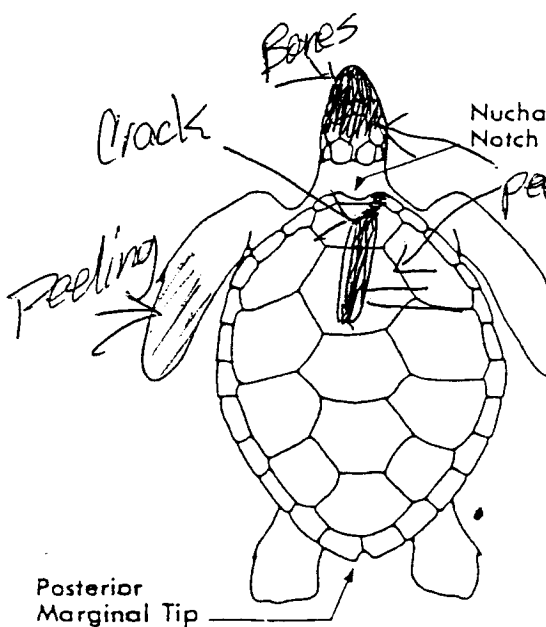
Location 2424 Sandfiddler Rd

Species LK

Condition 3

Remarks one crack near head on carapace
top of head and jaw-bones, peeling
near crack on carapace, peeling on
front left flipper.

Curved Length (cm) 11.9 (notch), 12.1 (tip)
Curved Width (cm) 12.4



CODES:

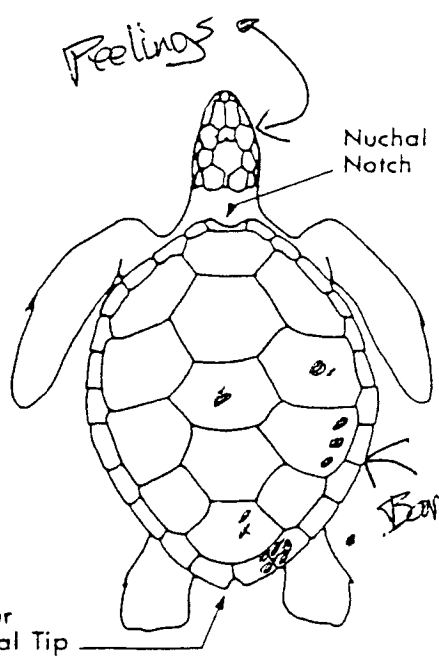
- SPECIES:
- CC = Loggerhead
 - EM = Green
 - DC = Leatherback
 - EI = Hawksbill
 - LK = Kemp's ridley
 - UN = Unidentified

- CONDITION OF TURTLE:
- 0 = Alive
 - 1 = Fresh dead
 - 2 = Moderately decomposed
 - 3 = Severely decomposed
 - 4 = Dried carcass
 - 5 = Skeleton, bones only

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 6-24-01
 Turtle # By Day 1
 Observer's Full Name Christopher Wicker
 Location On Croatan Beach, just behind military fence
 Species CC
 Condition 3
 Remarks Bloated, bigger @ neck
Left side of turtle in sand, in low tide

Curved Length (cm) 84 (tip), 83 (notch)
 Curved Width (cm) _____



- CODES:**
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 UN = Unidentified

- CONDITION OF TURTLE:**
 0 = Alive
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 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

Copy: original sent to VMSM

SEA TURTLE STRANDING AND SALVAGE NETWORK - STRANDING REPORT

OBSERVER'S NAME / ADDRESS / PHONE:

First Laura M.I. K Last Edwards

Affiliation Back Bay National Wildlife Refuge

Address 4005 Sandpiper Rd., VA Beach, VA 23456

Area code/Phone number (757) 721-2412

STRANDING DATE:

Year 2001 Month 06 Day 08

Turtle number by day 01

Field #:

State coordinator must be notified within 48 hrs:

this was done by phone (757)437-6159

email fax (757)437-4933

SPECIES: (check one)

- CC = Loggerhead
- CM = Green
- DC = Leatherback
- Ei = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

Check Unidentified if not positive. Do Not Guess.

Photos taken? Yes No

Species verified by state

coordinator? Yes No

SEX: (check one)

Immature, undetermined

Female Male

How was sex determined?

Necropsy

Tail length (adult only)

Length of tail beyond

carapace _____ cm / in

STRANDING LOCATION:

State VA County Va Beach

Descriptive location (be specific) ApX. 200 Yds from 3 phone posts on

False cove Near huge stump w/ roots on dune ApX.

2 miles from NC border + 1 mi from WW post

Latitude ~36.58649 Longitude ~75.875999

CONDITION: (check one)

- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

FINAL DISPOSITION: (check one)

- 1 = Left on beach where found, painted? Yes* No
- 2 = Buried: on beach / off beach; carcass painted before buried? Yes* No
- 3 = Salvaged: all / part(s), why/why?
- 4 = Pulled up on beach/dune; painted? Yes* No
- 6 = Alive, released
- 7 = Alive, taken to rehab. facility, where? _____

Left Front + flipper

- 8 = Left floating, not recovered; painted? Yes* No
- 9 = Disposition unknown, explain _____

*If painted, what color? orange #BB

TAGS: Contact state coordinator before disposing of any tagged animal!!

Flipper tags present? Yes No

Check all 4 flippers. If found, record tag number(s) / tag location / return address

PIT tag scan? Yes No

If found, record number / tag location

Coded wire tag scan? Yes No

If positive response, record location (flipper)

Checked for living tag? Yes No

If found, record location (scute number & side)

CARAPACE MEASUREMENTS: (see drawing)

Using calipers

Straight length (NOTCH-TIP)	_____	Circle unit
Minimum length (NOTCH-NOTCH)	_____	_____ cm / in
Straight width (Widest Point)	_____	_____ cm / in

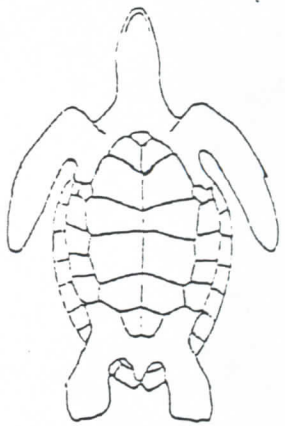
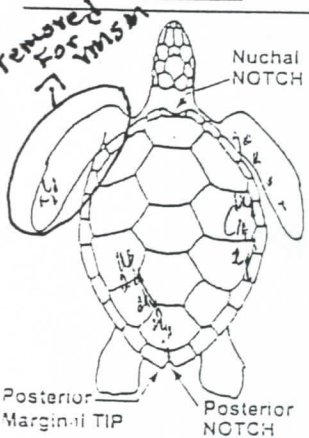
Using non-metal measuring tape

Curved length (NOTCH-TIP)	<u>75</u>	<u>cm</u> / in
Minimum length (NOTCH-NOTCH)	<u>74</u>	<u>cm</u> / in
Curved width (Widest Point)	<u>74</u>	<u>cm</u> / in

Weight actual / est. _____ kg / lb

Mark wounds / abnormalities on diagrams at left and describe below (note tar or oil, gear or debris entanglement, propeller damage, epibiota, papillomas, emaciation, etc.). Please note if no wounds / abnormalities are found.

Covered w/ barnacles on carapace + front flippers (some on rear flippers) Damage to tail Blood dripping from head, slight smell not much.



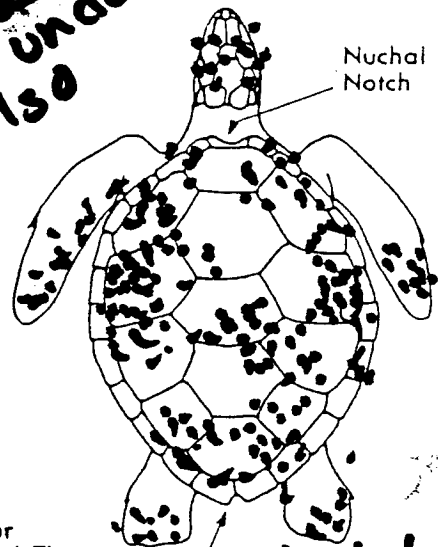
Back Bay National Wildlife Refuge
Sea Turtle Stranding Report

Date 6/6/01
 Turtle # By Day 1
 Observer's Full Name Michael C. Farrell
 Location Sand bridge in front of house 2926 Sandfiddler
 Species CC
 Condition 3
 Remarks

Fairly small, lots of barnacles
 scutes starting to come off
 still has eyes

Curved Length (cm) 60
 Curved Width (cm) 65 } shell distorted
 } due to bloating

*barnacles
 on underside
 also*



- CODES:**
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(Pulled up on beach)

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**
Fort Story, Resort Strip, and Croatan Beach

Date 6-4-01
 Turtle # By Day 01
 Observer's Full Name Christopher Micker
 Location Fort Story Beach, turn right onto beach after Yang Tau St, turtle located just east of entrance
 Species CC
 Condition 3
 Remarks Severely Bloated, no obvious wounds, some scutes feelings
Pulled from high tide

Curved Length (cm) 90 (notch), 102 (tip)
 Curved Width (cm) 76

CODES:

SPECIES:
 CC = Loggerhead
 CM = Green
 DC = Leatherback
 EI = Hawksbill
 LK = Kemp's ridley
 UN = Unidentified

CONDITION OF TURTLE:
 0 = Alive
 1 = Fresh dead
 2 = Moderately decomposed
 3 = Severely decomposed
 4 = Dried carcass
 5 = Skeleton, bones only

**Back Bay National Wildlife Refuge
Sea Turtle Stranding Report**

Fort Story, Resort Strip, and Croatan Beach

Date 6/1/01

Turtle # By Day 1

Observer's Full Name Michael C. Farrell

Location Fort Story ~.2 miles From Northern
most end of Patrol (1st Landing State Park)

Species CC

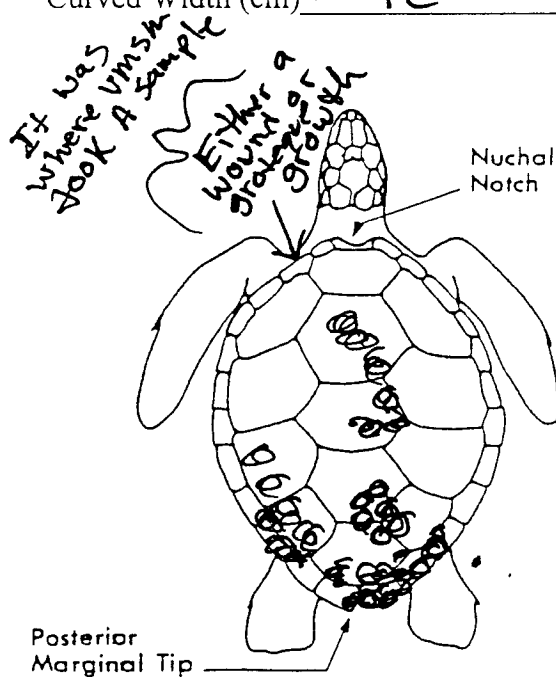
Condition 3

Remarks Looks like a mature female

(VMSM already Responded)

Curved Length (cm) ~ 75

Curved Width (cm) ~ 72



CODES:

SPECIES:

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- CM = Green
- DC = Leatherback
- EI = Hawksbill
- LK = Kemp's ridley
- UN = Unidentified

CONDITION OF TURTLE:

- 0 = Alive
- 1 = Fresh dead
- 2 = Moderately decomposed
- 3 = Severely decomposed
- 4 = Dried carcass
- 5 = Skeleton, bones only

Back Bay National Wildlife Refuge
Sea Turtle Stranding Report
Fort Story, Resort Strip, and Croatan Beach

Date 5/31/01

Turtle # By Day 1

Observer's Full Name Michael C. Farrell

Location Fort Story ~ 0.8 miles (North) of
main Public beach access (to area of lrg. sandbags)

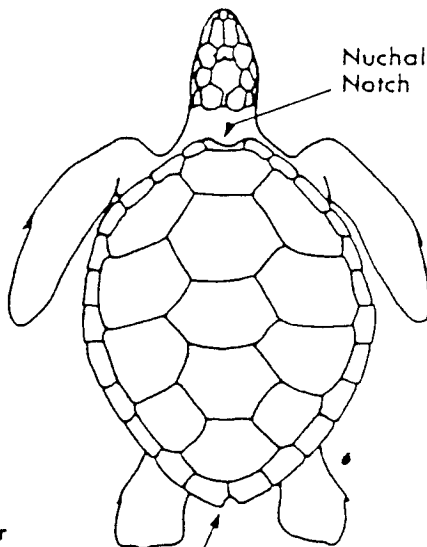
Species Logger-head CC

Condition 3

Remarks VMSM has already inspected
the turtle. (spray painted = scutes are
falling off).

Curved Length (cm) 85

Curved Width (cm) 75



CODES:

SPECIES:

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CONDITION OF TURTLE:

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APPENDIX 2

SEA TURTLE NEST RELOCATION DATA SHEETS

1:37 AM

CRAWL #1
NEST #1

2 body pits!

DATA SHEET FOR CRAWLS & NEST RELOCATIONS

EXIT CRAWL/COULD
FROM WESTERNMOST
BODY PIT.

I. General Information (weather, time, tide level, wind speed, location, etc.)

Date 6/16/01 Tide height _____ Estimated air temperature ~~_____~~
General weather conditions (ie. % cloud cover, rainfall) rain fall: overcast 100% cloud cover
Wind speed & direction _____ Location of crawl (include markers) ~ 2 miles
South of Little Island on North Mile

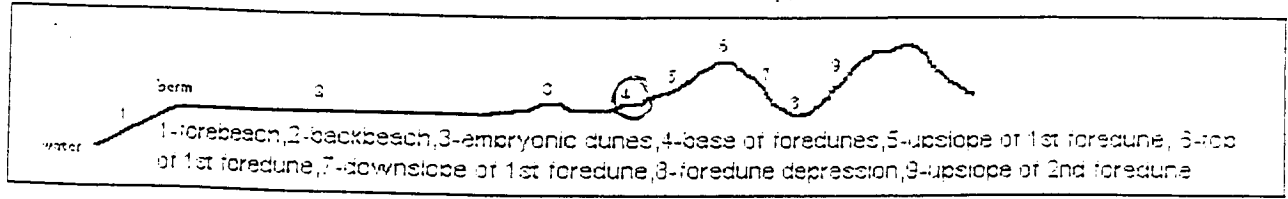
II. Parties Involved

Michael Farrell Rachel Cliche John Gallegos Laura
Edwards : Crawl located by bio-tech Chris Wicker on morning
Patrol

III. Data to be collected for Each Set of Tracks

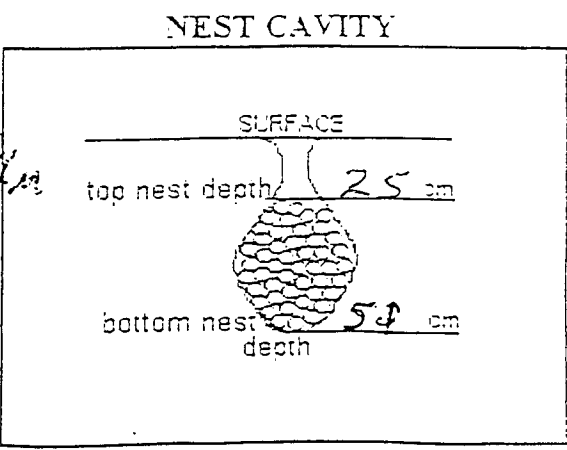
2 body pits; #1 = EASTERNMOST x #2 = WESTERNMOST
Crawl # (ie. 1, 2, 3, ...) 1 Time crawl detected ~ 8:00 am Date 6/16/01
Track measurements: (from where first visible near surf to nest site or end of crawl)
Length of incoming tracks (m) 14.3 m Length of outgoing tracks (m) 13.25 m
Width of incoming tracks (cm) .95 m Width of outgoing tracks (cm) 1.1 m

Flipper impressions alternate or opposite AH. Were tracks prominent? Yes
Distance from center of disturbed nesting area to toe of dunes #1 = 1.85 m #2 = 4.6 m both pits are on top of dunes
Topographical feature at end of tracks (CIRCLE area on diagram) both pits are on top of dunes
Was a nest found? yes false nest? _____ false crawl only? _____



IV. Data to be collected for Each Nest (measurements of nest, egg #, etc.)

Original Nest Data: 6/16/2001
Nest # (ie. 1, 2, 3, ...) 1 Crawl # 1
Time nest excavated 10:20
Width of disturbed nesting area #1 = 1.3 m #2 = 1.6 m
Length of disturbed nesting area #1 = 1.6 m #2 = 2.4 m
Nest cavity width at widest pt. 31 cm
Nest cavity length at longest pt. 25 cm
Total # eggs 127
damaged eggs _____
broken or predated eggs _____
Temperature of soil in nest cavity 25.9°C



* to 1st body pit
* 2nd body pit

Heavy Rain has reduced crawl clarity -
- East nest excavated, no eggs
- Evidence of Fox digging, but no disturbance to

Crawl # 2
Nest # 2

DATA SHEET FOR CRAWLS & NEST RELOCATIONS

I. General Information (weather, time, tide level, wind speed, location, etc.)

Date 2 July 2001 Tide height high Estimated air temperature 73°F
 General weather conditions (ie. % cloud cover, rainfall) 100% Cloud; just rained
 Wind speed & direction — Location of crawl (~, include markers) 7 miles south of Back Bay ramp/on False Cape SP.

II. Parties Involved

Rachel Cliche, John Gallegos, Michael Christine Farrell,
VIMS Night Patrol, David Schulte (Army Corps Engineers)

III. Data to be collected for Each Set of Tracks

* rain washed tracks away.

Crawl # (ie. 1, 2, 3, ...) 2 Time crawl detected 4:30 a.m. Date 2 July 2001
 (by VIMS) (U.S.F.W.S ARRIVED at 6:00 a.m.)

Track measurements: (from where first visible near surf to nest site or end of crawl) (not complete)
 Length of incoming tracks (m) 3.5m Length of outgoing tracks (m) 1.3m (crawl)

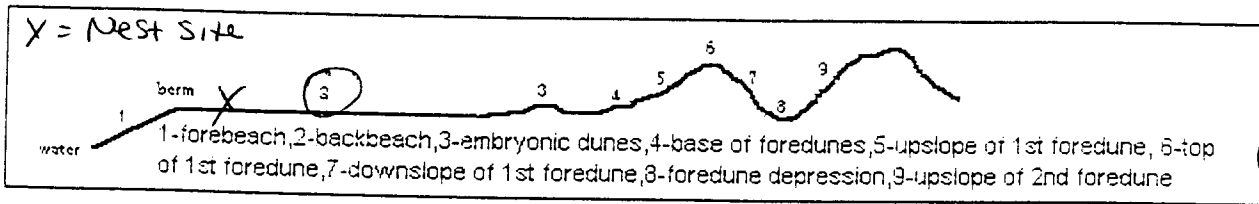
Width of incoming tracks (cm) 100cm Width of outgoing tracks (cm) 100cm. (fresh tracks - from VIMS Release)

Flipper impressions alternate or opposite alt. Were tracks prominent? NO

Distance from center of disturbed nesting area to toe of dunes 18m

Topographical feature at end of tracks (CIRCLE area on diagram)

Was a nest found? Yes false nest? NO false crawl only? NO



VIMS caught Turtle w/ (TURTLE) box

IV. Data to be collected for Each Nest (measurements of nest, egg #, etc.)

Original Nest Data:

Nest # (ie. 1, 2, 3, ...) 2 Crawl# 2

Time nest excavated 7:00 a.m.

Width of disturbed nesting area 1m

Length of disturbed nesting area 3m

Nest cavity width at widest pt. 21 cm

Nest cavity length at longest pt.

Total # eggs 115

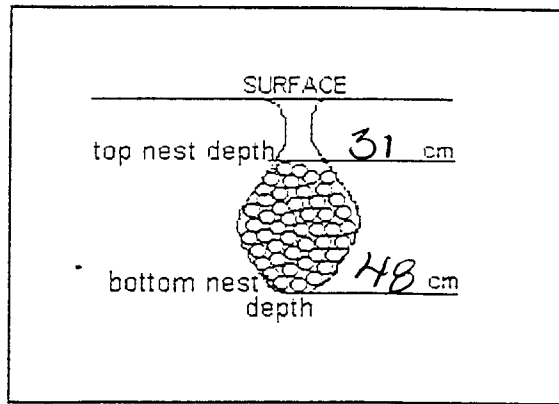
#damaged eggs None

broken or predated eggs None

Temperature of soil in nest cavity 29.2° Soil

28.6° Nest

NEST CAVITY



• Nest Site
X Crawl
O body pit
/ Turtle box

* Saw Turtle Release

APPENDIX 3

VMSM STRANDING TEAM 2000-2001 HATCHLING REPORT

APPENDIX 4

Article on the Release of VMSM
Year-Old Hatchlings

HAMPTON ROADS

Bittersweet farewell: Baby turtles are freed

Yearlings make transition from human hands to natural habitat

THE PROGRAM
 A quartet of young loggerhead turtles that had been raised in a public display in the Virginia Marine Science Museum was released at the edge of the Gulf Stream on Thursday. The goal was to take them where they would have ended up had they survived the perilous 60-mile journey young loggerheads take at the beginning of their lives.



This baby turtle seems eager to begin the next stage of its life. If all goes well, for the next few years it will find food and shelter in the warmth of the Gulf Stream before returning to the beaches where it hatched.



BY PAUL CLANCY
 THE VIRGINIAN-PILOT

VIRGINIA BEACH — A jumbo moon draped the western sky as the powerful fishing boat rumbled out of Rudee inlet before dawn Thursday. Sea turtles usually hatch on a full moon and will release them on a full moon, too," said Beth Pritchard, an exhibits curator at the Virginia Marine Science Museum.

But maybe this quartet of loggerheads, now more than a year after they bobbed out of the sand at Back Bay National Wildlife Refuge, had a better chance of making it than their brothers and sisters who faced a perilous journey across the waves.

The goal was to take them out to mats of sargassum weeds that float at the edge of the Gulf Stream. That's where they would have been had they survived the 60-mile journey at the beginning of their lives.

The cereal bowl-sized yearlings rested comfortably on soft foam padding in cardboard boxes as museum staff and supporters — who donated their boat and time — took them on a habitat-hunting

Photo: Turtles, Page B5
 Stacy Carls, a Virginia Marine Science Museum aquarist, prepares to release a baby in some sea grass.

"Typically, this time of year ride out on the Atlantic when you get nice hard temperature breaks, you find weed beds," said Bill Richardson, captain of "Rebel," the 53-foot custom boat, as it crested rising swells.

The mission was part of an experiment to see if, by intervening at the beginning of the sea turtles' lives, the museum can improve their chances of survival.

Of the 90 or so babies hatched in the Back Bay nest last year, only about 10 percent were expected to make it.

Fritchau said. If they don't fall prey to the red foxes that jump them as they race across the sand, there are dozens of other predators waiting in the sea.

Marine science staff took the four turtles from the suit and raised them at a public display in the museum.

In a program now in its sixth year, the turtles are taught to dive for food. Then they're tagged and taken to the edge of the Gulf Stream, 60 to 80 miles out.

Thomas Fritchau, co-chairman of an education and research committee of the Virginia Marine Science Museum Foundation, his son, Tommy, who helped pilot the boat, Stacy Cards, an aquarist at the museum, and Rachel Cliche, an observer from the U.S. Fish and Wildlife Service,

The boat raced through a thick fog bank, passed at least one medium-sized shark, a floating adult loggerhead, a surfacing tuna and diving sea birds. Richardson had plotted the warmer Gulf Stream on an ocean temperature Web site maintained by Rutgers University.

Just as the water temperature warmed, strands of brown mats began to appear. The sea turned deep blue, the air temperature rose, then larger mats appeared.

"Ready to go, pal?" Fritchau said as she lifted one of the turtles.

As the loggerheads, with tough, ridged shells and soft stomachs, were lifted from their boxes, their flippers began to move like wings. Their heads bent toward the water as they were lowered.

Some dived deep as they touched the surface. Others swam for the mats.

"Let's hear it for the turtles!" Fritchau said, and all applauded.

"There's something pretty special about this," he said. "The idea that you're able to interact with something so natural. You feel like you're giving something back."

For Fritchau, it was bittersweet.

"You work so hard to get them through that first year of life," she said. "To know that you're putting them in an ocean that you can't even father how big it is. . . . I'm going to wonder what they're doing, what they're finding to eat."

"You say a little prayer for them and hope for the best."

■ Rachel Fitch (Fancy at plangny.pl@earthlink.net or 222 5172

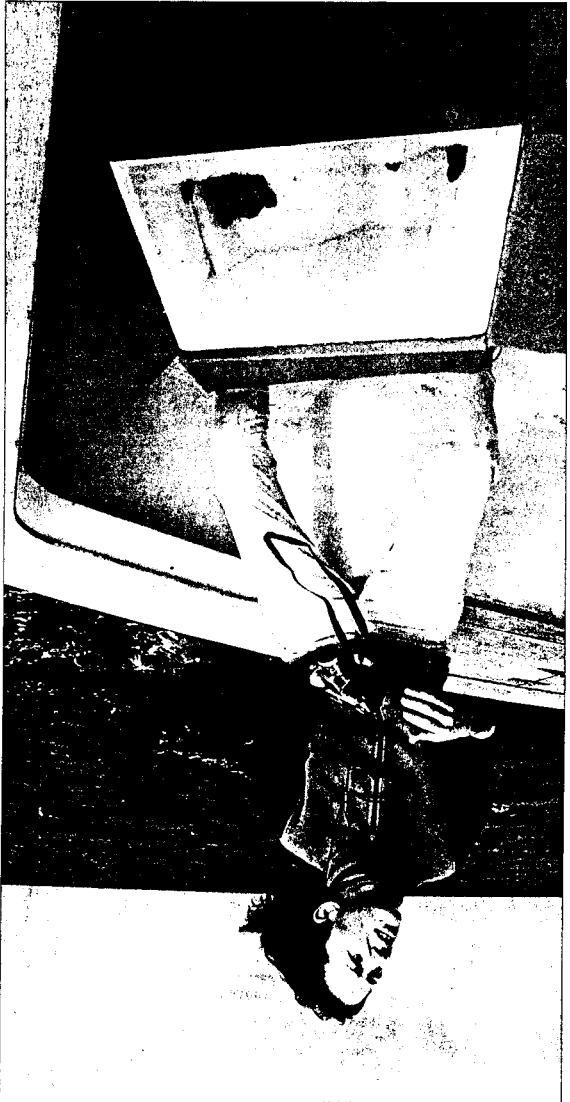
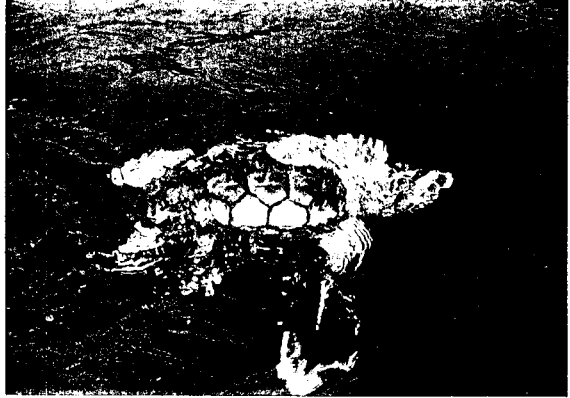


PHOTO BY JEFFREY M. HARRIS FOR THE OCEANOGRAPHY

Bill Fritchau, above, an exhibits curator at the Virginia Marine Science Museum, and other museum staff members and volunteers traveled out 60 miles in the fishing boat "Rebel" on Thursday to the Gulf Stream to release baby loggerhead sea turtles. Below, one of the four freed reptiles, which were born in the sand at Back Bay National Wildlife Refuge, glides into its new life in the Atlantic.



5172

APPENDIX 5

2001 SEA TURTLE PATROL EXPENSE

2001 Sea Turtle Patrol Expenses



I. Army Corps of Engineers Expenses:

\$20,706.35 (\$15,004.60 Salaries for 2 Biological Technicians)

<u>Total Salaries:</u>	\$14,403.27
<u>Administrative Costs:</u>	\$ 5,701.75 (38% absorbed by USFWS Denver Finance Center)
<u>ATV Training:</u>	\$ 225.00
<u>Miscellaneous supplies</u>	\$ 376.33
TOTAL	\$20,706.35

II Back Bay National Wildlife Refuge Expenses:

<u>(New) Replacement ATV:</u>	\$5,903.08
<u>Total ATV Repairs:</u>	\$1,283.54
<u>Photos Development:</u>	\$ 3.96
TOTAL	\$7,190.58

III. Total Sea Turtle Program Expenses for 2001:

<i>COE Expenses</i>	\$20,706.35
<i>BBNWR Expenses</i>	+ \$ 7,190.58
Grand Total:	\$27,896.93

BKB: J. Gallegos, R. Cliche

CC: John Gallegos, Lamar Gore, Don Schwab, Hal Laskowski, Karen Mayne (E.S.)

FILE DESIGNATION: 2001 ACOE Report.wpd

DISK NAME: C:\Myfiles\Sea Turtles

FILE NAME: LHSTSummaryReport-2001

EMAIL: NO

FAX: NO

OVERNIGHT MAIL: YES