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SEA TURTLE INVENTORY

for

SUMMER AND FALL 1985

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION

ASSISTANT CHIEF OF STAFF, FACILITIES

MARINE CORPS BASE

CAMP LEJEUNE, NORTH CAROLINA 28542

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TABLE OF CONTENTS

		Page
Introduction		
Sea Turtle Inventory (Nest Data)	Table I	5A-5C
Return of Tagged Turtles	Table 2	6
Ground Survey Number Totals	Table 3	7A-B
Crawl Information in Relation to Moon Tidal Cycles	Table 4	8A-D
Number of Crawls with Nests in Relation to Lunar Cycle	Figure I	9
Number of Crawls Without Nests in Relation to Lunar Cycle	Figure 2	10
Total Crawls and Nests by Months	Figure 3	11
Nest and Crawl Activity Map	Figure 4	12
Aerial Survey	Table 5	13A-13E
Nesting Results	Table 6	14A-14C

INTRODUCTION

The sea turtle inventory for 1985 is a continuation of past efforts by Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina, to protect sea turtle nesting activities at Onslow Beach. The sea turtle inventory consists of several programs including: nest protection, tagging of adult turtles, collecting nesting data, determining hatchling success and aerial surveys.

Management personnel began operating under a Federal Fish and Wildlife Permit during 1981, issued for working with threatened Loggerhead and Green Turtles. The permit authorizes the tagging and measurement of adults and the relocation of nests threatened by erosion, tides, extreme predation or military training activities. Nests may be moved only within 24 hours of egg laying to a safe beach location and not to a laboratory. Relocated nests are required to be monitored and hatchling success documented.

The results of the sea turtle program are as follows:

a. Nest protection from predators, 36.

b. Tagging of adults - number of turtles tagged 25.

Tag return data may be reviewed in Table II

c. Nesting data - Number of nests - 36.

d. Total number of crawls - ~~36~~ 87

e. Total number of eggs - 4,250.

f. Total number of hatchlings - 3,698.

*Note: 199 of these were dead in nest.

g. Number of tag returns 38

h. Number of stranded turtles 5

i. Number of nests lost during Hurricane Gloria 1

j. Number of nests lost during abnormal high tides associated with northeast winds 2

k. Number unhatched nests from unknown causes 0

Stranding reports were submitted to the North Carolina Wildlife Resources Stranding Network Coordinator. Carcasses of stranded turtles were buried on the beach.

Percent hatchling success is 80.1%; nesting and crawl data is compiled in Tables 1 through IV, and Figures 1 through 3. The enclosed maps in Figure 4 indicate locations of turtle activity on Onslow Beach.

Aerial survey data may be found in Table V.

Table VI contains the hatching results of individual nests for the season.

This inventory period, a green sea turtle that nested four times in 1980, nested on Onslow Beach five times this year. Data on the green turtle is in this 1985 report.

The Marine Corps Base, Camp Lejeune and Natural Resources and Environmental Affairs Division give special thanks to Doctor F. J. Schwartz at the Institute of Marine Science, Morehead City, North Carolina for his advice and services.

For copies of this report or other information concerning the sea turtle management program conducted by this agency, contact: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542 (Attention: Director, Natural Resources and Environmental Affairs Divison, Assistant Chief of Staff, Facilities).

SEA-TURTLE INVENTORY
(Crawl Data)

TABLE I

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
001	6-5-85	0110	✓	1.6(S)	135 eggs
002	6-5-85	2230±	✓	1.6(S)	Relocated from 0.35(S)
003	6-6-85	2100		2.1(S)	Crawl Only (C.O.)
004	6-6-85	Unk		2.1(S)	C.O. Base of high dune
005	6-6-85	2200+	✓	2.55(S)	Behind dune 35' above high tide
006	6-12-85	2200		2.2(S)	C.O. Base eroded low dune
007	6-12-85	2200		2.4(S)	C.O. To low dune, moved around
008	6-12-85	0120	✓	0.4(N)	
009	6-17-85	2305	✓	2.25(N)	Near (N) Tower in dune
010	6-18-85	2130	✓	2.2(N)	Relocated from 035(S) Pie
011	6-18-85	2300		1.0(S)	C.O.
012	6-19-85	2325		2.7(S)	Into low dunes near Inlet
013	6-19-85	0115		0.6(S)	Began nest but left
014	6-19-85	0350	✓	0.6(S)	Relocated from 2.3(S)
015	6-20-85	0330		0.2(N)	C.O. 60' circle above MHW
016	6-21-85	0340		0.57(S)	C.O. Base eroded dune - revers
017	6-22-85	2228	✓	1.9(S)	Tag AAR 145, 146 Relocated from 0.25(S) CM
018	6-22-85	-423	✓	0.5(N)	Tag GA 7130, 7129 Relocated from 0.8(s)
019	6-23-85	2325		2.3(S)	C.O. Observed Went down beach - back
020	6-23-85	0100		.6(N)	C.O. No tag Tag AAR147,148 Observed turned - into se
021	6-24-85	0100	✓	.6(N)	No tag Relocated from .3(S)
022	6-26-85	0030		1.6(S)	C.O. To dunes left - to sea

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurr
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
023	6-27-85	0015		0.8(NP	C.O. Into low dune - Started nest
024	6-27-85	0019			C.O. In surf - did not catch
025	6-27-85	0350		0.45(N)	C.O. 0.45(N) 35' above mean high tide
026	6-28-85	0150	✓	1.7(N)	Tag 151, 152 Relocated 25' higher
027	6-30-85	0309		.5(N)	C.O. Turtle not observed
028	7-2-85	2310	✓	3.0(S)	Tag AAR 149, 150 1 deformed egg dime size
029	7-3-85	2230		1.95(S)	C.O. 40' above MHW Started nest
030	7-3-85	2233	✓	2.0(S)	2.0(S) return #014 added Tag #142, moved up 40'
031	7-5-85	2148		1.2(S)	C.O. Overwash - to sea
032	7-5-85	2245	✓	2.0(S)	Rel.from 1.2(S)- 200' fro 031 2.0(S) nest to 030
033	7-5-85	0010	✓	2.0(N)	Incomplete nest - Turtle left dur exam 18 eggs into 03
034	7-6-85	2233	✓	1.6(S)	CM Relocated from 1.6(S) Tag AAR 145
035	7-6-85	2252	✓	1.5(S)	Relocated from 1.4(S) Tag AAR 157, 158
036	7-6-85	0008		0.52(N)	C.O. Over 5'-7' dune wander return to sea
037	7-6-85	0012		5.5(N)	Base steep eroded dune-ba
038	7-7-85	2146		2.2(S)	C.O. False crawl to base of dune
039	7-7-85	2218		2.0(S)	C.O. Unavailable to tag. To base dune turn - to sea
040	7-7-85	2253		1.8(N)	C.O. Tried to dig middle beach - sand hard left
041	7-8-85	0210		1.0(S)	C.O. Too heavy to turn over, one man.
042	7-10-85	0011	✓	2.0(N)	Tag 815, 816 - IMS Moreh Return See #008
043	7-10-85	0145		0.6(N)	C.O. To base dunes. Looked 1 nest but found no eggs
44	7-10-85	0148		0.55(N)	C.O. AAR 071 Observed while e amining #043 caught. Could dc only GMC.

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SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
045	7-11-85	0500	✓	1.5(S)	Turtle nested Barnacle Bill'sPi Moved to 1.5(S) C. Peterson 2.
046	7-12-85	0011	✓	1.7(N)	Relocated from 0.85(S) AAR 071 - same as on #044
047	7-13-85	2211		0.2(S)	C.O. Turned on beach - to sea
048	7-13-85	2309	✓	2.3(N)	Tag AAR 151, 1520.47(N) Rel 2.3(N) Return of 026
049	7-14-85	0235	✓	1.7(S)	Relocated 1.6(S) Tag AAR 159, 160
050	7-15-85	2236		1.9(S)	C.O. Tag AAR 144 Same turtle #014
051	7-15-85	2349		2.7(S)	C.O. Turtle made it up a 3' vertical wall of sand
052	7-15-85	0013		1.05(N)	Tag AAR 161,162 Turtle observ but laid no eggs - in dune are
053	7-15-85	0305	✓	1.35(N)	Tag 36 observed laying eggs Layed eggs first part beach
054	7-17-85	0028	✓	0.25(N)	Tag AAR 145, IMS 649-CM Same a 017, 034 Video tape Rel.from 0.45
055	7-18-85	0012	✓	1.8(S)	Tag AAR 163,164 Rel. from 2.7(S)
056	7-19-85	0018	✓	1.8(S)	Tag AAR 157,158 Rel.from 0.65(S) Return #035
057	7-19-85	0055		1.9(N)	C.O. into dunes 3 false nests
058	7-20-85	0029		1.95(S)	C.O. Up 2nd line of dunes Ret.to sea Tag 165,166. 166 no closed
059	7-21-85	0021	✓	1.9(N)	Tag AAR 167,168. Rel.from .3(S) Crawled through Amtrack tracks
060	7-21-85	0353		2.2(S)	Aborted due to roots unde C.O ground - cavity was there
061	7-21-85	0417		1.6(S)	C.O. Turned around due to vertical embankment
062	7-26-85	0350		0.45(S)	Tag AAR 144 - Return 014 030 - leaving beach C.O.
063	7-27-85	0028		2.2(S)	C.O. Base steep 2 1/2' ledge - to ocean
064	7-27-85	0055	✓	1.8(N)	Tag AAR 144, relocated from 1.8(N) Return of 014 020 FG 062

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SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
065	7-28-85	0105		.15(S)	C.O. Two nests were attem No eggs laid - loop-patte
066	7-29-85	2200		1.6(S)	C.O. Vert.sand dune. Turned around to sea Tag AAR169,170
067	7-29-85	2305	✓	.6(N)	C.M. Green Turtle Tag AAR145 IMS 649. Did not relocate
068	7-29-85	0105		1.7(S)	Back into water C.O. AAR 071, IMS 716
069	8-1-85	2243		0.5(N)	Rel.from 0.15(S) Tag AAR1 158. Return of #035,056.
					Crawled 150' to top dune.
070	8-3-85	0203		0.3(S)	Tag AAR 063, 064 - Seen b low H.T.L. Turned and lef
071	8-3-85	0223		0.55(S)	C.O. 15'from tide line to base of 15'-18'dune - to sea C
072	8-3-85	0230		0.84(S)	C.O. To base of 10' dune and return to sea
073	8-3-85	0236		1.14(S)	C.O. To base of overwash rested - to sea
074	8-3-85	0241		1.43(S)	C.O. To base of overwash Return 8' to sea
075	8-3-85	0245		2.1(S)	C.O. Diag. to base of 7'-8' dune - 25' out water - sea
076	8-4-85	0023		1.9(N)	C.O. Hit sand dunes -turn around returned to sea
077	8-5-85	0047		1.0(S)	C.O. Crawled up into sand dune turned around - back to sea
078	8-5-85	0145		2.0(S)	C.O. to bottom of sand du turned around - to sea
079	8-10-85	0055		3.12(S)	C.O. Crawled to eroded ledge along ledge 25'.
080	8-10-85	0111		3.0(S)	C.O. observed at eroded 15" ledge. Returned 15' to sea.
081	8-10-85	0208		1.66(S)	c.o. observed 10' from surf crawled 60' to eroded dune
082	8-10-85	0225		2.95(S)	C.O. observed 10' to steep led To sea. Did not get tag number
083	8-10-85	0238		2.75(S)	C.O. 18' to ledge and bac to sea
084	8-10-85	0240		2.85(S)	C.O. 20' to ledge and 20' alor ledge trying to climb. To sea.
085	8-10-85	0250	✓	2.0(S)	Crawled 75' above MHW in dunes. Lg.body cav Tag AA 1 IMS 64

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SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (√)	Location*	Comments
086	8-11-85	0005	√	.6(N)	Rel.from 0.2(S) in flat of beac Same as 014, 064, 030 Tag AAR-1
087	8-14-85	0100		0.6(N)	C.O. Crawled 75' Made nest attempt
088	8-15-85	2309	√	2.07(S)	Rel.from 0.17(S). Crawled from water. Return 035, 056, 069
089	8-20-85	0029	√	0.3(N)	Return of 008, 042, on top of 6' dune. Tag IMS 815,816
090	8-22-85	2311		1.82(S)	C.O. To base of steep dun 12' - return to sea
091	8-22-85	0100		1.8(S)	Probably (C.M.) wandered aroun C.O. low overwash 450'-500' To sea
092	Unk. Approx. 7-4-85	Unk	√	2.0(S)	Located nest 9/3/85. Probably turtle not seen laying eggs

Summary of Instructions:
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TABLE II

RETURN RECORD OF TAGGED TURTLES
1985 SEA TURTLE INVENTORY

Date Tagged 1985	Tag Number	Return 1985	Return 1985	Return 1985	Return 1985
6-12 (2)	815*, 816*	8-20 (2)			
6-17 (2)	139, 140 AAR				
6-18 (2)	041, 043 AAR				
6-19 (2)	Lost 144 142 AAR	Added 142AAR 7-3 (2)	7-26 (1)	7-27 (2)	8-11 (2)
6-22 (2)	Missed 649 145, 146 AAR	7-6 (2)	649* 7-17 (2)	649*-145AAR 7-29 (2)	145-649* 8-10 (1)
6-22 (2)	7130,7129 **				
6-23 (1)	147, 148 AAR				
6-28 (2)	151, 152 AAR	7-13 (2)			
7-2 (2)	149, 150 AAR				
7-3 (2)	142, 144 AAR	7-15 (1)			
7-5 (2)	154 One tag only AAR				
7-5 (2)	18 eggs 155, 156 AAR				
7-6 (2)	157, 158 AAR	7-19 (2)	8-1 (2)	8-15 (2)	
7-10 (1)	071 AAR	7-12 (2)	716* 7-29 (2)		
7-10 (2)	815*, 816*	8-20 (2)			
7-14 (2)	159, 160 AAR				
7-15 (1)	161, 162 AAR				
7-15 (2)	36 UNK	7-29 (1)			
7-17 (2)	649* 145 (left)AAR	7-29 (2)	8-10 (2)		
7-18 (2)	163, 164 AAR				
7-20 (1)	165, 166 AAR				
7-21 (2)	167, 168 AAR				
7-26	144 AAR	7-27 (2)	8-11 (2)		
7-27 (2)	144, 142 AAR				
8-3 (2)	063, 064 AAR				

(1) Did not nest (2) Nested * Scientific Marine Institute ** GA Yellow plastic
PO 6 Morehead City, NC

TABLE III

GROUND SURVEY NUMBER

(NIGHTS NOT SEPARATED AT MIDNIGHT)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
6-5-85	0	2	2
6-6-85	2	1	3
6-12-85	2	1	3
6-17-85	0	1	1
6-18-85	1	1	2
6-19-85	2	1	3
6-20-85	1	0	1
6-21-85	1	0	1
6-22-85	0	2	2
6-23-85	2	0	2
6-24-85	0	1	1
6-26-85	1	0	1
6-27-85	3	0	3
6-28-85	0	1	1
6-30-85	1	0	1
7-2-85	0	1	1
7-3-85	1	1	2
7-4-85	0	1	1
7-5-85	1	2	3
7-6-85	2	2	4
7-7-85	3	0	3
7-8-85	1	0	1
7-10-85	2	1	3
7-11-85	0	1	1
7-12-85	0	1	1

TABLE III (cont'd)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
7-13-85	1	1	2
7-14-85	0	1	1
7-15-85	3	1	4
7-17-85	0	1	1
7-18-85	0	1	1
7-19-85	1	1	2
7-20-85	1	0	1
7-21-85	2	1	3
7-26-85	1	0	1
7-27-85	1	1	2
7-28-85	1	0	1
7-29-85	2	1	3
8-1-85	0	1	1
8-3-85	6	0	6
8-4-85	1	0	1
8-5-85	2	0	2
8-10-85	6	1	7
8-11-85	0	1	1
8-14-85	1	0	1
8-15-85	0	1	1
8-20-85	0	1	1
8-22-85	2	0	2

TOTAL 92

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-5-85	2223	3/4	95	0930		0110	1
6-5-85	2223	3/4	95	0930		2230	1
6-6-85	2308	3/4	89	0408	2100		1
6-6-85	2308	3/4	89	2236	Unk		1
6-6-85	2308	3/4	89	1537		2200	1
6-12-85	0132	1/4	34	1537	2200		1
6-12-85	0132	1/4	34	1537	2200		1
6-12-85	0132	1/4	34	1537		0120	1
6-17-85	0400	New	02	1910	2300		1
6-18-85	0445	New	000	1949		2130	1
6-18-85	0445	New	00	1949	2300		1
6-19-85	0537	New	00	2029	2325		1
6-19-85	0537	New	000	2029	0115		1
6-19-85	0537	New	00	2029		0350	1
6-20-85	0636	New	02	2109	0330		1
6-21-85	0740	1/4	07	2152	0340		1
6-22-85	0846	1/4	13	2238		2228	1
6-22-85	0846	1/4	13	2238		0423	1
6-23-85	0953	1/4	21	2327	2325		1
6-23-85	0953	1/4	21	2327	0021		1
6-24-85	1100	1/2	30	1808		0100	1
6-26-85	1314	1/2	52	0120	0030		1
6-27-85	1423	3/4	64	1503	0015		1
6-27-85	1423	3/4	64	1503	0019		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-27-85	1423	3/4	64	1503	0350		1
6-28-85	1534	3/4	75	1605		0150	1
6-30-85	1800	FULL	92	1801	0309		1
7-2-85	2209	FULL	100	1947		2310	1
7-3-85	2059	FULL	100	2037	2230		1
7-3-85	2059	FULL	100	2037		2233	1
7-4-85	2140	FULL	97	2124		UNK	1
7-5-85	2215	3/4	92	2211	2148		1
7-5-85	2215	3/4	92	2211		2245	1
7-5-85	2215	3/4	92	2211		0010	1
7-6-85	2244	3/4	86	2255		2233	1
7-6-85	2244	3/4	86	2255		2252	1
7-6-85	2244	3/4	86	2255	0008		1
7-6-85	2244	3/4	86	2255	0012		1
7-7-85	2310	3/4	78	1130	2146		1
7-7-85	2310	3/4	78	1130	2218		1
7-7-85	2310	3/4	78	1130	2253		1
7-8-85	2334	1/2	69	1218	0210		1
7-10-85	2400	1/2	50	1357		0011	1
7-10-85	2400	1/2	50	1357	0145		1
7-10-85	2400	1/2	50	1357	0148		1
7-11-85	0023	1/4	41	1447		0500	1
7-12-85	0050	1/4	32	1540		0011	1
7-13-85	0121	1/4	23	1629	2211		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
7-13-85	0121	1/4	23	1629		2309	1
7-14-85	0156	NEW	16	1629		0235	1
7-15-85	0238	NEW	09	1759	2236		1
7-15-85	0238	NEW	09	1759	2349		1
7-15-85	0238	NEW	09	1759	0013		1
7-15-85	0238	NEW	09	1759		0305	1
7-17-85	0426	NEW	01	1926		0028	1
7-18-85	0529	NEW	00	2008		0012	1
7-19-85	0636	NEW	01	2050		0018	1
7-19-85	0636	NEW	01	2050	0055		1
7-20-85	0744	1/4	05	2133	0029		1
7-21-85	0852	1/4	05	2218		0021	1
7-21-85	0852	1/4	05	2218	0353		1
7-21-85	0852	1/4	05	2218	0417		1
7-26-85	1435	3/4	62	1444	3500		1
7-27-85	1546	3/4	72	1550	0028		1
7-27-85	1546	3/4	72	1550		0055	1
7-28-85	1655	3/4	82	1653	0105		1
7-29-85	1757	FULL	90	1751	2200		1
7-29-85	1757	FULL	90	1751		2305	1
7-29-85	1757	FULL	90	1751	0105		1
8-1-85	2012	FULL	100	2018		2243	1
8-3-85	2110	3/4	95	2141	0203		1
8-3-85	2110	3/4	95	2141	0223		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
8-3-85	2110	3/4	95	2141	0230		1
8-3-85	2110	3/4	95	2141	0236		1
8-3-85	2110	3/4	95	2141	0241		1
8-3-85	2110	3/4	95	2141	0245		1
8-4-85	2135	3/4	90	2221	0023		1
8-5-85	2200	3/4	83	1049	0047		1
8-5-85	2200	3/4	83	1049	0145		1
8-10-85	1200	1/4	38	1454	0055		1
8-10-85	1200	1/4	38	1454	0111		1
8-10-85	1200	1/4	38	1454	0208		1
8-10-85	1200	1/4	38	1454	0225		1
8-10-85	1200	1/4	38	1454	0238		1
8-10-85	1200	1/4	38	1454	1240		1
8-10-85	1200	1/4	38	1454		0250	1
8-11-85	0031	1/4	29	1548		0005	1
8-14-85	0313	NEW	07	1817	0100		1
8-15-85	0429	NEW	03	1901		2309	1
8-20-85	1006	1/4	16	1026		0029	1
8-22-85	1227	1/2	36	1217	2311		1
8-22-85	1227	1/2	36	1217	0100		1

TOTAL 92

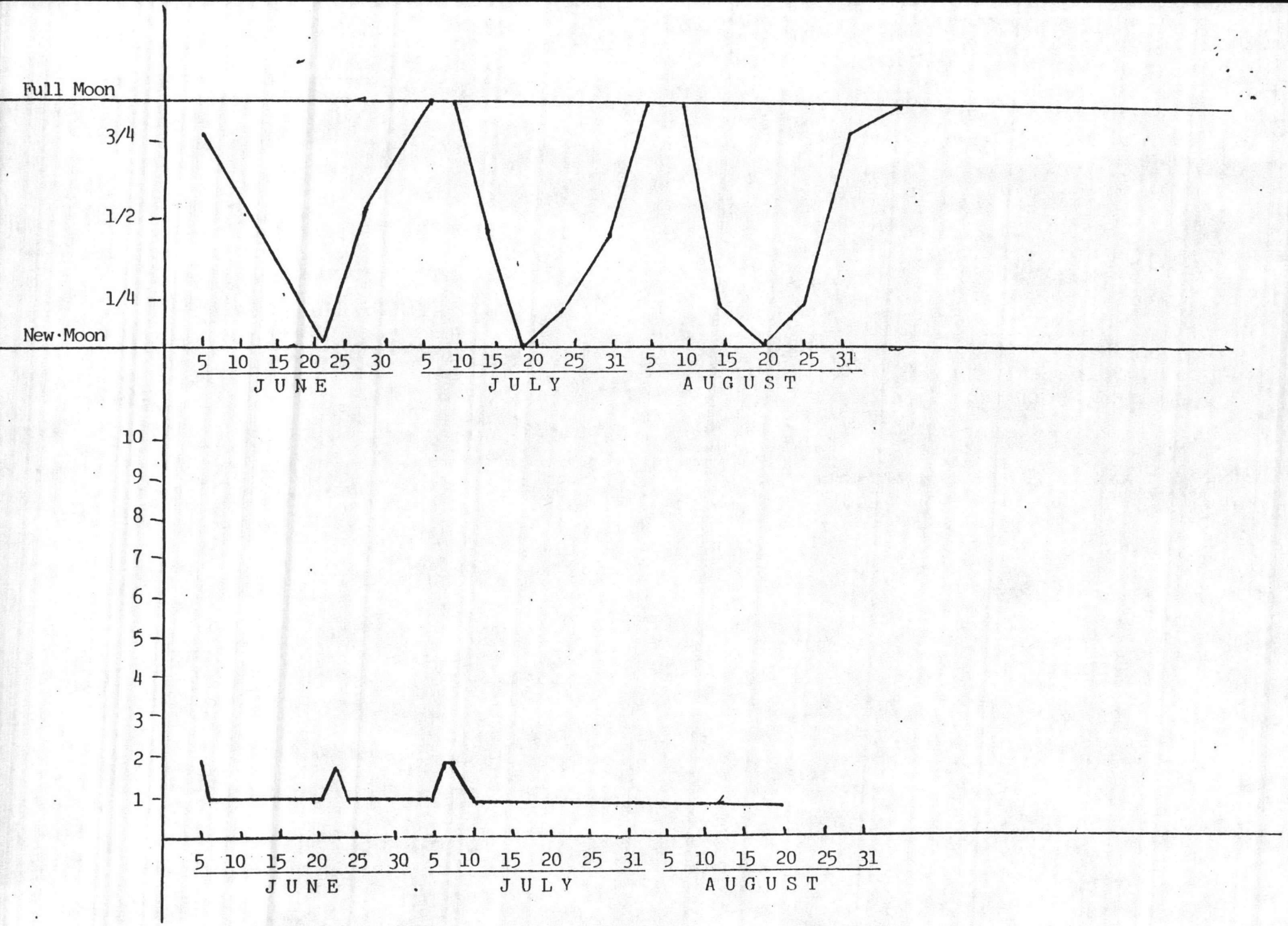

FIG.1 - NUMBER OF CRAWLS WITH NESTS IN RELATION TO LUNAR CYCLE

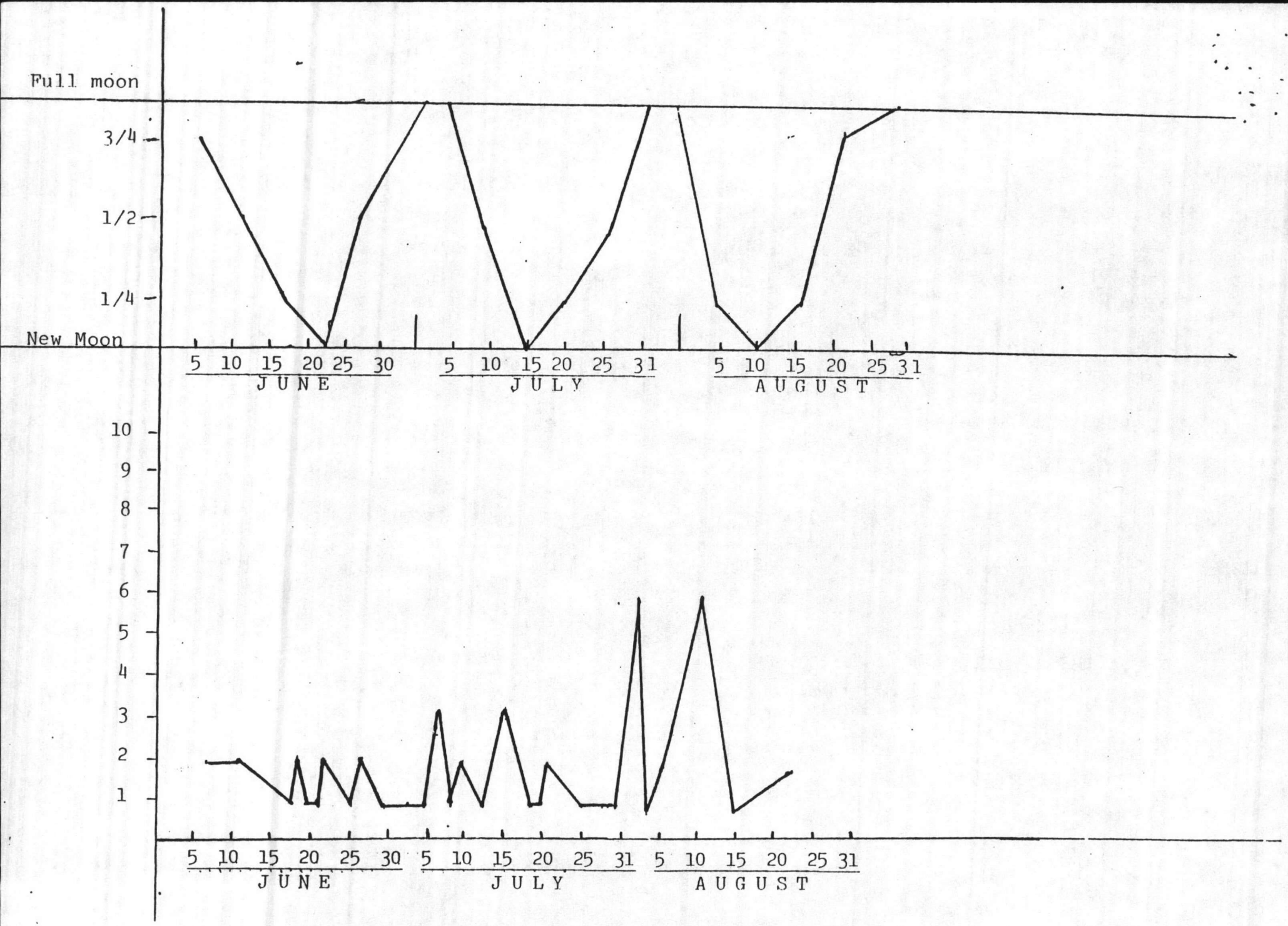

FIG. 2 - NUMBER OF CRAWLS WITHOUT NESTS IN RELATION TO LUNAR CYCLE

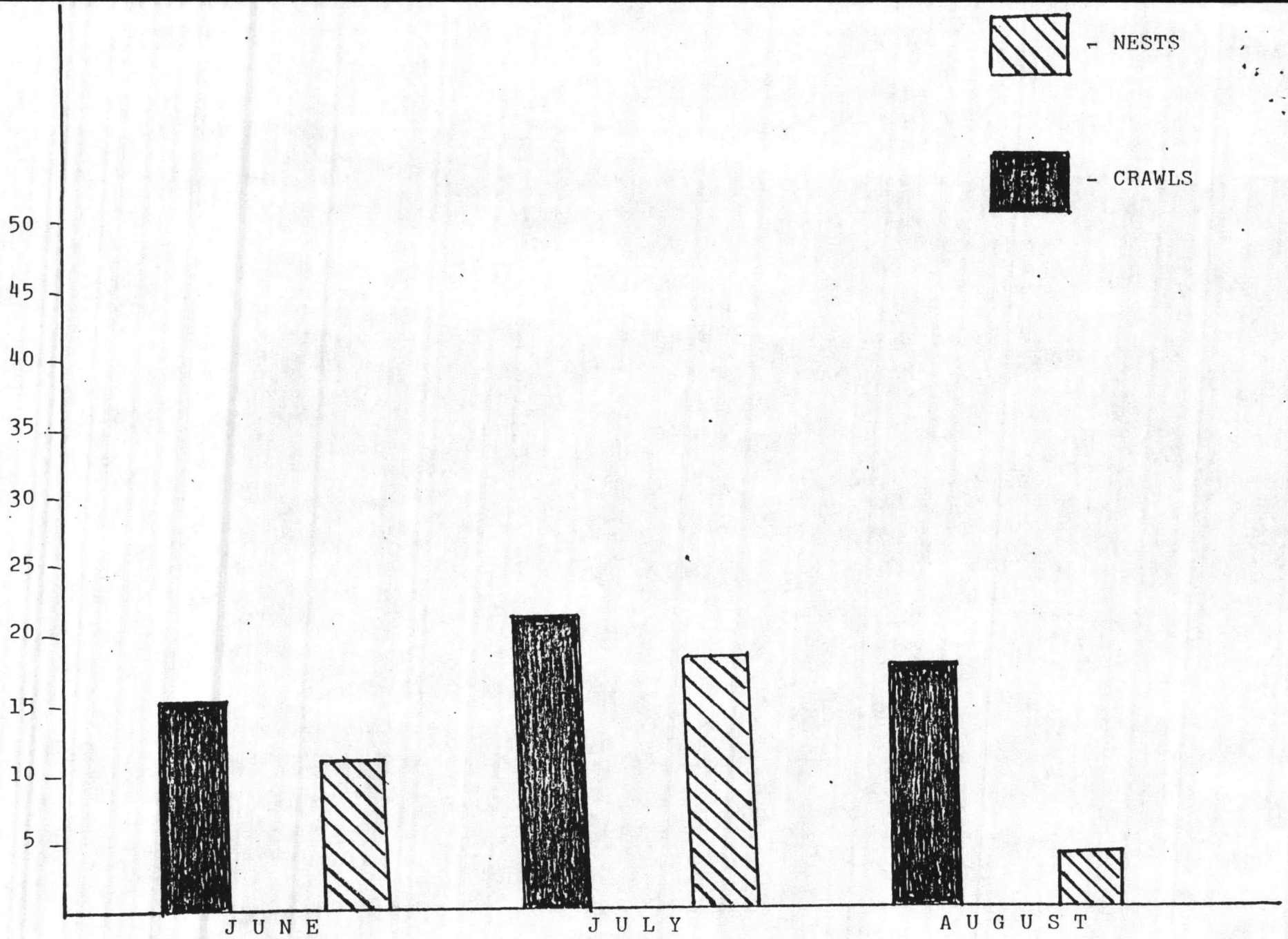

FIG. 3- TOTAL CRAWLS AND NESTS BY MONTHS

NEST AND CRAWL ACTIVITY
ONSLOW BEACH, MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

Nests - upper map

Crawls no nest - lower map

Dots indicate multiple usage

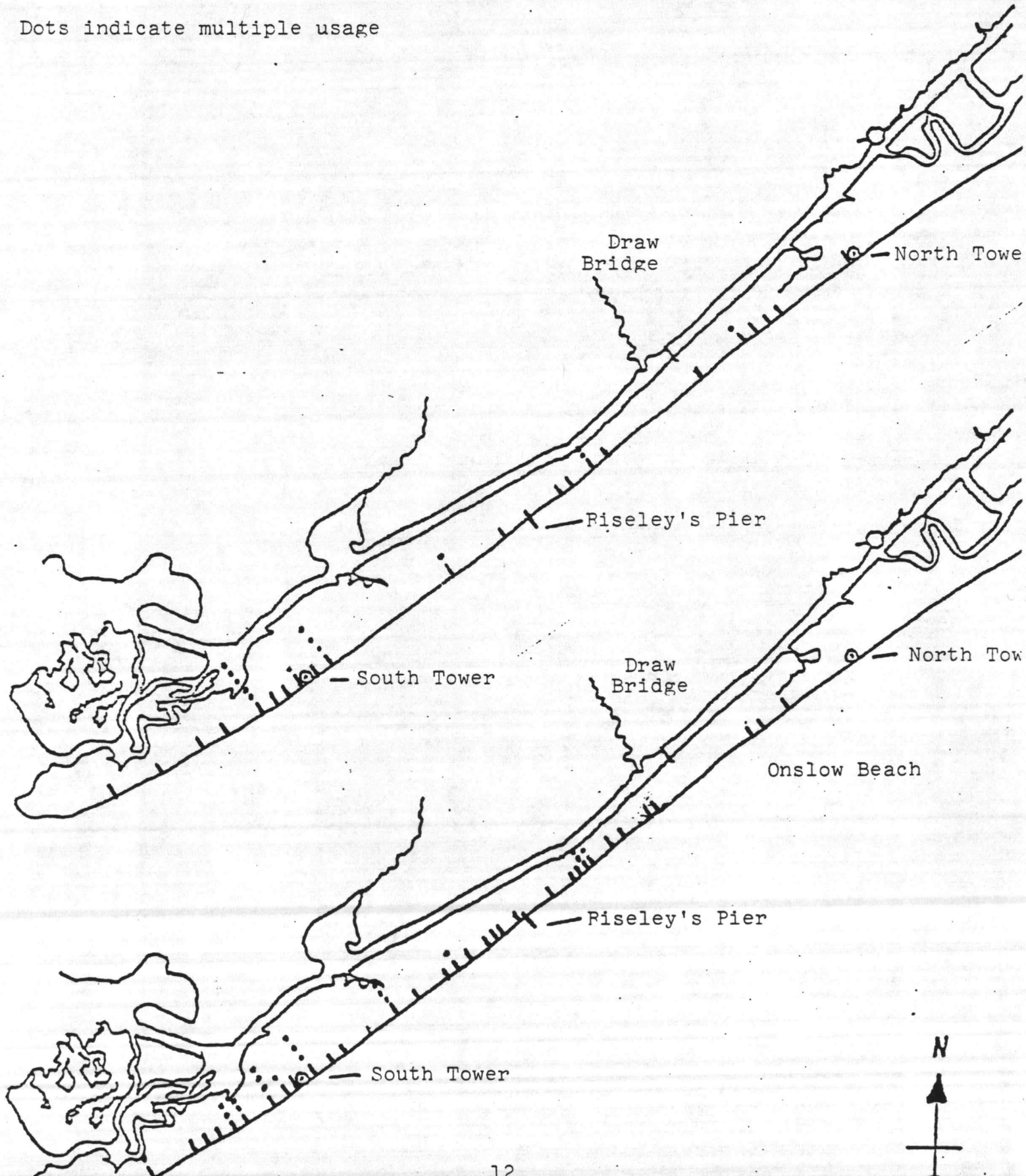

TABLE V

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NP- New Predation OP- Old Pred.

	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						
DATE	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	WEATHER
5-24-85	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	Foggy/clear
5-27-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Patchy fog/clear
6-5-85	4	0	3	0	0	0	7	0	6	0	0	0	5	0	4	0	0	0	Patchy fog/clear
6-7-85	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Hazy/broken
6-12-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast
6-14-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Clear/scattered
6-19-85	2	0	2	0	0	0	2	0	2	0	0	0	1	0	1	0	0	0	Overcast
6-21-85	2	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	Clear
6-26-85	0	0	0	0	0	0	5	2	5	0	0	0	6	0	0	0	0	0	Scattered
6-28-85	2	0	2	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Clear
7-3-85	1	1	1	1	0	0	3	1	3	1	0	0	2	1	2	1	0	0	Foggy/obscured
7-5-85	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Fog/haze
7-10-85	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	Fog/clear
7-12-85	1	0	1	0	0	0	2	0	2	0	0	0	8	0	8	0	0	0	Fog/overcast
7-17-85	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	Obscured
7-19-85	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	Fog/clear
7-23-85	1	0	1	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	Haze/scattered
7-26-85	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Haze/scattered

TABLE V (cont'd)

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NF- New Predation OP- Old Pred.

	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						
DATE	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	WEATHER
7-31-85	0	0	0	0	0	0	4	0	4	0	0	0	5	0	5	0	0	0	Clear/scattered
8-2-85	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Fog/haze
8-7-85	3	0	0	0	0	0	3	0	3	0	0	0	4	0	4	0	0	0	Clear
8-9-85	0	0	0	0	0	0	4	1	4	1	0	0	1	2	1	2	0	0	Cloudy
8-14-85	1	0	1	0	0	0	3	0	3	0	0	0	2	0	2	0	0	0	Fog/haze
8-16-85	2	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Clear/haze
8-21-85	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	Fog/haze
8-23-85	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-29-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-31-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 Mi. visibility
TOTAL	30	4	26	4	0	0	45	5	41	2	0	0	51	3	43	3	0	0	

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
005	6/6	M/W (Reloc)	8/(6)	61	120	116	96.6	(1) Hatchling alive in nest (2) eggs w/embryos discern.
001	6/5	M/W (Reloc)	8/13	69	135	132	97.7	(1) dead hatchling (2) Broken prior relocation
002	6/5	M/W (Reloc)	8/13	68	92	59	64.1	(2) Live hatchlings released (2) dead turtles; (1) rel.
008	6/12	W & Reloc.	8/18	61	97	65	67.0	alive; 32 did not hatch
010	6/18	M/W (Reloc)	8/21	61	152	130	88.5	32 released; (2) dead
009	6/17	W (Reloc)	8/22	66	105	99	94.2	(2) deformed - undeveloped flippers = released
014	6/1-	M/W (Reloc)	8/19	61	113	100	88.4	
(CM)017	6/22	M/W (Reloc)	8/26	79	163	157	96.3	(2) live released
018	6/22	M (Reloc)	8/26	79	143	126	88.1	(11) Live - released
021	6/24	M/W (Reloc)	8/29	66	108	89	82.4	No turtles in nest
Unk 092	7/4	W	9/3	61	Approx. 125	122	97.6	(1) Hatchling released
030	7/3	M/W (Reloc)	9/4	64	106	93	87.7	(1) hatchling released nondiscern. embryo
026	6/28	M/W (Reloc)	9/8	73	122	113	92.6	(9) unhatched eggs
035	7/6	M/W (Reloc)	9/9	65	98	85	86.7	(13) unhatched (3) reloc.
028	7/2	W	9/8	70	140	128	91.4	(12) discernable embryos
CM)034	7/6	M/W (Reloc)	9/8	64	199	186	93.4	(3) discern.embryos (23) (20) undiscern.embryos
042	7/10	W	9/10	62	108	90	83.3	(18) nondiscern.embryos
032	7/5	M/W	9/12	69	100	96	96.0	(1) dead turtle (4) nondiscern.embryos
033	7/5	In nest 032 (reloc)	9/12	69	18 eggs	16	88.8	(1) Nondiscern.embryo (1) dead piped egg

*** Clutch size determined from nest remains**

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI (Cont'd)

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
(CM)054	7/17	M/W (Reloc)	9/16/85	61	195	185	94.8	(2) eggs left nest probably won't hatch
049	7/14	M/W (Reloc)	9/18/85	66	115	99	86.0	(16) eggs No discern.embryo
045	7/11	M/W (Reloc)	9/15/85	66	142	20	14.0	
046	7/12	M/W (Reloc)	9/15/85	65	152	84	55.2	(1) dead turtle
048	7/13	M/W (Reloc)	9/18/85	67	124	117	94.4	
059	7/21	M/W (Reloc)	9/25/85	66	135	130	96.3	(5) discern.embryos
055	7/18	M/W (Reloc)	N/A	Unk	106	All dead 100	00.0	Nest washed over Hurricane "Gloria"
056	7/19	M/W	N/A	Unk	103	All dead 99	00.0	Nest washed over Hurricane "Gloria"
(CM)067	7/29	W	9/27/85	60	172	152	88.3	Peterson & Sharpe Cpl Taylor, Beach Detach
069	8/1	M/W (Reloc)	10/7/85	67	96	85	88.5	Released behind dune (12) hatchlings in grass
064	10/7	M/W (Reloc)	10/7/85	72	102	92	90.1	Was tagged #054 - is #064
053	7/15	M/W (Reloc)	10/1/85	78	119	115	96.7	Nest not under tag cage bent

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION 1984 PROJECT NAME Onslow Beach

NESTING RESULTS

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
#069	8-1-85	M/W	10-7-85	67	96	85	88.5	12 hatchlings - grass-dun
#064	10-7-85	M/W	10-7-85	72	102	92	90.2	
(CM) #085	8-10-85	W	10-31-85	82	164	106	70.0	Two white turtles
#086	8-28-85	M/W	10-28-85	79	101	96	95.0	
#088	8-15-85	M/W	11-15-85	90	109	39	35.8	

* Clutch size determined from nest remains

SEA TURTLE INVENTORY

for

SUMMER AND FALL 1985

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION

ASSISTANT CHIEF OF STAFF, FACILITIES

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TABLE OF CONTENTS

		Page
Introduction		
Sea Turtle Inventory (Nest Data)	Table I	5A-5C
Return of Tagged Turtles	Table 2	6
Ground Survey Number Totals	Table 3	7A-B
Crawl Information in Relation to Moon Tidal Cycles	Table 4	8A-D
Number of Crawls with Nests in Relation to Lunar Cycle	Figure I	9
Number of Crawls Without Nests in Relation to Lunar Cycle	Figure 2	10
Total Crawls and Nests by Months	Figure 3	11
Nest and Crawl Activity Map	Figure 4	12
Aerial Survey	Table 5	13A-13E
Nesting Results	Table 6	14A-14C

INTRODUCTION

The sea turtle inventory for 1985 is a continuation of past efforts by Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina, to protect sea turtle nesting activities at Onslow Beach. The sea turtle inventory consists of several programs including: nest protection, tagging of adult turtles, collecting nesting data, determining hatchling success and aerial surveys.

Management personnel began operating under a Federal Fish and Wildlife Permit during 1981, issued for working with threatened Loggerhead and Green Turtles. The permit authorizes the tagging and measurement of adults and the relocation of nests threatened by erosion, tides, extreme predation or military training activities. Nests may be moved only within 24 hours of egg laying to a safe beach location and not to a laboratory. Relocated nests are required to be monitored and hatchling success documented.

The results of the sea turtle program are as follows:

a. Nest protection from predators, 36.

b. Tagging of adults - number of turtles tagged 25.

Tag return data may be reviewed in Table II

c. Nesting data - Number of nests - 36.

d. Total number of crawls - ~~36~~ 87 92

e. Total number of eggs - 4,250.

f. Total number of hatchlings - 3,698.

*Note: 199 of these were dead in nest.

g. Number of tag returns 38

h. Number of stranded turtles 5

i. Number of nests lost during Hurricane Gloria 1

j. Number of nests lost during abnormal high tides associated with northeast winds 2

k. Number unhatched nests from unknown causes 0

Stranding reports were submitted to the North Carolina Wildlife Resources Stranding Network Coordinator. Carcasses of stranded turtles were buried on the beach.

Percent hatchling success is 80.1%; nesting and crawl data is compiled in Tables 1 through IV, and Figures 1 through 3. The enclosed maps in Figure 4 indicate locations of turtle activity on Onslow Beach.

Aerial survey data may be found in Table V.

Table VI contains the hatching results of individual nests for the season.

This inventory period, a green sea turtle that nested four times in 1980, nested on Onslow Beach five times this year. Data on the green turtle is in this 1985 report.

The Marine Corps Base, Camp Lejeune and Natural Resources and Environmental Affairs Division give special thanks to Doctor F. J. Schwartz at the Institute of Marine Science, Morehead City, North Carolina for his advice and services.

For copies of this report or other information concerning the sea turtle management program conducted by this agency, contact: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542 (Attention: Director, Natural Resources and Environmental Affairs Divison, Assistant Chief of Staff, Facilities).

SEA-TURTLE INVENTORY
(Crawl Data)

TABLE I

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
001	6-5-85	0110	✓	1.6(S)	135 eggs
002	6-5-85	2230±	✓	1.6(S)	Relocated from 0.35(S)
003	6-6-85	2100		2.1(S)	Crawl Only (C.O.)
004	6-6-85	Unk		2.1(S)	C.O. Base of high dune
005	6-6-85	2200+	✓	2.55(S)	Behind dune 35' above high tide
006	6-12-85	2200		2.2(S)	C.O. Base eroded low dune
007	6-12-85	2200		2.4(S)	C.O. To low dune, moved around
008	6-12-85	0120	✓	0.4(N)	
009	6-17-85	2305	✓	2.25(N)	Near (N) Tower in dune
010	6-18-85	2130	✓	2.2(N)	Relocated from 035(S) Pie:
011	6-18-85	2300		1.0(S)	C.O.
012	6-19-85	2325		2.7(S)	Into low dunes near Inlet
013	6-19-85	0115		0.6(S)	Began nest but left
014	6-19-85	0350	✓	0.6(S)	Relocated from 2.3(S)
015	6-20-85	0330		0.2(N)	C.O. 60' circle above MHW
016	6-21-85	0340		0.57(S)	C.O. Base eroded dune - revers
017	6-22-85	2228	✓	1.9(S)	Tag AAR 145, 146 Relocated from 0.25(S) CM
018	6-22-85	-423	✓	0.5(N)	Tag GA 7130, 7129 Relocated from 0.8(s)
019	6-23-85	2325		2.3(S)	C.O. Observed Went down beach - back
020	6-23-85	0100		.6(N)	C.O. No tag Tag AAR147,148 Observed turned - into sea
021	6-24-85	0100	✓	.6(N)	No tag Relocated from .3(S)
022	6-26-85	0030		1.6(S)	C.O. To dunes left - to sea

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurr
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehic to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
023	6-27-85	0015		0.8(NP	C.O. Into low dune - Started nest
024	6-27-85	0019			C.O. In surf - did not catch
025	6-27-85	0350		0.45(N)	C.O. 0.45(N) 35' above mean high tide
026	6-28-85	0150	✓	1.7(N)	Tag 151, 152 Relocated 25' higher
027	6-30-85	0309		.5(N)	C.O. Turtle not observed
028	7-2-85	2310	✓	3.0(S)	Tag AAR 149, 150 1 deformed egg dime size
029	7-3-85	2230		1.95(S)	C.O. 40' above MHW Started nest
030	7-3-85	2233	✓	2.0(S)	2.0(S) return #014 added Tag #142, moved up 40'
031	7-5-85	2148		1.2(S)	C.O. Overwash - to sea
032	7-5-85	2245	✓	2.0(S)	Rel.from 1.2(S)- 200' fron 031 2.0(S) nest to 030
033	7-5-85	0010	✓	2.0(N)	Incomplete nest - Turtle left dur exam 18 eggs into 032
034	7-6-85	2233	✓	1.6(S)	CM Relocated from 1.6(S) Tag AAR 145
035	7-6-85	2252	✓	1.5(S)	Relocated from 1.4(S) Tag AAR 157, 158
036	7-6-85	0008		0.52(N)	C.O. Over 5'-7' dune wander return to sea
037	7-6-85	0012		5.5(N)	Base steep eroded dune-ba
038	7-7-85	2146		2.2(S)	C.O. False crawl to base of dune
039	7-7-85	2218		2.0(S)	C.O. Unavailable to tag. To base dune turn - to sea
040	7-7-85	2253		1.8(N)	C.O. Tried to dig middle beach - sand hard left
041	7-8-85	0210		1.0(S)	C.O. Too heavy to turn over, one man.
042	7-10-85	0011	✓	2.0(N)	Tag 815, 816 - IMS Morehe Return See #008
043	7-10-85	0145		0.6(N)	C.O. To base dunes. Looked li nest but found no eggs
44	7-10-85	0148		0.55(N)	C.O. AAR 071 Observed while ex amining #043 caught. Could do only GMC.

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
045	7-11-85	0500	✓	1.5(S)	Turtle nested Barnacle Bill'sPie Moved to 1.5(S) C. Peterson 2.(
046	7-12-85	0011	✓	1.7(N)	Relocated from 0.85(S) AAR 071 - same as on #044
047	7-13-85	2211		0.2(S)	C.O. Turned on beach - to sea
048	7-13-85	2309	✓	2.3(N)	Tag AAR 151, 1520.47(N) Rel 2.3(N) Return of 026
049	7-14-85	0235	✓	1.7(S)	Relocated 1.6(S) Tag AAR 159, 160
050	7-15-85	2236		1.9(S)	C.O. Tag AAR 144 Same turtle #014
051	7-15-85	2349		2.7(S)	C.O. Turtle made it up a 3' vertical wall of sand
052	7-15-85	0013		1.05(N)	Tag AAR 161,162 Turtle observe but laid no eggs - in dune area
053	7-15-85	0305	✓	1.35(N)	Tag 36 observed laying eggs Layed eggs first part beach
054	7-17-85	0028	✓	0.25(N)	Tag AAR 145, IMS 649-CM Same as 017, 034 Video tape Rel.from 0.45(
055	7-18-85	0012	✓	1.8(S)	Tag AAR 163,164 Rel. from 2.7(S)
056	7-19-85	0018	✓	1.8(S)	Tag AAR 157,158 Rel.from 0.65(S) Return #035
057	7-19-85	0055		1.9(N)	C.O. into dunes 3 false nests
058	7-20-85	0029		1.95(S)	C.O. Up 2nd line of dunes Ret.to sea Tag 165,166. 166 not closed.
059	7-21-85	0021	✓	1.9(N)	Tag AAR 167,168. Rel.from .3(S) Crawled through Amtrack tracks
060	7-21-85	0353		2.2(S)	C.O Aborted due to roots unde ground - cavity was there
061	7-21-85	0417		1.6(S)	C.O. Turned around due to vertical embankment
062	7-26-85	0350		0.45(S)	Tag AAR 144 - Return 014 030 - leaving beach C.O.
063	7-27-85	0028		2.2(S)	C.O. Base steep 2 1/2' ledge - to ocean
064	7-27-85	0055	✓	1.8(N)	Tag AAR 144, relocated from 1.8(N) Return of 014 020 FG 062

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
065	7-28-85	0105		.15(S)	C.O. Two nests were attemp No eggs laid - loop-patter
066	7-29-85	2200		1.6(S)	C.O. Vert.sand dune. Turned around to sea Tag AAR169,170
067	7-29-85	2305	✓	.6(N)	C.M. Green Turtle Tag AAR145 IMS 649. Did not relocate
068	7-29-85	0105		1.7(S)	Back into water C.O. AAR 071, IMS 716
069	8-1-85	2243		0.5(N)	Rel.from 0.15(S) Tag AAR15 158. Return of #035,056.
					Crawled 150' to top dune.
070	8-3-85	0203		0.3(S)	Tag AAR 063, 064 - Seen be low H.T.L. Turned and left
071	8-3-85	0223		0.55(S)	C.O. 15'from tide line to C. base of 15'-18'dune - to sea
072	8-3-85	0230		0.84(S)	C.O. To base of 10' dune and return to sea
073	8-3-85	0236		1.14(S)	C.O. To base of overwash rested - to sea
074	8-3-85	0241		1.43(S)	C.O. To base of overwash Return 8' to sea
075	8-3-85	0245		2.1(S)	C.O. Diag. to base of 7'-8' dune - 25' out water - sea
076	8-4-85	0023		1.9(N)	C.O. Hit sand dunes -turne around returned to sea
077	8-5-85	0047		1.0(S)	C.O. Crawled up into sand dune turned around - back to sea
078	8-5-85	0145		2.0(S)	C.O. to bottom of sand dur turned around - to sea
079	8-10-85	0055		3.12(S)	C.O. Crawled to eroded ledge along ledge 25'.
080	8-10-85	0111		3.0(S)	C.O. observed at eroded 15" ledge. Returned 15' to sea.
081	8-10-85	0208		1.66(S)	c.o. observed 10' from surf crawled 60' to eroded dune
082	8-10-85	0225		2.95(S)	C.O. observed 10' to steep led To sea. Did not get tag number
083	8-10-85	0238		2.75(S)	C.O. 18' to ledge and bacl to sea
084	8-10-85	0240		2.85(S)	C.O. 20' to ledge and 20' alon ledge trying to climb. To sea.
085	8-10-85	0250	✓	2.0(S)	Crawled 75' above MHW in dunes. Lg.body cav Tag AA 1 IMS 64

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely P
Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (√)	Location*	Comments
086	8-11-85	0005	√	.6(N)	Rel.from 0.2(S) in flat of beach Same as 014, 064, 030 Tag AAR-14
087	8-14-85	0100		0.6(N)	C.O. Crawled 75' Made nest attempt
088	8-15-85	2309	√	2.07(S)	Rel.from 0.17(S). Crawled from water. Return 035, 056, 069
089	8-20-85	0029	√	0.3(N)	Return of 008, 042, on top of 6' dune. Tag IMS 815,816
090	8-22-85	2311		1.82(S)	C.O. To base of steep dune 12' - return to sea
091	8-22-85	0100		1.8(S)	Probably (C.M.) wandered around C.O. low overwash 450'-500' To sea
092	Unk. Approx. 7-4-85	Unk	√	2.0(S)	Located nest 9/3/85. Probably turtle not seen laying eggs

Summary of Instructions:
* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

TABLE II

RETURN RECORD OF TAGGED TURTLES
1985 SEA TURTLE INVENTORY

Date Tagged 1985	Tag Number	Return 1985	Return 1985	Return 1985	Return 1985
6-12 (2)	815*, 816*	8-20 (2)			
6-17 (2)	139, 140 AAR				
6-18 (2)	041, 043 AAR				
6-19 (2)	Lost 144 142 AAR	Added 142AAR 7-3 (2)	7-26 (1)	7-27 (2)	8-11 (2)
6-22 (2)	Missed 649 145, 146 AAR	7-6 (2)	649* 7-17 (2)	649*-145AAR 7-29 (2)	145-649* 8-10 (1)
6-22 (2)	7130,7129 **				
6-23 (1)	147, 148 AAR				
6-28 (2)	151, 152 AAR	7-13 (2)			
7-2 (2)	149, 150 AAR				
7-3 (2)	142, 144 AAR	7-15 (1)			
7-5 (2)	One tag 154 only AAR				
7-5 (2)	18 eggs 155, 156 AAR				
7-6 (2)	157, 158 AAR	7-19 (2)	8-1 (2)	8-15 (2)	
7-10 (1)	071 AAR	7-12 (2)	716* 7-29 (2)		
7-10 (2)	815*, 816*	8-20 (2)			
7-14 (2)	159, 160 AAR				
7-15 (1)	161, 162 AAR				
7-15 (2)	36 UNK	7-29 (1)			
7-17 (2)	649* 145 (left)AAR	7-29 (2)	8-10 (2)		
7-18 (2)	163, 164 AAR				
7-20 (1)	165, 166 AAR				
7-21 (2)	167, 168 AAR				
7-26	144 AAR	7-27 (2)	8-11 (2)		
7-27 (2)	144, 142 AAR				
8-3 (2)	063, 064 AAR				

(1) Did not nest (2) Nested * Scientific Marine Institute ** GA Yellow plastic

TABLE III

GROUND SURVEY NUMBER

(NIGHTS NOT SEPARATED AT MIDNIGHT)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
6-5-85	0	2	2
6-6-85	2	1	3
6-12-85	2	1	3
6-17-85	0	1	1
6-18-85	1	1	2
6-19-85	2	1	3
6-20-85	1	0	1
6-21-85	1	0	1
6-22-85	0	2	2
6-23-85	2	0	2
6-24-85	0	1	1
6-26-85	1	0	1
6-27-85	3	0	3
6-28-85	0	1	1
6-30-85	1	0	1
7-2-85	0	1	1
7-3-85	1	1	2
7-4-85	0	1	1
7-5-85	1	2	3
7-6-85	2	2	4
7-7-85	3	0	3
7-8-85	1	0	1
7-10-85	2	1	3
7-11-85	0	1	1
7-12-85	0	1	1

TABLE III (cont'd)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
7-13-85	1	1	2
7-14-85	0	1	1
7-15-85	3	1	4
7-17-85	0	1	1
7-18-85	0	1	1
7-19-85	1	1	2
7-20-85	1	0	1
7-21-85	2	1	3
7-26-85	1	0	1
7-27-85	1	1	2
7-28-85	1	0	1
7-29-85	2	1	3
8-1-85	0	1	1
8-3-85	6	0	6
8-4-85	1	0	1
8-5-85	2	0	2
8-10-85	6	1	7
8-11-85	0	1	1
8-14-85	1	0	1
8-15-85	0	1	1
8-20-85	0	1	1
8-22-85	2	0	2

TOTAL 92

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE PHASE % ILLUMINATION			TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-5-85	2223	3/4	95	0930		0110	1
6-5-85	2223	3/4	95	0930		2230	1
6-6-85	2308	3/4	89	0408	2100		1
6-6-85	2308	3/4	89	2236	Unk		1
6-6-85	2308	3/4	89	1537		2200	1
6-12-85	0132	1/4	34	1537	2200		1
6-12-85	0132	1/4	34	1537	2200		1
6-12-85	0132	1/4	34	1537		0120	1
6-17-85	0400	New	02	1910	2300		1
6-18-85	0445	New	000	1949		2130	1
6-18-85	0445	New	00	1949	2300		1
6-19-85	0537	New	00	2029	2325		1
6-19-85	0537	New	000	2029	0115		1
6-19-85	0537	New	00	2029		0350	1
6-20-85	0636	New	02	2109	0330		1
6-21-85	0740	1/4	07	2152	0340		1
6-22-85	0846	1/4	13	2238		2228	1
6-22-85	0846	1/4	13	2238		0423	1
6-23-85	0953	1/4	21	2327	2325		1
6-23-85	0953	1/4	21	2327	0021		1
6-24-85	1100	1/2	30	1808		0100	1
6-26-85	1314	1/2	52	0120	0030		1
6-27-85	1423	3/4	64	1503	0015		1
6-27-85	1423	3/4	64	1503	0019		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-27-85	1423	3/4	64	1503	0350		1
6-28-85	1534	3/4	75	1605		0150	1
6-30-85	1800	FULL	92	1801	0309		1
7-2-85	2209	FULL	100	1947		2310	1
7-3-85	2059	FULL	100	2037	2230		1
7-3-85	2059	FULL	100	2037		2233	1
7-4-85	2140	FULL	97	2124		UNK	1
7-5-85	2215	3/4	92	2211	2148		1
7-5-85	2215	3/4	92	2211		2245	1
7-5-85	2215	3/4	92	2211		0010	1
7-6-85	2244	3/4	86	2255		2233	1
7-6-85	2244	3/4	86	2255		2252	1
7-6-85	2244	3/4	86	2255	0008		1
7-6-85	2244	3/4	86	2255	0012		1
7-7-85	2310	3/4	78	1130	2146		1
7-7-85	2310	3/4	78	1130	2218		1
7-7-85	2310	3/4	78	1130	2253		1
7-8-85	2334	1/2	69	1218	0210		1
7-10-85	2400	1/2	50	1357		0011	1
7-10-85	2400	1/2	50	1357	0145		1
7-10-85	2400	1/2	50	1357	0148		1
7-11-85	0023	1/4	41	1447		0500	1
7-12-85	0050	1/4	32	1540		0011	1
7-13-85	0121	1/4	23	1629	2211		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
7-13-85	0121	1/4	23	1629		2309	1
7-14-85	0156	NEW	16	1629		0235	1
7-15-85	0238	NEW	09	1759	2236		1
7-15-85	0238	NEW	09	1759	2349		1
7-15-85	0238	NEW	09	1759	0013		1
7-15-85	0238	NEW	09	1759		0305	1
7-17-85	0426	NEW	01	1926		0028	1
7-18-85	0529	NEW	00	2008		0012	1
7-19-85	0636	NEW	01	2050		0018	1
7-19-85	0636	NEW	01	2050	0055		1
7-20-85	0744	1/4	05	2133	0029		1
7-21-85	0852	1/4	05	2218		0021	1
7-21-85	0852	1/4	05	2218	0353		1
7-21-85	0852	1/4	05	2218	0417		1
7-26-85	1435	3/4	62	1444	3500		1
7-27-85	1546	3/4	72	1550	0028		1
7-27-85	1546	3/4	72	1550		0055	1
7-28-85	1655	3/4	82	1653	0105		1
7-29-85	1757	FULL	90	1751	2200		1
7-29-85	1757	FULL	90	1751		2305	1
7-29-85	1757	FULL	90	1751	0105		1
8-1-85	2012	FULL	100	2018		2243	1
8-3-85	2110	3/4	95	2141	0203		1
8-3-85	2110	3/4	95	2141	0223		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
8-3-85	2110	3/4	95	2141	0230		1
8-3-85	2110	3/4	95	2141	0236		1
8-3-85	2110	3/4	95	2141	0241		1
8-3-85	2110	3/4	95	2141	0245		1
8-4-85	2135	3/4	90	2221	0023		1
8-5-85	2200	3/4	83	1049	0047		1
8-5-85	2200	3/4	83	1049	0145		1
8-10-85	1200	1/4	38	1454	0055		1
8-10-85	1200	1/4	38	1454	0111		1
8-10-85	1200	1/4	38	1454	0208		1
8-10-85	1200	1/4	38	1454	0225		1
8-10-85	1200	1/4	38	1454	0238		1
8-10-85	1200	1/4	38	1454	1240		1
8-10-85	1200	1/4	38	1454		0250	1
8-11-85	0031	1/4	29	1548		0005	1
8-14-85	0313	NEW	07	1817	0100		1
8-15-85	0429	NEW	03	1901		2309	1
8-20-85	1006	1/4	16	1026		0029	1
8-22-85	1227	1/2	36	1217	2311		1
8-22-85	1227	1/2	36	1217	0100		1

TOTAL 92

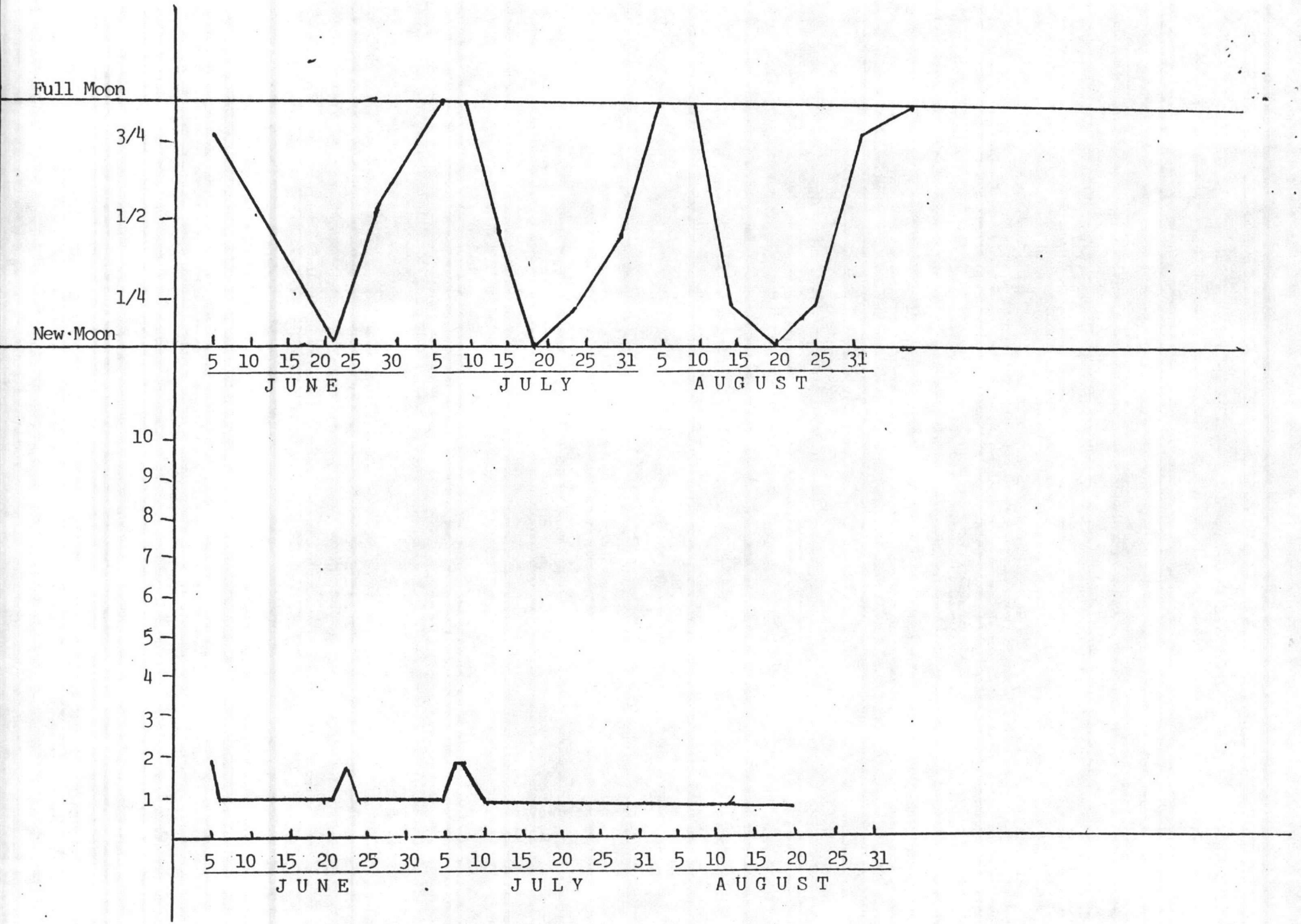

FIG.1 - NUMBER OF CRAWLS WITH NESTS IN RELATION TO LUNAR CYCLE

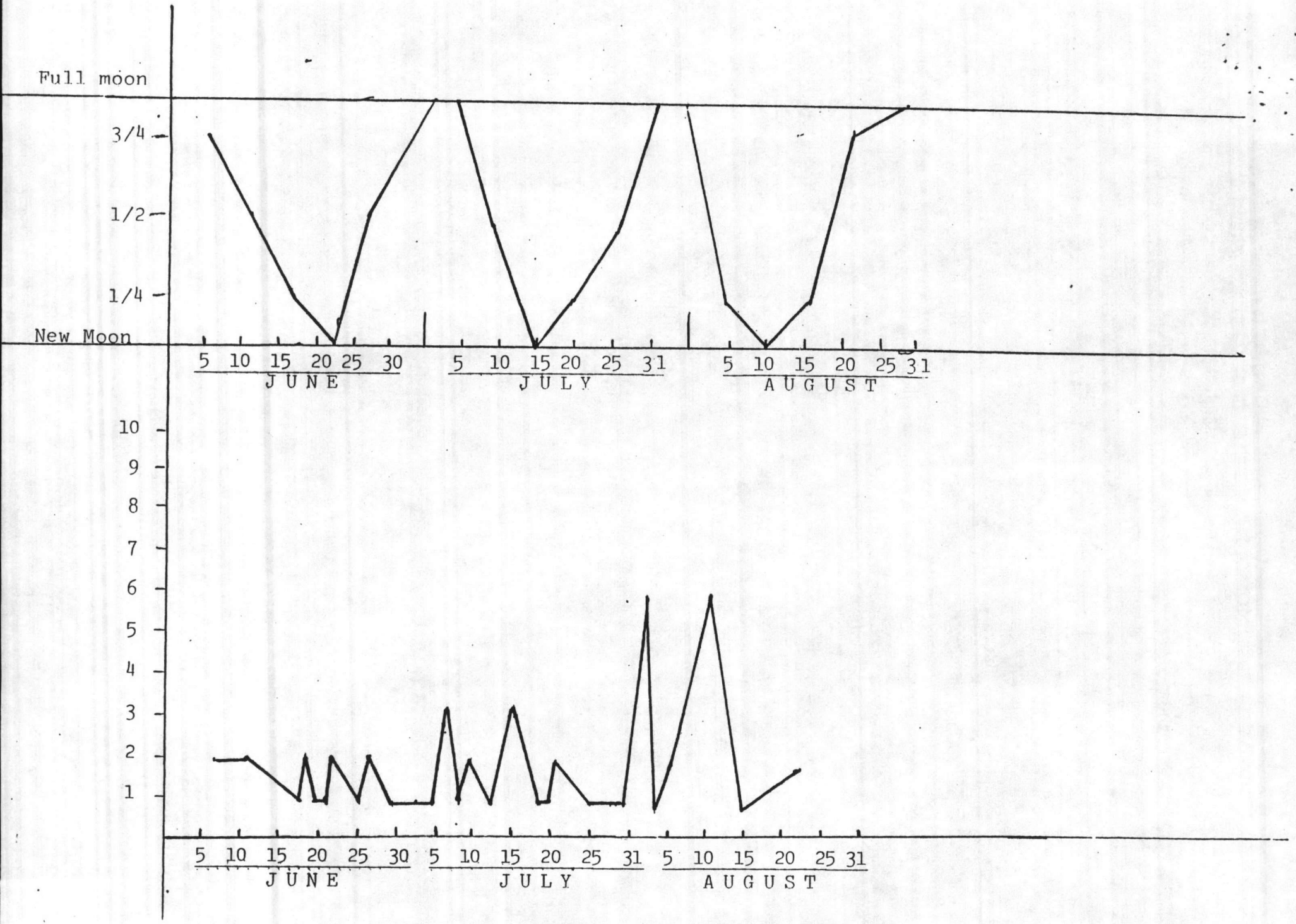

FIG. 2 - NUMBER OF CRAWLS WITHOUT NESTS IN RELATION TO LUNAR CYCLE

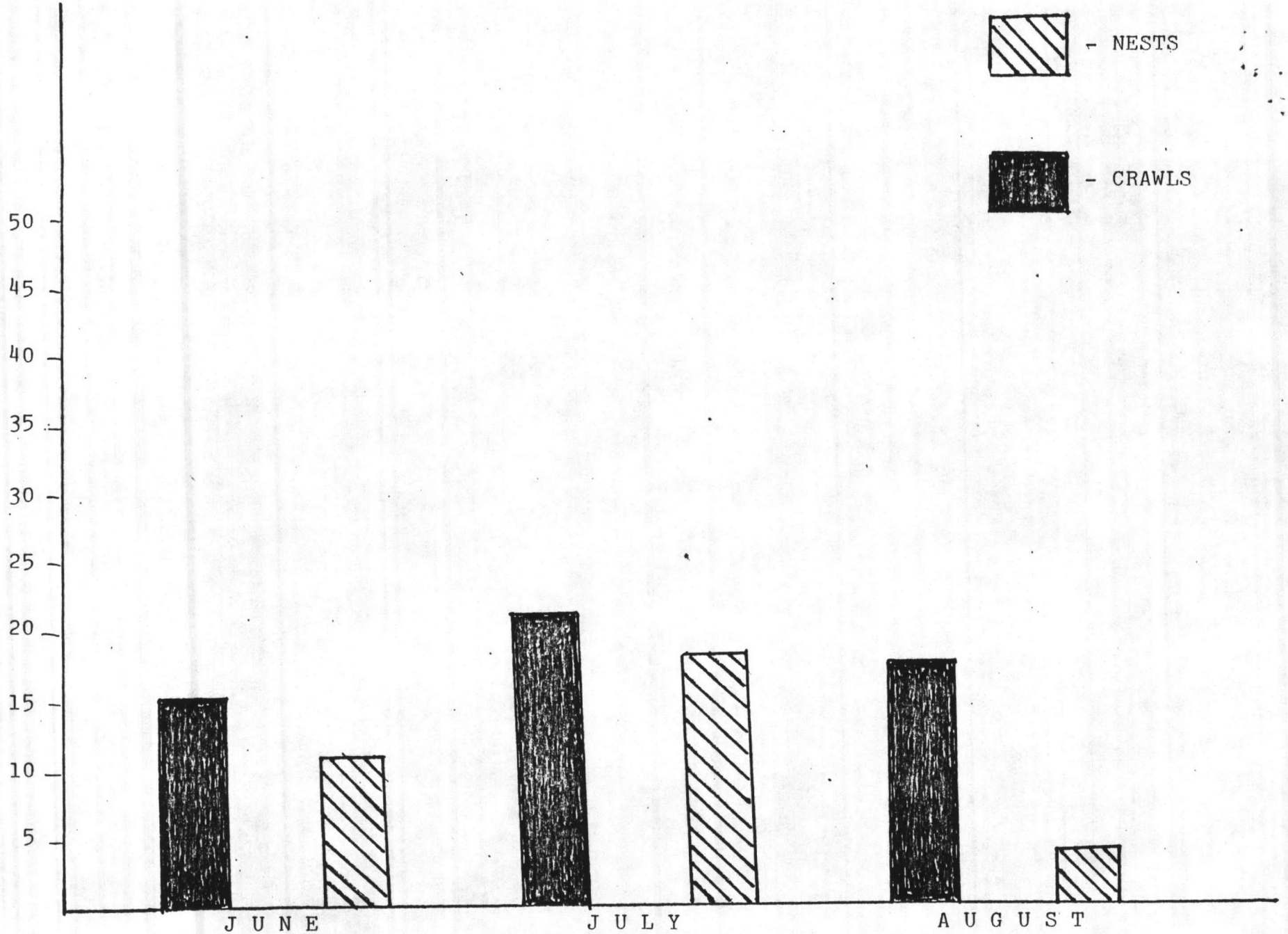

FIG. 3- TOTAL CRAWLS AND NESTS BY MONTHS

NEST AND CRAWL ACTIVITY
ONSLOW BEACH, MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

Nests - upper map

Crawls no nest - lower map

Dots indicate multiple usage

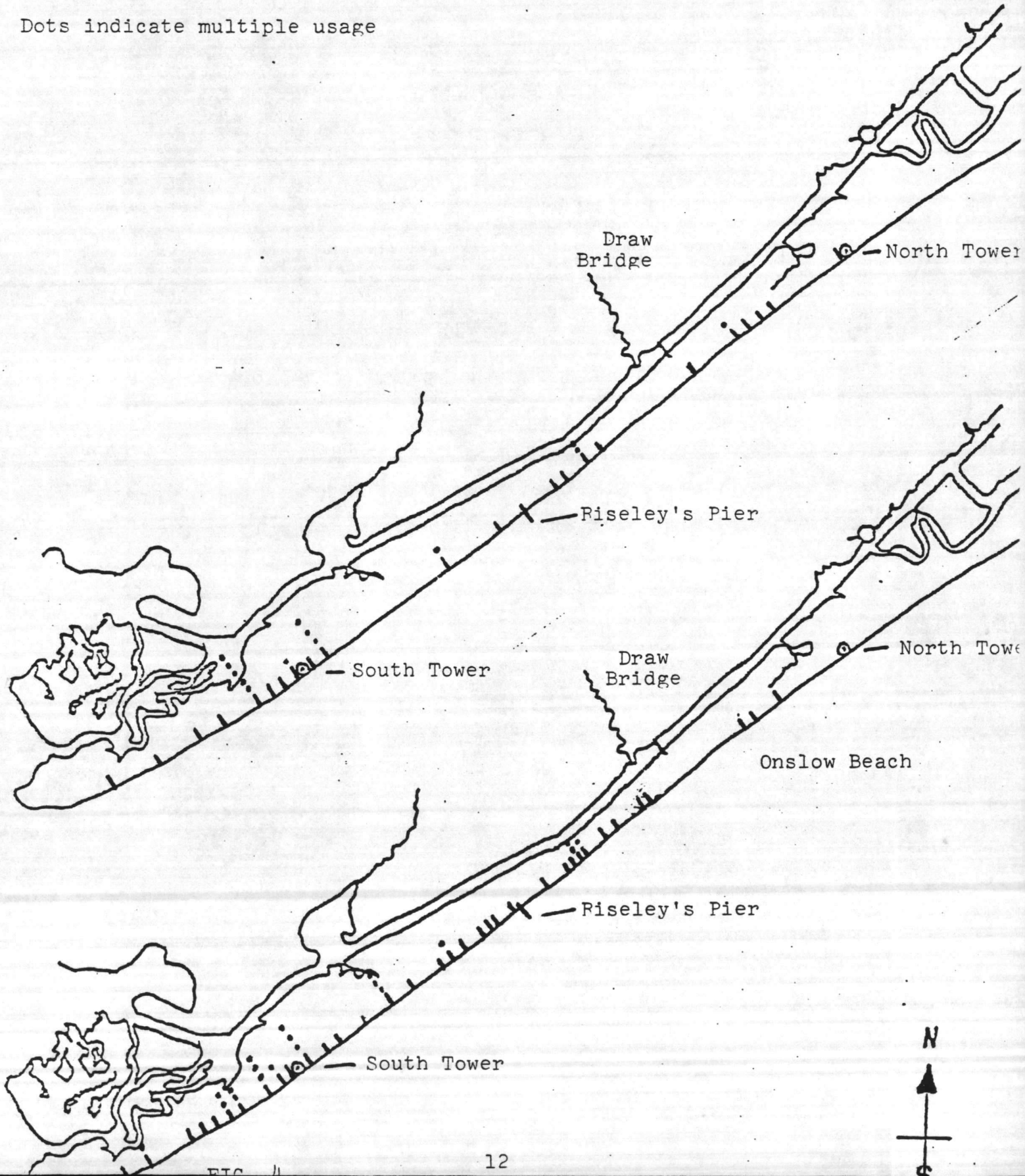

FIG. 4

TABLE V

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NP- New Predation OP- Old Pred.

	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						
DATE	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	WEATHER
5-24-85	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	Foggy/clear
5-27-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Patchy fog/clear
6-5-85	4	0	3	0	0	0	7	0	6	0	0	0	5	0	4	0	0	0	Patchy fog/clear
6-7-85	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Hazy/broken
6-12-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast
6-14-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Clear/scattered
6-19-85	2	0	2	0	0	0	2	0	2	0	0	0	1	0	1	0	0	0	Overcast
6-21-85	2	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	Clear
6-26-85	0	0	0	0	0	0	5	2	5	0	0	0	6	0	0	0	0	0	Scattered
6-28-85	2	0	2	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Clear
7-3-85	1	1	1	1	0	0	3	1	3	1	0	0	2	1	2	1	0	0	Foggy/obscured
7-5-85	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Fog/haze
7-10-85	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	Fog/clear
7-12-85	1	0	1	0	0	0	2	0	2	0	0	0	8	0	8	0	0	0	Fog/overcast
7-17-85	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	Obscured
7-19-85	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	Fog/clear
7-23-85	1	0	1	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	Haze/scattered
7-26-85	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Haze/scattered

TABLE V (cont'd)

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NF- New Predation OP- Old Pred.

	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						
DATE	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	WEATHER
7-31-85	0	0	0	0	0	0	4	0	4	0	0	0	5	0	5	0	0	0	Clear/scattered
8-2-85	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Fog/haze
8-7-85	3	0	0	0	0	0	3	0	3	0	0	0	4	0	4	0	0	0	Clear
8-9-85	0	0	0	0	0	0	4	1	4	1	0	0	1	2	1	2	0	0	Cloudy
8-14-85	1	0	1	0	0	0	3	0	3	0	0	0	2	0	2	0	0	0	Fog/haze
8-16-85	2	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Clear/haze
8-21-85	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	Fog/haze
8-23-85	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-29-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-31-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 Mi. visibility
TOTAL	30	4	26	4	0	0	45	5	41	2	0	0	51	3	43	3	0	0	

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
005	6/6	M/W (Reloc)	8/(6)	61	120	116	96.6	(1) Hatchling alive in nest (2) eggs w/embryos discern.
001	6/5	M/W (Reloc)	8/13	69	135	132	97.7	(1) dead hatchling (2) Broken prior relocation
002	6/5	M/W (Reloc)	8/13	68	92	59	64.1	(2) Live hatchlings released (2) dead turtles; (1) rel.
008	6/12	W & Reloc.	8/18	61	97	65	67.0	alive; 32 did not hatch
010	6/18	M/W (Reloc)	8/21	61	152	130	88.5	32 released; (2) dead
009	6/17	W (Reloc)	8/22	66	105	99	94.2	(2) deformed - undeveloped flippers = released
014	6/1-	M/W (Reloc)	8/19	61	113	100	88.4	
(CM)017	6/22	M/W (Reloc)	8/26	79	163	157	96.3	(2) live released
018	6/22	M (Reloc)	8/26	79	143	126	88.1	(11) Live - released
021	6/24	M/W (Reloc)	8/29	66	108	89	82.4	No turtles in nest
Unk 092	7/4	W	9/3	61	Approx. 125	122	97.6	(1) Hatchling released
030	7/3	M/W (Reloc)	9/4	64	106	93	87.7	(1) hatchling released
026	6/28	M/W (Reloc)	9/8	73	122	113	92.6	nondiscern. embryo (9) unhatched eggs
035	7/6	M/W (Reloc)	9/9	65	98	85	86.7	(13) unhatched (3) reloc.
028	7/2	W	9/8	70	140	128	91.4	(12) discernable embryos
(CM)034	7/6	M/W (Reloc)	9/8	64	199	186	93.4	(3) discern.embryos (23) (20) undiscern.embryos
042	7/10	W	9/10	62	108	90	83.3	(18) nondiscern.embryos
032	7/5	M/W	9/12	69	100	96	96.0	(1) dead turtle (4) nondiscern.embryos
033	7/5	In nest 032 (reloc)	9/12	69	18 eggs	16	88.8	(1) Nondiscern.embryo (1) dead piped egg

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI (Cont'd)

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
(CM)054	7/17	M/W (Reloc)	9/16/85	61	195	185	94.8	(2) eggs left nest probably won't hatch
049	7/14	M/W (Reloc)	9/18/85	66	115	99	86.0	(16) eggs No discern.embryo
045	7/11	M/W (Reloc)	9/15/85	66	142	20	14.0	
046	7/12	M/W (Reloc)	9/15/85	65	152	84	55.2	(1) dead turtle
048	7/13	M/W (Reloc)	9/18/85	67	124	117	94.4	
059	7/21	M/W (Reloc)	9/25/85	66	135	130	96.3	(5) discern.embryos
055	7/18	M/W (Reloc)	N/A	Unk	106	All dead 100	00.0	Nest washed over Hurricane "Gloria"
056	7/19	M/W	N/A	Unk	103	All dead 99	00.0	Nest washed over Hurricane "Gloria"
(CM)067	7/29	W	9/27/85	60	172	152	88.3	Peterson & Sharpe Cpl Taylor, Beach Detach
069	8/1	M/W (Reloc)	10/7/85	67	96	85	88.5	Released behind dune (12) hatchlings in grass
064	10/7	M/W (Reloc)	10/7/85	72	102	92	90.1	Was tagged #054 - is #064
053	7/15	M/W (Reloc)	10/1/85	78	119	115	96.7	Nest not under tag cage bent

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION 1984
NESTING RESULTS

PROJECT NAME Onslow Beach

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
#069	8-1-85	M/W	10-7-85	67	96	85	88.5	12 hatchlings - grass-dun
#064	10-7-85	M/W	10-7-85	72	102	92	90.2	
(CM) #085	8-10-85	W	10-31-85	82	164	106	70.0	Two white turtles
#086	8-28-85	M/W	10-28-85	79	101	96	95.0	
#088	8-15-85	M/W	11-15-85	90	109	39	35.8	

* Clutch size determined from nest remains

29 Active Nests

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

C.O. without crawl only

10

Crawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
001	6-5-85	0110	✓	1.6 (S)	135 eggs
002	6-5-85	2230±	✓	1.6 (S)	Rel from 0.35 (S)
003	6-6-85	2100		2.1(S)	C.O.
004	6-6-85	UNK		2.1(S)	C.O. Base of high dune
005	6-6-85	2200+	✓	2.55(S)	Behind dune 35' Above H.Tide
006	6-12-85	2200		2.2(S)	C.O Base eroded low dune
007	6-12-85	2200		2.4(S)	C.O To low dune, moved Around
008	6-12-85	0120	✓	0.4(N)	
009	6-17-85	2305	✓	2.25(N)	Near (N) Tower in dune
010	6-18-85	2130	✓	2.2(N)	Rel. from 035(S) Pier
011	6-18-85	2300		1.0(S)	C.O.
012	6-19-85	2325		2.7(S)	INTO LOW DUNES NEAR INLET
013	6-19-85	0115		0.6(S)	began nest but left
014	6-19-85	0350	✓	0.6(S)	Rel. from 2.3(S)
015	6-20-85	0330		0.2(N)	C.O. 60' circle Above MHW
016	6-21-85	0340		0.57(S)	C.O. base eroded dune - reversed
017	6-22-85	2228	✓	1.9(S)	Tag AAR 145, 146 rel. from 0.25(S) CM
018	6-22-85	0423	✓	0.5(N)	Tag GA 7130, 7129. rel. from 0.8(S)
019	6-23-85	2325		2.3(S)	C.O. observed went down beach; back
020	6-23-85	0021		.7(N)	C.O Tag AAR 147, 148 observed turned - into Sea
021	6-24-85	0100	✓	.6(N)	C.O. NO TAG rel. from .3(S)

Summary of Instructions:
*Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or throught to have occurred. Conduct surveys daily during regular working hours 0800-1630 traveling by four wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

8

rawl o.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
022	6-26-85	0030		1.6(S)	C.O. To dunes Left - To Sea
023	6-27-85	0015		0.8(N)	C.O. INTO low dune - started nest
024	6-27-85	0019			C.O IN SURF - did NOT catch
025	6-27-85	0350		0.45(N)	C.O. 0.45(N) 35' Above MHW
026	6-28-85	0150	✓	1.7(N)	TAG 151, 152 rel. 25' higher
027	6-30-85	0309		.5(N)	C.O. Turtle NOT observed
028	7-2-85	2310	✓	3.0(S)	TAG. AAR 149, 150 (1) deformed egg dime size
029	7-3-85	2230		1.95(S)	C.O. 40' Above MHW - Started nest
030	7-3-85	2233	✓	2.0(S)	2.0(S) return # 014 Added TAG # 142, moved up 40'
031	7-5-85	2148		1.2(S)	C.O. overwash - To Sea
032	7-5-85	2245	✓	2.0(S)	Rel. From 1.2(S) - 200' from 031. 2.0(S) NEXT TO 030.
033	7-5-85	0010	✓	2.0(N)	INCOMPLETE NEST - Turtle Left during examination 18 eggs into 032
034	7-6-85	2233	✓	1.6(S)	CM. rel. from 1.6(S) TAG. AAR 145
035	7-6-85	2252	✓	1.5(S)	Rel. from 1.4(S) TAG. AAR 157, 158
036	7-6-85	0008		0.52(N)	C.O over 5'-7' dune - WANDER return to Sea
037	7-6-85	0012		5.5(N)	base steep eroded dune - BACK
038	7-7-85	2146		2.2(S)	C.O. false crawl to base of dune
039	7-7-85	2218		2.0(S)	C.O. UNAVAILABLE TO TAG. To base dune TURN - To Sea
040	7-7-85	2253		1.8(N)	C.O. Tried to dig middle beach - SAND hard left
041	7-8-85	0210		1.0(S)	C.O. To heavy TO TURN over ONE MAN.
042	7-10-85	0011	✓	2.0(N)	TAG. 815, 816 - 1MS Morehead Return See #008

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eel drive vehicle when tide is low. Traverse the beach flood plane in vehicle
avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl o.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
043	7-10-85	0145		0.6(N)	C.O. Looked like Nest To base dunes - but found no eggs
044	7-10-85	0148		0.55(N)	C.O. AAR 071 observed while examining # 043 caught. Could do only
045	7-11-85	0500	✓	1.5(S)	Turtle nested Barnacle Bills Pier moved to 1.5(S) C. Petterson 2.04
046	7-12-85	0011	✓	1.7(N)	rel. from 0.85(S) AAR 071 - same as on 044
047	7-13-85	2211		0.2(S)	Turned on beach - to sea
048	7-13-85	2309	✓	2.3(N)	Tag AAR - 151, 1520.47(N) Rel. 2.3(N) - Return of 026
049	7-14-85	0235	✓	1.7(S)	Rel. 1.6(S) Tag: AAR159, 160
050	7-15-85	2236		1.9(S)	C.O. Tag AAR 144 Same Turtle # 014
051	7-15-85	2349		2.7(S)	C.O. Turtle made it up a 3' vertical wall of sand
052	7-15-85	0013		1.05(N)	Tag AAR 161, 162 Turtle observed but laid no eggs - in dune area
053	7-15-85	0305	✓	1.35(N)	Tag (36) observed laying eggs Layed eggs first part beach
054	7-17-85	0028	✓	0.25(N)	Tag AAR 145, IMS 649-C/M Same as 017, 034 - video Tape rel. from 0.45(S)
055	7-18-85	0012	✓	1.8(S)	Tag AAR 163, 164 - rel from 2.7(S)
056	7-19-85	0018	✓	1.8(S)	Tag AAR 157, 158 Rel. from 0.65(S) - Return # 035
057	7-19-85	0055		1.9(N)	C.O. into dunes 3 false Nests.
058	7-20-85	0029		1.95(S)	C.O. up 2nd line of dunes return to sea Tag 165, 166 166 Not checked
059	7-21-85	0021	✓	1.9(N)	Tag AAR 167, 168 - Rel. from .3(S) - Crawled threw Embankment & Tracks
060	7-21-85	0353		2.2(S)	Aborted due to roots under Ground - cavity was There
061	7-21-85	0417		1.6(S)	C.O. turned around due to Vertical embankment
062	7-26-85	0350		0.45(S)	Tag AAR 144 - Return 014 030 - Leaving beach C.O.
063	7-27-85	0028		2.2(S)	C.O. base steep 2 1/2' Ledge - To ocean

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eel drive vehicle when tide is low. Traverse the beach flood plane in vehicle
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SEA TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
064	7-27-85	0055	✓	1.8(N)	TAG AAR 144, relocated from 1.8(N) Return of 014; 030 - FC 062
065	7-28-85	0105		.15(S)	C.O. (2) Nests were Attempted but No eggs Laid - Loop - Pattern
066	7-29-85	2200		1.6(S)	C.O. vertical sand dune. Turned Around - To sea, Same Turtle 053. Tag AAR 169, 170 (26)
067	7-29-85	2305	✓	.6(N)	C.M. Green turtle TAG AAR 145, IMS 649 4th Time Did Not relocate
068	7-29-85	0105		1.7(S)	Back into water - C.O. AAR 071, IMS 716
069	8-1-85	2243		0.5(N)	C.O. Relocated from 0.15(S) TAG - AAR 157, 158 - Return of #035; 056, crawled 150' To Top Dune.
070	8-3-85	0203		0.3(S)	TAG AAR 063; 064 - Seen below H.T.L. - Turned and left. C.O.
071	8-3-85	0223		0.55(S)	C.O. 15' from Tide Line to base of 15'-18' dune. - To sea
072	8-3-85	0230		0.84(S)	C.O. To base of 10' dune and return to sea
073	8-3-85	0236		1.14(S)	C.O. - To base of overwash rested - To sea.
074	8-3-85	0241		1.43(S)	C.O. - To base of overwash return 8' to sea.
075	8-3-85	0245		2.1(S)	C.O. diagnol to base of 7'-8' dune - 25' out water - sea
076	8-4-85	0023		1.9(N)	C.O. hit sandunes - Turned Around returned to sea.
077	8-5-85	0047		1.0(S)	C.O. crawled up in to sand dune, Turned Around - back to sea.
078	8-5-85	0145		2.0(S)	C.O. To bottom of sand dune Turned Around - To sea.
079	8-10-85	0055		3.12(S)	C.O. crawled to eroded ledge along ledge 25'.
080	8-10-85	0111		3.0(S)	C.O. observed at eroded 15" ledge. Returned 15' To sea
081	8-10-85	0208		1.66(S)	C.O. observed 10' from surf crawled 60' to eroded dune steep To sea - 95% certain (C.M.)
082	8-10-85	0225		2.95(S)	C.O. observed - 10' To steep ledge - To sea - Did not get Tag Number.
083	8-10-85	0238		2.75(S)	C.O. 18' To ledge and back To sea.
084	8-10-85	0240		2.85(S)	C.O. 20' To ledge. and 20' along ledge trying to climb. To sea

29

mmary of Instructions:
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SEA TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
085	8-10-85	0250	✓	2.0(S)	crawled 75' above MHW, in low dunes - Large body of cavity. Tag AAR 145, Ims 649
086	8-11-85	0005	✓	.6(N)	Relocated from 0.2(S) in flat of beach. Same as 014, 064, 030 Tag - AAR - 144
087	8-14-85	0100		0.6 (N)	C.O. - Crawled 75' - made Nest attempt
088	8-15-85	2309	✓	2.07(S)	Relocated from 0.17(S) - crawled off from water - Return 035, 056, 069
089	8-20-85	0029	✓	0.3(N)	Return of 008, 042, on top of 6' dune. Tag - Ims 815, 816
090	8-22-85	2311		1.82 (S)	C.O. - To base of steep dune 12' - return to sea.
091	8-22-85	0100		1.8(S)	Probably (C.M.) wandered around low overwash - 450' - 500' - to sea
092	unk - aprox. 7-4-85	unk	✓	2.0(S)	Located nest 9-3-85 probably turtle not seen laying eggs - (S.C.)

mmary of Instructions:
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eel drive vehicle when tide is low. Traverse the beach flood plane in vehicle
avoid leaving tire tracks in the sand.

NORTH CAROLINA SEA TURTLE CONSERVATION - 1984

NIGHTLY BEACH SURVEY

Date JUNE 85

Time Start _____ Finish _____ Tide at Start _____

Weather _____

CODES
N=Nest
FC=False Crawl
UK=Unknown
W=Wired
M=Moved
H=Hatchery

#	Activity Code	Time	Turtle Observ.?	Tag	Ht. above $\bar{x}$ high tide	Location	Treatment Code
001	N	6/5 01100	NO	NO	30 feet	6-5-85, Location (1.6)(S) W 15" Number eggs 135 D 19½"	2 deformed eggs - M/W
002	N	6/5 2230±	NO - SEEN BY LAAM GUARD	UNK	15 feet	0.35 (SOUTH) RISLEY PIER RELOCATED TO 1.6 S. R. PIER 92 eggs - 90 RELOCATED	2 dome size flattened M/W
003	FC	6/6 2100	YES - by SENTRY	UNK	25 ft	2.1 (SOUTH) R. PIER BOTH CRAWLS WENT TO BASE OF HIGH DUNES	N/A
004	FC	6/6 UNK	NO	N/A	25 ft	2.1 (S) Risley Pier	N/A
005	N	6/6 2200±	NO	N/A	35 FT	2.55 (SOUTH) RISLEY PIER - BEHIND DUNE 35 FT ABOVE HIGH TIDE W 11" D 18" # NO EGGS 120	W
006	FC	6 UNK PRIOR 12 2200	NO	N/A	10 FT	2.2 (S). PIER WENT TO BASE OF ERODED LOW DUNE 6-12-85	N/A
007	FC	6/12 UNK 2200	NO	N/A	20 FT	2.4 (S) PIER TO LOW DUNE AND MOVED AROUND A BIT 6-12-85	N/A
008	N	6/12 0120	YES	MOREHEAD CITY 815+816	40 FT	6-12-85, LOC. 0.4 (N) 0.4 N W = 11 IN 97 eggs 37/4 l d = 18 IN CARAPACE 34 w	W
009	N	6/17 2305	YES	NO AAR139 BAR140	30 ft	2.25 (NORTH) RISELY PIER ALMOST RIGHT NEAR TOWER IN DUNE. 105 EGGS W 35" L 37"	6-17-85 W
010	N	6-18-85 8130	Yes	NO # 141, 143	15 ft	0.35 (S) Pier 152 eggs moved to 2.2 N. Pier 20 in d., 9 in w 15 ft above mean high tide	M/W
011	FC	6-18-85 2300	NO	N/A	5 ft	1.0 (S) Pier WENT TO BASE OF ERODED DUNE, SIDEWASE 20 ft BACK TO WATER	N
012	FC	6/19 2325	NO	N/A	MAX 62 FT NEST 46 FT	2.7 (S) Risely Pier - went into low dunes, near Inlet, returned and made nest 46' above max but left	N/A
013	FC 013	6/19 0115	NO	N/A	15 FT	0.6 mi (S) R. PIER - went to base of 15 FT DUNE, moved TO SIDE OF Began NEST BUT LEFT.	N/A
014	N 014	6/19 0350	YES	NO #144 (ONLY)	15 FT	0.6 mi (S) Risely Pier - Digging when found 40 in L 39 in W Rel - 2.3 (S) 113 eggs	W
015	FC 015	6/20 0330	NO	N/A	0	0.2 mi (N) of Pier - Did a wide circle, about 60 ft above water, but not above	N/A
016	FC 016	6/21 0340	YES	NONE	15 FT	0.57 (S) Risely Pier - went to base of eroded 12-15' dune + reversed - low tide - crawled 80 ft	N/A

N[illegible] CAROLINA SEA TURTLE CONSERVATION - ~~1984~~

NIGHTLY BEACH SURVEY

Date _____

Time Start _____ Finish _____ Tide at Start _____

Weather _____

CODES
N=Nest
FC=False Crawl
UK=Unknown
W=Wired
M=Moved
H=Hatchery

(8)

#	Activity Code	Time	Turtle Observ.?	Tag	Ht. above x̄ high tide	Location	Treatment Code
Green 017	N	6/22 2228	(Green) YES	AAR 145 146	70 ft	0.25 (S) Risely Pier Relocated 1.9 S. Pier 163 eggs 46.5 l, 43.5 w (CM)	M/W
018	N	6/22 0423	CC YES	GA 7130 7129	5 ft	0.8 mi (S) Risely Pier Relocated 0.5 mi North Risely pier 143 eggs. 42 in l 38 in w (CC)	M
019	+FC	6/23 2325	YES	N/A	50 ft	2.3 mi (S) RISELY'S PIER TURTLE OBSERVED WENT DOWN BEACH CAME BACK AND WAS GONE	N/A
020	+FC	6/23/85 0021	YES	NO AAR 147 AAR 148	30 FT	.7 miles (N) of Risely's Pier 38 in L 42 in L TURTLE OBSERVED TURNED AROUND WENT INTO WATER	N/A
021	N	6-24-85 0100	NO	N/A	40 FT RELOCATED 50 ft	.3 mi (S) Risely's Pier Relocated .6 mi (N) Risely's pier 108 eggs (CC)	M/W
022	+FC	6/26 0030	NO	N/A	15 FT	1.6 Miles (S) Risely Pier To Dunes began nest, left straight back to water	N/A
023	+FC	6/27 0015	NO	N/A	70 FT	0.8 (N) Risely Pier - went into low dune and out, started nest 10 ft below and left	N/A
024	+FC	6/27 0019	YES	UNK	-0-	0.95 (N) Risely Pier - in surf, returning - couldn't catch	N/A
025	+FC	6/27 0350	NO	N/A	35 FT	0.45 (N) Risely Pier 35 ft abv m h w to low steep eroded dune and return	N/A
026	N	6/28 0150	YES	NO 151 + 152	15 FT	1.7 (N) Risely Pier 36 l x 36 W (CC) RELOCATED 25 [illegible] tag AAR 151 + 152 122 eggs	M/W
027	+FC	6/30/85 0309	NO	N/A	20 ft	.5 (N) Risely's Pier in Dune turtle was not observed	N/A
028	N	7/2/85 2310	YES	NO AAR 149 + 150	20 FT	3.0 (S) Risely - Pier 41" l x 38 3/4" w (CC) CC in low dune TAG AAR 149 + 150 140 eggs (1 deformed) + 1 dime size	W
029	+FC 029	7/3/85 2230	NO	N/A	40 FT	1.95 mi (S) riseley's pier 40' above m h w. began nest no eggs found.	N/A
030	N 030	7/3/85 2233	YES	YES #144	15'	2.0 mi (S) Risely's Pier CC 40 l x 39 w return (#014) - added tag #142 nest 15" d x 11" w Relocated N about 40' 106 eggs	M/W
031	+FC 031	7/5 2148	YES	UNK	10'	1.2 (S) Risely Pier CC at overwash returned to water	N/A
032	N 032	7/5/85 2245	YES	NO AAR 154 ONLY	15'	1.2 (S) Risely Pier (CC) 36 1/2 l x 34 1/4 w about 200 ft from #031 RELOCATED 100 EGGS 2.0 S Risely nest to #030	M/W
033	(N) 033	7/5/85 0010	YES	NO AAR 155 + 156	30	2.0 (N) Risely Pier (CC) 40 1/2 l x 37 1/4 w incomplete nest - turtle left while being examined - Relocated 18 eggs INTO #032	

NORTH CAROLINA SEA TURTLE CONSERVATION - ~~1984~~

NIGHTLY BEACH SURVEY

Date 1985

Time Start _____ Finish _____ Tide at Start _____

Weather _____

CODES
N=Nest
FC=False Crawl
UK=Unknown
W=Wired
M=Moved
H=Hatchery

(7)

#	Activity Code	Time	Turtle Observ.?	Tag	Ht. above x̄ high tide	Location	Treatment Code
Great 034	N ✓	7/6 2233	YES	YES AAR 145	80 ft	0.35 (South) Risely Pier (CM) Return * Relocated 1.6 mi. South Risely Pier. 199 eggs 46½l x 43½w (SEE #017)	M/W ✓ Group
035	N ✓	7/6 2252	YES	NO AAR 157 + 158	30 ft	1.4 mi (South) Risely Pier (CC) Relocated 1.5 mi South R. Pier 98 eggs 40½l x 37½w	M/W ✓
036	+ FC	7/6 0008	NO	UNK	40 ft	0.52 (North) Risely Pier - up over 5-7' dune - wander - return	N/A ✓
037	+ FC	7/6 0012	NO	UNK	30 ft.	0.55 (North) Risely Pier - to base of steep, eroded dune and right back	N/A ✓
038	+ FC	7/7/85 2146	NO	UNK	15 ft	false crawl at base of dune 2.2 mi (S) of Risely's pier	N/A ✓
039	+ FC	7/7/85 2218	YES	NO	20 ft	unavailable to tag it also crawled to base of dune and turned around 2.0 mi (S) Risely's Pier 40" long 37" wide	N/A ✓
040	+ FC	7/7/85 2253	NO	UNK	0 ft	tried digging a nest in middle of the beach I think sand was to hard and left 1.8 mi (N) Risely's Pier	N/A ✓
041	+ FC	7/8/85 0210	YES	NO	30 ft	to heavy to turn over by myself 41" long 28" wide 1.0 mi (S) of Risely's Pier	N/A ✓
042	N ✓	7/10/0011	YES	YES MAR 815/816	Marsey mouth 45'	2.0 (N) Risely pier (CC) 37½l x 35w 108 eggs in hole 22"l x 9"w Return - see #008 Track 36m	W ✓
043	+ FC	7/10 0145	NO	UNR	30'	0.6 (N) Risely to base of dunes - looked like a nest, but couldn't find eggs. ↑ Both tracks same 37"	N/A ✓
044	+ FC	7/10 0148	YES	YES AAR 071	0	0.55 (N) Risely pier - turtle observed while examining #43 - caught at surf - could only check DNA	N/A ✓
* Patterson 045	N ✓	7/11 0500	YES	NO	80	Turtle nested Barnacle Bill's Pier moved to 1.5 (S) Risely Pier 142 eggs 2.04 (S)	M/W ✓
046	N ✓	7/12 0011	YES	YES AAR 071	20	0.85 S. Risely Pier 40l x 37w RELOCATED 1.7 (NORTH) 152 eggs	M/W ✓
047	+ FC	7/13 2211	NO	N/A	0	0.2 (S)outh Risely - turned on beach and Returned	N/A ✓
048	048 N ✓	7/13 2309	YES	YES AAR 151+152	10	0.47 (South) of Pier - Return of #026 of 6/28 36l x 36w 124 eggs relocate 2.3 North	M/W ✓
049	049 N ✓	7/14/85 0235	YES	NO AAR 159 AAR 160	0 ft Relocated 15 ft put on dune	1.6 (South) Risely's Pier - tagged w/ AAR 159 AAR 160 Relocated 1.7 mi S of Risely's Pier on top of dune. 35" long by 31" wide. 115 eggs 16 in deep hole	M/N ✓
050	+ FC 050	7/15/85 2230	YES	YES AAR 144	10 ft	1.9 mi (S) Risely's Pier 40"L 38"W SAME TURTLE AS IN #014. 41" X 38"	N/A ✓

NORTH CAROLINA SEA TURTLE CONSERVATION ~~1984~~

NIGHTLY BEACH SURVEY

Date 7/15/85

Time Start _____ Finish _____ Tide at Start _____

Weather _____

CODES
N=Nest
FC=False Crawl
UK=Unknown
W=Wired
M=Moved
H=Hatchery

(17)

#	Activity Code	Time	Turtle Observ.?	Tag	Ht. above x high tide	Location	Treatment Code
051	+ FC	7/15/85 2349	NO	NA	5 ft	2.7 mi (S) of Riselys Pier turtle made it up a 3 foot vertical wall of sand	NA ✓
052	+ FC	7/15/85 0013	YES	NO ~~YES~~ AAR 161 162	25 ft	1.05 mi (N) of Riselys pier turtle was observed but laid no eggs found in dune area 45 x 41"	NA
053	N ✓	7/15/85 0305	YES	YES 36	0 ft	1.35 mi (N) of Riselys Pier. Turtle observed laying eggs. Had tag labeled 36? laid eggs on flat part of beach 39" by 36" 119 eggs	M/W ✓
054	N ✓	7/17 0028	YES	YES AAR 143 Mark & Tim met 6:49	40 ft	0.45 (South) Risely Pier CM same as #017 and #034 ✓ DEC TAPE 194 eggs + 1 Broken Relocate 0.25 N.	M/W ✓
055	N ✓	18/0012	YES	NO AAR 163 + 164 ✓	15 ft	2.7 (South) Risely Pier CM l = 38" w = 35" # eggs = 106 Relocate to 1.8 South Risely	M/W ✓
056	N ✓	19/0018	YES	YES AAR 157 + 158	20 ft	0.65 (S) Risely Pier 103 Return #035 of 7/6/85 - Relocate 1.85 (S) Pier 99	M/W ✓
057	+ FC	19/0055	NO	NA	30 ft	1.9 (N) Risely Pier - opposite dunes 8 false nests Track 36"	N/A ✓
058	+ 058 FC	20/0029	YES	NO AAR 165 166	200 ft	1.95 (S) Risely Pier up and line of dunes and return TAG 166 not closed but would not come out	N/A
059	N ✓	21/0021	YES	NO AAR 167 AAR 168	40 ft	.3 (S) Riselys Pier relocated 1.9 mi N of Riselys Pier. 135 eggs. 41" by 35" crawl thru antrack tracks	M/W ✓
060	+ FC	21/0353	NO	N/A	5 ft	false crawl 2.2 (S) of Riselys pier cavity was there but aborted due to roots ~~on~~ under ground	N/A ✓
061	+ FC	21/0417	NO	N/A	0 ft	false crawl 1.6 mi (S) of Riselys Pier. Turned around due to vertical embankment.	N/A ✓
062	+ FC	7/26 0350	YES	YES AAR 144	60 ft	0.45 (S) Risely Nest depression deep OC leaving when 2 checked Return #014 + 030	N/A ✓
063	+ FC	7/27 0028	NO	N/A	m h w	2.2 miles (S) south Risely pier to m h w base of step 2 1/2' ledge and return	N/A ✓
064	064 N ✓	7/27 0055	YES	YES AAR 144	30 ft	1.7 (S) Risely Pier - Return of Relocate 1.15 Nance # 014 + 030 FC 062 102 egg	M/W ✓
065	+ FC 065	7/28 0105	NO	N/A	20 ft	.15 (S) of Risely Pier. 2 nests were attempted but no eggs. went in loop-de-loop track pattern.	N/A ✓
066	+ FC 066	7/29 2200	YES	YES 36 ~~NO~~ RETAGGED AAR 169 170	0 ft	.6 mi (S) of Risely Pier. hit vertical sand dune and turned around. same turtle as # 053. Tag 36 was →	N/A ✓
067	N ✓ 067 Green	7/29 2305	YES #067	YES AAR 145 Mark and Tim met 6:49	20 ft	.6 mi (N) Risely Pier. Green turtle tag 4th from. laid 172 eggs did not relocate	W ✓

Relocated ~~20~~ 25 ft from nest
into sand dune.

in question. so retagged
w/ #'s AAR169, AAR170

NORTH CAROLINA SEA TURTLE CONSERVATION - ~~1984~~

NIGHTLY BEACH SURVEY

Date 1985

Time Start 29 July 88 Finish _____ Tide at Start _____

Weather _____

1.8(S)

CODES
N=Nest
FC=False Crawl
UK=Unknown
W=Wired
M=Moved
H=Hatche[redacted]

(1)

#	Activity Code	Time	Turtle Observ.?	Tag	Ht. above x̄ high tide	Location	Treatment Code
068	7/29 x FC	7/29 0105	YES	YES 716 ~~[illegible]~~ AAR ~~[illegible]~~ 071	MIS 716 0 ft	1.7 mi S of Riselys Pier, went back into water as soon as we saw it (AAR #071 and MIS 716)	N/A ✓
069	N ✓	8/1 2243	YES	YES AAR 157 158	50 ft (CC)	0.15 South Risely crawled 150' to top of dune Return of #035 (7/6) and #056 (7/19) Reloc 0.5 N 96 eggs	M/W ✓
070	x FC	8/3 0203	YES	YES AAR 063+064	30 ft (CM)	0.3 S. Risely Pier spotted below High tide line but continue turned over on return (38 x W37 rough	N/A ✓
071	x FC	8/3 0223	NO	UNK	20'	0.55 S pier 34-35" track 15 ft fm tide line to base of 15-18' dune + return	N/A ✓
072	x FC	8/3 0230	NO	UNK	15'	0.84 S. of Pier to base of 10' dune + return 35' to water Track 34"	N/A ✓
073	+ FC	8/3 0236	NO	UNK	18'	1.14 S of Pier to base of overwash crest + return 28' to water Track 32"	✓ N/A
074	+ FC	8/3 0241	NO	UNK	10'	1.43 S. to base of overwash + return about 8' to water 34" track	N/A ✓
075	x FC	8/3 0245	NO	UNK	15'	2.1(S) of Pier in diagonal to base of 7-8' dune 25 ft out of water - track = 34-35"	N/A ✓
076	x FC	8/4 0023	NO	UNK	0	1.9 mile (N) of Riselys Pier hit sand dunes + returned around	N/A ✓
077	x FC	8/5 0047	NO	UNK	25 ft	1.0(S) of Riselys Pier crawled up on sand dune turned around and crawled back	N/A ✓
078	x FC	8/5 0145	NO	unk	10 ft	2.1(S) of Riselys Pier crawl to bottom of sand dune and turned around	N/A ✓
079	x FC	8/10 0055	NO	UNK	0	3.12(S) of Pier crawled to eroded ledge then along 25 ft Track = 33"	N/A ✓
080	x FC	8/10 0111	YES	UNK	0	3.0(S) of pier CC observed at eroded 15 in ledge - returned 15 ft to water before tag check	N/A ✓
081 *	x FC	8/10 0208	YES *	UNK	30 ft 1.66(S) Pier	(CM) observed on return 10 ft from Surf had crawled about 60 ft to steep eroded dune and returned (95% certain = [illegible]	N/A ✓
082	x 082 FC	8/10 0225	YES	YES	20 ft 24'	(CC) 2.95(S) of Pier - observed coming out (10 ft) - she continued to steep ledge + returned - didn't get tag #	N/A ✓
083	+ 083 FC	8/10 0238	NO	UNK	0	2.75(S) of pier - 34" track went 18' to ledge + back	N/A ✓
084	x FC 084	8/10 0240	NO	UNK	0	2.85(S) of pier - 34" track 20 ft to ledge + 20 ft along ledge trying to climb	N/A ✓

NORTH CAROLINA SEA TURTLE CONSERVATION - ~~1984~~

NIGHTLY BEACH SURVEY

Date 1985 AUG.

Time Start 8/10 Finish _____ Tide at Start _____

Weather _____

CODES
N=Nest
FC=False Crawl
UK=Unknown
W=Wired
M=Moved
H=Hatchery

(30) + (4)

728
164
892

#	Activity Code	Time	Turtle Observ.?	Tag	Ht. above x̄ high tide	Location (CM)	Treatment Code
~~X~~ 085	N ✓	8/10 0250	YES	YES AAR145 IMS 649	50 ft	2.0 S. of Pier, 75' abo. mhw in low dunes, large body cavity 78" deep x 6' egg cav. 17 W13 164 eggs.	W ✓
086	N ✓	8/11 0005	YES	YES AAR144	40 ft 101 eggs	0.2 S of Riseleys Pier in flat part of beach relocated .6 N of Riseleys Pier Same turtle as #014, #064, 030	(6.N) M/W ✓
087	x FC	8/14 0100	NO	UNK	20 ft	0.6 mi N. Risely pier 41" track crawled 75' out at about 2400 and made nest atempt	N/A ✓
088	N ✓	8/15 2309	YES	YES AAR 157, 158	45 ft	0.17 S of Pier 33 in track (CC) crawled 80 ft from water 109 eggs Return of (035, 056, 069) Reloc. 2.07 S. pier.	M/W ✓
089	N ✓	8/20 0029	YES	YES MIMS 815, 816	30 ft	0.3 N of Risely pier (Return 008, 042) on top of 37 l x 34½ w 96 eggs 6' dune	W ✓
090	+ FC	8/22 2311	NO	N/A	20 ft	1.82 S. Risely pier to base of steep, 12 ft dune + return track 40 in +	N/A ✓
091	+ FC (CM)	8/22 0100	NO	N/A	150 ft	1.8 S. Risely pier - 47" track probably (CM) - wandered around low overwash	N/A ✓ 450-500 ft
092	N	7/4 aprox UNK	NO	UNK	12 ft	2.0 (S) Riseleys pier - NO TAG or CAGE →	Found Nest 9-3-85 K W-red TAG + CAGE Put over Nest

DEPARTMENT OF THE INTERIOR
U.S. FISH AND WILDLIFE SERVICE

3-201
(2/76)

FEDERAL FISH AND WILDLIFE PERMIT

1. PERMITTEE

MARINE CORPS BASE

CAMP LEJEUNE NC 28542

2. AUTHORITY-STATUTES

16 USC 1539 (a)

REGULATIONS (*Attached*)

50 CFR 17.22

3. NUMBER

PRT-689394

4. RENEWABLE	5. MAY COPY
X ☒ YES	X ☒ YES
☐ NO	☐ NO

6. EFFECTIVE	7. EXPIRES
3/23/85	3/31/87

8. NAME AND TITLE OF PRINCIPAL OFFICER (*If #1 is a business*)

DIRECTOR
JULIAN I. WOOTEN

9. TYPE OF PERMIT

ENDANGERED SPECIES

10. LOCATION WHERE AUTHORIZED ACTIVITY MAY BE CONDUCTED

CAMP LEJEUNE, NORTH CAROLINA

11. CONDITIONS AND AUTHORIZATIONS:

A. GENERAL CONDITIONS SET OUT IN SUBPART D OF 50 CFR 13, AND SPECIFIC CONDITIONS CONTAINED IN FEDERAL REGULATIONS CITED IN BLOCK #2 ABOVE, ARE HEREBY MADE A PART OF THIS PERMIT. ALL ACTIVITIES AUTHORIZED HEREIN MUST BE CARRIED OUT IN ACCORD WITH AND FOR THE PURPOSES DESCRIBED IN THE APPLICATION SUBMITTED. CONTINUED VALIDITY, OR RENEWAL, OF THIS PERMIT IS SUBJECT TO COMPLETE AND TIMELY COMPLIANCE WITH ALL APPLICABLE CONDITIONS, INCLUDING THE FILING OF ALL REQUIRED INFORMATION AND REPORTS.

B. THE VALIDITY OF THIS PERMIT IS ALSO CONDITIONED UPON STRICT OBSERVANCE OF ALL APPLICABLE FOREIGN, STATE, LOCAL OR OTHER FEDERAL LAW.

C. VALID FOR USE BY PERMITTEE NAMED ABOVE.

D. Acceptance of this permit serves as evidence that the permittee understands and agrees to abide by the "Special Conditions for Marine Mammals and Native Endangered and Threatened Species" (copy attached).

E. AUTHORIZED TO TAKE GREEN (Chelonia mydas) AND LOGGERHEAD (Caretta caretta) SEA TURTLES TO TAG AND MEASURE ADULTS AND TO RELOCATE NESTS, FOR THE PURPOSE OF SCIENTIFIC RESEARCH AND ENHANCEMENT OF SURVIVAL, PROVIDED:

1. ONLY NESTS THREATENED BY EROSION, TIDES, EXTREME PREDATION OR MILITARY ACTIVITIES ARE MOVED,
2. NESTS MAY BE RELOCATED ONLY TO SAFE BEACH SITES (NOT LABORATORIES),
3. RELOCATED NESTS ARE MONITORED AND HATCHING SUCCESS RECORDED,
4. THE PERMITTEE MAY MOVE NESTS ONLY WITHIN 24 HOURS OF

☒ ADDITIONAL CONDITIONS AND AUTHORIZATIONS ON REVERSE ALSO APPLY

12. REPORTING REQUIREMENTS

FIRST ANNUAL REPORT DUE 1/31/86
COMPLETE REPORT OF ACTIVITIES MUST BE SUBMITTED TO FWPO, BOX 3654 ARLINGTON, VA 22203, 1/31 OF EACH YEAR PERMIT IS IN EFFECT.

ISSUED BY	TITLE	DATE
R. R. Robinson	CHIEF, BRANCH OF PERMITS-FWPO	3/23/85

ORIGINAL

EGG DEPOSITION OR AFTER TWO WEEKS FOLLOWING DEPOSITION (PREFERABLY EGGS SHOULD BE MOVED WITHIN 12 HOURS OF DEPOSITION), AND

5. NO EGGS BE REMOVED OR RELOCATED OUTSIDE THE CAMP LEJEUNE GENERAL BEACH VICINITY.

E. NESTING FEMALES SHOULD BE DOUBLE-TAGGED BY PLACING ONE TAG ON EACH FRONT FLIPPER.

F. THE ATLANTA, GA USFWS ENDANGERED SPECIES OFFICE (404/831-4671) MUST BE NOTIFIED BEFORE COMMENCING THE PERMITTED ACTIVITY.

ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

Implemented June 1982

Special Conditions for Marine Mammals and Native Endangered and Threatened Species Permits

1. Permittee must comply with the attached General Permit Conditions specified by the Federal Wildlife Permit Office.

2. Any dead or injured specimens of the authorized wildlife found may be salvaged or cared for.

3. Unless otherwise authorized on the face of the permit, the wildlife must be immediately released at or near the capture site after permitted activity.

4. Unexpected death or escape of the authorized wildlife shall be reported to the Federal Wildlife Permit Office (703/235-1903) before the end of the next business day.

5. BIRD banding, marking, radio tagging, etc. must be conducted in accordance with a Federal Bird Marking and Salvage permit.

THE FOLLOWING CONDITIONS APPLY UNTIL AUTHORIZED DISPOSAL OF THE WILDLIFE, REGARDLESS OF THE EXPIRATION DATE OF THE PERMIT:

6. The authorized wildlife may NOT be sold, donated or transferred unless the receiver has first been issued authorization by the Director.

7. Any dead authorized wildlife shall be preserved and held for scientific purposes whenever practical.

8. Any live SEA TURTLES held must be maintained in accordance with the "Care and Maintenance Standards for Sea Turtles Held in Captivity" specified by the Federal Wildlife Permit Office.

9. MARINE MAMMALS must be cared for and maintained in accordance with the Animal and Plant Health Inspection Service's regulations on "Marine Mammals; Humane Handling, Care, Treatment, and Transportation".

ADDRESS ONLY THE DIRECTOR,
FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
WASHINGTON, D.C. 20240

Implemented May 1982

GENERAL PERMIT CONDITIONS

1. All sections of Title 50 Code of Federal Regulations Part 13 provided on the reverse of this page are conditions of the permit.

2. All applicable foreign, state, local or other federal laws, including those requiring permits, must be observed.

3. Living specimens must be handled and shipped so as to minimize risk of injury, damage to health or cruel treatment.

4. Container in which authorized wildlife is shipped must be plainly marked with name and address of shipper and consignee and an accurate description of the contents including common and scientific name and number of each within, OR with a symbol authorized by a Symbol Marking permit.

5. Permittee must carry a copy of permit while conducting authorized activities.

6. Permit number must be legibly printed on all documents and advertisements involving activities conducted under permit.

For permits authorizing import, export or reexport:

7. This permit and a completed copy of the Wildlife Declaration (Form 3-177) must be presented to a USFWS officer at the port upon import, export or reexport of wildlife shipments.

8. Import, export or reexport of pre-Act wildlife under the U.S. Endangered Species Act must be accompanied by documentation required by 50 CFR 17.4.

9. Import of species listed in Appendix I, II or III of CITES must be accompanied by proper foreign documentation from the country of export.

10. Import, export or reexport of plants must be made through a U.S. Department of Agriculture (USDA) port (list attached if applicable). Permittee shall allow an authorized USDA agent to enter his premises at any reasonable hour to inspect any specimens held, or to inspect any records.

11. Import, export or reexport of wildlife must be made through one of the following designated ports or as authorized by an Exception to Designated Port permit: New York, NY; Miami, FL; New Orleans, LA; Dallas/Ft. Worth, TX; Los Angeles and San Francisco, CA; Honolulu, HI; Seattle, WA; and Chicago, IL.

Exception to Designated Port permittees:

a. Permittee is liable for all costs incurred by USFWS in examining shipments including per diem, salary and travel cost. Payment shall be by certified check or money order, payable to U.S. Fish and Wildlife Service prior to delivery of shipment to the consignee.

b. The nearest USFWS Law Enforcement Office (list attached) must be notified at least 72 hours prior to import, export or reexport.

Excerpts from CODE OF FEDERAL REGULATIONS (50 CFR 13)

§ 13.23 Amendment of applications or permits.

Where circumstances have changed so that an applicant or permittee desires to have any term or condition of his application or permit modified, he must submit in writing full justification and supporting information in conformance with the provisions of this part and the part under which the permit has been issued or requested. Such applications for modification are subject to the same issuance criteria as are original applications, as provided in § 13.21.

§ 13.24 Renewal of permit.

Where the permit is renewable and a permittee intends to continue the activity described in the permit during any portion of the year ensuing its expiration, he shall, unless otherwise notified in writing by the Director, file a request for permit renewal, together with a certified statement that the information in his original application is still currently correct, or a statement of all changes in the original application, accompanied by any required fee at least 30 days prior to the expiration of his permit. Any person holding a valid renewable permit, who has complied with the foregoing provision of this section, may continue such activities as were authorized by his expired permit until his renewal application is acted upon.

§ 13.25 Permits not transferable; agents.

(a) Permits issued under this part are not transferable or assignable. Some permits authorize certain activities in connection with a business or commercial enterprise and in the event of any lease, sale, or transfer of such business entity, the successor must obtain a permit prior to continuing the permitted activity. However, certain limited rights of succession are provided in § 13.26.

(b) Except as otherwise stated on the face of a permit, any person who is under the direct control of the permittee, or who is employed by or under contract to the permittee for the purposes authorized by the permit, may carry out the activity authorized by the permit.

§ 13.27 Change of mailing address.

During the term of his permit, a permittee may change his mailing address without procuring a new permit. However, in every case notification of the new mailing address must be forwarded to the issuing official within 30 days after such change. This section does not authorize the change of location of the permitted activity for which an amendment must be obtained in accordance with § 13.23.

§ 13.28 Change in name.

A permittee continuing to conduct a permitted activity is not required to obtain a new permit by reason of a mere change in trade name under which a business is conducted or a change of name by reason of marriage or legal decree: *Provided*, That such the issuing official for endorsement within 30 days from the date the permittee begins conducting the permitted activity under the new name.

§ 13.29 Official endorsement of changes required.

Any change in a permit must be made by endorsement of the Director or issuing officer. Any modification or change in an issued permit, other than those specifically provided for in this subpart, may be granted or denied in the discretion of the Director.

§ 13.30 Certain continuancy of activity.

A permittee who furnishes his permit to the issuing official for endorsement or correction in compliance with the provisions of this subpart may continue his operations pending its return.

§ 13.31 Discontinuance of activity.

When any permittee discontinues his activity, he shall, within 30 days thereof, mail his permit and a request for cancellation to the issuing officer, and said permit shall be deemed void upon receipt. No refund of any part of an amount paid as a permit fee shall be made where the operations of the permittee are, for any reason, discontinued during the tenure of an issued permit.

§ 13.41 Recall and amendment of permit during its term.

Except for marine mammal permits (See Part 18), all permits are issued subject to the condition that the Service reserves the right to recall and amend the provisions of a permit for just cause at any time during its term. Such amendments take effect on the date of notification, unless otherwise specified.

§ 13.42 Permits are specific.

The authorizations on the face of a permit which set forth specific times, dates, places, methods of taking, numbers and kinds of wildlife or plants, location of activity, authorize certain circumscribed transactions, or otherwise permit a specifically limited matter, are to be strictly construed and shall not be interpreted to permit similar or related matters outside the scope of strict construction.

§ 13.43 Alteration of permits.

Permits shall not be altered, erased, or mutilated, and any permit which has been altered, erased, or mutilated shall immediately become invalid. Unless specifically permitted on the face thereof, no permit shall be copied, nor shall any copy of a permit issued pursuant to this Subchapter B be displayed, offered for inspection, or otherwise used for any official purpose

§ 13.44 Display of permit.

Any permit issued under this part shall be displayed for inspection upon request to the Director or his agent, or to any other person relying upon its existence.

§ 13.45 Filing of reports.

Permittees may be required to file reports of the activities conducted under the permit. Any such reports shall be filed not later than March 31 for the preceding calendar year ending December 31, or any portion thereof, during which a permit was in force, unless the regulations of this Subchapter B or the provisions of the permit set forth other reporting requirements.

§ 13.46 Maintenance of records.

From the date of issuance of the permit, the permittee shall maintain complete and accurate records of any taking, possession, transportation, sale, purchase, barter, exportation, or importation of plants obtained from the wild (excluding seeds) or wildlife pursuant to such permit. Such records shall be kept current and shall include names and addresses of persons with whom any plant obtained from the wild (excluding seeds) or wildlife has been purchased, sold, bartered, or otherwise transferred, and the date of such transaction, and such other information as may be required or appropriate. Such records, unless otherwise specified, shall be entered in books, legibly written in the English language. Such records shall be retained for 5 years from the date of issuance of the permit.

§ 13.47 Inspection requirement.

Any person holding a permit under this Subchapter B shall allow the Director's agent to enter his premises at any reasonable hour to inspect any wildlife or plant held or to inspect, audit, or copy any permits, books, or records required to be kept by regulations of this Subchapter B.

§ 13.51 Penalties for violation of a permit, notice; demonstration of compliance.

(a) Any violation of the applicable provisions of this subchapter, or of the statute under which the permit was issued, or a condition of the permit, may subject the permittee to the following penalties:

(1) The penalty provided in the statute under which the permit was issued;

(2) Temporary suspension of the permit for a specified period; and

(3) Revocation of the permit. When revoked, permits must be surrendered to the Director on demand.

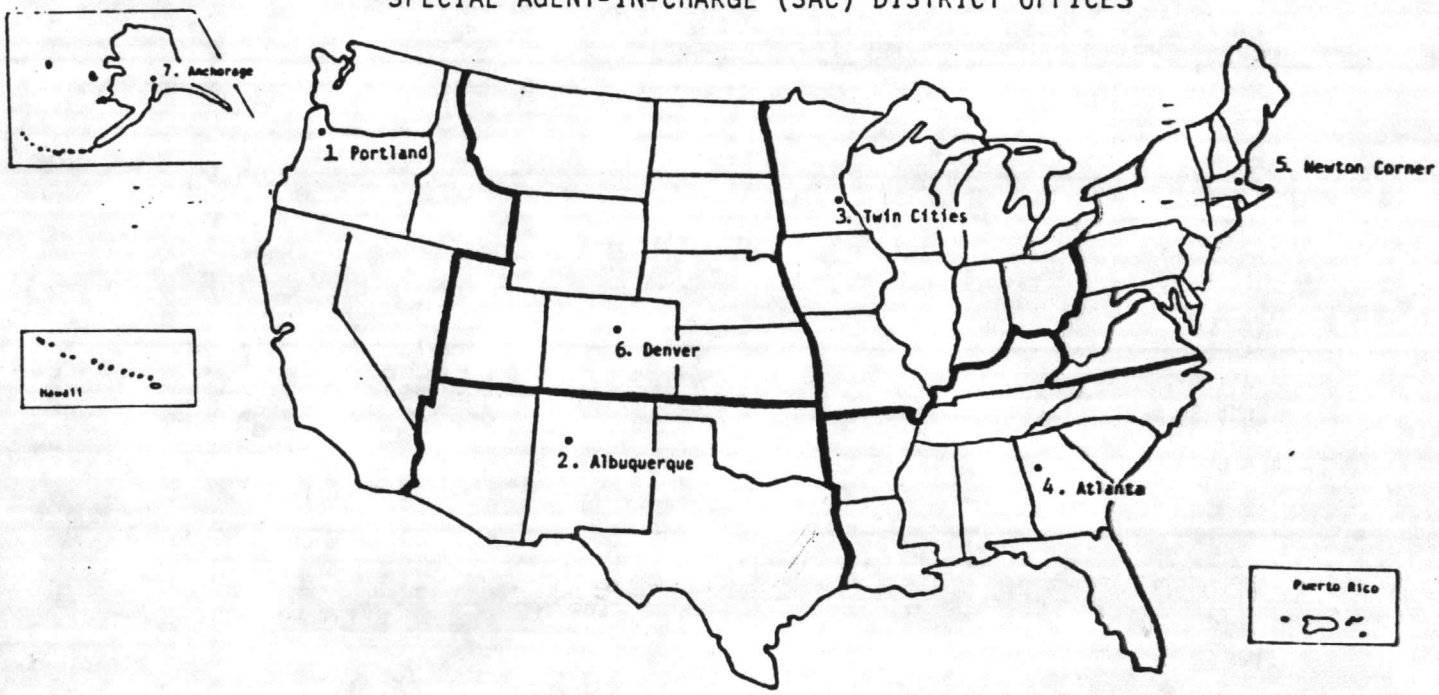
(b) Except in cases of willfullness or those in which the public health safety or interest requires, and prior to any suspension or revocation of a permit, the permittee shall be given:

(1) Notice by the Service in writing of the facts or conduct which may warrant the suspension or revocation; and

(2) Opportunity to demonstrate or achieve compliance with all permit requirements.

February 1985

UNITED STATES FISH AND WILDLIFE SERVICE
DIVISION OF LAW ENFORCEMENT
SPECIAL AGENT-IN-CHARGE (SAC) DISTRICT OFFICES



1. California, Hawaii, Idaho, Nevada, Oregon, Washington:
847 N.E. 19th Street
Suite 225
Portland, OR 97232
503/231-6125

2. Arizona, New Mexico, Oklahoma, Texas:
P.O. Box 329
Albuquerque, NM 87103
505/766-2091

3. Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, Wisconsin:
P.O. Box 45
Twin Cities, MN 55111
612/725-3530

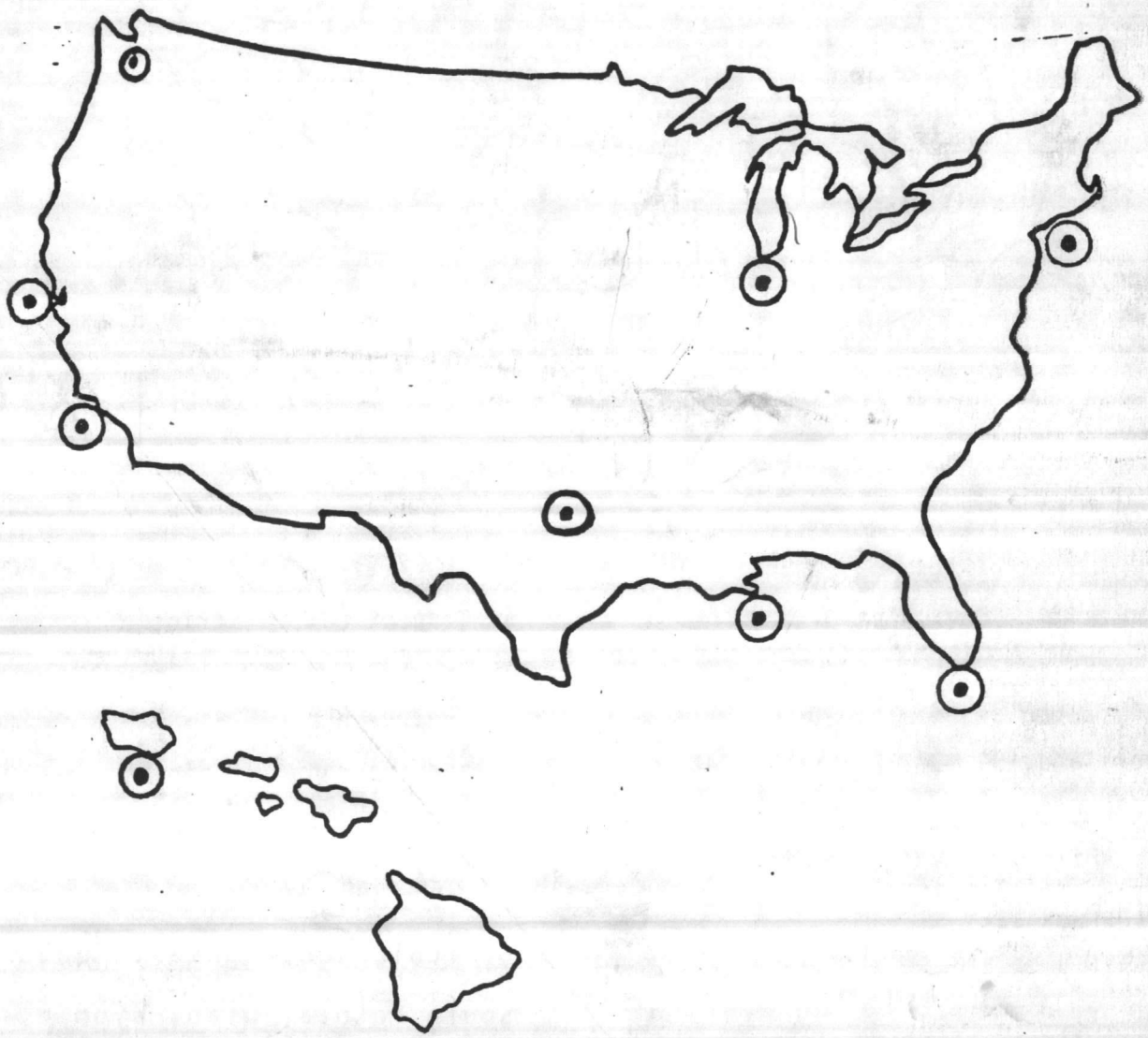
4. Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee:
P.O. Box 4839
Atlanta, GA 30302
404/221-5872

5. Connecticut, District of Columbia, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia:
P.O. Box 129 New Town Branch
Boston, MA 02258
617/965-2298

6. Colorado, Kansas, Montana Nebraska, North Dakota, South Dakota, Utah, Wyoming:
P.O. Box 25486
Denver Federal Center
Denver, CO 80225
303/236-7540

7. Alaska
P.O. Box 4-2597
Anchorage, AK 99509
907/786-3311

U.S. Fish and Wildlife Service Designated Ports
(50 CFR 14.12)



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11015
NREAD
2 Dec 85

Ms. Deborah S. Paul
Chief of Youth Activities and
Environmental Service Division
Wildlife Resources Commission
Archdale Building
512 North Salisbury Street
Raleigh, North Carolina

Dear Ms. Paul:

The enclosed results of the 1985 Sea Turtle nesting activities at Onslow Beach, Marine Corps Base, Camp Lejeune are forwarded for your information. Also enclosed are individual nesting data sheets for all the nests located during the season.

Further information concerning the report on nesting results of the program at Camp Lejeune may be obtained by contacting Mr. Charles D. Peterson at (919) 451-2195.

Sincerely,

J. I. WOOTEN
Director

Encl

Writer: C. D. Peterson, NREAD 5003
Typist: J. Cross 26Nov85

SEA TURTLE INVENTORY

for

SUMMER AND FALL 1985

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION

ASSISTANT CHIEF OF STAFF, FACILITIES

MARINE CORPS BASE

CAMP LEJEUNE, NORTH CAROLINA 28542

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TABLE OF CONTENTS

		Page
Introduction		
Sea Turtle Inventory (Nest Data)	Table I	5A-5C
Return of Tagged Turtles	Table 2	6
Ground Survey Number Totals	Table 3	7A-B
Crawl Information in Relation to Moon Tidal Cycles	Table 4	8A-D
Number of Crawls with Nests in Relation to Lunar Cycle	Figure I	9
Number of Crawls Without Nests in Relation to Lunar Cycle	Figure 2	10
Total Crawls and Nests by Months	Figure 3	11
Nest and Crawl Activity Map	Figure 4	12
Aerial Survey	Table 5	13A-13B
Nesting Results	Table 6	14A-14C

INTRODUCTION

The sea turtle inventory for 1985 is a continuation of past efforts by Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina, to protect sea turtle nesting activities at Onslow Beach. The sea turtle inventory consists of several programs including: nest protection, tagging of adult turtles, collecting nesting data, determining hatchling success and aerial surveys.

Management personnel began operating under a Federal Fish and Wildlife Permit during 1981, issued for working with threatened Loggerhead and Green Turtles. The permit authorizes the tagging and measurement of adults and the relocation of nests threatened by erosion, tides, extreme predation or military training activities. Nests may be moved only within 24 hours of egg laying to a safe beach location and not to a laboratory. Relocated nests are required to be monitored and hatchling success documented.

The results of the sea turtle program are as follows:

a. Nest protection from predators, 36.

b. Tagging of adults - number of turtles tagged 25.

Tag return data may be reviewed in Table II

c. Nesting data - Number of nests - 36.

d. Total number of crawls - 36.

e. Total number of eggs - 4,250.

f. Total number of hatchlings - 3,698.

*Note: 199 of these were dead in nest.

g. Number of tag returns 38

h. Number of stranded turtles 5

i. Number of nests lost during Hurricane Gloria 1

j. Number of nests lost during abnormal high tides associated with northeast winds 2

k. Number unhatched nests from unknown causes 0

Stranding reports were submitted to the North Carolina Wildlife Resources Stranding Network Coordinator. Carcasses of stranded turtles were buried on the beach.

Percent hatchling success is 80.1%; nesting and crawl data is compiled in Tables 1 through IV, and Figures 1 through 3. The enclosed maps in Figure ~~3~~ 4 indicate locations of turtle activity on Onslow Beach.

Aerial survey data may be found in Table V.

Table VI contains the hatching results of individual nests for the season.

This inventory period, a green sea turtle that nested four times in 1980, nested on Onslow Beach five times this year. Data on the green turtle is in this 1985 report.

The Marine Corps Base, Camp Lejeune and Natural Resources and Environmental Affairs Division give special thanks to Doctor F. J. Schwartz at the Institute of Marine Science, Morehead City, North Carolina for his advice and services.

For copies of this report or other information concerning the sea turtle management program conducted by this agency, contact: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542 (Attention: Director, Natural Resources and Environmental Affairs Divison, Assistant Chief of Staff, Facilities).

SEA-TURTLE INVENTORY
(Crawl Data)

TABLE I

Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
01	6-5-85	0110	✓	1.6(S)	135 eggs
02	6-5-85	2230±	✓	1.6(S)	Relocated from 0.35(S)
03	6-6-85	2100		2.1(S)	Crawl Only (C.O.)
04	6-6-85	Unk		2.1(S)	C.O. Base of high dune
05	6-6-85	2200+	✓	2.55(S)	Behind dune 35' above high tide
06	6-12-85	2200		2.2(S)	C.O. Base eroded low dune
07	6-12-85	2200		2.4(S)	C.O. To low dune, moved around
08	6-12-85	0120	✓	0.4(N)	
09	6-17-85	2305	✓	2.25(N)	Near (N) Tower in dune
10	6-18-85	2130	✓	2.2(N)	Relocated from 035(S) Pie
11	6-18-85	2300		1.0(S)	C.O.
12	6-19-85	2325		2.7(S)	Into low dunes near Inlet
13	6-19-85	0115		0.6(S)	Began nest but left
14	6-19-85	0350	✓	0.6(S)	Relocated from 2.3(S)
15	6-20-85	0330		0.2(N)	C.O. 60' circle above MHW
16	6-21-85	0340		0.57(S)	C.O. Base eroded dune - revers
17	6-22-85	2228	✓	1.9(S)	Tag AAR 145, 146 Relocated from 0.25(S) CM
18	6-22-85	-423	✓	0.5(N)	Tag GA 7130, 7129 Relocated from 0.8(s)
19	6-2[illegible]-85	2325		2.3(S)	C.O. Observed Went down beach - back
20	6-23-85	0100		.6(N)	C.O. No tag Tag AAR147,148 Observed turned - into se
21	6-24-85	0100	✓	.6(N)	No tag Relocated from .3(S)
22	6-26-85	0030		1.6(S)	C.O. To dunes left - to sea

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurr
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

EA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

awl o.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
3	6-27-85	0015		0.8(N)	C.O. Into low dune - Started nest
4	6-27-85	0019			C.O. In surf - did not catch
5	6-27-85	0350		0.45(N)	C.O. 0.45(N) 35' above mean high tide
6	6-28-85	0150	✓	1.7(N)	Tag 151, 152 Relocated 25' higher
7	6-30-85	0309		.5(N)	C.O. Turtle not observed
8	7-2-85	2310	✓	3.0(S)	Tag AAR 149, 150 1 deformed egg dime size
	7-3-85	2230		1.95(S)	C.O. 40' above MHW Started nest
	7-3-85	2233	✓	2.0(S)	2.0(S) return #014 added Tag #142, moved up 40'
	7-5-85	2148		1.2(S)	C.O. Overwash - to sea
	7-5-85	2245	✓	2.0(S)	Rel.from 1.2(S)- 200' from 031 2.0(S) nest to 030
	7-5-85	0010	✓	2.0(N)	Incomplete nest - Turtle left dur exam 18 eggs into 032
34	7-6-85	2233	✓	1.6(S)	CM Relocated from 1.6(S) Tag AAR 145
5	7-6-85	2252	✓	1.5(S)	Relocated from 1.4(S) Tag AAR 157, 158
6	7-6-85	0008		0.52(N)	C.O. Over 5'-7' dune wander return to sea
7	7-6-85	0012		5.5(N)	Base steep eroded dune-bac
8	7-7-85	2146		2.2(S)	C.O. False crawl to base of dune
9	7-7-85	2218		2.0(S)	C.O. Unavailable to tag. To base dune turn - to sea
	7-7-85	2253		1.8(N)	C.O. Tried to dig middle beach - sand hard left
	7-8-85	0210		1.0(S)	C.O. Too heavy to turn over, one man.
	7-10-85	0011	✓	2.0(N)	Tag 815, 816 - IMS Morehea Return See #008
	7-10-85	0145		0.6(N)	C.O. To base dunes. Looked lik nest but found no eggs
	7-10-85	0148		0.55(N)	C.O. AAR 071 Observed while examining #043 caught. Could do only GMC.

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heel drive vehicle when tide is low. Traverse the beach flood plane in vehicl
o avoid leaving tire tracks in the sand.

5-B

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

awl o.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
045	7-11-85	0500	✓	1.5(S)	Turtle nested Barnacle Bill'sPier Moved to 1.5(S) C. Peterson 2.0
046	7-12-85	0011	✓	1.7(N)	Relocated from 0.85(S) AAR 071 - same as on #044
047	7-13-85	2211		0.2(S)	C.O. Turned on beach - to sea
048	7-13-85	2309	✓	2.3(N)	Tag AAR 151, 1520.47(N) Rel 2.3(N) Return of 026
049	7-14-85	0235	✓	1.7(S)	Relocated 1.6(S) Tag AAR 159, 160
050	7-15-85	2236		1.9(S)	C.O. Tag AAR 144 Same turtle #014
051	7-15-85	2349		2.7(S)	C.O. Turtle made it up a 3' vertical wall of sand
052	7-15-85	0013		1.05(N)	Tag AAR 161,162 Turtle observe but laid no eggs - in dune area
053	7-15-85	0305	✓	1.35(N)	Tag 36 observed laying eggs Layed eggs first part beach
054	7-17-85	0028	✓	0.25(N)	Tag AAR 145, IMS 649-CM Same as 017, 034 Video tape Rel.from 0.45(
055	7-18-85	0012	✓	1.8(S)	Tag AAR 163,164 Rel. from 2.7(S)
056	7-19-85	0018	✓	1.8(S)	Tag AAR 157,158 Rel.from 0.65(S) Return #035
057	7-19-85	0055		1.9(N)	C.O. into dunes 3 false nests
058	7-20-85	0029		1.95(S)	C.O. Up 2nd line of dunes Ret.to sea Tag 165,166. 166 not closed.
059	7-21-85	0021	✓	1.9(N)	Tag AAR 167,168. Rel.from .3(S) Crawled through Amtrack tracks
060	7-21-85	0353		2.2(S)	Aborted due to roots under C.O ground - cavity was there
061	7-21-85	0417		1.6(S)	C.O. Turned around due to vertical embankment
062	7-26-85	0350		0.45(S)	Tag AAR 144 - Return 014 030 - leaving beach C.O.
063	7-27-85	0028		2.2(S)	C.O. Base steep 2 1/2' ledge - to ocean
064	7-27-85	0055	✓	1.8(N)	Tag AAR 144, relocated from 1.8(N) Return of 014 020 FG 062

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o avoid leaving tire tracks in the sand.

5-e

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
065	7-28-85	0105		.15(S)	C.O. Two nests were atter No eggs laid - loop-patt
066	7-29-85	2200		1.6(S)	C.O. Vert.sand dune. Turned around to sea Tag AAR169,170
067	7-29-85	2305	✓	.6(N)	C.M. Green Turtle Tag AAR145 IMS 649. Did not relocate
068	7-29-85	0105		1.7(S)	Back into water C.O. AAR 071, IMS 716
069	8-1-85	2243		0.5(N)	Rel.from 0.15(S) Tag AAR 158. Return of #035,056. Crawled 150' to top dune
070	8-3-85	0203		0.3(S)	Tag AAR 063, 064 - Seen low H.T.L. Turned and le
071	8-3-85	0223		0.55(S)	C.O. 15'from tide line to base of 15'-18'dune - to sea
072	8-3-85	0230		0.84(S)	C.O. To base of 10' dune and return to sea
073	8-3-85	0236		1.14(S)	C.O. To base of overwash rested - to sea
074	8-3-85	0241		1.43(S)	C.O. To base of overwash Return 8' to sea
075	8-3-85	0245		2.1(S)	C.O. Diag. to base of 7'-8' dune - 25' out water - sea
076	8-4-85	0023		1.9(N)	C.O. Hit sand dunes -tur around returned to sea
077	8-5-85	0047		1.0(S)	C.O. Crawled up into sand du turned around - back to sea
078	8-5-85	0145		2.0(S)	C.O. to bottom of sand turned around - to sea
079	8-10-85	0055		3.12(S)	C.O. Crawled to eroded ledge along ledge 25'.
080	8-10-85	0111		3.0(S)	C.O. observed at eroded 15" ledge. Returned 15' to sea.
081	8-10-85	0208		1.66(S)	c.o. observed 10' from surf crawled 60' to eroded dune
082	8-10-85	0225		2.95(S)	C.O. observed 10' to steep To sea. Did not get tag numb
083	8-10-85	0238		2.75(S)	C.O. 18' to ledge and b to sea
084	8-10-85	0240		2.85(S)	C.O. 20' to ledge and 20' a ledge trying to climb. To se
085	8-10-85	0250	✓	2.0(S)	Crawled 75' above MHW i dunes. Lg.body cav Tag IMS

Summary of Instructions:
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SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
086	8-11-85	0005	✓	.6(N)	Rel.from 0.2(S) in flat of beach Same as 014, 064, 030 Tag AAR-14
087	8-14-85	0100		0.6(N)	C.O. Crawled 75' Made nest attempt
088	8-15-85	2309	✓	2.07(S)	Rel.from 0.17(S). Crawled from water. Return 035, 056, 069
089	8-20-85	0029	✓	0.3(N)	Return of 008, 042, on top of 6' dune. Tag IMS 815,816
090	8-22-85	2311		1.82(S)	C.O. To base of steep dune 12' - return to sea
091	8-22-85	0100		1.8(S)	Probably (C.M.) wandered around C.O. low overwash 450'-500'. To sea
092	Unk. Approx. 7-4-85	Unk	✓	2.0(S)	Located nest 9/3/85. Probably turtle not seen laying eggs

Summary of Instructions:
* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurr
Conduct surveys daily during regular working hours 0800-1630 traveling by fou
wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl
to avoid leaving tire tracks in the sand.

TABLE II

RETURN RECORD OF TAGGED TURTLES
1985 SEA TURTLE INVENTORY

Date Tagged 1985	Tag Number	Return 1985	Return 1985	Return 1985	Return 1985
6-12 (2)	815*, 816*	8-20 (2)			
6-17 (2)	139, 140 AAR				
6-18 (2)	041, 043 AAR				
6-19 (2)	Lost 144 142 AAR	Added 142AAR 7-3 (2)	7-26 (1)	7-27 (2)	8-11 (2)
6-22 (2)	Missed 649 145, 146 AAR	7-6 (2)	649* 7-17 (2)	649*-145AAR 7-29 (2)	145-649* 8-10 (1)
6-22 (2)	7130,7129 **				
6-23 (1)	147, 148 AAR				
6-28 (2)	151, 152 AAR	7-13 (2)			
7-2 (2)	149, 150 AAR				
7-3 (2)	142, 144 AAR	7-15 (1)			
7-5 (2)	One tag 154 only AAR				
7-5 (2)	18 eggs 155, 156 AAR				
7-6 (2)	157, 158 AAR	7-19 (2)	8-1 (2)	8-15 (2)	
7-10 (1)	071 AAR	7-12 (2)	716* 7-29 (2)		
7-10 (2)	815*, 816*	8-20 (2)			
7-14 (2)	159, 160 AAR				
7-15 (1)	161, 162 AAR				
7-15 (2)	36 UNK	7-29 (1)			
7-17 (2)	649* 145 (left)AAR	7-29 (2)	8-10 (2)		
7-18 (2)	163, 164 AAR				
7-20 (1)	165, 166 AAR				
7-21 (2)	167, 168 AAR				
7-26	144 AAR	7-27 (2)	8-11 (2)		
7-27 (2)	144, 142 AAR				
8-3 (2)	063, 064 AAR	return [illegible] 81 [illegible]	768,769 or 766,767		

(1) Did not nest (2) Nested * Scientific Marine Institute ** GA Yellow

6

TABLE III

GROUND SURVEY NUMBER

(NIGHTS NOT SEPARATED AT MIDNIGHT)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
6-5-85	0	2	2
6-6-85	2	1	3
6-12-85	2	1	3
6-17-85	0	1	1
6-18-85	1	1	2
6-19-85	2	1	3
6-20-85	1	0	1
6-21-85	1	0	1
6-22-85	0	2	2
6-23-85	2	0	2
6-24-85	0	1	1
6-26-85	1	0	1
6-27-85	3	0	3
6-28-85	0	1	1
6-30-85	1	0	1
7-2-85	0	1	1
7-3-85	1	1	2
7-4-85	0	1	1
7-5-85	1	2	3
7-6-85	2	2	4
7-7-85	3	0	3
7-8-85	1	0	1
7-10-85	2	1	3
7-11-85	0	1	1
7-12-85	0	1	1

TABLE III (cont'd)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
7-13-85	1	1	2
7-14-85	0	1	1
7-15-85	3	1	4
7-17-85	0	1	1
7-18-85	0	1	1
7-19-85	1	1	2
7-20-85	1	0	1
7-21-85	2	1	3
7-26-85	1	0	1
7-27-85	1	1	2
7-28-85	1	0	1
7-29-85	2	1	3
8-1-85	0	1	1
8-3-85	6	0	6
8-4-85	1	0	1
8-5-85	2	0	2
8-10-85	6	1	7
8-11-85	0	1	1
8-14-85	1	0	1
8-15-85	0	1	1
8-20-85	0	1	1
8-22-85	2	0	2

TOTAL 92

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-5-85	2223	3/4	95	0930		0110	1
6-5-85	2223	3/4	95	0930		2230	1
6-6-85	2308	3/4	89	0408	2100		1
6-6-85	2308	3/4	89	2236	Unk		1
6-6-85	2308	3/4	89	1537		2200	1
-12-85	0132	1/4	34	1537	2200		1
-12-85	0132	1/4	34	1537	2200		1
-12-85	0132	1/4	34	1537		0120	1
-17-85	0400	New	02	1910	2300		1
-18-85	0445	New	000	1949		2130	1
-18-85	0445	New	00	1949	2300		1
-19-85	0537	New	00	2029	2325		1
-19-85	0537	New	000	2029	0115		1
-19-85	0537	New	00	2029		0350	1
-20-85	0636	New	02	2109	0330		1
-21-85	0740	1/4	07	2152	0340		1
-22-85	0846	1/4	13	2238		2228	1
-22-85	0846	1/4	13	2238		0423	1
-23-85	0953	1/4	21	2327	2325		1
-23-85	0953	1/4	21	2327	0021		1
-24-85	1100	1/2	30	1808		0100	1
-26-85	1314	1/2	52	0120	0030		1
-27-85	1423	3/4	64	1503	0015		1
-27-85	1423	3/4	64	1503	0019		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-27-85	1423	3/4	64	1503	0350		1
6-28-85	1534	3/4	75	1605		0150	1
6-30-85	1800	FULL	92	1801	0309		1
7-2-85	2209	FULL	100	1947		2310	1
7-3-85	2059	FULL	100	2037	2230		1
7-3-85	2059	FULL	100	2037		2233	1
7-4-85	2140	FULL	97	2124		UNK	1
7-5-85	2215	3/4	92	2211	2148		1
7-5-85	2215	3/4	92	2211		2245	1
7-5-85	2215	3/4	92	2211		0010	1
7-6-85	2244	3/4	86	2255		2233	1
7-6-85	2244	3/4	86	2255		2252	1
7-6-85	2244	3/4	86	2255	0008		1
7-6-85	2244	3/4	86	2255	0012		1
7-7-85	2310	3/4	78	1130	2146		1
7-7-85	2310	3/4	78	1130	2218		1
7-7-85	2310	3/4	78	1130	2253		1
7-8-85	2334	1/2	69	1218	0210		1
7-10-85	2400	1/2	50	1357		0011	1
7-10-85	2400	1/2	50	1357	0145		1
7-10-85	2400	1/2	50	1357	0148		1
7-11-85	0023	1/4	41	1447		0500	1
7-12-85	0050	1/4	32	1540		0011	1
7-13-85	0121	1/4	23	1629	2211		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
7-13-85	0121	1/4	23	1629		2309	1
7-14-85	0156	NEW	16	1629		0235	1
7-15-85	0238	NEW	09	1759	2236		1
7-15-85	0238	NEW	09	1759	2349		1
7-15-85	0238	NEW	09	1759	0013		1
7-15-85	0238	NEW	09	1759		0305	1
7-17-85	0426	NEW	01	1926		0028	1
7-18-85	0529	NEW	00	2008		0012	1
7-19-85	0636	NEW	01	2050		0018	1
7-19-85	0636	NEW	01	2050	0055		1
7-20-85	0744	1/4	05	2133	0029		1
7-21-85	0852	1/4	05	2218		0021	1
7-21-85	0852	1/4	05	2218	0353		1
7-21-85	0852	1/4	05	2218	0417		1
7-26-85	1435	3/4	62	1444	3500		1
7-27-85	1546	3/4	72	1550	0028		1
7-27-85	1546	3/4	72	1550		0055	1
7-28-85	1655	3/4	82	1653	0105		1
7-29-85	1757	FULL	90	1751	2200		1
7-29-85	1757	FULL	90	1751		2305	1
7-29-85	1757	FULL	90	1751	0105		1
8-1-85	2012	FULL	100	2018		2243	1
8-3-85	2110	3/4	95	2141	0203		1
8-3-85	2110	3/4	95	2141	0223		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE PHASE % ILLUMINATION			TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
8-3-85	2110	3/4	95	2141	0230		1
8-3-85	2110	3/4	95	2141	0236		1
8-3-85	2110	3/4	95	2141	0241		1
8-3-85	2110	3/4	95	2141	0245		1
8-4-85	2135	3/4	90	2221	0023		1
8-5-85	2200	3/4	83	1049	0047		1
8-5-85	2200	3/4	83	1049	0145		1
8-10-85	1200	1/4	38	1454	0055		1
8-10-85	1200	1/4	38	1454	0111		1
8-10-85	1200	1/4	38	1454	0208		1
8-10-85	1200	1/4	38	1454	0225		1
8-10-85	1200	1/4	38	1454	0238		1
8-10-85	1200	1/4	38	1454	1240		1
8-10-85	1200	1/4	38	1454		0250	1
8-11-85	0031	1/4	29	1548		0005	1
8-14-85	0313	NEW	07	1817	0100		1
8-15-85	0429	NEW	03	1901		2309	1
8-20-85	1006	1/4	16	1026		0029	1
8-22-85	1227	1/2	36	1217	2311		1
8-22-85	1227	1/2	36	1217	0100		1

TOTAL 92

8-D

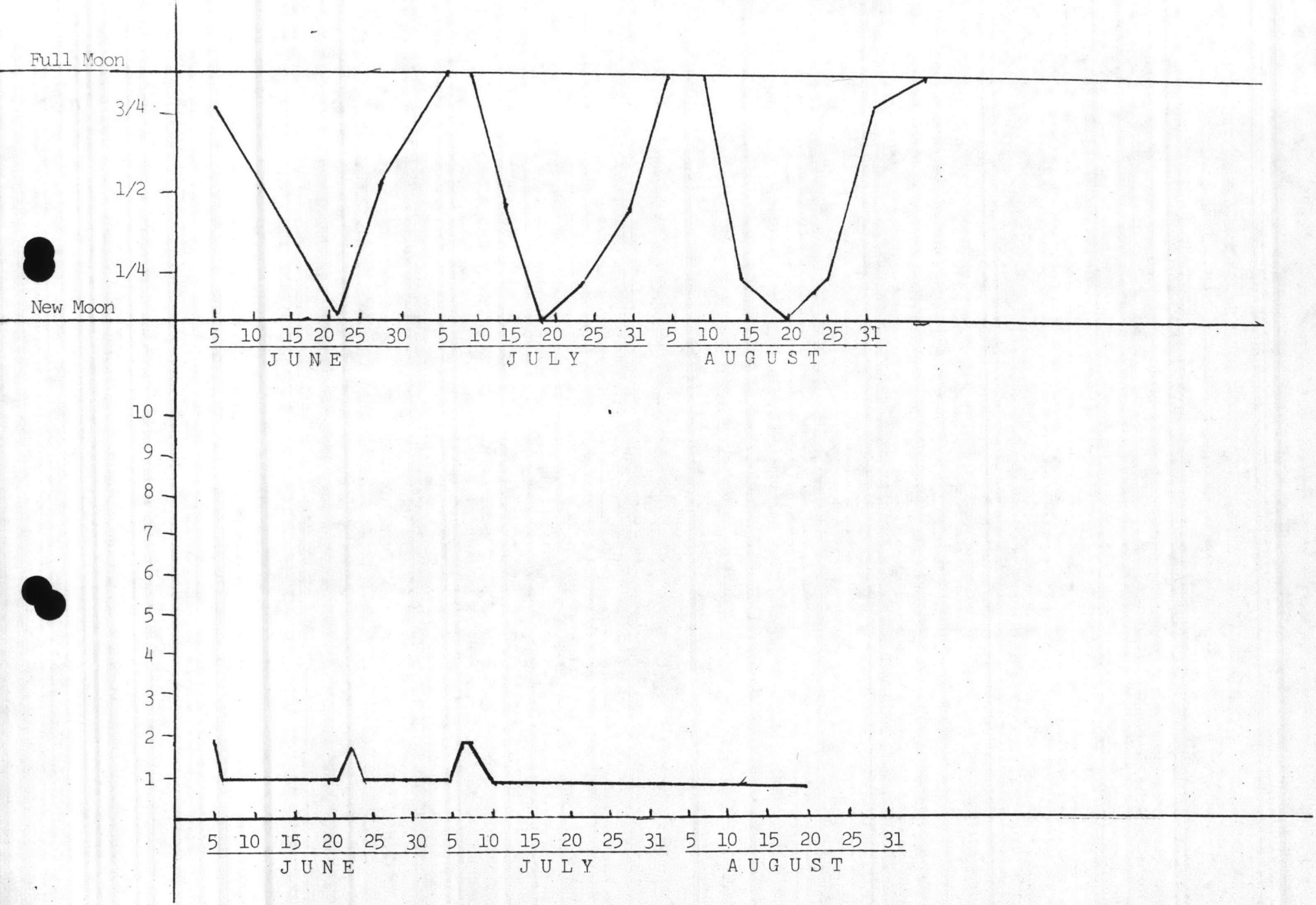

FIG. 1 - NUMBER OF CRAWLS WITH NESTS IN RELATION TO LUNAR CYCLE

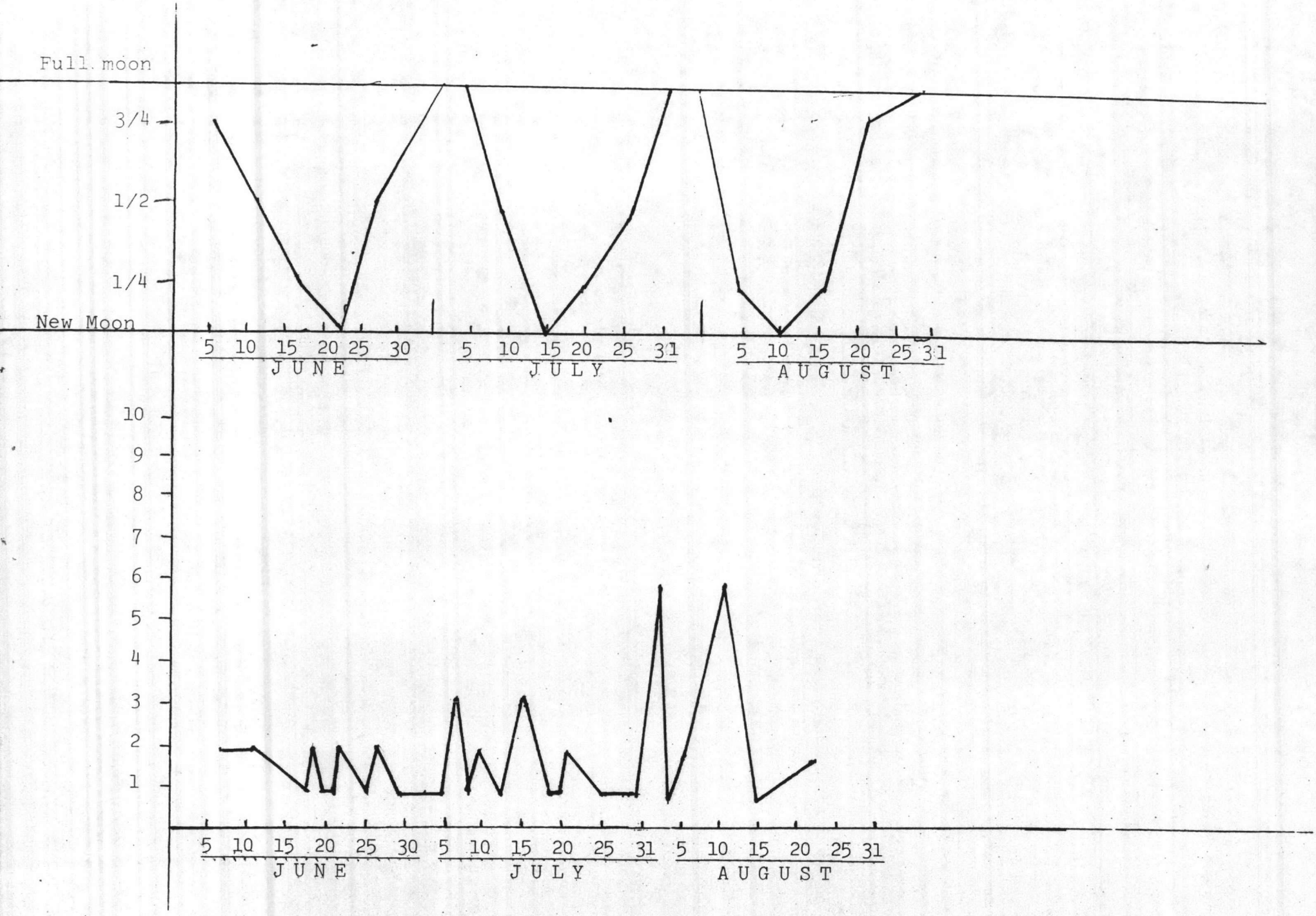

FIG. 2 - NUMBER OF CRAWLS WITHOUT NESTS IN RELATION TO LUNAR CYCLE

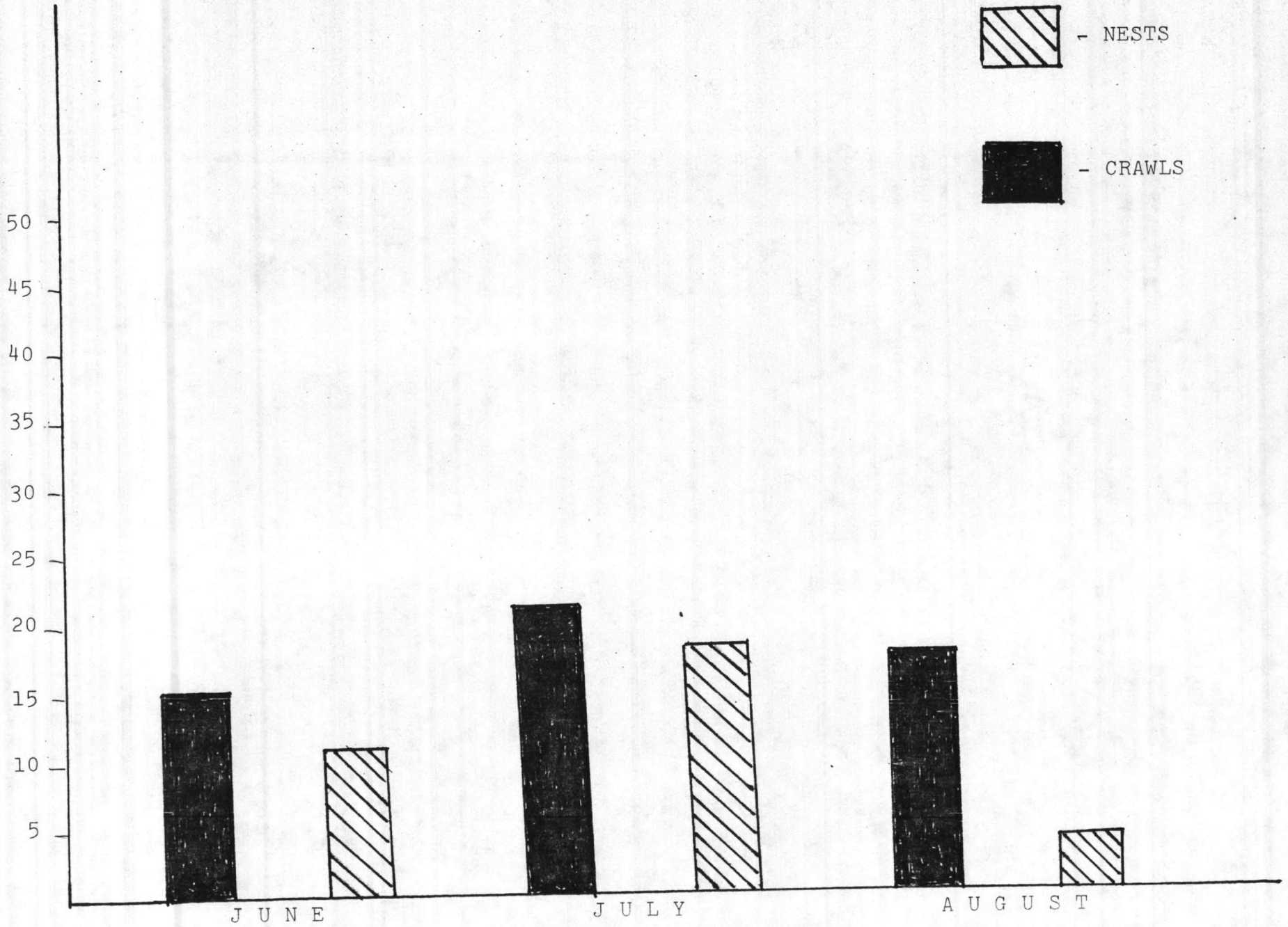

FIG. 3 - TOTAL CRAWLS AND NESTS BY MONTHS

NEST AND CRAWL ACTIVITY
ONSLOW BEACH, MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

Nests - upper map

Crawls no nest - lower map

Dots indicate multiple usage

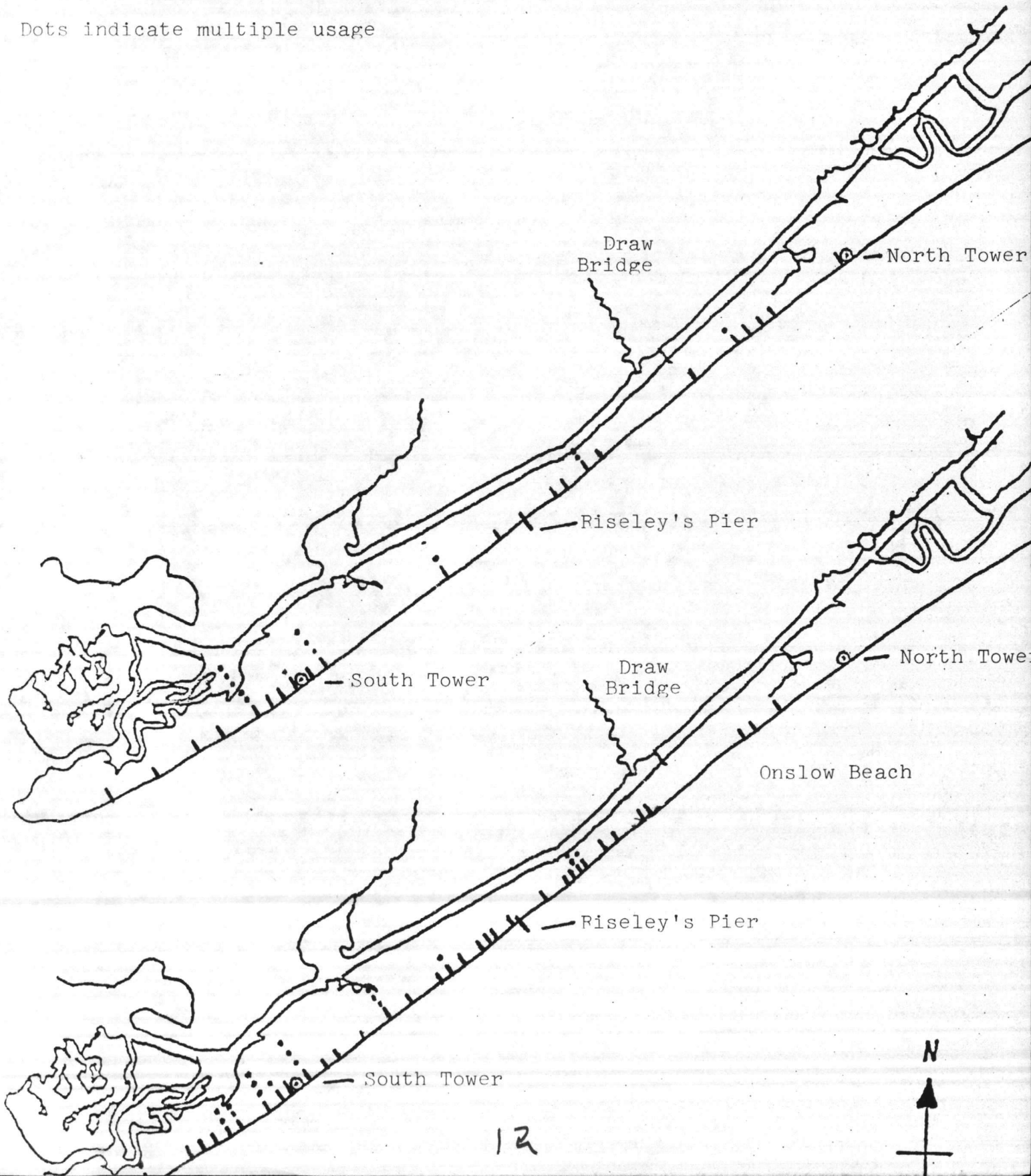

TABLE V

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NP- New Predation OP- Old Pred.

DATE	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						WEATHER
	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	
5-24-85	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	Foggy/clear
[illegible]-27-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Patchy fog/clear
6-5-85	4	0	3	0	0	0	7	0	6	0	0	0	5	0	4	0	0	0	Patchy fog/clear
6-7-85	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Hazy/broken
6-12-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast
6-14-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Clear/scattered
6-19-85	2	0	2	0	0	0	2	0	2	0	0	0	1	0	1	0	0	0	Overcast
6-21-85	2	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	Clear
6-26-85	0	0	0	0	0	0	5	2	5	0	0	0	6	0	0	0	0	0	Scattered
[illegible]-28-85	2	0	2	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Clear
7-3-85	1	1	1	1	0	0	3	1	3	1	0	0	2	1	2	1	0	0	Foggy/obscured
7-5-85	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Fog/haze
7-10-85	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	Fog/clear
7-12-85	1	0	1	0	0	0	2	0	2	0	0	0	8	0	8	0	0	0	Fog/overcast
7-17-85	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	Obscured
7-19-85	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	Fog/clear
7-23-85	1	0	1	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	Haze/scattered
7-26-85	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Haze/scattered

TABLE V (cont'd)

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NF- New Predation OP- Old Pred.

DATE	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						WEATHER
	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	
7-31-85	0	0	0	0	0	0	4	0	4	0	0	0	5	0	5	0	0	0	Clear/scattered
8-2-85	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Fog/haze
8-7-85	3	0	0	0	0	0	3	0	3	0	0	0	4	0	4	0	0	0	Clear
8-9-85	0	0	0	0	0	0	4	1	4	1	0	0	1	2	1	2	0	0	Cloudy
8-14-85	1	0	1	0	0	0	3	0	3	0	0	0	2	0	2	0	0	0	Fog/haze
8-16-85	2	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Clear/haze
8-21-85	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	Fog/haze
8-23-85	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-29-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-31-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 Mi. visibility
TOTAL	30	4	26	4	0	0	45	5	41	2	0	0	51	3	43	3	0	0	

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
005	6/6	M/W (Reloc)	8/(6)	61	120	116	96.6	(1) Hatchling alive in nest
001	6/5	M/W (Reloc)	8/13	69	135	132	97.7	(2) eggs w/embryos discern. (1) dead hatchling
002	6/5	M/W (Reloc)	8/13	68	92	59	64.1	(2) Broken prior relocation (2) Live hatchlings released
008	6/12	W & Reloc.	8/18	61	97	65	67.0	(2) dead turtles; (1) rel. alive; 32 did not hatch
010	6/18	M/W (Reloc)	8/21	61	152	130	88.5	32 released; (2) dead
009	6/17	W (Reloc)	8/22	66	105	99	94.2	(2) deformed - undeveloped flippers = released
014	6/1-	M/W (Reloc)	8/19	61	113	100	88.4	
(CM)017	6/22	M/W (Reloc)	8/26	79	163	157	96.3	(2) live released
018	6/22	M (Reloc)	8/26	79	143	126	88.1	(11) Live - released
021	6/24	M/W (Reloc)	8/29	66	108	89	82.4	No turtles in nest
Unk 92	7/4	W	9/3	61	Approx. 125	122	97.6	(1) Hatchling released
030	7/3	M/W (Reloc)	9/4	64	106	93	87.7	(1) hatchling released
026	6/28	M/W (Reloc)	9/8	73	122	113	92.6	nondiscern. embryo (9) unhatched eggs
035	7/6	M/W (Reloc)	9/9	65	98	85	86.7	(13) unhatched (3) reloc.
028	7/2	W	9/8	70	140	128	91.4	(12) discernable embryos
(CM)034	7/6	M/W (Reloc)	9/8	64	199	186	93.4	(3) discern.embryos (23) (20) undiscern.embryos
042	7/10	W	9/10	62	108	90	83.3	(18) nondiscern.embryos
032	7/5	M/W	9/12	69	100	96	96.0	(1) dead turtle (4) nondiscern.embryos
033	7/5	In nest 032 (reloc)	9/12	69	18 eggs	16	88.8	(1) Nondiscern.embryo (1) dead piped egg
					2244	2052		

14-A

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION Prog

NESTING RESULTS

TABLE VI (Cont'd)

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
(CM)054	7/17	M/W (Reloc)	9/16/85	61	195	185	94.8	(2) eggs left nest probably won't hatch
049	7/14	M/W (Reloc)	9/18/85	66	115	99	86.0	(16) eggs No discern.embryo
[illegible]5	7/11	M/W (Reloc)	9/15/85	66	142	20	14.0	
046	7/12	M/W (Reloc)	9/15/85	65	152	84	55.2	(1) dead turtle
048	7/13	M/W (Reloc)	9/18/85	67	124	117	94.4	
059	7/21	M/W (Reloc)	9/25/85	66	135	130	96.3	(5) discern.embryos
055	7/18	M/W (Reloc)	N/A	Unk	106	All dead 100	00.0	Nest washed over Hurricane "Gloria"
056	7/19	M/W	N/A	Unk	103	All dead 99	00.0	Nest washed over Hurricane "Gloria"
(CM)067	7/29	W	9/27/85	60	172	152	88.3	Peterson & Sharpe Cpl Taylor, Beach Detach
069	8/1	M/W (Reloc)	10/7/85	67	96	85	88.5	Released behind dune (12) hatchlings in grass
064	10/7	M/W (Reloc)	10/7/85	72	102	92	90.1	Was tagged #054 - is #064
0[illegible]	7/15	M/W (Reloc)	10/1/85	78	119	115	96.7	Nest not under tag cage bent
					3805	3131		

* Clutch size determined from nest remains

14-B

NORTH CAROLINA SEA TURTLE CONSERVATION 1984
NESTING RESULTS

PROJECT NAME Onslow Beach

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
#069	8-1-85	M/W	10-7-85	67	96	85	88.5	12 hatchlings - grass-dunes
#064	10-7-85	M/W	10-7-85	72	102	92	90.2	
(CM) 085	8-10-85	W	10-31-85	82	164	106	70.0	Two white turtles
#086	8-28-85	M/W	10-28-85	79	101	96	95.0	
#088	8-15-85	M/W	11-15-85	90	109	39	35.8	
					4377	3549		

* Clutch size determined from nest remains

SEA TURTLE INVENTORY

for

SUMMER AND FALL 1985

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION

ASSISTANT CHIEF OF STAFF, FACILITIES

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TABLE OF CONTENTS

		Page
Introduction		
Sea Turtle Inventory (Nest Data)	Table I	5A-5C
Return of Tagged Turtles	Table 2	6
Ground Survey Number Totals	Table 3	7A-B
Crawl Information in Relation to Moon Tidal Cycles	Table 4	8A-D
Number of Crawls with Nests in Relation to Lunar Cycle	Figure I	9
Number of Crawls Without Nests in Relation to Lunar Cycle	Figure 2	10
Total Crawls and Nests by Months	Figure 3	11
Nest and Crawl Activity Map	Figure 4	12
Aerial Survey	Table 5	13A-13E
Nesting Results	Table 6	14A-14C

INTRØDUCTION

The sea turtle inventory for 1985 is a continuation of past efforts by Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina, to protect sea turtle nesting activities at Onslow Beach. The sea turtle inventory consists of several programs including: nest protection, tagging of adult turtles, collecting nesting data, determining hatchling success and aerial surveys.

Management personnel began operating under a Federal Fish and Wildlife Permit during 1981, issued for working with threatened Loggerhead and Green Turtles. The permit authorizes the tagging and measurement of adults and the relocation of nests threatened by erosion, tides, extreme predation or military training activities. Nests may be moved only within 24 hours of egg laying to a safe beach location and not to a laboratory. Relocated nests are required to be monitored and hatchling success documented.

The results of the sea turtle program are as follows:

a. Nest protection from predators, 36.

b. Tagging of adults - number of turtles tagged 25.

Tag return data may be reviewed in Table II

c. Nesting data - Number of nests - 36.

d. Total number of crawls - ~~36~~ 87 ? 92 shown

e. Total number of eggs - 4,250.

f. Total number of hatchlings - 3,698.

*Note: 199 of these were dead in nest.

g. Number of tag returns 38

h. Number of stranded turtles 5

i. Number of nests lost during Hurricane Gloria 1

j. Number of nests lost during abnormal high tides associated with northeast winds 2

k. Number unhatched nests from unknown causes 0

Stranding reports were submitted to the North Carolina Wildlife Resources Stranding Network Coordinator. Carcasses of stranded turtles were buried on the beach.

Percent hatchling success is 80.1%; nesting and crawl data is compiled in Tables 1 through IV, and Figures 1 through 3. The enclosed maps in Figure 4 indicate locations of turtle activity on Onslow Beach.

Aerial survey data may be found in Table V.

Table VI contains the hatching results of individual nests for the season.

This inventory period, a green sea turtle that nested four times in 1980, nested on Onslow Beach five times this year. Data on the green turtle is in this 1985 report.

The Marine Corps Base, Camp Lejeune and Natural Resources and Environmental Affairs Division give special thanks to Doctor F. J. Schwartz at the Institute of Marine Science, Morehead City, North Carolina for his advice and services.

For copies of this report or other information concerning the sea turtle management program conducted by this agency, contact: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542 (Attention: Director, Natural Resources and Environmental Affairs Divison, Assistant Chief of Staff, Facilities).

TABLE II

RETURN RECORD OF TAGGED TURTLES
1985 SEA TURTLE INVENTORY

Date Tagged 1985	Tag Number	Return 1985	Return 1985	Return 1985	Return 1985
6-12 (2)	815*, 816* '82	8-20 (2)			
6-17 (2)	139, 140 AAR	should be 141-143?			
6-18 (2)	041, 043 AAR				
6-19 (2)	Lost 144 142 AAR	Added 142AAR 7-3 (2)	7-26 (1)	7-27 (2)	8-11 (2)
cm 6-22 (2)	Missed 649 145, 146 AAR cm	7-6 (2)	649* 7-17 (2)	649*-145AAR 7-29 (2)	145-649* 8-10 (1) cm
6-22 (2)	7130,7129 **				
6-23 (1)	147, 148 AAR				
6-28 (2)	151, 152 AAR	7-13 (2)			
7-2 (2)	149, 150 AAR				
7-3 (2)	142, 144 AAR	7-15 (1)			
7-5 (2)	One tag 154 only AAR				
7-5 (2)	18 eggs 155, 156 AAR				
7-6 (2)	157, 158 AAR	7-19 (2)	8-1 (2)	8-15 (2)	
7-10 (1)	071 AAR '83	7-12 (2)	716* 7-29 (2)		
7-10 (2)	815*, 816*	8-20 (2)			
7-14 (2)	159, 160 AAR				
7-15 (1)	161, 162 AAR				
7-15 (2)	36 UNK	7-29 (1)			
7-17 (2)	649* 145 (left)AAR cm	7-29 (2)	8-10 (2)		
7-18 (2)	163, 164 AAR				
7-20 (1)	165, 166 AAR				
7-21 (2)	167, 168 AAR				
7-26	144 AAR	7-27 (2)	8-11 (2)		
7-27 (2)	144, 142 AAR				
8-3 (2)	063, 064 AAR '83				

(1) Did not nest (2) Nested * Scientific Marine Institute ** GA Yellow plastic

 Morehead City, NC

SEA-TURTLE INVENTORY
(Crawl Data)

TABLE I

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
001	6-5-85	0110	✓	1.6(S)	135 eggs
002	6-5-85	2230±	✓	1.6(S)	Relocated from 0.35(S)
003	6-6-85	2100		2.1(S)	Crawl Only (C.O.)
004	6-6-85	Unk		2.1(S)	C.O. Base of high dune
005	6-6-85	2200+	✓	2.55(S)	Behind dune 35' above high tide
006	6-12-85	2200		2.2(S)	C.O. Base eroded low dune
007	6-12-85	2200		2.4(S)	C.O. To low dune, moved around
008	6-12-85	0120	✓	0.4(N)	
009	6-17-85	2305	✓	2.25(N)	Near (N) Tower in dune
010	6-18-85	2130	✓	2.2(N)	Relocated from 035(S) Pie
011	6-18-85	2300		1.0(S)	C.O.
012	6-19-85	2325		2.7(S)	Into low dunes near Inlet
013	6-19-85	0115		0.6(S)	Began nest but left
014	6-19-85	0350	✓	0.6(S)	Relocated from 2.3(S)
015	6-20-85	0330		0.2(N)	C.O. 60' circle above MHW
016	6-21-85	0340		0.57(S)	C.O. Base eroded dune - revers
017	6-22-85	2228	✓	1.9(S)	Tag AAR 145, 146 Relocated from 0.25(S) CM
018	6-22-85	-423	✓	0.5(N)	Tag GA 7130, 7129 Relocated from 0.8(s)
019	6-23-85	2325		2.3(S)	C.O. Observed Went down beach - back
020	6-23-85	0100		.6(N)	C.O. No tag Tag AAR147,148 Observed turned - into sea
021	6-24-85	0100	✓	.6(N)	No tag Relocated from .3(S)
022	6-26-85	0030		1.6(S)	C.O. To dunes left - to sea

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurr
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
023	6-27-85	0015		0.8(NP	C.O. Into low dune - Started nest
024	6-27-85	0019			C.O. In surf - did not catch
025	6-27-85	0350		0.45(N)	C.O. 0.45(N) 35' above mean high tide
026	6-28-85	0150	✓	1.7(N)	Tag 151, 152 Relocated 25' higher
027	6-30-85	0309		.5(N)	C.O. Turtle not observed
028	7-2-85	2310	✓	3.0(S)	Tag AAR 149, 150 1 deformed egg dime size
029	7-3-85	2230		1.95(S)	C.O. 40' above MHW Started nest
030	7-3-85	2233	✓	2.0(S)	2.0(S) return #014 added Tag #142, moved up 40'
031	7-5-85	2148		1.2(S)	C.O. Overwash - to sea
032	7-5-85	2245	✓	2.0(S)	Rel.from 1.2(S)- 200' fro 031 2.0(S) nest to 030
033	7-5-85	0010	✓	2.0(N)	Incomplete nest - Turtle left dur exam 18 eggs into 032
034	7-6-85	2233	✓	1.6(S)	CM Relocated from 1.6(S) Tag AAR 145
035	7-6-85	2252	✓	1.5(S)	Relocated from 1.4(S) Tag AAR 157, 158
036	7-6-85	0008		0.52(N)	C.O. Over 5'-7' dune wander return to sea
037	7-6-85	0012		5.5(N)	Base steep eroded dune-ba
038	7-7-85	2146		2.2(S)	C.O. False crawl to base of dune
039	7-7-85	2218		2.0(S)	C.O. Unavailable to tag. To base dune turn - to sea
040	7-7-85	2253		1.8(N)	C.O. Tried to dig middle beach - sand hard left
041	7-8-85	0210		1.0(S)	C.O. Too heavy to turn over, one man.
042	7-10-85	0011	✓	2.0(N)	Tag 815, 816 - 1MS Morehe Return See #008
043	7-10-85	0145		0.6(N)	C.O. To base dunes. Looked 1: nest but found no eggs
44	7-10-85	0148		0.55(N)	C.O. AAR 071 Observed while e: amining #043 caught. Could do only GMC.

Summary of Instructions:

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Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
045	7-11-85	0500	✓	1.5(S)	Turtle nested Barnacle Bill'sPi Moved to 1.5(S) C. Peterson 2.
046	7-12-85	0011	✓	1.7(N)	Relocated from 0.85(S) AAR 071 - same as on #044
047	7-13-85	2211		0.2(S)	C.O Turned on beach - to sea
048	7-13-85	2309	✓	2.3(N)	Tag AAR 151, 1520.47(N) Rel 2.3(N) Return of 026
049 ✓	7-14-85	0235	✓	1.7(S)	Relocated 1.6(S) Tag AAR 159, 160
050	7-15-85	2236		1.9(S)	C.O. Tag AAR 144 Same turtle #014
051	7-15-85	2349		2.7(S)	C.O. Turtle made it up a 3' vertical wall of sand
052	7-15-85	0013		1.05(N)	Tag AAR 161,162 Turtle observ but laid no eggs - in dune are
053	7-15-85	0305	✓	1.35(N)	Tag 36 observed laying eggs Layed eggs first part beach
054	7-17-85	0028	✓	0.25(N)	Tag AAR 145, IMS 649-CM Same a 017, 034 Video tape Rel.from 0.45
055	7-18-85	0012	✓	1.8(S)	Tag AAR 163,164 Rel. from 2.7(S)
056	7-19-85	0018	✓	1.8(S)	Tag AAR 157,158 Rel.from 0.65(S) Return #035
057	7-19-85	0055		1.9(N)	C.O. into dunes 3 false nests
058	7-20-85	0029		1.95(S)	C.O. Up 2nd line of dunes Ret.to sea Tag 165,166. 166 not closed.
059	7-21-85	0021	✓	1.9(N)	Tag AAR 167,168. Rel.from .3(S) Crawled through Amtrack tracks
060	7-21-85	0353		2.2(S) C.O	Aborted due to roots unde ground - cavity was there
061	7-21-85	0417		1.6(S)	C.O. Turned around due to vertical embankment
062	7-26-85	0350		0.45(S)	Tag AAR 144 - Return 014 030 - leaving beach C.O.
063	7-27-85	0028		2.2(S)	C.O. Base steep 2 1/2' ledge - to ocean
064	7-27-85	0055	✓	1.8(N)	Tag AAR 144, relocated from 1.8(N) Return of 014 020 FG 062

Summary of Instructions:

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SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
065	7-28-85	0105		.15(S)	C.O. Two nests were attemp No eggs laid - loop-patter
066	7-29-85	2200		1.6(S)	C.O. Vert.sand dune. Turned around to sea Tag AAR169,170
067	7-29-85	2305	✓	.6(N)	C.M. Green Turtle Tag AAR145 IMS 649. Did not relocate
068	7-29-85	0105		1.7(S)	Back into water C.O. AAR 071, IMS 716
069	8-1-85	2243		0.5(N)	Rel.from 0.15(S) Tag AAR15 158. Return of #035,056.
					Crawled 150' to top dune.
070	8-3-85	0203		0.3(S)	Tag AAR 063, 064 - Seen be low H.T.L. Turned and left
071	8-3-85	0223		0.55(S)	C.O. 15'from tide line to C. base of 15'-18'dune - to sea
072	8-3-85	0230		0.84(S)	C.O. To base of 10' dune and return to sea
073	8-3-85	0236		1.14(S)	C.O. To base of overwash rested - to sea
074	8-3-85	0241		1.43(S)	C.O. To base of overwash Return 8' to sea
075	8-3-85	0245		2.1(S)	C.O. Diag. to base of 7'-8' dune - 25' out water - sea
076	8-4-85	0023		1.9(N)	C.O. Hit sand dunes -turne around returned to sea
077	8-5-85	0047		1.0(S)	C.O. Crawled up into sand dune turned around - back to sea
078	8-5-85	0145		2.0(S)	C.O. to bottom of sand du turned around - to sea
079	8-10-85	0055		3.12(S)	C.O. Crawled to eroded ledge along ledge 25'.
080	8-10-85	0111		3.0(S)	C.O. observed at eroded 15" ledge. Returned 15' to sea.
081	8-10-85	0208		1.66(S)	c.o. observed 10' from surf crawled 60' to eroded dune
082	8-10-85	0225		2.95(S)	C.O. observed 10' to steep led To sea. Did not get tag number
083	8-10-85	0238		2.75(S)	C.O. 18' to ledge and bac to sea
084	8-10-85	0240		2.85(S)	C.O. 20' to ledge and 20' alon ledge trying to climb. To sea.
085	8-10-85	0250	✓	2.0(S)	Crawled 75' above MHW in dunes. Lg.body cav Tag AA 1 IMS 64

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely P
Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

SEA-TURTLE INVENTORY
(Crawl Data)

Marine Corps Base
Camp Lejeune, North Carolina

rawl No.	Date	Time Crawl Occurred	Active Nest (✓)	Location*	Comments
086	8-11-85	0005	✓	.6(N)	Rel.from 0.2(S) in flat of beac Same as 014, 064, 030 Tag AAR-1
087	8-14-85	0100		0.6(N)	C.O. Crawled 75' Made nest attempt
088	8-15-85	2309	✓	2.07(S)	Rel.from 0.17(S). Crawled from water. Return 035, 056, 069
089	8-20-85	0029	✓	0.3(N)	Return of 008, 042, on top of 6' dune. Tag IMS 815,816
090	8-22-85	2311		1.82(S)	C.O. To base of steep dun 12' - return to sea
091	8-22-85	0100		1.8(S)	Probably (C.M.) wandered aroun C.O. low overwash 450'-500' To sea
092	Unk. Approx. 7-4-85	Unk	✓	2.0(S)	Located nest 9/3/85. Probably turtle not seen laying eggs

Summary of Instructions:

* Location measured to nearest tenth of mile to the north or south of Risely Pi
Record known or estimated time when crawl was made or thought to have occurre
Conduct surveys daily during regular working hours 0800-1630 traveling by fou wheel drive vehicle when tide is low. Traverse the beach flood plane in vehicl to avoid leaving tire tracks in the sand.

TABLE III

GROUND SURVEY NUMBER

(NIGHTS NOT SEPARATED AT MIDNIGHT)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
6-5-85	0	2	2
6-6-85	2	1	3
6-12-85	2	1	3
6-17-85	0	1	1
6-18-85	1	1	2
6-19-85	2	1	3
6-20-85	1	0	1
6-21-85	1	0	1
6-22-85	0	2	2
6-23-85	2	0	2
6-24-85	0	1	1
6-26-85	1	0	1
6-27-85	3	0	3
6-28-85	0	1	1
6-30-85	1	0	1
7-2-85	0	1	1
7-3-85	1	1	2
7-4-85	0	1	1
7-5-85	1	2	3
7-6-85	2	2	4
7-7-85	3	0	3
7-8-85	1	0	1
7-10-85	2	1	3
7-11-85	0	1	1
7-12-85	0	1	1

TABLE III (cont'd)

DATE	CRAWLS/NO NEST	CRAWLS/NEST	TOTAL
7-13-85	1	1	2
7-14-85	0	1	1
7-15-85	3	1	4
7-17-85	0	1	1
7-18-85	0	1	1
7-19-85	1	1	2
7-20-85	1	0	1
7-21-85	2	1	3
7-26-85	1	0	1
7-27-85	1	1	2
7-28-85	1	0	1
7-29-85	2	1	3
8-1-85	0	1	1
8-3-85	6	0	6
8-4-85	1	0	1
8-5-85	2	0	2
8-10-85	6	1	7
8-11-85	0	1	1
8-14-85	1	0	1
8-15-85	0	1	1
8-20-85	0	1	1
8-22-85	2	0	2

TOTAL 92

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-5-85	2223	3/4	95	0930		0110	1
6-5-85	2223	3/4	95	0930		2230	1
6-6-85	2308	3/4	89	0408	2100		1
6-6-85	2308	3/4	89	2236	Unk		1
6-6-85	2308	3/4	89	1537		2200	1
6-12-85	0132	1/4	34	1537	2200		1
6-12-85	0132	1/4	34	1537	2200		1
6-12-85	0132	1/4	34	1537		0120	1
6-17-85	0400	New	02	1910	2300		1
6-18-85	0445	New	000	1949		2130	1
6-18-85	0445	New	00	1949	2300		1
6-19-85	0537	New	00	2029	2325		1
6-19-85	0537	New	000	2029	0115		1
6-19-85	0537	New	00	2029		0350	1
6-20-85	0636	New	02	2109	0330		1
6-21-85	0740	1/4	07	2152	0340		1
6-22-85	0846	1/4	13	2238		2228	1
6-22-85	0846	1/4	13	2238		0423	1
6-23-85	0953	1/4	21	2327	2325		1
6-23-85	0953	1/4	21	2327	0021		1
6-24-85	1100	1/2	30	1808		0100	1
6-26-85	1314	1/2	52	0120	0030		1
6-27-85	1423	3/4	64	1503	0015		1
6-27-85	1423	3/4	64	1503	0019		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
6-27-85	1423	3/4	64	1503	0350		1
6-28-85	1534	3/4	75	1605		0150	1
6-30-85	1800	FULL	92	1801	0309		1
7-2-85	2209	FULL	100	1947		2310	1
7-3-85	2059	FULL	100	2037	2230		1
7-3-85	2059	FULL	100	2037		2233	1
7-4-85	2140	FULL	97	2124		UNK	1
7-5-85	2215	3/4	92	2211	2148		1
7-5-85	2215	3/4	92	2211		2245	1
7-5-85	2215	3/4	92	2211		0010	1
7-6-85	2244	3/4	86	2255		2233	1
7-6-85	2244	3/4	86	2255		2252	1
7-6-85	2244	3/4	86	2255	0008		1
7-6-85	2244	3/4	86	2255	0012		1
7-7-85	2310	3/4	78	1130	2146		1
7-7-85	2310	3/4	78	1130	2218		1
7-7-85	2310	3/4	78	1130	2253		1
7-8-85	2334	1/2	69	1218	0210		1
7-10-85	2400	1/2	50	1357		0011	1
7-10-85	2400	1/2	50	1357	0145		1
7-10-85	2400	1/2	50	1357	0148		1
7-11-85	0023	1/4	41	1447		0500	1
7-12-85	0050	1/4	32	1540		0011	1
7-13-85	0121	1/4	23	1629	2211		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
7-13-85	0121	1/4	23	1629		2309	1
7-14-85	0156	NEW	16	1629		0235	1
7-15-85	0238	NEW	09	1759	2236		1
7-15-85	0238	NEW	09	1759	2349		1
7-15-85	0238	NEW	09	1759	0013		1
7-15-85	0238	NEW	09	1759		0305	1
7-17-85	0426	NEW	01	1926		0028	1
7-18-85	0529	NEW	00	2008		0012	1
7-19-85	0636	NEW	01	2050		0018	1
7-19-85	0636	NEW	01	2050	0055		1
7-20-85	0744	1/4	05	2133	0029		1
7-21-85	0852	1/4	05	2218		0021	1
7-21-85	0852	1/4	05	2218	0353		1
7-21-85	0852	1/4	05	2218	0417		1
7-26-85	1435	3/4	62	1444	3500		1
7-27-85	1546	3/4	72	1550	0028		1
7-27-85	1546	3/4	72	1550		0055	1
7-28-85	1655	3/4	82	1653	0105		1
7-29-85	1757	FULL	90	1751	2200		1
7-29-85	1757	FULL	90	1751		2305	1
7-29-85	1757	FULL	90	1751	0105		1
8-1-85	2012	FULL	100	2018		2243	1
8-3-85	2110	3/4	95	2141	0203		1
8-3-85	2110	3/4	95	2141	0223		1

TABLE IV

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

DATE	MOON RISE	PHASE	% ILLUMINATION	TIME OF HIGH TIDE	TIME CRAWL WITHOUT NEST	TIME CRAWL WITHIN NEST	TOTAL CRAWLS
8-3-85	2110	3/4	95	2141	0230		1
8-3-85	2110	3/4	95	2141	0236		1
8-3-85	2110	3/4	95	2141	0241		1
8-3-85	2110	3/4	95	2141	0245		1
8-4-85	2135	3/4	90	2221	0023		1
8-5-85	2200	3/4	83	1049	0047		1
8-5-85	2200	3/4	83	1049	0145		1
8-10-85	1200	1/4	38	1454	0055		1
8-10-85	1200	1/4	38	1454	0111		1
8-10-85	1200	1/4	38	1454	0208		1
8-10-85	1200	1/4	38	1454	0225		1
8-10-85	1200	1/4	38	1454	0238		1
8-10-85	1200	1/4	38	1454	1240		1
8-10-85	1200	1/4	38	1454		0250	1
8-11-85	0031	1/4	29	1548		0005	1
8-14-85	0313	NEW	07	1817	0100		1
8-15-85	0429	NEW	03	1901		2309	1
8-20-85	1006	1/4	16	1026		0029	1
8-22-85	1227	1/2	36	1217	2311		1
8-22-85	1227	1/2	36	1217	0100		1

TOTAL 92

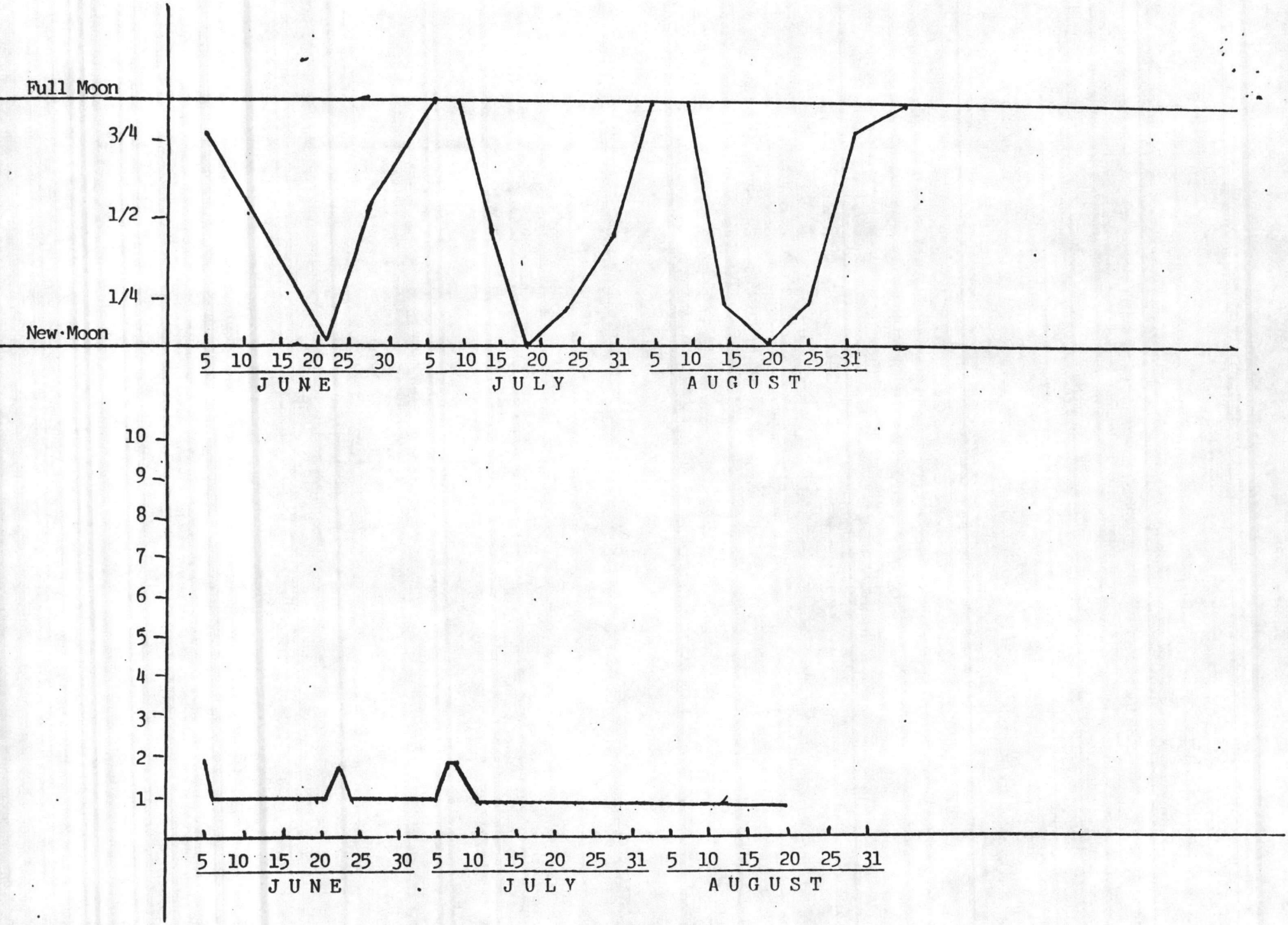

FIG.1 - NUMBER OF CRAWLS WITH NESTS IN RELATION TO LUNAR CYCLE

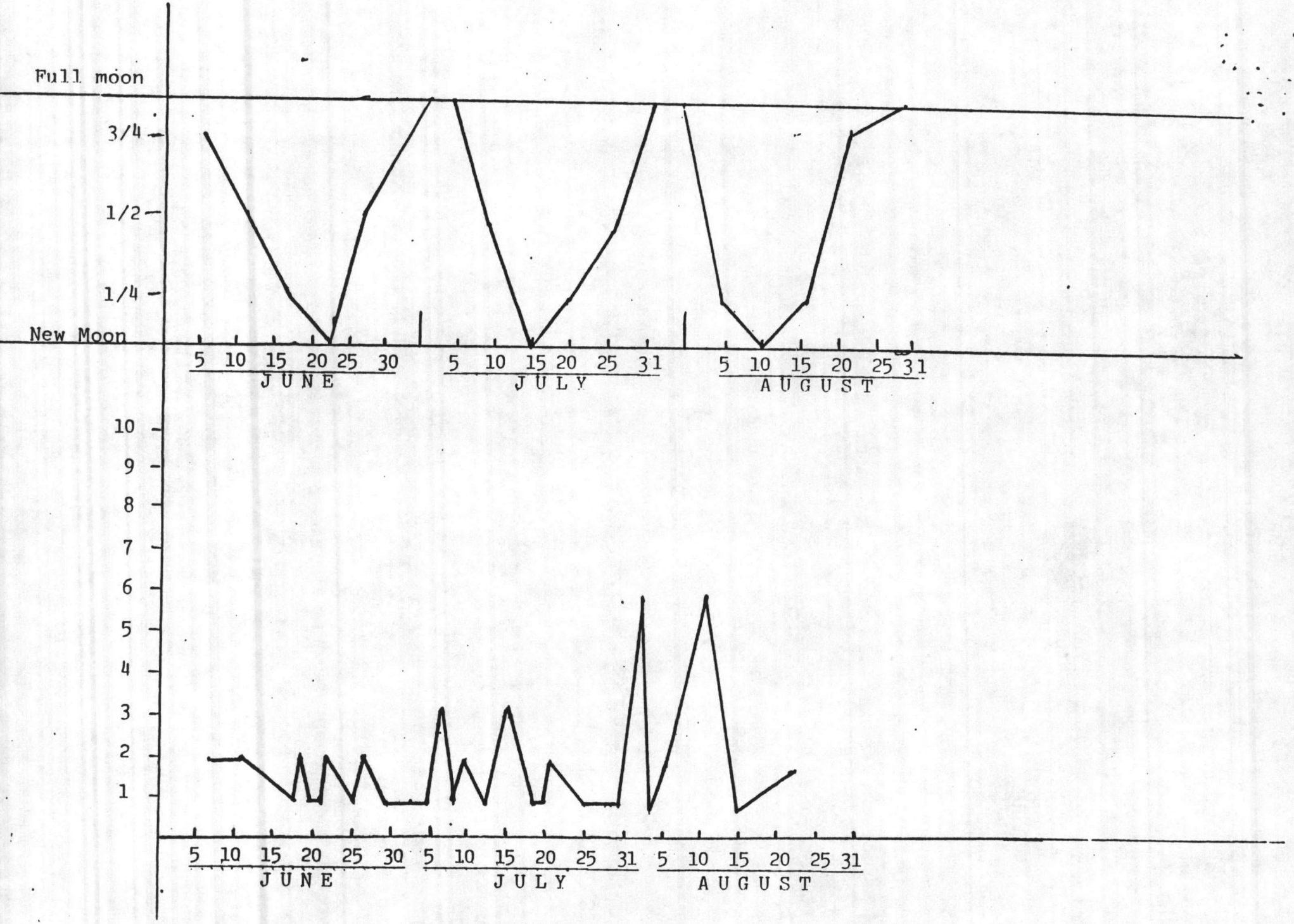

FIG. 2 - NUMBER OF CRAWLS WITHOUT NESTS IN RELATION TO LUNAR CYCLE

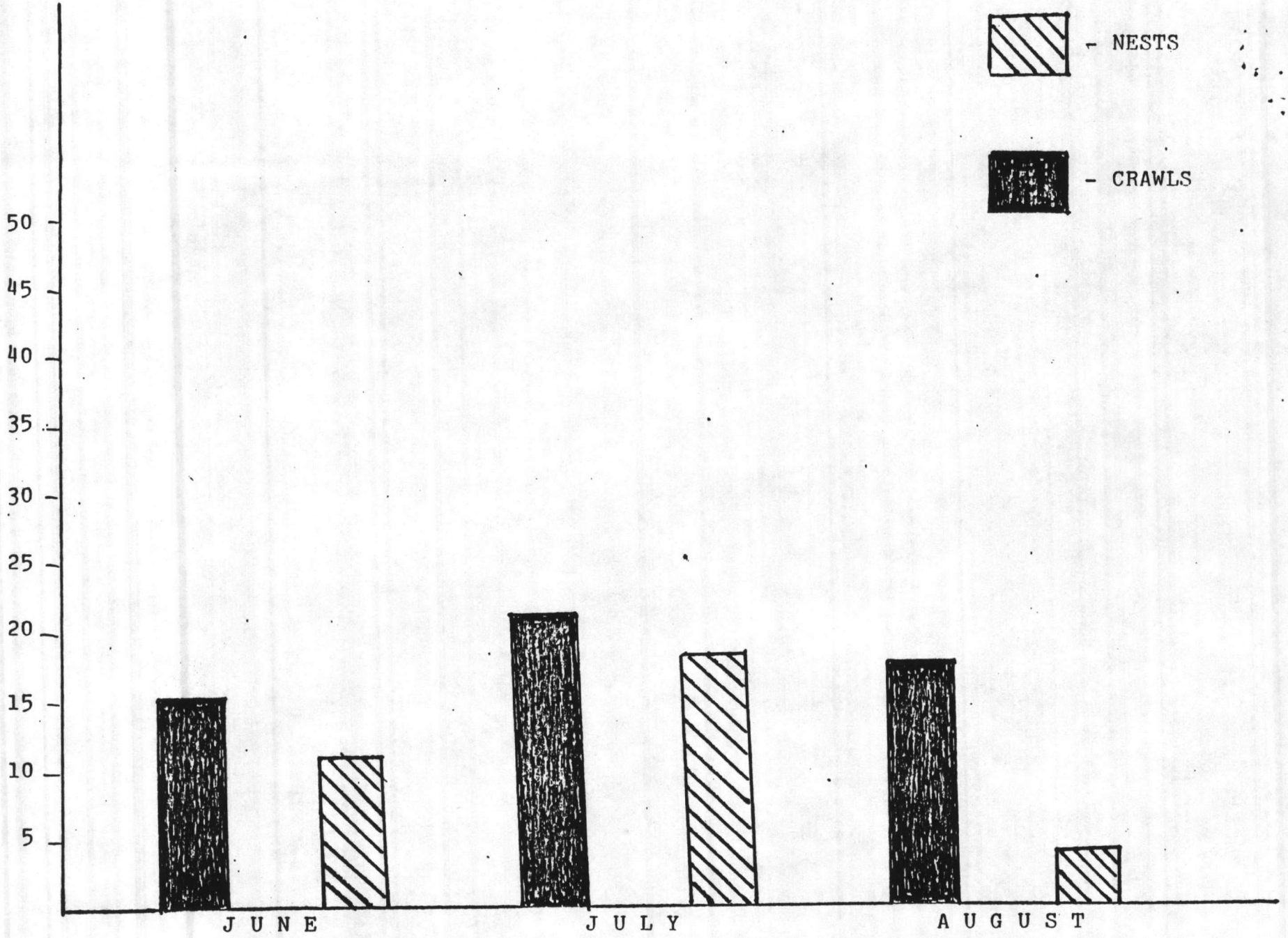

FIG. 3- TOTAL CRAWLS AND NESTS BY MONTHS

NEST AND CRAWL ACTIVITY
ONSLOW BEACH, MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

Nests - upper map

Crawls no nest - lower map

Dots indicate multiple usage

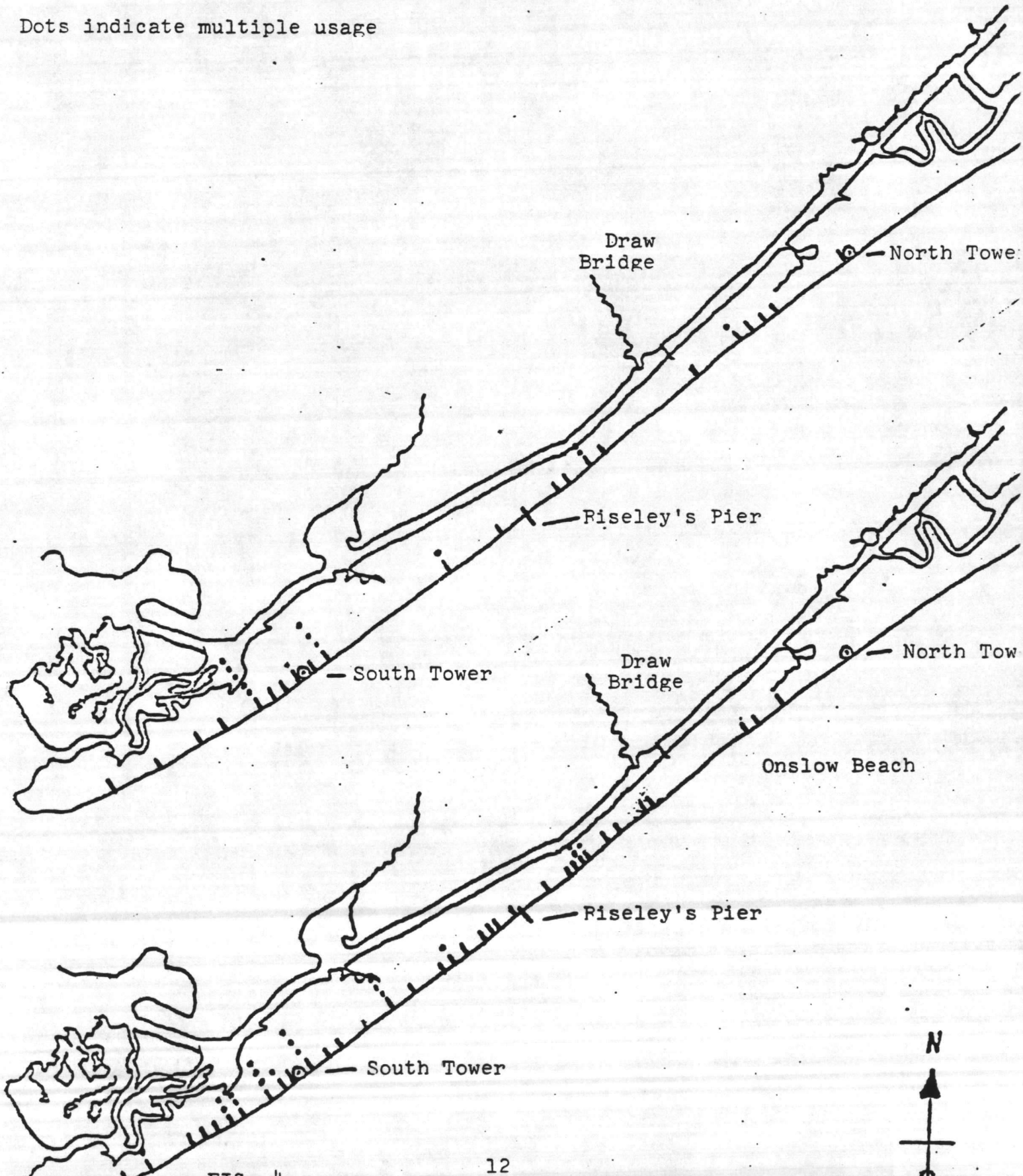

TABLE V

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NP- New Predation OP- Old Pred.

	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						
DATE	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	WEATHER
5-24-85	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	Foggy/clear
5-27-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Patchy fog/clear
6-5-85	4	0	3	0	0	0	7	0	6	0	0	0	5	0	4	0	0	0	Patchy fog/clear
6-7-85	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Hazy/broken
6-12-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Overcast
6-14-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Clear/scattered
6-19-85	2	0	2	0	0	0	2	0	2	0	0	0	1	0	1	0	0	0	Overcast
6-21-85	2	0	2	0	0	0	2	0	2	0	0	0	2	0	2	0	0	0	Clear
6-26-85	0	0	0	0	0	0	5	2	5	0	0	0	6	0	0	0	0	0	Scattered
6-28-85	2	0	2	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Clear
7-3-85	1	1	1	1	0	0	3	1	3	1	0	0	2	1	2	1	0	0	Foggy/obscured
7-5-85	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Fog/haze
7-10-85	0	0	0	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0	Fog/clear
7-12-85	1	0	1	0	0	0	2	0	2	0	0	0	8	0	8	0	0	0	Fog/overcast
7-17-85	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0	0	0	0	Obscured
7-19-85	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	Fog/clear
7-23-85	1	0	1	0	0	0	2	0	2	0	0	0	3	0	3	0	0	0	Haze/scattered
7-26-85	0	0	0	0	0	0	1	0	1	0	0	0	2	0	2	0	0	0	Haze/scattered

TABLE V (cont'd)

AERIAL SURVEY

SYMBOLS: NC- New Crawl OC- Old Crawl NN- New Nest ON- Old Nest NF- New Predation OP- Old Pred.

	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						
DATE	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	WEATHER
7-31-85	0	0	0	0	0	0	4	0	4	0	0	0	5	0	5	0	0	0	Clear/scattered
8-2-85	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Fog/haze
8-7-85	3	0	0	0	0	0	3	0	3	0	0	0	4	0	4	0	0	0	Clear
8-9-85	0	0	0	0	0	0	4	1	4	1	0	0	1	2	1	2	0	0	Cloudy
8-14-85	1	0	1	0	0	0	3	0	3	0	0	0	2	0	2	0	0	0	Fog/haze
8-16-85	2	0	2	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	Clear/haze
8-21-85	2	0	2	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	Fog/haze
8-23-85	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-29-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Haze
8-31-85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5 Mi. visibility
TOTAL	30	4	26	4	0	0	45	5	41	2	0	0	51	3	43	3	0	0	

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
005	6/6	M/W (Reloc)	8/(6)	61	120	116	96.6	(1) Hatchling alive in nest (2) eggs w/embryos discern.
001	6/5	M/W (Reloc)	8/13	69	135	132	97.7	(1) dead hatchling (2) Broken prior relocation
002	6/5	M/W (Reloc)	8/13	68	92	59	64.1	(2) Live hatchlings released (2) dead turtles; (1) rel.
008	6/12	W & Reloc.	8/18	61	97	65	67.0	alive; 32 did not hatch
010	6/18	M/W (Reloc)	8/21	61	152	130	88.5	32 released; (2) dead
009	6/17	W (Reloc)	8/22	66	105	99	94.2	(2) deformed - undeveloped flippers = released
014	6/1-	M/W (Reloc)	8/19	61	113	100	88.4	
(CM)017	6/22	M/W (Reloc)	8/26	79	163	157	96.3	(2) live released
018	6/22	M (Reloc)	8/26	79	143	126	88.1	(11) Live - released
021	6/24	M/W (Reloc)	8/29	66	108	89	82.4	No turtles in nest
Unk 092	7/4	W	9/3	61	Approx. 125	122	97.6	(1) Hatchling released
✓030	7/3	M/W (Reloc)	9/4	64	106	93	87.7	(1) hatchling released
026	6/28	M/W (Reloc)	9/8	73	122	113	92.6	nondiscern. embryo (9) unhatched eggs
✓035	7/6	M/W (Reloc)	9/9	65	98	85	86.7	(13) unhatched (3) reloc.
028	7/2	W	9/8	70	140	128	91.4	(12) discernable embryos
✓CM)034	7/6	M/W (Reloc)	9/8	64	199	186	93.4	(3) discern.embryos (23) (20) undiscern.embryos
042	7/10	W	9/10	62	108	90	83.3	(18) nondiscern.embryos
✓032	7/5	M/W	9/12	69	100	96	96.0	(1) dead turtle (4) nondiscern.embryos
✓033	7/5	In nest 032 (reloc)	9/12	69	18 eggs	16	88.8	(1) Nondiscern.embryo (1) dead piped egg

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION 1985
NESTING RESULTS

TABLE VI (Cont'd)

PROJECT NAME ONSLOW BEACH

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
(CM)054	7/17	M/W (Reloc)	9/16/85	61	195	185	94.8	(2) eggs left nest probably won't hatch
049	7/14	M/W (Reloc)	9/18/85	66	115	99	86.0	(16) eggs No discern.embryo
045	7/11	M/W (Reloc)	9/15/85	66	142	20	14.0	
046	7/12	M/W (Reloc)	9/15/85	65	152	84	55.2	(1) dead turtle
048	7/13	M/W (Reloc)	9/18/85	67	124	117	94.4	
059	7/21	M/W (Reloc)	9/25/85	66	135	130	96.3	(5) discern.embryos
055	7/18	M/W (Reloc)	N/A	Unk	106	All dead 100	00.0	Nest washed over Hurricane "Gloria"
056	7/19	M/W	N/A	Unk	103	All dead 99	00.0	Nest washed over Hurricane "Gloria"
(CM)067	7/29	W	9/27/85	60	172	152	88.3	Peterson & Sharpe Cpl Taylor, Beach Detach
069	8/1	M/W (Reloc)	10/7/85	67	96	85	88.5	Released behind dune (12) hatchlings in grass
064	10/7	M/W (Reloc)	10/7/85	72	102	92	90.1	Was tagged #054 - is #064
053	7/15	M/W (Reloc)	10/1/85	78	119	115	96.7	Nest not under tag cage bent

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION 1984
NESTING RESULTS

PROJECT NAME Onslow Beach

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
#069	8-1-85	M/W	10-7-85	67	96	85	88.5	12 hatchlings - grass-dunc
#064	10-7-85	M/W	10-7-85	72	102	92	90.2	
(CM) #085	8-10-85	W	10-31-85	82	164	106	70.0	Two white turtles
#086	8-28-85	M/W	10-28-85	79	101	96	95.0	
#088	8-15-85	M/W	11-15-85	90	109	39	35.8	

* Clutch size determined from nest remains

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 005 Date nest laid 6 JUNE 85 Time laid 2200 (estimate?)

Site description LOW DUNES NEAR INLET, TURTLE NESTED IN SPARTINA GRASS OVER DUNE Turtle observed? Y/N Tags? Y/N

Distance from high tide 35 ft ~~m~~ Carapace length _____ cm width _____ cm (standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved _____
H hatchery. " _____

Relocated where? _____

Number of eggs: whole 120 broken 0 nest depth 12 TO 18 INCHES ~~cm~~

Comments (predation, description of turtle etc) APPEARED TO BE A LARGE TURTLE

HATCHING DATA

incubation time 61 days

120 laid

Date nest hatched 8-6-85 (estimate?)

Excavated by Mark Jerry

Date nest excavated 8-7-85

Hatched eggs, from which hatchlings escaped from egg H= 116

Hatched escaped from nest HN= 115
Hatchlings dead in nest 0
Hatchlings alive in nest 1

Unhatched eggs UH= 4 undeveloped

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 4
Eggs with embryo < 3cm N/A
Eggs with embryo > 3cm N/A

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = $\frac{116}{120}$ = 96.6 % 97

Processed 8-8-85

Comments (factors effecting hatching success, deformed hatchlings etc.) NEST RELOCATED 7/24 due threat of Hurricane Laid 6/6-85

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1984

NESTING RESULTS

PROJECT NAME _____

Nest #	Date laid	Treatment code	Date hatched	Incubation time	Clutch size *	# Hatched (HN)	Survival % (HN/ H+UH)	Losses (pred., overwash)
04	5/31	WIRE	7 Aug	60 DAYS	117	96	82 %	
05	5/31		7 Aug	60 DAYS	120	110	91 %	
09	6/8		25 Aug	78 DAYS	90	72	80 %	
10	6/10		25 Aug	80 DAYS	52	18	34.6 %	
20	6/14		19 Aug	66 DAYS	132	122	90 %	
23	6/16		8 Sept 84	64 DAYS	99	69	69.7 %	
27	6/20		19 Aug	53 DAYS	128	121	94.5 %	
31	6/27		22 Aug	59 DAYS	146	124	84. %	
38	6/28		22 Aug	58 DAYS	124	84	67 %	
39	6/28		22 Aug	58 DAYS	126	52	58 %	
40	6/28		20 Aug	52 DAYS	114	109	94.7 %	
41	6/29		7 Sept	58 DAYS	119	117	98.3 %	
42	6/29		12 Sept 84	74 DAYS	147	42	28.5 %	
43	7/3		25 Aug	53 DAYS	123	115	93.5 %	
50	7/4		25 Aug	52 DAYS	105	100	95 %	
55	7/6		1 Sept	57 DAYS	168	156	92.8 %	
59	7/7		8 Sept	65 DAYS	153	145	95.4 %	
60	7/7		1 Sept	54 DAYS	133	106	79.6 %	
62	7/8		8 Sept	60 DAYS	152	132	86.4 %	

*** Clutch size determined from nest remains**

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 005 Date nest laid 6 JUNE 85 Time laid 2200 (estimate?)

Site description LOW DUNES NEAR INLET, TURTLE NESTED IN SPARTINA GRASS OVER DUNE Turtle observed? Y/N Tags? Y/N

Distance from high tide 35 ft m Carapace length _____ cm width _____ cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved _____
H hatchery. " _____

Relocated where? _____

Number of eggs: whole 120 broken 0 nest depth 12 TO 18 INCHES ~~cm~~

Comments (predation, description of turtle etc) APPEARED TO BE A LARGE TURTLE

HATCHING DATA

INCUBATION TIME 61 DAYS

120 laid

Date nest hatched 8-6-85 (estimate?)

Excavated by MARK JERRY

Date nest excavated 8-7-85

Hatched eggs, from which hatchlings escaped from egg H= 116

Hatched escaped from nest HN= 115
Hatchlings dead in nest 0
Hatchlings alive in nest 1

Unhatched eggs UH= 4 undeveloped

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 4
Eggs with embryo < 3cm N/A
Eggs with embryo > 3cm N/A

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = $\frac{116}{120}$ = 97 %

Processed 8-9-85

Comments (factors effecting hatching success, deformed hatchlings etc.) NEST RELOCATED 7/24 due threat of Hurricane LAID 6/6-85

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET PROJECT NAME ONSLOW BEACH

Nest # 008 Date nest laid 12 JUNE 85 Time laid 0130 (estimate?)

Site description Medium size dunes, low sloping near jeep trail

0.4 N RISELY'S PIER Turtle observed? Y/N Tags? Y/N *

Distance from high tide 40 FT ~~m~~ Carapace length 37 1/4 IN ~~cm~~ width 34 IN ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved N/A
H hatchery. "

Relocated where? N/A

Number of eggs: whole 97 broken -0 nest depth 18" IN ~~cm~~

Comments (predation, description of turtle etc) MOREHEAD CITY 815+816
"CC" about 150-200# - NESTING + TRAVEL TIME = 1HR + 15MIN =
- ON BEACH ABOUT 2HR BEFORE HIGH TIDE -

HATCHING DATA

Date nest hatched 8-18-85 (estimate?) Excavated by POOLE + MONAHAN

Date nest excavated 8-23-85

Hatched eggs, from which hatchlings escaped from egg H= 65

Hatched escaped from nest HN= 62
Hatchlings dead in nest 2
Hatchlings alive in nest 1

65
32
97

Unhatched eggs UH= 32

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 31
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 1

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ 4}{H + UH}$ = $\frac{\cancel{66}\ 65}{\cancel{97}}$ % = 64.9 ✓

Comments (factors effecting hatching success, deformed hatchlings etc.) Nest relocated 7/24/85 due threat of hurricane

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 009 Date nest laid 6/17/85 Time laid 2305 (estimate?)

Site description 2.25 NORTH RISELY PIER in the sand dunes

Turtle observed? (Y)/N Tags? Y (N) AAR 139 AAR 140

Distance from high tide 30.5 m Carapace length 37 in cm width 35 in cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
R relocated time moved N/A
H hatchery. "

Relocated where? N/A

Number of eggs: whole 105 broken 0 nest depth 15 in cm

Comments (predation, description of turtle etc) buried in sand dune right near the North tower
LOGGERHEAD

HATCHING DATA

Date nest hatched 8-22-85 (~~estimate?~~) OBSERVED

Excavated by POOLE + MONAHAN

Date nest excavated

Hatched eggs, from which hatchlings escaped from egg H= 99

Hatched escaped from nest HN= 99
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 6

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 6
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{H_{HN}}{H + UH} = \frac{99}{105}$ % = 94.2

Comments (factors effecting hatching success, deformed hatchlings etc.) Nest relocated 7/24/85 Due threat of hurricane

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 010 Date nest laid 6-18-85 Time laid 2200 (estimate?)

Site description OPENING IN MODERATE SIZE DUNES 0.35 MILES SOUTH OF RISELY PIER

Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 15 ft ~~m~~ Carapace length 41 IN ~~cm~~ width 38½ IN ~~cm~~ AAR141 AAR143
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 2315
H hatchery. "

Relocated where? 2.2 MILES NORTH RISELY PIER

Number of eggs: whole 152 broken 0 nest depth 20 IN ~~cm~~

Comments (predation, description of turtle etc) LARGE LOGGERHEAD IN GOOD CONDITION - NO WOUNDS NOTED - TAGGED W/# 041 + 043 (042 DAMAGED)

HATCHING DATA

Date nest hatched 8-21-85 OBSERVED (~~estimate?~~) Excavated by POOLE + MONAHAN

Date nest excavated 8-23-85

Hatched eggs, from which hatchlings escaped from egg H= 130

Hatched escaped from nest HN= 98
Hatchlings dead in nest 2
Hatchlings alive in nest 32 released

Unhatched eggs UH= 20

Turtles dead in pipped eggs 13
Turtles alive in pipped eggs 2
Eggs with no discernible embryo 14
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 4

87.5 OLD WAY

Survival Percentage of hatchlings from nest SP= $\frac{H}{H + UH}$ = $\frac{130}{152}$ %

Comments(factors effecting hatching success, deformed hatchlings etc.) Nest relocated 7/24/85 due threat of hurricane

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 014 Date nest laid 6-19-85 Time laid 0400 ACTUAL (estimate?)

Site description AT BASE OF 15-20' DUNES 0.6 S. RISELY PIER

Turtle observed? (Y) N Tags? Y (N)

Distance from high tide 15 ft/m Carapace length 40 in/cm width 39 in/cm
(standard curve measure or specify)

Nest Treatment (M) marked only 6-19-85
(W) wired
6-20-85 (R) relocated time moved 0855 to
H hatchery. " 0915

Relocated where? 2.3 (S) Risley's Pier (6-20-85) Above high tide (18')
From 0.6 (S) Risley's Pier Relocated to 9" 2.3(S)

Number of eggs: whole 113 broken NONE nest depth 9" cm

Comments (predation, description of turtle etc) large CC - LOGGERHEAD
TAGGED w/ #144

HATCHING DATA

Date nest hatched 8-19-85 (estimate?) Excavated by POOLEY MONAHAN

Date nest excavated 8/23/85

Hatched eggs, from which hatchlings escaped from egg H= ~~100~~ 105

Hatched escaped from nest HN= 100
Hatchlings dead in nest 5
Hatchlings alive in nest 0

Unhatched eggs UH= 8

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 6
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 2

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = $\frac{\cancel{100}\ 105}{\cancel{113}\ 105}$ % 93 90

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 017 C.M. Date nest laid 6-22-85 Time laid 2345 (estimate?)

Site description High dune, turtle climbed about 15 ft up and dug 6½ ft dia. hole 2 ft deep then excavated another 20 in, 10½" wide

Turtle observed? Y/N Tags? Y/N

Distance from high tide 70 ft Carapace length 46½ cm width 43½ cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 0230
H hatchery. "

Relocated where? 1.9 mi South Rock jetty on top of 10 ft dune, 40 ft above mhw

Number of eggs: whole 163 broken 0 nest depth 24 in cm

Comments (predation, description of turtle etc) * 1 Pr shutes, 4 lateral shutes blunt nose, no wounds - no barnacles TAG AA R145+146

* GREEN TURTLE

163 eggs
6
157

4.3
1.9
6.2

HATCHING DATA

Date nest hatched 8-26-85 (estimate?) Excavated by Sam Peale

Date nest excavated 8-26-85

Hatched eggs, from which hatchlings escaped from egg H= 159

Hatched escaped from nest HN= 157
Hatchlings dead in nest 0
Hatchlings alive in nest 2

22 June
31 July
26 Aug
79 days

Unhatched eggs UH= 4

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 4
Eggs with embryo > 3cm 0

✓

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 97.6 %

Comments(factors effecting hatching success, deformed hatchlings etc.)

Green Turtle - (2) alive released

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 018 Date nest laid 6-22-85 Time laid 0415 ~~(estimate?)~~

Site description At base of low dunes in tire tracks 0.8 MI S. RISELY

Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 5 ft ~~m~~ Carapace length 42 cm ~~cm~~ width 38 cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
(R) relocated time moved 0530
H hatchery. "

Relocated where? 0.5 mi North Riseley pier, 45 ft above mhw on low (5 ft) dune

Number of eggs: whole 143 broken 0 nest depth 24 in ~~cm~~

Comments (predation, description of turtle etc) CC w/barnacles - no wounds

Carried Tags: left = "GA7130", right = "GA7129"

143 eggs

HATCHING DATA

Date nest hatched 8-26-85 (estimate?) Excavated by Sam F. Poole

Date nest excavated 8-26-85

Hatched eggs, from which hatchlings escaped from egg H= 126

Hatched escaped from nest HN= 115
Hatchlings dead in nest 0
Hatchlings alive in nest 11

Unhatched eggs UH= 17

143
28
115

Turtles dead in pipped eggs 3
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 14
Eggs with embryo > 3cm

14
11
3
28

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = ~~80.4~~ % 85.3

Comments(factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 2761

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 021 Date nest laid 6/23/84 Time laid 0030 (estimate?)

Site description mi S of Riseley's pier near embankment of sand dunes

Turtle observed? Y/(N) Tags? Y/N

Distance from high tide 40 ft m Carapace length N/A cm width N/A cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0150
H hatchery. "

Relocated where? 6 mi N of Riseley's Pier

Number of eggs: whole 108 broken nest depth 19 in 10 in wide cm

Comments (predation, description of turtle etc) turtle was not observed.

50 ft past high tide mark in sand dune

6/24 laid 65 days 8-28-85 66 days - 8-29-85 108 eggs

HATCHING DATA

Date nest hatched 8-29-85 (estimate?) Excavated by SAM POOLE

Date nest excavated 8-29-85

Hatched eggs, from which hatchlings escaped from egg H= 89

Hatched escaped from nest HN= 89
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 19

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 19

$\frac{H}{H + UH}$ = SP

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 82.4 %

Comments(factors effecting hatching success, deformed hatchlings etc.)

ase leave no space blank. Enter "0" or "NA" for data not available

ame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW B

Nest # 026 Date nest laid 6-28-85 Time laid 0230 ~~(estimate~~

Site description LOWER FACE OF LOW SLOPING 10 FT DUNE, 1
NORTH OF RISELY PIER, 15

Turtle observed? (Y) N Tags? Y

Distance from high tide 15 ~~FT~~ Carapace length 36 ~~cm~~ IN width 36 ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
(R) relocated time moved 0330
H hatchery. "

Relocated where? 25 FT FURTHER UP DUNE

Number of eggs: whole 122 broken 0 nest depth 18

Comments (predation, description of turtle etc) LOGGERHEAD W/NO WOUNDS
TAGGED W/# AAR 151 AND 152

HATCHING DATA

Date nest hatched 9-9-85 (estimate?) Excavated by POOLE

Date nest excavated 9-9-

Hatched eggs, from which hatchlings escaped from egg H= 113

Hatched escaped from nest HN= 113
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 9

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 9

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 92.6\%$

Comments(factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 2761

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 028 Date nest laid 7-2-85 Time laid 2310 - 2330 (estimate?)

Site description 3.0 MILES SOUTH RISELY PIER, 20 FT ABOVE M.H.W., IN LOW (3-4') DUNE, (NEAR INLET)

Turtle observed? (Y)/N Tags? Y/(N)

Distance from high tide 12 FT ~~m~~ Carapace length 41 IN ~~cm~~ width 38 3/4 IN ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
R relocated time moved N/A
H hatchery "

Relocated where? N/A

Number of eggs: whole 140 broken 0 nest depth 17 IN ~~cm~~

Comments (predation, description of turtle etc) LOGGERHEAD - GOOD CONDITION
TAGS AAR 149+150
EGGS - 1 EGG DIME SIZE + 139 INCLUDES 1 W/DEFORMITY (NEST d = 17" w = 11")

HATCHING DATA

Date nest hatched 9-8-85 (estimate?) Excavated by POOLE

Date nest excavated 9-10-85

Hatched eggs, from which hatchlings escaped from egg H= 128

Hatched escaped from nest HN= 128
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 12

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 10
Eggs with embryo > 3cm 2

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = 91.4 %

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET PROJECT NAME ONSLOW BEACH

Nest # [illegible] Date nest laid 7/3/85 Time laid 2245 (estimate?)

Site description 2.7 Miles South of Kiseli Pier at base of low (5-7') dune 15 ft above mhw (6 ft above this tide) Turtle observed? Y/N Tags? Y/N

Distance from high tide 5 ft ~~m~~ Carapace length 40 ~~cm~~ m width 39 ~~cm~~ m
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 2345
H hatchery. "

Relocated where? 40 ft to North, 20 ft above mhw.

Number of eggs: whole 106 broken 0 nest depth 15" orig 18" relo ~~cm~~

Comments (predation, description of turtle etc) CC - return of #014 of 6-19-85 - last time laid 113 eggs and only got one tag #144 - this time she got the other #142 which had been fowled up

HATCHING DATA

Date nest hatched 9-4-85 (estimate?) Excavated by Poole

Date nest excavated 9-4-85

Hatched eggs, from which hatchlings escaped from egg H= 97

Hatched escaped from nest HN= 96 To high? Change to 92 +1 93 13 106 ✓ Change to 93

Hatchlings dead in nest 0

Hatchlings alive in nest 1

96 old shells + (1) Turtle released

Unhatched eggs UH= 13

Turtles dead in pipped eggs 0

Turtles alive in pipped eggs 0

Eggs with no discernible embryo 0

Eggs with embryo < 3cm 0

Eggs with embryo > 3cm 13

✓ 87.7 correct

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 88.1 %

Comments (factors effecting hatching success, deformed hatchlings etc.) (1) Turtle released

One Side not as well developed as other Side

Right Side -

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 2761.

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach NC

Nest # 032 Date nest laid 7-5-85 Time laid 2215 ~~(estimate?)~~

Site description 1.2 miles South of Risely pier 15 ft above m. h. w. on low overwash area

Turtle observed? Y/N Tags? Y/N

Distance from high tide 10 ft Carapace length _____ cm width _____ cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 0130
H hatchery. "

Relocated where? 2.0 miles South of Risely Pier, 20 ft above m. h. w.

Number of eggs: whole 100 broken 0 nest depth 19 in ~~cm~~

Comments (predation, description of turtle etc) CC 36½ l × 34¼ w in good condition lost tag #153 AAR dul flipper action #154 AAR on left.

HATCHING DATA

Date nest hatched 9-12-85 (estimate?) Excavated by E. Jones

Date nest excavated 9-12-85

Hatched eggs, from which hatchlings escaped from egg H= 96

Hatched escaped from nest HN= 92
Hatchlings dead in nest (1)
Hatchlings alive in nest 4

Unhatched eggs UH= 4

69 days

Turtles dead in pipped eggs 1
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 3
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 96.0 %

Comments(factors effecting hatching success, deformed hatchlings etc.) _____

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 033 Date nest laid 7/5/85 Time laid 0010 (estimate?)

Site description 2.0 miles North of Rich Pier, 30 ft above mhw, at base of steep, eroded, 7 ft dune line Turtle observed? (Y)/N Tags? Y/(N)

Distance from high tide 20 ft Carapace length 40½ ~~cm~~ mm width 37¼ ~~cm~~ mm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved _____
H hatchery. " _____

Relocated where? _____

Number of eggs: whole (18) broken 0 nest depth 17 ~~cm~~ mm

Comments (predation, description of turtle etc) CC in good condition

HATCHING DATA

Date nest hatched 9-12-85 (estimate?) Excavated by E. Jones

Date nest excavated 9-12-85

Hatched eggs, from which hatchlings escaped from egg H= 16

Hatched escaped from nest HN= 16
Hatchlings dead in nest 0
Hatchlings alive in nest 0

69 days

Unhatched eggs UH= 2

Turtles dead in pipped eggs 1
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 1
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

✓

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 89$ %

Comments (factors effecting hatching success, deformed hatchlings etc.) _____

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 034 Date nest laid 7-6-85 Time laid 2330 OBSERVED ~~(estimate?)~~

Site description 0.35 miles South of Reisly Pier, near crest of 20 ft dune, 80 ft above m.h.w

Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 80 ft ~~m~~ Carapace length 46½ in ~~cm~~ width 43½ in ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
(R) relocated time moved 0330
H hatchery. " 0415

Relocated where? 1.6 miles South of Reisly Pier, 30 ft above mhw, ⅓ up 20 ft dune.

Number of eggs: whole 199 broken 0 (CM) nest depth * 24 in * ~~cm~~

Comments (predation, description of turtle etc) Green Turtle - return (#017 of 6/22/85) 1 tag missing (146) - Nests significantly different from Loggerhead - 163 eggs - climbs high up dune, digs deep hole, then egg cavity 24 in down from hole bottom of 15-18 in depth

HATCHING DATA

Date nest hatched 9-8-85 (estimate?) Excavated by Poole

Date nest excavated 9-10-85

Hatched eggs, from which hatchlings escaped from egg H= 186

Hatched escaped from nest HN= 182
Hatchlings dead in nest 0
Hatchlings alive in nest 4

Unhatched eggs UH= 13

Turtles dead in pipped eggs
Turtles alive in pipped eggs
Eggs with no discernible embryo
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 13

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 93.4 %

Comments (factors effecting hatching success, deformed hatchlings etc.)

(2) deformed (2) not deformed

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 035 Date nest laid 7-6-85 Time laid 2330 OBSERVED ~~(estimate?)~~

Site description 1.4 miles South of Risely pier, on (wide) overwash area with slight crest - heavy vehicle traffic

Turtle observed? Y/N Tags? Y/N

Distance from high tide 30 ft Carapace length 40½ in ~~cm~~ width 37½ in ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 0130
H hatchery " 0215

Relocated where? 1.5 mi south of Risely Pier

Number of eggs: whole 98 broken 0 nest depth 19 in ~~cm~~

Comments (predation, description of turtle etc) Loggerhead (CC) Tagged with AAR 157 and AAR 158
Eggs all in good condition as was turtle except for barnacles

HATCHING DATA

Date nest hatched 9-9-85 (estimate?) Excavated by Poole

Date nest excavated 9-9-85

Hatched eggs, from which hatchlings escaped from egg H= 85

Hatched escaped from nest HN= 82
Hatchlings dead in nest 0
Hatchlings alive in nest 3

Unhatched eggs UH= 13

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 13

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 86.7 %

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET PROJECT NAME ONSLOW BEACH

Nest # 042 Date nest laid 7/10/85 Time laid 0021-37 OBSERVED ~~(estimate~~?)

Site description 2.0 miles North of Riseley Pier, slightly behind dune at opening for road.

Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 45 ft Carapace length 37 1/4 in width 35 in
(standard curve measure or specify)

Nest Treatment: (M) marked only
(W) wired
R relocated time moved N/A
H hatchery. "

Relocated where? N/A

Number of eggs: whole 108 broken 0 nest depth 22 in

Comments (predation, description of turtle etc) CC in good condition with Tags from Mar. Sci. Inst. Morehead City #815 - 816 - turtle was a Return for us - see #008 of 6/12/85 - 97 eggs. Turtle was very disoriented when leaving and tried to go back thru the dunes on the rd. We assisted by moving her about 150' to near water

HATCHING DATA

Date nest hatched 9-10-85 (estimate?) Excavated by Poole

Date nest excavated 9-10-85

Hatched eggs, from which hatchlings escaped from egg H= 90

Hatched escaped from nest HN= 8
Hatchlings dead in nest 0
Hatchlings alive in nest 82

Unhatched eggs UH= 18

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 18
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = 83.3 %

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 045 Date nest laid 7/11/85 Time laid 7/10 (estimate?)

Site description nested near Barnacle Bill's Pier in Topsail

Turtle observed? Y/N Tags? Y/N

Distance from high tide NA m Carapace length NA cm width NA cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved N/A
H hatchery. "

Relocated where? 1.5 mi S Rusty's Pier

Number of eggs: whole 142 broken 0 nest depth 0 cm

Comments (predation, description of turtle etc)

HATCHING DATA

Date nest hatched 9-15-85 (estimate?) Excavated by Poole

Date nest excavated 9-20-85

Hatched eggs, from which hatchlings escaped from egg H= 20

Hatched escaped from nest HN= 17
Hatchlings dead in nest 0
Hatchlings alive in nest 3

Unhatched eggs UH= 122

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 120
Eggs with embryo < 3cm 2
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ \#}{H + UH}$ = 14.0 % ✓

Comments(factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Bench

Nest # 046 Date nest laid 7-12-85 Time laid 0000 OBSERVED ~~(estimate?)~~

Site description 0.85 South Risely Pier at base of 7.5' dune (steep) eroded.

Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 20 ft ~~m~~ Carapace length 40 ~~cm~~ width 37 ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0145
H hatchery. "

Relocated where? 1.7 miles North of Risely Pier 30 ft above mtn

Number of eggs: whole 152 broken 0 nest depth 20 in ~~cm~~

Comments (predation, description of turtle etc) CC - had been up 2 mg/hts ago but scared off - Tag AAR 071 on left flipper - couldn't get any on right one

HATCHING DATA

Date nest hatched 9-15-85 (estimate?) Excavated by Poole

Date nest excavated 9-20-85

Hatched eggs, from which hatchlings escaped from egg H= 84

Hatched escaped from nest HN= 84
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 68

Turtles dead in pipped eggs 1
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 67
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = 55.1 %

Comments(factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET PROJECT NAME _____

Nest # 048 Date nest laid 7-13-85 Time laid 2315 ~~(estimate?)~~ Observed

Site description 0.47 miles South of Risely pier on foldt, 10 ft above mhw, 20 ft from steep dune Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 10 ft Carapace length 36 cm width 36 cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0115
H hatchery. "

Relocated where? 2.3 North of Risely Pier, 30 ft above mhw on low dune

Number of eggs: whole 124 broken 0 nest depth 20 ~~cm~~

Comments (predation, description of turtle etc) CC good condition - Return of N# 026 of 6-28-85 (122 eggs)

HATCHING DATA

Date nest hatched 9-18-85 (estimate?) Excavated by Poole

Date nest excavated 9-24-85

Hatched eggs, from which hatchlings escaped from egg H= 117

Hatched escaped from nest HN= 117
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 7

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 7
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = 94.4 %

Comments (factors effecting hatching success, deformed hatchlings etc.) _____

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 049 Date nest laid 7/14/85 Time laid 0235 (estimate?)

Site description laid at bottom of sand dunes around 0 ft high tide

Turtle observed? (Y)/N Tags? Y/(N)

Distance from high tide 0 m Carapace length 35 in ~~cm~~ width 31 in ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
R relocated time moved _____
H hatchery. " _____
moved

Relocated where? 1.7 mi S of Holiday Pier 15 ft from high tide on top of sand dune

Number of eggs: whole 115 broken 0 nest depth 16 in cm

Comments (predation, description of turtle etc) had alot of ~~barn~~ barnacles on shell

HATCHING DATA

Date nest hatched 9-19-85 (estimate?) Excavated by Poole

Date nest excavated 9-18-85

Hatched eggs, from which hatchlings escaped from egg H= 99

Hatched escaped from nest HN= 99
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 16

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 16
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 86.0$ %

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 053 Date nest laid 7/15/85 Time laid 0305-0341 (estimate?)

Site description 1.35 mi N of Riseley's pier on flat part of beach. 0 ft from high tide

Turtle observed? Y/N Tags? Y/N

Distance from high tide 0 m Carapace length 39" cm width 36" cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0349
H hatchery. "

Relocated where? about 20-25 ft away from nest on top of dune

Number of eggs: whole 119 broken 0 nest depth 21" cm

Comments (predation, description of turtle etc) identified as a loggerhead

HATCHING DATA

Date nest hatched 10-1-85 (estimate?) Excavated by Poole

Date nest excavated 10-8-85

Hatched eggs, from which hatchlings escaped from egg H= 115

Hatched escaped from nest HN= 115
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH=

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 4
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 96.7\%$

Comments (factors effecting hatching success, deformed hatchlings etc.)

Cage bent - hit by vehicle? - Tag west over nest cavity.

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET PROJECT NAME ONSLOW BEACH

Nest # 054 Date nest laid 7-17-85 Time laid 0300 OBSERVED ~~(estimate?)~~

Site description 0.45 Miles South of Risely Pier on low overwash, lots of Track Vehicle tracks Turtle observed? Y/N Tags? Y/N

Distance from high tide 40 ft Carapace length 46½ cm width 43½ cm (standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 0500
H hatchery. "

173
12

Relocated where? 0.25 North Risely Pier, 20 ft above mhw on top of 5 ft dune

Number of eggs: ~~whole~~ 195 194 + broken 1 nest depth 23 in ~~cm~~

Comments (predation, description of turtle etc) Mating wounds on front of shell. Green Turtle (CM) repeat of #017 and #034 of 6/22 and 7/6/85. Turtle explored about 100 ft in then 150 ft south before digging nest which filled w/water. Then moved 5 ft higher and dug final nest. Nesting (egg laying) was Videotaped

HATCHING DATA

Date nest hatched 9-16-85 (estimate?) Excavated by Charles D. Petterson

61 days

195 eggs Date nest excavated 9-17-85

Hatched eggs, from which hatchlings escaped from egg H= 185

Hatched escaped from nest HN= 173
Hatchlings dead in nest 0
Hatchlings alive in nest 12

Unhatched eggs UH= 10

Turtles dead in pipped eggs 5
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 5
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= ~~HN~~ H / H + UH = 95.3 %

Comments (factors effecting hatching success, deformed hatchlings etc.) video Filmed by M/Sgt. Joe Gallo from before nest emergence to time last hatchling entered ocean this date -

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET PROJECT NAME ONSLOW BEA

Nest # 055 Date nest laid 7-18-85 Time laid 0030 OBSERVED (~~estimate?~~

Site description 2.7 miles South of Risely pier, in roadway - area has dune height but some dune grass nearby. Turtle observed? (Y)/N Tags? Y/(N)

Distance from high tide 15 ft Carapace length 38 cm width 35 cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0200
H hatchery. "

Relocated where? 1.8 miles South of Risely pier

Number of eggs: whole 106 broken 0 nest depth 20 in

Comments (predation, description of turtle etc) loggerhead, good condi tagged with AAR 163 and 164

HATCHING DATA

Date nest hatched N/A (estimate?) Excavated by Poole

Date nest excavated 9-30-8

Hatched eggs, from which hatchlings escaped from egg H= 0

Hatched escaped from nest HN= 0
Hatchlings dead in nest
Hatchlings alive in nest

Unhatched eggs UH= 0

Turtles dead in pipped eggs
Turtles alive in pipped eggs
Eggs with no discernible embryo
Eggs with embryo < 3cm 6
Eggs with embryo > 3cm

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 0 %

Comments(factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 2761

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 056 Date nest laid 7/19/85 Time laid 0100 OBSERVED ~~(estimate~~?)

Site description 0.65 miles South of Rivels pier in low dune/overwash area 20 ft above mhw Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 15 ft Carapace length 40 1/2 cm width 37 1/2 cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0230
H hatchery. " _____

Relocated where? 1.8 miles South of Rivels pier, 15 ft above mhw

Number of eggs: whole 103 broken 0 nest depth 20 in cm

Comments (predation, description of turtle etc) CC - return of #035 of 7/6/85 - when she laid 98 eggs.

HATCHING DATA

Date nest hatched N/A (estimate?) Excavated by Pooke

Date nest excavated 9-30-85

Hatched eggs, from which hatchlings escaped from egg H= 0

Hatched escaped from nest HN= 0
Hatchlings dead in nest _____
Hatchlings alive in nest _____

Unhatched eggs UH= 0

Turtles dead in pipped eggs _____
Turtles alive in pipped eggs _____
Eggs with no discernible embryo _____
Eggs with embryo < 3cm 6
Eggs with embryo > 3cm 2

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 0$ ✓ %

Comments (factors effecting hatching success, deformed hatchlings etc.) _____

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 059 Date nest laid 7/21/85 Time laid 0113 (estimate?)

Site description .3 mi S of Riseley's Pier 40ft past high tide in deep amtrack tracks

Turtle observed? (Y)/N Tags? Y/(N)

Distance from high tide 40' m Carapace length 41" ~~cm~~ width 38' ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0335
H hatchery. "

Relocated where? 1.9 mi N of Riseley's Pier in the sand dune

Number of eggs: whole 135 broken 0 nest depth 16 in cm

Comments (predation, description of turtle etc)

HATCHING DATA

Date nest hatched 9-25-85 (estimate?) Excavated by Poole

Date nest excavated 9-25-85

Hatched eggs, from which hatchlings escaped from egg H= 130

Hatched escaped from nest HN= 126
Hatchlings dead in nest 0
Hatchlings alive in nest 4

Unhatched eggs UH= 5

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 5
Eggs with embryo < 3cm 0
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{\cancel{HN}\ H}{H + UH}$ = 96.3 % ✓

Comments (factors effecting hatching success, deformed hatchlings etc.)

W. Bostic checked - Night of 9-24-85
1430-1630

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 064 Date nest laid 7-27-85 Time laid 0130 (estimate?)

Site description 3.7 miles South of Rixely Pier, 30 ft above mhw in a wide overwash area

Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 30 ft Carapace length 40 ~~cm~~ width 39 cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0230
H hatchery. " 0315

Relocated where? 1.85 miles North of Rixely pier 30 ft above mhw, on top of 6 ft dune

Number of eggs: whole 102 broken 0 nest depth 20 in ~~cm~~

Comments (predation, description of turtle etc) TAGS AAR 144 and 142. Return of N#014 (113 eggs) 6/19/85 and N#030 (106 eggs) 7/3/85 and FC#062 7/26/85

~~SAME AS 07~~

HATCHING DATA

Date nest hatched 8-7-85 (estimate?) Excavated by Poole

Date nest excavated 10-7-85

Hatched eggs, from which hatchlings escaped from egg H=

Hatched escaped from nest HN=
Hatchlings dead in nest
Hatchlings alive in nest

Unhatched eggs UH=

Turtles dead in pipped eggs
Turtles alive in pipped eggs
Eggs with no discernible embryo
Eggs with embryo < 3cm
Eggs with embryo > 3cm

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} =$ ____ %

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 067 (CM) Date nest laid 7/29/85 Time laid 2305 (estimate?)

Site description 16 mi N Rodgers Pier in sand dune

Turtle observed? Y/N Tags? Y/N

Distance from high tide 70 m Carapace length 46.5 cm width 43.5 cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved N/A
H hatchery. "

Relocated where? N/A

Number of eggs: whole 172 broken 0 nest depth 20 in cm

Comments (predation, description of turtle etc) 4th time turtle has nested
Green turtle

Turtles counted by Cpl. Taylor
worked on by
C. Patterson; D. Sharpe

HATCHING DATA

Date nest hatched 9/27/85 (estimate?) Excavated by Poole

Date nest excavated 9-30-85

Hatched eggs, from which hatchlings escaped from egg H= 152

Hatched escaped from nest HN= 93
Hatchlings dead in nest 2
Hatchlings alive in nest 54
Caught and Killed by Gulls
Unhatched eggs (2) + (1) = 3 3 UH= 20

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 2
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 16
Eggs with embryo > 3cm 4

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 74.3 %

Comments (factors effecting hatching success, deformed hatchlings etc.) Nest observed by C. Patterson; D. Sharpe - impression at 0930. Cpl. Taylor beach det. observed 153 hatchlings at 1030 escaping from nest (2) Killed by Gulls at nest

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 069 Date nest laid 8/1/85 Time laid 2330 observed (~~estimate?~~)

Site description 0.15 South of Rich Pier; 50 ft above mhw on top of 8 ft dune

Turtle observed? (Y)N Tags? (Y)N

Distance from high tide 50 ft. Carapace length 40 1/2 ~~cm~~ width 37 1/2 ~~cm~~
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
(R) relocated time moved 0020
H hatchery. " 0035

Relocated where? 0.5 North of Rich pier, 20 ft above mhw on top of 7' dune

Number of eggs: whole 96 broken 0 nest depth 16 in ~~cm~~

Comments (predation, description of turtle etc) Return of N#035 and #056 of 7/6 and 7/19/85 with egg clutches of 98 and 103 TAG AAR 157 + 158

HATCHING DATA

Date nest hatched 10-7-85 (estimate?) Excavated by Poole

Date nest excavated 10-7-85

Hatched eggs, from which hatchlings escaped from egg H= 85

Hatched escaped from nest HN= 63
Hatchlings dead in nest 0
Hatchlings alive in nest 22

Unhatched eggs UH= 11

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 11
Eggs with embryo > 3cm 0

96 | 85

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 88.5 %

Comments (factors effecting hatching success, deformed hatchlings etc.)

12 hatchlings picked up around nest in grass behind dune sloping away from beach.

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # D85 Date nest laid 8-10-85 Time laid 0345 OBSERVED (estimate?)

Site description 2.0 miles South of Rerdy Pier, 50 ft above mhw in area of low dunes with dune grass Turtle observed? (Y)/N Tags? (Y)/N

Distance from high tide 75 ft Carapace length 47.5 cm width 43.5 cm (standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
R relocated time moved N/A
H hatchery. "

Body cavity 5½ ft diam 18 in deep then Egg cavity 17 in deep 13 in wide

Relocated where? N/A

Number of eggs: whole 164 broken 0 nest depth 18" + 17" egg cavity = 35"

Comments (predation, description of turtle etc) (CM) GREEN - apparent fresh mating wounds/blood - Turtle had false-crawled earlier TOTAL 892 eggs

HATCHING DATA

Date nest hatched 8-10-85 (estimate?) Excavated by Poole - Bowers

Date nest excavated 10-31-85

Hatched eggs, from which hatchlings escaped from egg H= 106

Hatched escaped from nest HN= 6
Hatchlings dead in nest 23
Hatchlings alive in nest 100

Unhatched eggs UH= 58

Turtles dead in pipped eggs 8
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 2
Eggs with embryo < 3cm 37
Eggs with embryo > 3cm 11

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 70.0 % ?

Comments (factors effecting hatching success, deformed hatchlings etc.) 5th nesting

(2) white Turtles

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 086 Date nest laid 8/11/85 Time laid 0005 (estimate?)

Site description .2 mi S Reelys Pier in flat part of beach

Turtle observed? Y/N Tags? Y/N

Distance from high tide 40 ft m Carapace length 40" cm width 39" cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 0027
H hatchery. "

Relocated where? .6 N of Reelys Pier

Number of eggs: whole 101 broken 0 nest depth 16" cm

Comments (predation, description of turtle etc) this is the 4th time it has nested #014, #064, #030

HATCHING DATA

Date nest hatched 8-11-85 (estimate?) Excavated by Pooke

Date nest excavated 10-28-8

Hatched eggs, from which hatchlings escaped from egg H= 96

Hatched escaped from nest HN= 96
Hatchlings dead in nest 1
Hatchlings alive in nest 25

Unhatched eggs UH= 5

Turtles dead in pipped eggs 1
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 3
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 95.0\%$

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 088 Date nest laid 8-15-85 Time laid 2345 OBSERVED ~~(estimate?)~~

Site description 0.17 South of Reisely Pier in heavy traffic overwash area. Many deep AMTRACK tracks Turtle observed? Y/N Tags? Y/N

Distance from high tide 45 ft Carapace length 40 cm width 37 1/4 cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved 0130
H hatchery. " 0215

Relocated where? 2.07 South of pier, 50 ft abv. mhw, 8 ft high on 12 ft dune

Number of eggs: whole 109 broken 0 nest depth 19 in ~~cm~~

Comments (predation, description of turtle etc.) (CC) TAG AAR 157, 158 Return of #035 (7/6) 056 (7/19), 069 (8/1) TOTAL EGGS: 406 AVG = 101.5/nest

HATCHING DATA

Date nest hatched 11-15-85 (estimate?) Excavated by Pooke

Date nest excavated 11-15-85

Hatched eggs, from which hatchlings escaped from egg H= 39

Hatched escaped from nest HN= 0
Hatchlings dead in nest 0
Hatchlings alive in nest 39

Unhatched eggs UH= 70.

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 2
Eggs with embryo < 3cm 68
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 35.77\%$

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

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NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME ONSLOW BEACH

Nest # 089 Date nest laid 8-20-85 Time laid 0029 OBSERVED ~~(estimate?)~~

Site description 0.3 miles North of Kiddy pier, on top of low, off dunes, just inside dune grass line - gradual slope.

Turtle observed? Y/N Tags? Y/N

Distance from high tide 30 ft/m Carapace length 37 in/cm width 34½ in/cm
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated
H hatchery.

counted
time ~~moved~~ 0215
"

Relocated where? N/A

Number of eggs: whole 96 broken 0 nest depth 19 in/cm

Comments (predation, description of turtle etc) Tags from some previous year
Return of #008 of 6/12 and #042 of 7/10 with 97 and 108 eggs rept.
TOTAL = 301

Cage gone
WASHED AWAY due to storm

HATCHING DATA

Date nest hatched / (estimate?) Excavated by Poole

Date nest excavated

Hatched eggs, from which hatchlings escaped from egg H= 29

Hatched escaped from nest HN= 0
Hatchlings dead in nest 0
Hatchlings alive in nest -

Unhatched eggs UH= 79

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs -
Eggs with no discernible embryo -
Eggs with embryo < 3cm -
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 36.77 %

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME Onslow Beach

Nest # 92 (UNK) Date nest laid 7-4-85 Time laid UNK (estimate?)

Site description 12' above m/high tide line

Sandy base of dune Turtle observed? Y/N N/A Tags? Y/N N/A

in front # 030

Distance from high tide +12' m Carapace length N/A cm width N/A cm
(standard curve measure or specify)

Nest Treatment: M marked only
(W) wired
R relocated time moved
H hatchery. "

Relocated where? N/A

Number of eggs: whole 125 broken N/A nest depth 18" cm

Comments (predation, description of turtle etc)

HATCHING DATA

Date nest hatched 9-4-85 (estimate?) Excavated by Pooke

Date nest excavated 9-4-85

125
-97
28

Hatched eggs, from which hatchlings escaped from egg H= 97

Hatched escaped from nest HN= 97
Hatchlings dead in nest 0
Hatchlings alive in nest 0

Unhatched eggs UH= 28

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 20
Eggs with embryo > 3cm 8

Survival Percentage of hatchlings from nest $SP = \frac{HN}{H + UH} = 92.0\%$

Comments (factors effecting hatching success, deformed hatchlings etc.)

Please leave no space blank. Enter "0" or "NA" for data not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 27611

NORTH CAROLINA SEA TURTLE CONSERVATION 1985

TURTLE NEST DATA SHEET

PROJECT NAME _____

Nest # _____ Date nest laid _____ Time laid _____ (estimat

Site description _____

_____ Turtle observed? Y/N Tags?

Distance from high tide _____ m Carapace length _____ cm width _____ c
(standard curve measure or specify)

Nest Treatment: M marked only
W wired
R relocated time moved _____
H hatchery. " _____

Relocated where? _____

Number of eggs: whole _____ broken _____ nest depth _____

Comments (predation, description of turtle etc) _____

96 eggs

Laid 8-1-85 31 -1 30 Aug Sept 30 Oct 67 days # 069

HATCHING DATA

Date nest hatched 10-7-85 (estimate?) COPY

Excavated by Poole

Date nest excavated 10-7-85

96
33
63

Hatched eggs, from which hatchlings escaped from egg H= 85

Hatched escaped from nest HN= 63
Hatchlings dead in nest 0
Hatchlings alive in nest 22

85
11
96

Unhatched eggs UH= 11

Turtles dead in pipped eggs 0
Turtles alive in pipped eggs 0
Eggs with no discernible embryo 0
Eggs with embryo < 3cm 11
Eggs with embryo > 3cm 0

Survival Percentage of hatchlings from nest SP= $\frac{HN}{H + UH}$ = 88.5

96 | 85.00,00 (88.54)
43
768
820
768
526
480
460

Comments (factors effecting hatching success, deformed hatchlings etc.) _____

12 around nest

Please leave no space blank. Enter "0" or "NA" for date not available

NC Nongame & Endangered Wildlife Program, 512 N. Salisbury Street, Raleigh NC 2

SEA TURTLE INVENTORY

for

SUMMER AND FALL 1984

NATURAL RESOURCES AND ENVIRONMENTAL AFFAIRS DIVISION

ASSISTANT CHIEF OF STAFF, FACILITIES

MARINE CORPS BASE

CAMP LEJEUNE, NORTH CAROLINA 28542

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TABLE OF CONTENTS

Introduction .....

Sea Turtle Inventory (Crawl Data) - Table I .....

Return Record of Tagged Turtles - Table II .....

Crawl Information in Relation to Moon and
Tidal Cycles and Weather Conditions - Table III ....

Ground Survey Numbers - Table IV .....

Aerial Survey - Table V .....

Nest Crawl Activity .....

INTRODUCTION

The sea turtle inventory for 1984 is a continuation of past efforts by Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities, Marine Corps Base, Camp Lejeune, North Carolina, to protect sea turtle nesting activities at Onslow Beach. The sea turtle inventory consists of several programs including: nest protection, tagging of adult turtles, collecting nesting data, determining hatchling success and aerial surveys.

Management personnel began operating under a Federal Fish and Wildlife Permit during 1981, issued for working with threatened Loggerhead and Green Turtles. The permit authorizes the tagging and measurement of adults and the relocation of nests threatened by erosion, tides, extreme predation or military training activities. Nests may be moved only within 24 hours of egg laying to a safe beach location and not to a laboratory. Relocated nests are required to be monitored and hatchling success documented.

The results of the aforementioned program are as follows:

a. Nest protection from predators, 63.

b. Tagging of adults - number of turtles tagged 26.

Tag return data may be reviewed in Table II, page 9.

c. Nesting data - Number of nests - 63.

d. Total number of crawls - 121.

e. Total number of eggs - 7,788.

f. Total number of hatchlings - 4,484.

g. Number of tag returns - 30.

h. Number of stranded turtles - 4.

i. Number of nests lost during Hurricane Diana - 2.

j. Number of nests lost during abnormal high tides associated with northeast winds - 6.

k. Number unhatched nests from unknown causes 5.

Stranding reports were submitted to the North Carolina Wildlife Resources Stranding Network Coordinator. Carcasses were buried on the beach.

Percent hatchling success is 57%; nesting and crawl data is compiled in Tables I, II, III, IV, and V, and Graphs I and II on pages 5 through 19. The enclosed maps indicate locations of turtle activity on Onslow Beach.

Aerial survey data may be found in Table IV, page 20.

The Marine Corps Base, Camp Lejeune and Natural Resources and Environmental Affairs Division give special thanks to Doctor F. J. Schwartz at the Institute of Marine Science, Morehead City for his advice and services.

For copies of this report or other information concerning the sea turtle management program conducted by this agency, contact: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542 Attention: Director, Natural Resources and Environmental Affairs Division, Assistant Chief of Staff, Facilities.

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest	Location*	Comments
001	5-23-84	0800-1130		-7N	C.O. (indicates Crawl Only)
002	5-24-84	0200	X	2.4S	Relocated to dunes 4 yds up. 143 eggs.
003	6-4-84	0900-1030	X	2.4S	Relocated to dunes 4 yds up. 13 yds.S. 133 eggs.
004	6-4-84	2100-0500		3.1N	C.O.
005	6-7-84	0300	X	2.5S	Relocated from .5S up 3 yds. 148 eggs.
006	6-8-84	2100-0500		3.4N	C.O.
007	6-9-84	2300	X	2.8S	Eggs 71 Tags AAR087, 088
008	6-9-84	0248	X	2.9N	Tags AAR 089, 090 Eggs 61
009	6-9-84	2100-2300		6S	C.O.
010	6-11-84	2100-0500		2.9S	C.O.
011	6-11-84	2100-0500		2.0N	C.O.
012	6-12-84	2230	X	2.8S	Rel. from .8S. Tags AAR 091, 092. Eggs 115
013	6-12-84	0030	X	3.1N	Eggs 137 Tags AAR 093, 094
014	6-12-84	2100-0500		3.4S	Tags AAR 095, 096
015	6-13-84	1300-1530		3.1S	C.O.
016	6-13-84	2100-0500		3.3N	C.O.
017	6-13-84	2230	X	3.3N	Tags AAR 097, 098 Eggs 155
018	6-13-84	2400	X	2.6S	Rel.From 3.S. Return AAR 095, 096. Eggs 98
019	6-13-84	2100-0500		.8S	C.O.
020	6-15-84	0010		1.25S	Tag AAR 099, 100
021	6-15-84	0020		1.4S	C.O.
022	6-15-84	0040		1.8S	Tag S.M.I. 803

Summary of Instruction:

* Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or thought to have occurred. Conduct surveys daily during regular working hours 0800-1630, traveling by four wheel drive vehicle when the tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest	Location*	Comments
023	6-16-84	2300	X	3.3N	Tag AAR 101,102. Eggs 155. Relocated to dunes.
024	6-17-84	2300	X	2.3S	Tag AAR 103, 104. Eggs 53. Relocated to dunes.
025	6-17-84	0400		3.N	C.O.
026	6-21-84	0330	X	4.N	Relocated to dune. Eggs 138.
027	6-22-84	2200	X	2.9N	Relocated to dune.Eggs 164 Tag AAR 105, 106
028	6-22-84	2405		1.6S	Tag AAR 107, 108
029	6-23-84	2325	X	3.4S	Return Tag AAR 107, 108. Eggs 131.
030	6-23-84	0135	X	3.7N	Tags AAR 109, 110 Eggs 139
031	6-25-84	2330	X	3.4N	Return Tag 089, 090 Eggs 121
032	6-25-84	0020	X	2.0N	Return Tag AAR 097, 098. Eggs 152. Relocated f/1.2S
033	6-25-84	0115		2.6S	Return Tag AAR 095, 096
034	6-25-84	0120		3.0S	C.O.
035	6-26-84	0355		1.8S	C.O.
036	6-27-84	2130	X	3.4N	Tag AAR 111, 112. Eggs 137 Relocated to dunes.
037	6-27-84	2330		1.8N	Return Tag AAR 093, 094
038	6-27-84	2345	X	.2N	Relocated from 1.2S Ret.Tag 091,092. Eggs 124.
039	6-27-84	0100		2.9S	Return Tag AAR 095, 096
040	6-27-84	0340	X	3.75S	Relocated from 3.6S. Retur Tag AAR095,096. Eggs 136.
041	6-28-84	2345	X	.6N	Relocated to dune. Return Tag AAR093,094. Eggs 132.
042	6-28-84	2345	X	.6N	Relocated to dune. Tags AAR 113,114. Eggs 91.
043	6-28-84	0100	X	2.1S	Tags AAR 115, 116. Eggs 144.

Summary of Instruction:

* Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or thought to have occurred. Conduct surveys daily during regular working hours 0800-1630, traveling by four wheel drive vehicle when the tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest	Location*	Comments
044	6-28-84	0130		2.2S	C.O.
045	6-28-84	0130		2.3S	C.O.
046	6-28-84	0135		3.1S	C.O.
047	6-28-84	0225		.7S	C.O.
048	6-29-84	2330		3.6N	C.O.
049	6-29-84	2340		3.8N	C.O.
050	6-29-84	0040		1.6N	C.O.
051	6-29-84	2355		.3S	C.O.
052	6-30-84	0240	X	2.1N	Relocated from 2.4S Eggs 131
053	7-1-84	0030	X	2.1S	Relocated from 3.3S Eggs 159
054	7-4-84	2300	X	1.5S	Return Tags AAR 105, 106. Eggs 144
055	7-5-84	2230	X	2.3N	Relocated to dune. Eggs 161
056	7-9-84	0100		1.1S	C.O.
057	7-9-84	0300	X	1.0N	Return Tag AAR 107, 108. Eggs 122
058	7-10-84	2307		.9S	C.O.
059	7-10-84	0200	X	3.2N	Relocated to dunes. Eggs 126. Tag AAR 097, 098.
060	7-11-84	2230	X	.2N	Tag AAR 117, 118. Relocat from .6S. Eggs 157
061	7-11-84	0020	X	3.7S	Tag AAR 119,120. Relocate to dune 25m.N10M. Eggs 12
062	7-11-84	0310		2.2S	Return Tag AAR 091, 092.
063	7-12-84	0043	X	2.0S	Return Tag AAR 091, 092. Eggs 131
064	7-12-84	0120		3.7S	C.O.
065	7-15-84	2130	X	1.9N	Relocated 10m(S) to dunes Tag AAR 121,122. Eggs 117

Summary of Instruction:

* Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or thought to have occurred. Conduct surveys daily during regular working hours 0800-1630, traveling by four wheel drive vehicle when the tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest	Location*	Comments
066	7-16-84	2350		1.8N	Return Tag AAR 105,106.
067	7-16-84	0310		3.4N	Return Tag AAR 105, 106.
068	7-17-84	2215	X	2.9N	Rel.to Dune. Return Tag AAR 105,106. Eggs 142.
069	7-22-84	0312	X	.8N	Rel.to Ocean side of Dune. Tag AAR 123,124. Eggs 111.
070					
071	7-23-84	2130	X	2.4N	Eggs - 140.
072	7-23-84	2330	X	3.2N	Return Tag AAR 097, 098. Eggs 130.
073	7-23-84	0030		.1N	Return Tag AAR 107, 108.
074	7-23-84	0050		3.1S	Return Tag AAR 119,120.
075	7-23-84	0228		2.9S	C.O.
076	7-23-84	0335	X	3.1S	Relocated to Dune. Return Tag AAR 119,120. Eggs 125.
077	7-24-84	2320		3.3N	C.O. Tag AAR 125, 126.
078	7-24-84	0022	X	67M.N	Rel.from under Risely Pier Tag AAR127,128. Eggs 129.
079	7-24-84	0120	X	.8N	Relocated from .4S. Eggs 130.
080	7-25-84	0057	X	3.6S	Return Tag AAR 125,126. Rel to dune. Eggs 118.
081	7-26-84	2200	X	.1N	Relocated from .6S.Return Tag AAR 099,100. Eggs 93.
082	7-26-84	2255		3.2N	C.O.
083	7-26-84	0130	X	3.5N	Tag S.M.I. 803. Relocate to Dune. Eggs 89.
084	7-26-84	0230		2.6S	C.O.
085	7-27-84	0110		2.3N	C.O.
086	7-27-84	0126	X	.7N	Relocated to dune. Return Tag AAR 093,094. Eggs 125

Summary of Instruction:

* Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or thought to have occurred. Conduct surveys daily during regular working hours 0800-1630, traveling by four wheel drive vehicle when the tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest	Location*	Comments
087	7-28-84	1134		1.0S	Return Tag AAR 129, 130.
088	7-28-84	1145	X	3.3S	Relocated 5MN to Dunes. Ret.Tag AAR113,114.Eggs14
089	7-28-84	0258	X	1.5N	Ret. Tag AAR 121, 122. Eggs 109.
090	7-29-84	2150	X	.2N	Relocated to Dune. Eggs 115.
091	7-29-84	2230	X ~~N/A~~	2.1S	Eggs 144. ~~C.O.~~
092	7-29-84	2330		2.9N	C.O.
093	7-30-84	0010	X	.6N	Relocated to Dunes. Retur Tag AAR 105,.06. Eggs 150
094	7-31-84	0230	X	1.95N	Relocated from 1.1S. Eggs 114.
095	8-5-84	2151	X	.2N	Relocated to Dune. Tag AAR 131, 132. Eggs 63.
096	8-5-84	0200		2.8S	Return Tag AAR 119, 120.
097	8-5-84	0330		2.7S	C.O.
098	8-6-84	2300		1.7N	Return Tag AAR 123, 124.
099	8-6-84	2341		3.3N	C.O.
100	8-6-84	0115	X	3.2N	Return Tag AAR 097, 098. Eggs 114.
101	8-6-84	0230	X	3.2N	Relocated from 2.9S. Retur Tag AAR 119,120. Eggs 129.
102	8-7-84	0320	X	3.5N	Relocated to Dune. Tag AAR 133,134. Eggs 117.
103	8-12-84	2110	X	2.0N	c.o. found from prev.night 8-11-84. Eggs 134.Rel.to dun
104	8-12-84	2145		3.1N	C.O.
105	8-12-84	2300		2.0S	C.O.
106	8-12-84	0047		3.0S	C.O.
107	8-12-84	0055		3.1S	C.O.

Summary of Instruction:

* Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or thought to have occurred. Conduct surveys daily during regular working hours 0800-1630, traveling by four wheel drive vehicle when the tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

SEA TURTLE INVENTORY
(Crawl Data)
TABLE I
Marine Corps Base
Camp Lejeune, North Carolina

Crawl No.	Date	Time Crawl Occurred	Active Nest	Location*	Comments
108	8-12-84	0123		1.0N	C.O.
109	8-12-84	0220		.6N	C.O. (Eggs 125
110	8-13-84	2127	X	2.0N	Relocated from 1.7N. Return Tag AAR 093,094.
111	8-13-84	0115	X	1.8N	C.O. Relocated from 1.7S. Eggs 114.
112	8-17-84	2305	X	3.9N	Relocated to Dune. Tag AAR 135,136. Eggs 122.
113	8-21-84	0126		3.5S	C.O.
114	8-22-84	2140		1.9S	C.O.
115	8-22-84	0050		2.3N	C.O.
116	8-22-84	0140		2.4S	C.O.
117	8-22-84	0150	X	2.0N	Relocated to Dune. Tag AAR 137,138. Eggs 76.
118	8-23-84	2150		3.1N	C.O.
119	8-23-84	2310	X	.2N	Relocated from .4S. Retur Tag AAR 107,108. Eggs 114
120	8-24-84	2300	X	3.7S	C.O. Eggs 98.
121	8-30-84	2100/0500	X	3.2N	C.O. Eggs 133.

Summary of Instruction:

* Location measured to nearest tenth of mile to the north or south of Risely Pier. Record known or estimated time when crawl was made or thought to have occurred. Conduct surveys daily during regular working hours 0800-1630, traveling by four wheel drive vehicle when the tide is low. Traverse the beach flood plane in vehicle to avoid leaving tire tracks in the sand.

TABLE II

RETURN RECORD OF TAGGED TURTLES
1984 SEA TURTLE INVENTORY

Date Tagged	Tag Number	Return	Return	Return	Return
6-9-84 (2)	AAR 087, 088				
6-9-84 (2)	AAR 089, 090	6-26-84 (2)			
6-12-84 (2)	AAR 091, 092	6-27-84 (2)	7-12-84 (2)		
6-12-84 (2)	AAR 093, 094	6-28-84 (2)	7-27-84 (2)	8-13-84 (2)	
6-12-84 (1)	AAR 095, 096	6-13-84 (2)	6-27-84 (1)	7-27-84 (2)	
6-13-84 (2)	AAR 097, 098	6-26-84 (2)	7-10-84 (2)	7-23-84 (2)	8-6-84 (2)
6-15-84 (1)	AAR 099, 100	7-26-84 (2)			
6-16-84 (2)	AAR 101, 102				
6-17-84 (2)	AAR 103, 104				
6-22-84 (2)	AAR 105, 106	7-4-84 (2)	7-16-84 (1)	7-17-84 (2)	7-30-84(2)
6-22-84 (1)	AAR 107, 108	6-23-84 (2)	7-9-84 (2)	7-23-84 (1)	8-23-84(2)
6-23-84 (1)	AAR 109, 110				
6-27-84 (2)	AAR 111, 112				
6-28-84 (2)	AAR 113, 114	7-28-84 (2)			
6-28-84 (2)	AAR 115, 116				
7-11-84 (2)	AAR 117, 118				
7-11-84 (2)	AAR 119, 120	7-23-84 (1) (2)	8-5-84 (1)	8-6-84 (2)	
7-15-84 (2)	AAR 121, 122	7-28-84 (2)			
7-22-84 (2)	AAR 123, 124	8-6-84 (1)			
7-24-84 (1)	AAR 125, 126	7-25-84 (2)			
7-24-84 (2)	AAR 127, 128				
7-28-84 (1)	AAR 129, 130				
8-5-84 (2)	AAR 131, 132				
8-7-84 (2)	AAR 133, 134				

TABLE II (Cont'd)

Date Tagged	Tag Number	Return	Return	Return	Return
8-17-84 (2)	AAR 135, 136				
8-22-84 (2)	AAR 137, 138				
6-15-84 (1)	SMI 803 *	7-26-84 (2)			

(1) Did not nest

(2) Nested

* Scientific Marine Institute, Morehead City, North Carolina

TABLE III

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

Date	Moon Rise % Illumin.	Time of High Tide	Time Crawl W/O Nest	Time Crawl W/Nest	Total Crawls
5-23-84	0131 - 48%	0145	0800-1130		2
5-24-84	0158 - 38%	0139		0800-1200	1
6-4-84	1039 - 21%	2336	2100-0500		2
6-7-84	1406 - 54%	0236		0300	1
6-8-48	1513 - 65%	0341	2100-0500		1
6-9-84	1621 - 75%	0444	2100-0500	0300 2300	3
6-11-84	1838 - 92%	1905	2100-0500 2100-0500		2
6-12-84	1945 - 97%	1955	2100-0500	2230 0030	3
6-13-84	2049 - 100%	2042	1300-1530 2100-0500	2230 2400	5
6-15-84	2239 - 98%	2213	0010-0040 0020		3
6-16-84	2322 - 94%	2255		2300	2
6-17-84	2359 - 88%	2339	0400	2300	2
6-21-84	0125 - 54%	0247	0400	0330	2
6-22-84	0150 - 45%	1527	0005	2200	2
6-23-84	0215 - 36%	1617		2325 0145	2
6-26-84	0346 - 11%	1839	0115-0355 0120	2330 0030	5
6-27-84	0426 - 05%	1923	2330 0100	2130-0330 2345	5
6-28-84	0515 - 02%	2010	0130-0225 0130 0135	2345 0100 2345	7
6-29-84	0612 - 00%	2056	2330 2355 2340		3
6-30-84	0717 - 01%	2144		0245	1
7-1-84	0827 - 05%	2234		0030	1
7-4-84	1158 - 29%	0114		2300	1
7-5-84	1306 - 40%	2205		2230	1
7-9-84	1733 - 82%	0619	0100	0300	2

TABLE III

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

Date	Moon Rise % Illumin.	Time of High Tide	Time Crawl W/O Nest	Time Crawl W/Nest	Total Crawls
7-10-84	1838 - 90%	0114	2307	0200	2
7-11-84	1938 - 95%	1940	0310	2230 0020	3
7-12-84	2031 - 99%	2024	0120	0043	2
7-15-84	2230 - 96%	2227		2130	1
7-16-84	2300 - 92%	2306	2350 0310		2
7-17-84	2326 - 86%	2344		2215	1
7-22-84	0110 - 42%	0344		0312	1
7-23-84	0141 - 32%	1622	0030 0227 0050	2130 0335 2330	6
7-24-84	0218 - 23%	1716	2320	0022 0120	3
7-25-84	0303 - 15%	0630		0057	1
7-26-84	0356 - 08%	1759	2255 0230	2200 0130	4
7-27-84	0458 - 03%	1949	0110	0126	2
7-28-84	0507 - 00%	2038	1134	1145 0258	3
7-29-84	0607 - 01%	2129	2330	2150 2330	3
7-30-84	0834 - 03%	2117		0010	1
7-31-84	0946 - 09%	2307		0230	1
8-5-84	1526 - 60%	0403	0200 0330	2151	3
8-6-84	1631 - 70%	0509	2300 2341	0115 0230	4
8-7-84	1732 - 79%	0607		0320	1
8-12-84	2101 - 100%	2122	2145 0047 0123 2300 0055 0220	2110	7
8-13-84	2129 - 98%	2159		2127 0115	2
8-17-84	2310 - 76%	2422		2305	1
8-21-84	- 38%	0405	0126		1
8-22-84	0141 - 28%	2311	2140 0140 0050 0150		4

TABLE III

CRAWL INFORMATION IN RELATION TO MOON AND TIDAL CYCLES

Date	Moon Rise % Illumin.	Time of High Tide	Time Crawl W/O Nest	Time Crawl W/Nest	Total Crawls
8-23-84	0238 - 19%	1742	2120	2310	2
8-24-84	0343 - 11%	1839		2300	1
8-30-84	1000 - 15%	2342	2100/0500	2100/0500	1

TABLE IV

GROUND SURVEY NUMBER

(Nights not separated at Midnight)

Date	Crawls/No Nest	Crawls/Nest	Total
6-4-84	1	1	2
6-5-84	0	0	0
6-6-84	0	0	0
6-7-84	0	1	1
6-8-84	1	0	1
6-9-84	1	2	3
6-10-84	0	0	0
6-11084	2	0	2
6-12-84	1	2	3
6-13-84	3	2	5
6-14-84	0	0	0
6-15-84	3	0	3
6-16-84	0	1	1
6-17-84	1	1	2
6-18-84	0	0	0
6-19-84	0	0	0
6-20-84	0	0	0
6-21-84	1	1	2
6-22-84	1	1	2
6-23-84	0	2	2
6-24-84	0	0	0
6-25-84	0	0	0
6-26-84	3	2	5
6-27-84	2	3	5
6-28-84	4	3	7
6-29-84	3	0	3
6-30-84	0	1	1
7-1-84	0	1	1
7-2-84	0	0	0
7-3-84	0	0	0
7-4-84	0	1	1
7-5-84	0	1	1
7-6-84	0	0	0
7-7-84	0	0	0
7-8-84	0	0	0
7-9-84	1	1	2
7-10-84	1	1	2
7-11-84	1	2	3
7-12-84	1	1	2
7-13-84	0	0	0
7-14-84	0	0	0
7-15-84	0	1	1
7-16-84	2	0	2
7-17-84	0	1	1
7-18-84	0	0	0
7-19-84	0	0	0

TABLE IV (cont'd)

Date	Crawls/No Nest	Crawls/Nest	Total
7-20-84	0	0	0
7-21-84	0	0	0
7-22-84	0	1	1
7-23-84	3	3	6
7-24-84	1	2	3
7-25-84	0	1	1
7-26-84	2	2	4
7-27-84	1	1	2
7-28-84	1	2	3
7-29-84	1	2	3
7-30-84	0	1	1
7-31-84	0	1	1
8-1-84	0	0	0
8-2-84	0	0	0
8-3-84	0	0	0
8-4-84	0	0	0
8-5-84	2	1	3
8-6-84	2	2	4
8-7-84	0	1	1
8-8-84	0	0	0
8-9-84	0	0	0
8-10-84	0	0	0
8-11-84	0	0	0
8-12-84	6	1	7
8-13-84	0	2	2
8-14-84	0	0	0
8-15-84	0	0	0
8-16-84	0	0	0
8-17-84	0	1	1
8-18-84	0	0	0
8-19-84	0	0	0
8-20-84	0	0	0
8-21-84	1	0	1
8-22-84	4	0	4
8-23-84	1	1	2
8-24-84	0	1	1
8-25-84	0	0	0
8-26-84	0	0	0
8-27-84	0	0	0
8-28-84	0	0	0
8-29-84	0	0	0
8-30-84	0	1	1
8-31-84	0	0	0

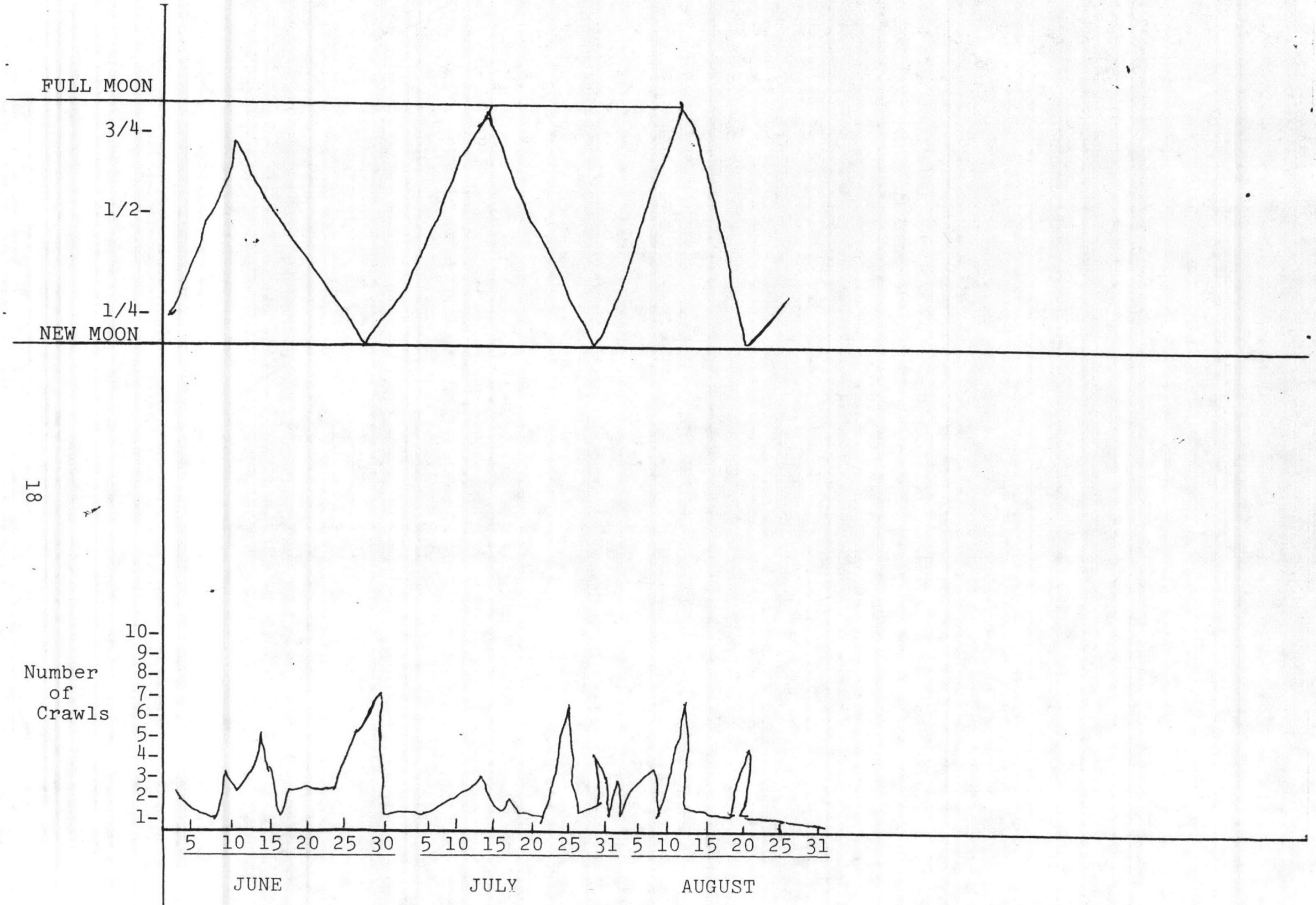

FIG. 1 - CRAWLS IN RELATION TO LUNAR CYCLE

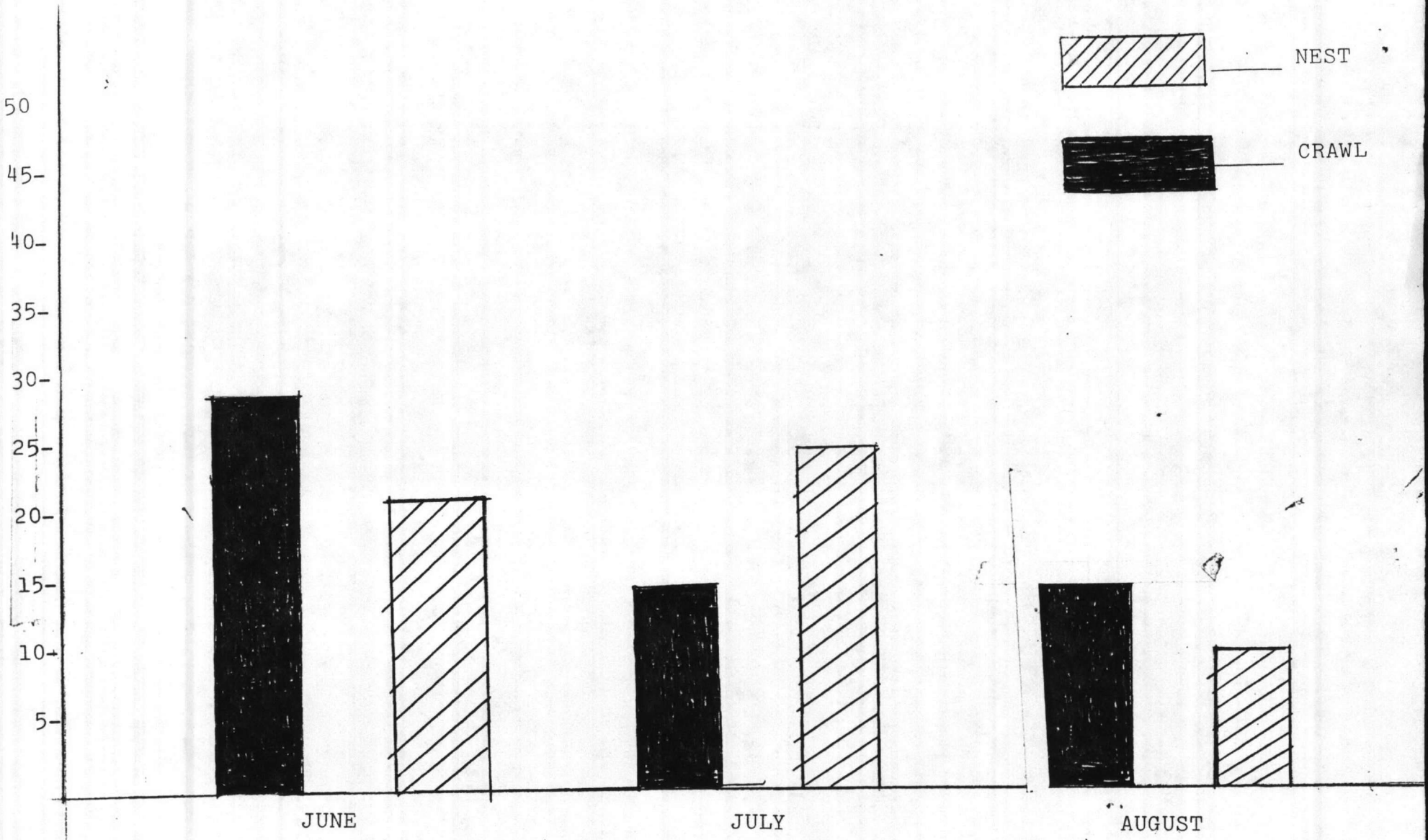

FIG. 2 - TOTAL CRAWLS AND NESTS BY MONTHS

TABLE V

AERIAL SURVEY

Date	ONSLOW BEACH						BROWNS ISLAND						BEAR ISLAND						Weather
	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	NC	OC	NN	ON	NP	OP	
5-25-84																			Fog/Clear
5-29-84							1		1				1		1				Clear
5-31-84																			Foggy/Overcast
6-5-84	1		1				1	1	1	1				1		1			Fog/Haze/Clear
6-7-84	1	1	1	1			3	3	2	3			3	2	3	2			Broken
6-12-84	1	1	1				4	4	2					2		2	2		Fog/Clear
6-14-84	5	2	5	2	1		6	4	5	4			2	1	2	1			Haze/Clear
6-19-84	4	2	2	2			2		2				4	1	3	1			Clear
6-21-84							2	2	2	2			2	2	2	2			Foggy/Clear
6-26-84	7	2	7	2			4	1	4	1			1						Clear
6-28-84	2	4	2	4			4		3				3		3				Fog/Haze/Overcast
7-3-84	2		2				1		1				1	1	1	1			Scattered
7-6-84	4		4				2		2				2		2				Clear
7-11-84	2		2					2		2									Foggy/Clear
7-13-84		1		1			3		3				2		2				Fog/Overcast
7-17-84	2		2										2		2				Clear
7-20-84							2		2				2		1				LtRain/Overcast
7-24-84	11		8				5	2	5	2			3		3				Foggy/Clear
7-27-84	7	1	7	1			4		4				4	1	4	1			Haze/Broken
8-2-84	3		3				13		13				7		7				Fog/Haze/Scatter
8-7-84	5		5				2		2				3		3				Haze/Fog/Clear
8-9-84	7	1	6	1				2		2			3	2	3	2			Fog/Haze/Clear
8-14-84	3		3				2		2				2		2				Haze/Clear
8-17-84							2	2	2	2				1		1			Clear/Obscured
8-21-84													1	1					Haze/Broken
8-23-84	4		4				1		1				2		2				Haze/Sctd/Brkn
8-27-84		1		1			1		1										Clear
8-30-84																			Clear