

SEA TURTLE ACTIVITY IN DRY TORTUGAS NATIONAL PARK AS OF 6/9/95

Turtle activity began on 4/28, and has occurred nightly on one or more of the seven islands, with the exception of 6/4 (tropical storm Allison). 149 of the 297 crawls documented are believed to be nests, giving the Tortugas population a 1:1 ratio of nests to false crawls. I am following the Florida Department of Environmental Protection and Florida Marine Research Institutes' Guidelines for Marine Turtle Permit Holders. Crawls are deemed nests or false based on the characteristics of the crawl. Characteristics of a nest include escarpment, a secondary body pit, and misted sand. Characteristics of a false crawl include backstop, and a primary body pit.

208 Crawls, resulting in 107 nests, were documented for the month of May alone. To put this into perspective 300 crawls is the maximum number documented in the previous 14 years of research. The maximum number of nests document was 93 in 1983, and 72 in 1994. The research varied from night tagging surveys, to the more common morning surveys. The duration of research ranged from 10 days to 3 months. Considering turtle nesting season begins in late April, with the last nests emerging in late October, the previous numbers hardly reflect the true Tortugas nesting population.

The first week of June resulted in 79 crawls. If the remaining 3 weeks of June produce an average of 79 crawls per week, the month will result in over 300 crawls. Considering no known turtle activity occurred on 6/4, it could be possible that this was even a low activity week. However, a record daily number (26 crawls), were documented on the day preceding the storm. Another aspect to consider is turtle activity peaks during periods around the full and new moon. June's full moon will occur on 6/12, and the new moon on 6/27. With this in mind, my prediction could be a meager one.

Tropical storm Allison roared through the Dry Tortugas on 6/4 and 6/5 bringing with her 40-50 mph winds, with gusts up to 60 mph. As can be expected, a tragic 51 nests were inundated with salt water, and an additional 13 were washed away. A large percentage of the salt water inundated nests were at or near the vegetation line. I'm hoping the higher elevation and minimal exposure to saltwater didn't hinder the development of many nests. If no emergence is detected, after 70 days I will probe the nests and excavate to conduct the nest success evaluation.

Five green turtle nests have been documented in the park, with the remaining nests being loggerheads. Crawl widths of 25 to 28 inches were recorded on about a dozen of the crawls. Hatchling scute patterns will be closely monitored on these in the event hawksbills are also nesting in the park. On the high end of the spectrum I anticipate between 800 - 1,000 crawls for the park in 1995. Considering we're at 300 in our fifth week, with peak season and 11 more weeks of nesting ahead, it doesn't seem unreasonable.

PREVIOUS TURTLE RESEARCH
1979 - 1994

- 1979- June 11 - 5 enormous crawls on Hospital Key.
Activity in coral rubble on SW side of Long Key.
- 1980- 7/11 - 7/16
- 1981- 7/8 - 7/10 7/12 - 7/14 8/3
- 1982- 97 crawls resulted in 29 nests.
First - 5/17 Last - 8/3
6/25 - 6/29 night surveys conducted
30% of activity resulted in nests.
- 1983- 214 crawls resulted in 95 nests.
First - 5/12 Last - 8/21
95 divided by 4 nests per season = 24 female loggerheads.
Average nesting interval 13 days. Only 4 nests excavated.
EAST KEY - 18 females tagged. 1 green and 17 loggerheads.
26 loggerhead clutches counted and 1 green (135 eggs).
Average clutch for loggerheads = 99 range: 55 - 138.
East key was surveyed every night from 6/1 - 7/15 during
peak season when theoretically 100% of females should've
been intercepted. 17 of 45 nights without activity!
57 nests on East Key. 44% of activity resulted in nests.
- 1984- 118 crawls resulted in 59 nests.
First - 5/12 Last - 8/21
Average nesting interval is 13 days.
21 loggerhead nests counted.
Average clutch for loggerheads = 115 range: 75 - 162.
East Key - 15 females tagged, no greens.
Night surveys conducted 730pm-3am from 5/16 to 7/10.
1 loggerhead nested 4 times while 6 nested 3 times.
50% of activity resulted in nests.
Two turtles nested in the day with crawl widths of:
29", 22", and 21".
- 1985- 99 crawls resulted in 44 nests. Surveyed 5/12 - 7/2
12 loggerheads and 1 green were tagged on East key.
45% of activity resulted in nests.
- 80-85 Population Estimate
83 - 18 tagged
84 - 15 tagged Researchers considered 39 - 40 female
85 - 13 tagged loggerheads a conservative estimate.
- 1988- June to August 203 crawls documented
- | Bush | Loggerhead | EAST | HOSPITAL | |
|----------|--------------|-----------------|----------|-----|
| 6/20 - 2 | 6/19 - 3 | 6/19 - 24 | 6/29 - 4 | |
| Garden | 6/29 -14 | 6/29 - 44 | 7/10 - 2 | = 6 |
| 7/11 - 3 | 7/10 -16 =59 | 7/10 - 31 | | |
| 8/2 - 2 | 7/24 -26 | 7/25 - 32 = 131 | | |

- 1991 - June - November 165 crawls resulted in 25 nests
First - 6/18 Last - 8/15 Hatchlings 6/21
Loggerhead - 69 crawls resulted in 16 nests.
East - 94 crawls resulted in 8 nests.
Bush - 2 crawls resulted in 1 nests.
- 1992 - Loggerhead - 85 crawls East - 132 crawls
First 5/20 First 5/6
Last 7/29 Last 8/2
Many weeks the islands were only visited twice.
Garden key had a nest in the moat by north beach.
Bush key had 12 crawls by 7/31 Hospital 2 crawls.
80 crawls made after 7/15.
- 1993 - Loggerhead - 84 crawls East - 156 crawls
First 5/18 11 nests First 5/6 27 nests
Last 8/8 Last 7/24
Garden key had 2 crawls and Hospital had 4.
May - 7 surveys resulted in 35 crawls
June - 14 surveys resulted in 125 crawls
July - 6 surveys resulted in 70 crawls
Only 9 crawls were documented on loggerhead key
between 7/26 and 8/8 by the Saddlers.
- 1994 - 164 crawls resulted in 72 nests.
First - 5/1 Last - 8/24
44% of documented activity resulted in crawls.