



## 30th Sea Turtle Symposium

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### Abstract Preview

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### TAGGING SATURATION PROGRAM OF NESTING HAWKSBILL TURTLES (*ERETMOCHELYS IMBRICATA*) IN THE NORTHEASTERN BRAZIL

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The southeast coastline of the state of Rio Grande do Norte Brazil (6°13'40"S, 35°03'05"W) is protected by Projeto Tamar/ICMBio, the Brazilian sea turtle program since 2000. Tagging of nesting hawksbill turtles started in 2004/2005 with random effort. Tagging saturation effort (TSE) started on the 10th December and ended 17 days later with no nesting activity, and were resumed in the nesting seasons of 2006/2007, 2007/2008 and 2008/2009. Beach area of 4km total was monitored every 40 minutes, starting at 7pm ending at 4:30am. Furthermore, morning patrols were conducted daily starting on the 15th September until the eclosion of the last nest. The nesting season lasts from October to May; however the period between January and March concentrates 84% of nesting activity. Average clutch size was 138 +/- 31.6 eggs (range 6 – 259 eggs; N = 696). In situ nests presented average emergence success of 57.5 % (N = 623) and average incubation period of 57.6 +/- 3.77 days (range 50 – 73 days; N = 386). During the three nesting seasons (2006/2007, 2007/2008 and 2008/2009) 48, 31 and 53 respectively nesting females were identified and the number of nests was 113, 84 and 133. In the first season 5 remigrants were found (tagged during the past random effort - PRE), followed by 7 remigrants in the second (still from PRE) and finally by 24 remigrants in the last (22 remigrants from the first TSE – 2006/2007 cohort, plus two remigrants from PRE). 33 females returned within two years and three within three years which average remigration interval results in 729 +/- 105 days (range 654 – 1076 days; N = 36). As the lower remigration interval was two years, the 2008/2009 nesting season represents the zero point for the comparison between the cohorts. Out of 48 females (2006/2007 cohort), 21 returned to nest within 4 km in extension and one was found during a random effort approximately 45 km Northward, at Barreira do Inferno beach, where did set then. The curve carapace length was 0.92 +/- 0.04 m (range 0.83 – 1.025 m, N = 89). Average first post-oviposition mass was 79.6 +/- 11.3 kg (range 56.2 – 105.7 kg; N = 72). Individuals laid one to six clutches, the average was 2.48 +/- 1.65 clutches (N = 132) and 47% of females was seen only once within nesting

season. Average internidal interval was 14.8 +/- 1.4 days (range 12 – 18 days, N = 122), excluding from the analysis all intervals >23 days, which was attributed to unobserved nesting events. Internidal intervals greater than 23 days were observed 58 times which could indicate that individuals are also using adjacent areas. Despite the possible use of adjacent areas by nesting females, the internidal interval pattern can work as correction factor to estimate clutches per individual. Even under this assumption, a concomitant effort to identify nesting females in the adjacent beaches may contribute to more precise estimate number of clutches per individual.

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