

HOME RANGE FOR NESTING HAWKSBILL TURTLES IN BRAZIL: NEW INSIGHTS THROUGH SATELLITE TELEMETRY**Claudio Bellini | Erik Allan Pinheiro Santos | Renata Ramos | Maria Angela Marcovaldi | Armando José Barsante Santos**

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The Rio Grande do Norte state, Brazil, hosts the highest nesting density of hawksbill turtles in the South Atlantic (05°53'19"S-06°22'13"S). During the nesting seasons 2014/2015, 2015/2016 and 2016/2017 respectively 12, 12 and 4 PTTs were attached to nesting hawksbill turtles in order to investigate its spatial ecology. The last cohort includes one female that was tracked in the first campaign. The average duration of PTTs was 172 d (range 16-531 d), however four are still transmitting. From 28 PTTs, one stopped tracking when still in the interesting area (16 d) and two during its migrations to the south (36 d) and the other to the north coast of Brazil (70 d); this three as well as the four that still active were excluded of further analysis. Home range size areas were defined based on the Kernel Density Estimation (KDE) with HRef as smoothing parameter for the maximum distribution (90%), as well as its core (50%). Considering all females together, the interesting area was close to the nesting beach within the continental shelf with maximum distribution of 1225 km² (mainly up to 50 meters deep), with a core area of 201 km², where they did spend in average 31 d, ranging 1 to 65 d. Migration to foraging grounds took from less than 24 hours to 28 days, with average distance of 453 km (range 17-2182 km). Six females with migration duration up to 1 d were considered residents, with average distance of 41 km (range 17 to 78 km) between tagging site and foraging destination. For those six turtles the forage use area shows a partially overlap with the interesting area. This group includes the female that was tracked twice (in 14/2015 and 16/2017); despite still transmitting we could check that this turtle in 16/2017 nesting season stayed in the same interesting/foraging site previously recorded. Nine females spent from 2 to 28 d migrating northward, an average distance of 839 km (range 82-2182 km), stationing off the states of Rio Grande do Norte (2), Ceará (5), Maranhão (1) and Pará (1). Six females spent from 2 to 17 d migrating southward, an average distance of 288 km (range 93-758 km), with forage areas located off the states of Paraíba (3), Pernambuco (2) and Sergipe (1). The average home range size area of foraging site showed maximum distribution of 100 km² (range 54-187 km²) with a core of 16 km² (range 6-53 km²). These findings demonstrate a behavioral variety regarding migration strategies, where some individuals, remain close to the nesting site. Individuals migrating northward showed the longest migrations, up to 2182 km and the southward group up to 758 km, however all individuals always remained within the continental shelf. From 21 individuals with forage grounds detected only three settled at marine protected areas (APA Costa dos Corais; APA Recifes de Corais; PARNA Parcel de Manuel Luís). The knowledge of home ranges as well as migratory corridor for the Critically Endangered hawksbill turtle is essential to address conservation strategies.