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ORIGIN AND FORAGING ECOLOGY OF MALE LOGGERHEAD TURTLES REVEALED BY GENETIC AND STABLE ISOTOPE ANALYSIS

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The Southwestern Atlantic Ocean (SAO) represents an important foraging ground for loggerhead sea turtles (*Caretta caretta*) at different life stages. However, most studies have focused on adult females and juveniles, and little is known about males. This study aimed to infer natal origins and feeding ecology of male loggerhead turtles from a southern Brazil foraging ground through genetic and stable isotope analysis (SIA). For both approaches, skin samples were obtained from 12 male loggerhead washed ashore along the southern coast of Rio Grande do Sul state. Their curve carapace length ranged from 74.5 to 111 cm (mean = 98.1 ± 9.45 cm). Additionally, samples of potential food sources (the crustaceans *Loxopagurus* sp., *Dardanus* sp., and the cephalopod *Dorytheuthis plei*) were collected for SIA. For DNA analysis, a fragment of the mtDNA control region (740pb) was sequenced and classified according to the Archie Carr Center for Sea Turtle Research database. A Bayesian stable isotope mixing model (SIAR) was fitted to stable isotope data to estimate the relative contribution of different food sources assimilated by males. Two haplotypes from Brazilian reproductive populations were identified (CC-A4.1 and CC-A4.2), indicating that males are from Brazilian lineages. $\delta^{13}\text{C}$ values ranged from -16.36 to -12.14‰ ($-14.51\% \pm 1.14$), indicating that these individuals move between the neritic and oceanic areas. $\delta^{15}\text{N}$ values ranged from 10.69 to 17.74‰ ($15.59\% \pm 1.72$), suggesting that males are feeding at high trophic levels. SIAR demonstrated consistent foraging behaviour among individuals, with the main food source being *Loxopagurus* sp. (32.9-83.2%), followed by *D. plei* (4.7-54.4%) and *Dardanus* sp. (0.5-32.2%). These data corroborate studies developed in SAO with loggerheads, which identified high contribution of Brazilian colonies to foraging aggregates and observed a carnivorous diet of benthic organisms at neritic zones.

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