

## SEA TURTLE HYBRIDIZATION IN BRAZIL: WHAT DO WE KNOW?

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The Brazilian hawksbill, *Eretmochelys imbricata*, nesting population is the largest known population in the South Atlantic. It is endangered and under pressure, especially from coastal development. Its distinctiveness has been revealed by genetic analyses, making it a priority for conservation. The loggerhead turtle, *Caretta caretta*, is also considered endangered and faces the same conservation challenges in its nesting areas. Brazil supports the largest loggerhead colony in Latin America, and it is also genetically unique. In the main hawksbill and loggerhead nesting areas, in the state of Bahia, a hybridization and introgression process between these two species has been monitored for the past few years. The unusually high (more than 40%) proportion of hybrids in this population is apparently unique and may represent a serious conservation concern for both parental species. Projeto TAMAR (The Brazilian Sea Turtle Research and Conservation Program) has conducted standardized field monitoring for the past 30 years. They have had great success, as indicated by the increasing trend in the populations of these two species. TAMAR has also conducted experiments to understand sea turtle migratory behaviour. Satellite transmitters were attached to 15 turtles: 6 hybrids and 9 “pure” hawksbills. Tagged hybrids presented a distinct migratory behaviour from “pure” individuals, suggesting a genetic component in migratory patterns and the need for different conservation and management measures (Marcovaldi *et al*, 2009). By using TAMAR’s database, and collecting new information (in collaboration with TAMAR), we intend to study the biology of the hybrids and to evaluate potential depensation in these populations. What happens when a population gets to a very low level? Is hybridization more common because of lack of suitable mates? What are the patterns in reproductive output (remigration interval, clutch size, hatching success, clutch frequency), and female and hatchling body sizes between hybrids and parental species? In addition, we will evaluate movements from more satellite telemetry, foraging ecology from stable isotopes, and deeper genetic relationships for comparisons between the parental species and their hybrids. The expected results should give us important information to better understand hybridization patterns and implement appropriate conservation and management measures.

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## CONTRIBUTION TO THE CONSERVATION AND PROTECTION OF THE MARINE TURTLE IN PLAYA CEUTA SINALOA MEXICO 1991-2009

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Human activities related with marine turtles in nesting beaches cause mortalities, in all stages of their development (females nesting, eggs, turtle hatchlings, youthful and adult). They are vulnerable to diverse potentially lethal interactions; these include direct predation and modification of the habitat. Sea turtles programs exist to implement and support investigations that promote the restoration and survival of sea turtle populations, furthermore involving the