

(*Lepidochelys olivacea*), nests were relocated using a density of 2 nests/m<sup>2</sup>. During the five seasons, 41 different leatherback females were tagged using Microchips (PIT Tags). They laid 235 nests, 222 (94%) of which were protected. During season 2006-2007 seven of the fourteen females identified were remigrants (tagged within the past three to four years). This finding confirms the importance of the beach in providing a small but important nesting colony, which leads to high beach fidelity. This presentation aims to expose the results obtained during five years of a leatherback nesting beach monitoring and hatchery operation work in the Pacific coast of Nicaragua as well as perspectives for future interventions of conservation initiatives targeting this species in Nicaragua.

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## FACTORS AFFECTING HATCHING AND EMERGENCE SUCCESS AT TWO IMPORTANT LOGGERHEAD TURTLE (*CARETTA CARETTA*) NESTING BEACHES IN WESTERN AUSTRALIA

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The loggerhead turtle (*Caretta caretta*) nesting population in Western Australia is estimated to consist of about 1,500 females, and is consequently the largest nesting population in Australia. However, while the Eastern Australian stock has been extensively studied and monitored since 1968, no long-term data is available for any Western Australian index beach. Dirk Hartog Island, within the Shark Bay World Heritage Area (Gascoyne region), is by far the largest loggerhead turtle nesting ground in Australia and current data suggests that loggerhead turtles nesting at Dirk Hartog Island represent 70-75% of nesting loggerheads found in the whole Eastern Indian Ocean. This study aims to assess several biotic and abiotic factors affecting hatching and emergence success in two loggerhead turtle nesting beaches in Western Australia: Turtle Bay on Dirk Hartog Island and the smaller mainland nesting beach located at the Bungelup section of Cape Range National Park (North West Cape Peninsula, Pilbara region). Nest temperature, nest position across and along the beach, other environmental parameters, nest characteristics, nest predation and nesting female health parameters have been correlated to hatching and emergence success, as well as to the prevalence of embryonic and hatchling deformities. The preliminary results of the data collected during the nesting season 2006-2007 will be presented and discussed. First results show that in Cape Range National Park nest predation by ghost crabs (*Ocypode* spp), monitor lizards (*Varanus giganteus*) and feral European red foxes (*Vulpes vulpes*) considerably reduces hatching and emergence success. In fact, 76% of the monitored nests showed signs of nest predation. Nests with signs of confirmed and suspected predation in Cape Range National Park had a statistically significant smaller clutch size at excavation than nests without any signs of predation (P=0.003). Further investigations will be necessary during the next nesting seasons to better understand the impact of introduced and natural predators and assess the success of the ongoing fox baiting program, so that appropriate management actions can be undertaken. In contrast, Dirk Hartog Island is fox free and natural predators as well as the only introduced predator, the feral cat (*Felis catus*), have only a limited impact on hatching and emergence success. However, nest position across the beach and other environmental parameters seemed to significantly influence both hatching and emergence success. To conclude, this study takes an important first step towards obtaining crucial information on loggerhead turtle nest ecology and nesting turtle health in this region. Acknowledgements: Funding for this study has been provided by BHP-Billiton, The Department of Environment and Conservation and The Hermon Slade Foundation. ST gratefully acknowledges travel support from Project GLOBAL, Disney Animal Kingdom, Western Pacific Regional Fisheries Management Council, U.S. National Marine Fisheries Service, U.S. Fish and Wildlife Service (Marine Turtle Conservation Fund), David and Lucille Packard Foundation, and the Sandler Family Foundation, Carlos Peralta Quintero and Robert N. Allen, Jr., the Sea Turtle Symposium and the Murdoch University Veterinary Trust (Weston-Fernie Research Fund).