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## Health assessment of Loggerhead turtles (*Caretta caretta*): nesting females and hatchlings

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Most of the existing sea turtle populations world wide are in decline. This has been largely attributed to anthropogenic factors such as coastal development, poaching, fisheries by-catch, climate change and pollution. Loggerhead turtles (*Caretta caretta*) are listed as endangered (IUCN, 2006). The loggerhead nesting population in Western Australia is estimated to consist of about 1500 females, and is consequently the largest nesting population in Australia and one of the largest in the Indian Ocean (Baldwin et al. 2003). However, no long-term census data is available for any Western Australian index beach. Similarly, there is an amazing deficit of information on the causes of mortality in hatchlings in the nest, in particular on embryonic death due to infection by bacteria, fungi or viruses. The purpose of this study was to collect critical baseline data and establish a health database on two important loggerhead turtle nesting populations in Western Australia, Dirk Hartog Island (Shark Bay) and Bungelup beach in Cape Range National Park (Ningaloo region). Nesting female loggerheads from Western Australia were examined and their barnacle load, haematology, plasma biochemistry and blood toxin levels were recorded. To examine the causes of hatchling mortality, the embryos from unhatched eggs were evaluated for developmental stage and deformities were classified and recorded. Egg content was frozen for future toxin examination and both embryos and dead full-term hatchlings were placed in 10% buffered formalin for histopathological examination. The general clinical condition of the 69 turtles examined in this study was rated as good. A range of deformities were identified and the trends have been correlated with several nest and clutch parameters. To conclude, the results of this study enhance general knowledge with regards to health and reproduction of loggerhead sea turtles in Western Australia; and provide fundamental information for management policies and conservation initiatives aimed at conserving these sea turtle populations.

### References:

Baldwin R, Hughes GR, Prince RIT, 2003, Loggerhead turtles in the Indian Ocean. In: Bolten AB, Witherington BE (Eds) *Loggerhead sea turtles*. Smithsonian Books, Washington, DC, p 218–232.

IUCN 2006. *2006 IUCN Red List of Threatened Species*. [www.iucnredlist.org](http://www.iucnredlist.org). Downloaded on 27 June 2006.