

Distribution and conservation status of crocodiles in Sian Ka'an Biosphere Reserve, Quintana Roo, Mexico: preliminary data

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Abstract: Biological monitoring allows to know the state of wild populations and generate guidelines for the species conservation. Two species of crocodiles, *Crocodylus acutus* and *C. moreletii*, inhabit the Sian Ka'an Biosphere Reserve (SKBR), during every stage of their life cycle. Some areas occupied by crocodiles in Sian Ka'an often are used by humans, in which several economic/tourist activities take place. This study addresses the distribution and occupation zones of crocodiles in the SKBR, specifically in Ascension Bay and the associated lagoon system. We conducted diurnal surveys and three nocturnal counts of crocodiles, as well as opportunistic records during August-October 2019. Additionally, we conducted 19 interviews to local inhabitants in order to collect information regarding distribution, seasonality and local perception on the crocodile species. We recorded a total of 30 crocodiles (three in August, 19 in September and eight in October). From spotlight surveys, we obtained an encounter rate of 0.36 ind/km in September, and 0.4 ind/km in October. As a result of daytime surveys, 10 individuals were observed, including one dead (adult female *C. acutus*). The interviewees provided information on sighting (n=17) and nesting (n=11) areas, with a highest mention frequency for eight sighting, and three nesting areas. These preliminary results may facilitate the management and conservation of critical areas for crocodiles in SKBR. The waterways areas along the lagoons stand out as important sites for both species; however, this area has the highest boat traffic, this may represent a danger for individuals who cross from one shore to another. In addition, it seems necessary to deepen whether tourist activities influence crocodile populations in the SKBR.

Keywords: *Crocodylus acutus*, *Crocodylus moreletii*, Spatial ecology, Human-crocodile interactions

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