Abstract

The American crocodile, Crocodylus acutus, is widely distributed in the American neotropics. It is endangered throughout most of its range and is listed as vulnerable by the International Union for the Conservation of Natural Fauna and Flora (IUCN) and on Appendix I of the Convention for the International Trade in Endangered Species of Wild Flora and Fauna (CITES). Despite this listing, there are few published reports on population status throughout most of its range. We investigated the status of the C. acutus, at several locations along the Pacific coast of Costa Rica. We carried out spotlight and nesting surveys from 2007-2009 along the Costa Rican Pacific coast in four distinct areas, coastal areas of Las Baulas (N=40) and Santa Rosa (N=9) National Parks and the Osa Conservation Area (N=13), and upriver in Palo Verde National Park (N=11). We recorded crocodile locations and standard environmental data at each observation. Encounter rates, population structure, distribution within each area and data on successful nesting (presence of hatchlings, nests, etc) were determined. We attempted to capture all crocodiles to record standard morphometrics. A total of 586 crocodiles were observed along 185.8km of survey route. The majority of animals encountered (54.9%) were either hatchlings (<0.5m) or juveniles (0.5-1.25m). The average non-hatchling encounter rate per survey for the Pacific coast was 3.1 crocodiles/km, with individual encounter rates ranging from 1.2 crocodiles/km to 4.3 crocodiles/ km in Las Baulas National Park and the Osa Conservation Area respectively. Distribution of size classes within the individual locations did not differ with the exception of Santa Rosa and Las Baulas National Parks, where hatchlings were found in water with lower salinities. These were the first systematic surveys in several of the areas studied and additional work is needed to further characterize the American crocodile population in Costa Rica.Rev. Biol. Trop. 60 (4): 1889-1901. Epub 2012 December 01.

Keywords

American crocodile, Crocodylus acutus, Costa Rica, encounter rates, population surveys, size class distribution.