

Successful hatching and survival of the American crocodile *Crocodylus acutus* at Sumidero Canyon National Park (SCNP), Chiapas, Mexico

Yessenia Sarmiento Marina*^{1,4}; Edgar Sarmiento Marina² y Luis Sigler³

¹Estudiante-Posgrado en Ciencias Biológicas y Conservación de Ecosistemas Tropicales, Universidad de Ciencias y Artes de Chiapas (UNICACH). (yessenia.marina@gmail.com)

²Reserva de la Biosfera La Encrucijada. (edgar.sarmiento@conanp.gob.mx)

³The Dallas World Aquarium, Texas, EE.UU. (luis@dwazoo.com)

⁴YEDMALIM A.C.-Conservación y Gestión Ambiental de los Recursos Naturales, Chiapas, México (yedmalim.ac@gmail.com)

Abstract: The nesting process is the most vulnerable stage of the life cycle of crocodiles, therefore, it is important to consider the reproductive phase and reproductive success, since it can be affected by natural and anthropic factors. The objective was to identify and characterize the nesting areas of the American crocodile (*Crocodylus acutus*) in the Sumidero Canyon National Park (SCNP), Chiapas, Mexico. The activities were carried out in 2017 and 2018. The coordinates of each nest, diameter (cm), incubation chamber depth (cm), egg chamber temperature (° C), distance from the nest to the shore of water (m) and percentage of shade were recorded. For the reviewed nests, the total number of eggs, major and minor diameter (mm), weight (gr) and conditions of each egg (fertile, infertile or cracked but viable) were counted. In 2017, 14 active nests were located, 9 in the “El Tomatal” zone totalizing 47 eggs (25 fertile, 14 infertile and 8 cracked but viable). The remaining five nests were located on the banks of the river by detecting groups of hatchlings. In 2018, 17 active nests were found, 8 in the “El Tomatal” zone totalizing 146 eggs (121 fertile, 12 infertile and 12 cracked but viable), one nest on the Island of Cahuaré with 45 eggs (29 fertile, 2 infertile and 14 fissures but viable) and the remaining eight located on the banks of the river by detecting groups of hatchlings. Hatchlings were captured and marked every year: 82 in 2017, and 178 in 2018; 13 hatchlings had atypical coloration. Although the nests were active, productivity was low compared to previous years, looted nests and infertile eggs were found. The decrease in hatchlings is affected by predation, waves produced by tourist boats and illegal looting. It is recommended to continue monitoring crocodiles and strengthen surveillance in nesting areas.

Keywords: American crocodile, SCNP, Nests, Fertile, Infertile

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