

## The crocodile's population of La Manzanilla, Jalisco, México

Helios Hernández\*<sup>1</sup>, Pablo Simitrius Hernández<sup>2</sup>, José Martínez<sup>3</sup>, Primitivo González<sup>4</sup>, Daniel Robles<sup>5</sup>, Sergio Aguilar<sup>6</sup> and Isabel Cárdenas<sup>7</sup>

<sup>1,2,5</sup> Reptilario Cipactli. Department of Biological Sciences, Centro Universitario de la Costa, Universidad de Guadalajara. Av. Universidad #203 C.P. 48280, Puerto Vallarta, Jalisco, México. (helios.croc@gmail.com; pabloshh08@gmail.com)

<sup>3,4</sup> Cocodrilario La Manzanilla, Ejido La Manzanilla, Jalisco, México. (ejido\_lamanzanilla@hotmail.com)

<sup>6</sup> Facultad FCBA, U. de C. Autopista Colima-Manzanillo Km 40, La Estación, CP. 28930, Tecomán, Colima, México y UMA Centro Ecológico de Cuyutlán "El Tortugario", Av. López Mateos S/N, Poblado de Cuyutlán, CP. 28350, Armería, Colima, México. (saguilar14@ucol.mx)

<sup>7</sup> Vallarta Whales, Puerto Vallarta, Jalisco, México. ([vallartawhales@gmail.com](mailto:vallartawhales@gmail.com))

**Abstract:** La Manzanilla is a coastal village in the municipality of La Huerta, Jalisco, México, where there is a coastal lagoon of 200 hectares with a main channel of 3.5 km, dominant vegetation is mangrove forest and tropical deciduous forest. The population is 1500 people, and the land is administrated by the community through Ejido La Manzanilla. In this research the crocodile's population was estimated during two periods, first one was from 2001 to 2002 and the second was from 2017 to 2018. In the first period the population was estimated as  $N=103.13$  and average meeting rate of  $15 \text{ org} \cdot \text{km}$ , in the second period the estimation was  $N=709.23$  and average meeting rate of  $78.77 \text{ org} \cdot \text{km}$ . Six size classes were found every 60 cm, Classes I, II, III, IV, V and one undetermined. There were not differences between periods ( $P=0.69$ ), however, in the period 2017.2018 were differences ( $P=0.0003$ ) among classes, the Tukey test showed that Class II is different ( $P<0.05$ ) from Classes I, III, IV, V and the untermiated one. Biologically this Class II reflects the new recruits of the population, and also the largest ( $N=417.8$ ). The crocodile's population increased due the management and conservation actions made by the community of La Manzanilla, some of the activities are protection of nests and offspring during last 20 years beside the restrictions to use in the crocodile's habitat and the ecotourism that visits the area.

**Keywords:** Crocodilians, Abundance, Population structure

**Type of Presentation:** Oral

**Thematic Area:** Research and Knowledge (Population *status*)