

# Population trend and perspectives of *Caiman crocodilus chiapasius*, in the La Encrucijada Biosphere Reserve, Chiapas, Mexico

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**Abstract:** *Caiman crocodilus chiapasius*, is the third species of crocodilian found in Mexican territory and the least studied, which should be considered a priority since the state of Chiapas and particularly the La Encrucijada Biosphere Reserve (REBIEN by its acronym in Spanish) are the only sites of their distribution in Mexico. The sampling effort of the Reserve and its monitoring over 20 years by different authors through monitoring in four transects within the REBIEN, generated enough data to describe general patterns of abundance, distribution and population trends. In 2016 we had the opportunity to perform monitors in these four transects, which allows us to define and endorse these patterns and determine the changes throughout all these years. This resulted in the abundance of the population of *C. c. chiapasius*, within the REBIEN, presents a downward trend which puts us on alert about its situation. Another factor to consider is that the sex ratio has a tendency towards males, so it is necessary to conduct studies of the temperatures at which the eggs are being incubated naturally to determine what could be the cause of this trend. Currently the problems of change and land use, habitat destruction, illegal hunting, fishing, pollution, climate change, as well as the increase in the incidence of contingencies (negative interactions) between the crocodilians and the human being put at risk the feasibility of coexistence of this species with the human being and the maintenance capacity of healthy alligator populations. Therefore, it is proposed to generate strategies for the protection and conservation of *C. c. chiapasius* in the REBIEN. It is essential to establish nesting management programs as it is the basis for the development of a conservation program and potential sustainable use, in addition to having updated and systematized information on the population ecology of *C. c. chiapasius*

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