



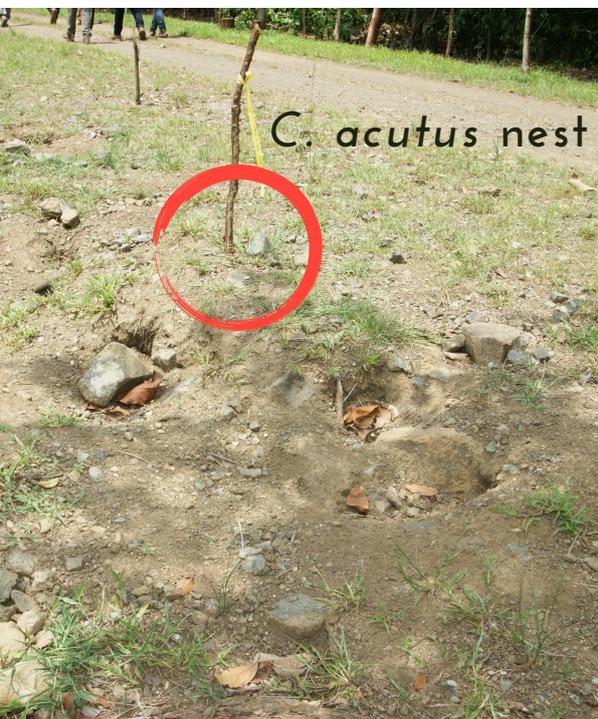
PROGRESS REPORT

ESTADO ACTUAL DE LAS POBLACIONES SILVESTRES DE *CROCODYLUS ACUTUS* (COCODRILO AMERICANO) Y SU INTERACCIÓN ANTROPOGENICA EN, IZABAL, GUATEMALA

By Valerie Andrea Corado Garcia

So far we've been monitoring for 4 months, March and April in Sarstoon River one week per month, in May we surveyed in Parque Nacional Río Dulce -PNRD- (three days) and Refugio de Vida Silvestre Bocas de Polochic -RVSBP- (two days) as a field trip recognition, lastly in June the survey was carried out one week in RVSBP. At the very beginning of the project was mainly focused on Sarstoon River, due to the low number of spotted individuals in this area during the night surveys, resulting in an encounter rate (ER) of 0.055 crocs/km, with a 20 hrs total monitoring at night covering 71.5 km of the river during these 2 months (March and April), and in order to achieve the objectives in the project proposal we decided to reach other distribution areas of the American crocodile.

Those areas are: i) Parque Nacional Rio Dulce, which is a biological corridor that connects Izabal Lake with the Caribbean Sea, host endangered species, such as: *Trichechus manatus*, *Allouata palliata*, *Kinosternon leucostomum*, *Crocodylus moreletii* (low presence of the species in the area), among others (Quan & Morales, 2004). Also, it works as an important area of species migration between nearby protected areas (Sierra Santa Cruz, Biotopo Chocón Machacas Cerro San Gil and Sarstoon river), and ii) The Refugio de Vida Silvestre Bocas de Polochic, which is a recognized as an important wetland by the international RAMSAR Convention. This wetland works as a buffer system that traps nutrients, sediments and pollution from the Cahabón and Polochic rivers. As a result, the contamination of the water produced by the industries and local people is reduced before flowing into Izabal Lake, Rio Dulce reaching to the Caribbean Sea (Defensores de la Naturaleza, 2021).



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The preliminary results show a low number of *Crocodylus acutus* individuals in the three study areas (Sarstoon River, PNRD and RVSBP) with a total of 44 crocodiles in 305 km mostly juveniles and sub-adults associated to grazing land and aquatic flora. In addition, nesting sites were identified in a Private Natural Reserve SETAL which had developed a conservation program since 2014 towards the species. This year (2021) the reserve counted approximately 500 neonates of *Crocodylus acutus*, but doesn't guarantee that all individuals reach their reproductive age; this allowed to build a scientific collaboration between the researches, involved in this project, and the Natural Reserve to promote scientific investigations and species conservation in a long term.

The night surveys had allowed to identify some potential risks for the crocodiles such as: i) high levels of human activities in the areas (e.g. cattle ranching, tourism and spearfishing at day and night); ii) fishing practices with gill nets and crab traps; iii) appearance of invasive-introduced species, such as *Oreochromis niloticus*; iv) presence of plastics (e.g. plastic bottles and bags) and hydrocarbons along the river; throughout the interviews we could determine other threats as hunting, direct attacks due to negative perception, domestic animals predation and incidental fishing. This interaction with the locals has enabled gather information about their perception toward the crocodiles, sighting and nesting sites, and knowledge about its ecological and economic relevance.

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The following map shows the routes of the three sites that has monitored in these four months. The red line shows Sarstoon river route, the yellow line shows the Parque Nacional Rio Dulce route, and the purple line shows RVS Bocas del Polochic route, each site shows the spotted crocodiles in the area.

