

Aestivation of the spectacled caiman *Caiman crocodilus* in Colombia

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In response to high temperatures and dry weather, some ectotherms may enter a period of inactivity, termed aestivation, where they slow their metabolism to conserve energy (Ganslosser, 2008). The precise behaviour shown may vary according to geographical location and prevailing conditions. For example, in Venezuela, it has been observed that some individuals of *C. crocodilus* restrict their movements and bury themselves in the mud when prevailing temperatures are high (Staton & Dixon, 1975). Whereas Medem (1981) stated that generally *C. crocodilus* usually either aestivate buried in mud or on the surface under leaf litter, bushes, and/or stubble during the day, or disperse to the nearest body of water on the Caribbean coast of Colombia. However, there is no specific information relating to how and when this process occurs and whether spectacled caiman stick with one of the strategies across the season (either aestivation or dispersal) or vary it depending on weather conditions. Herein, we report and detail the behaviour of a spectacled caiman aestivating in the Tayrona National Natural Park (TNNP), Department of Magdalena, on the Colombian Caribbean coast. The TNNP is characterised by low rainfall between December–April and July–August due to the north-easterly trade winds, making these the driest seasons (Parque Nacional Natural Tayrona, 2006).

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Observations were made in the Cañaveral area of the TNNP (11° 18'37.5" N, 73° 56'03.2" W). During July 2021 through January 2022, the movements and home range of 5 individuals of *C. crocodilus* were monitored using VHF radio telemetry across the TNNP (Bonilla-Liberato, 2022). One of the animals tracked was a female (132 cm total length) that was tracked until January 2022. Between November and January, rainfall was low, so the water body where the individual was found was reduced, and with it, the movements of the animal. From 28 December 2021 onwards, this individual restricted its activity, being observed in the same place during the three daily surveys until 9 January 2022. The female was slightly submerged in the mud at the edge of the water body, where the top of her head and nostrils were uncovered, making it difficult to locate her visually due to the colour of the water and the amount of mud in the area (Fig. 1). Through this time we noticed a change in her behaviour, with a notable reduction

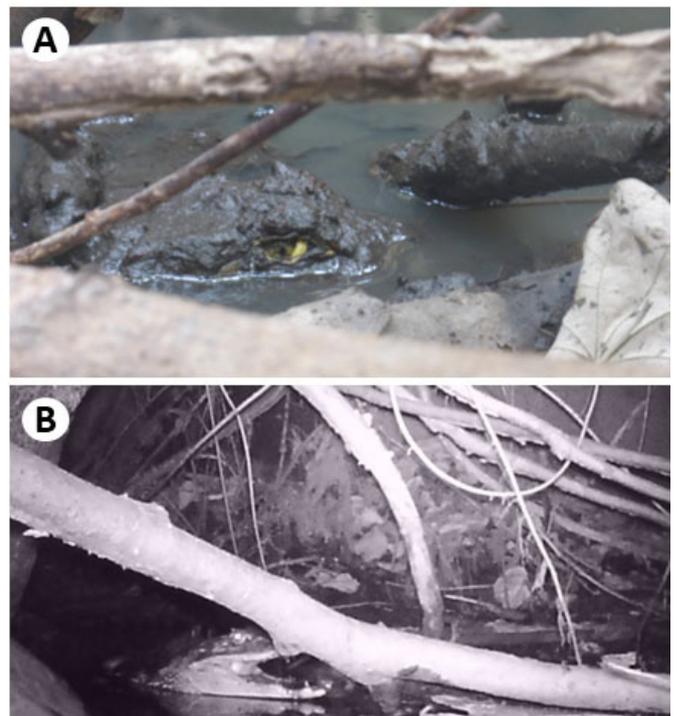


Figure 1. An aestivating female *Caiman crocodilus* in the Cañaveral sector of TNNP - **A.** During the day, **B.** At night photographed by camera trap

in wariness and aggressiveness to human presence and any other kind of disturbances generated (i.e. noise created by breaking branches and walking) but still responding when researchers mimicked hatchling distress calls. Prior to this period, the behaviour of this individual whenever researchers approached had been highly wary and aggressive.

To understand more in-depth this change in behaviour we deployed a camera trap (HC-001B trail hunting trap) for a period of three days. The camera trap revealed that the individual was actually more active during the night, moving around the remnant of the body of water. This was corroborated in morning inspections of the area where we found tracks of those movements across the surroundings of the remnant body of water, even though the individual otherwise remained inactive. After 9 January, we were unable to make any new records of this individual. However, no traces were found to suggest that the animal had been

predated in the area, so it was inferred that the individual had undertaken an exploratory movement in search of water bodies and food. Similarly, Medem (1981) reported that not all spectacled caimans aestivate, some of them may also migrate in search of rivers and streams, so the studied individual may have presented a compound behavioural pattern during the dry season (aestivation and dispersal). Our data provide confirmation of *C. crocodilus* aestivation for the Colombian Caribbean coast, as well as offering a preliminary insight into the behaviour that may occur in spectacled caimans during times of aestivation.

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