Crocodile Specialist Group

Student Research Assistance Scheme REPORT

PROJECT TITLE: SPATIAL TEMPORAL DYNAMICS OF A DWARF-CAIMAN (*Paleosuchus palpebrosus*) POPULATION IN THE BRAZILIAN CERRADO.

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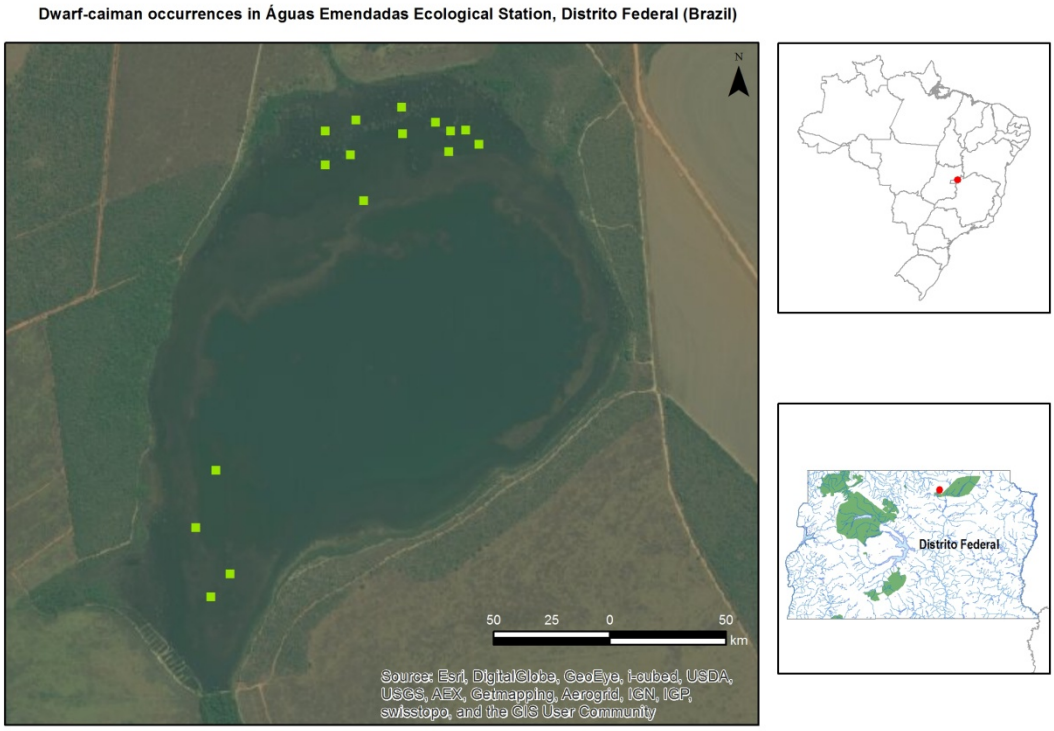
The dwarf-caiman (*Paleosuchus palpebrosus*) is one of the smallest and least-studied crocodilians in the World. Little is known about its habitat requirements, home ranges and movements (Campos et al 2013). Although it is not endangered at a broader scale, there is evidence that it may be threatened in some parts of its range, particularly in the Cerrado of central Brazil, which is under pressure due to water conflict, habitat degradation, deforestation, pollution and damming (Marinho-Filho et al 2010).

Since 2009, I studied the distribution and conservation status of the dwarf-caiman in the Cerrado. Through the course of the research, I identified some evidences such as new study sites and adopted methods to trap crocodilians in cerrado habitats (Carvalho & Batista, 2013). However, progress has been slow, because conventional capture techniques presented considerable limitations due to the rarity and elusiveness of the dwarf-caiman and environmental characteristics.

The present research aimed to implement a radio track study to investigate spatial and temporal features on dwarf caiman habitat use in a natural lagoon protected by Águas Emendadas Ecological Station.

This initiative was conducted in Bonita lagoon which is the main natural water body in Distrito Federal, Brazil. It is presents a 120ha area surrounded by some Brazilian savanna habitats associated to water presence, such as: moist grassy areas, palms and riparian forests.

Field activities consisted on spotlighting lagoon margins using an aluminum boat powered by an 5hp electric engine. All individuals captured were measured (Total Length - TL, snout-vent length - SVLand head length - HL), weighted and marked however only individuals larger than 1,2m received were tagged with VHF transmitters. We adopted cutting-scutes technique to mark all individuals, then tissue samples were send to the Coleção Herpetológica da Universidade de Brasília.



Between June and August 2014 17 dwarf caimans were captured, 11 males 3 females and 3 unidentified individuals. Dwarf caimans seemed to be concentrated in two main areas in that lagoon. Both places have aquatic habitats consisted of flooded vegetation and forests environments along margins. Individuals larger than 30cm SVL were always alone, at the same time a crèche were found at the same place three times observed by an adult female by far.

Two dwarf caiman adult female were tagged with VHF tags on the top of their tail. They ranged respectively 82cm and 79cm SVL and both weighted 14,5kg. The first adult was captured in June and the second one in August 2014(Figs. 1-2). Then, we started to relocate the animals at weekly intervals.

Unfortunately, monitoring was halted just one month later the second female received a VHF transmitter, because our main field equipment a aluminum motor boat was stolen. It happened in the Águas Emendadas Ecological Station which is a protected area with police patrol in its perimeter. This drawback has disrupted the continuity of fieldwork, because we have been unable to buy or borrow another boat after this episode.

During this period, 3 undergraduates were in contact with field techniques used on studying crocodilians.

Meanwhile, we lend the receiver and antenna funded by IdeaWild to another researcher (Lilian Bonjorne de Almeida, from the Center for Research and Conservation of Mammalian Carnivores, http://www4.icmbio.gov.br/cenap/, email: bonjorne@gmail.com). She is using the equipment in a study on the spatial ecology of *Puma concolor* in forest fragments of southeastern Brazil. Four VHF transmitters funded by CSG/IUCN were sent to Boris Marioni who is investing the same species in Brazilian Amazon forests.

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Literature Cited

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Figura 1 - Dwarf-caiman with attached radio transmitter at Águas Emendadas Ecological Station, Brazil.



Figura 2 - Detail of radio transmitter attached to Dwarf-caiman at Águas Emendadas Ecological Station, Brazil.



Figura 3 - Another radio transmitter (donated by SCG/IUCN) at Águas Emendadas Ecological Station, Brazil.



Figura 4 - Measuring procedures during dwarf caiman monitoring at Águas Emendadas Ecological Station.