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FIG. 1. Sarcophagid larvae in the aural cavity of an adult male *Terrapene carolina* from North Carolina, USA, following surgical incision and debridement of the abscess.

PHOTO BY DANIEL MEJIA



FIG. 2. Sarcophagid larva following removal from the aural cavity.

a perfect opportunity for the adult fly to deposit the larvae. This *T. c. carolina* recovered without incident and has been released where it was originally found.

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CROCODYLIA — CROCODILIANS

CAIMAN LATIROSTRIS (Broad-snouted Caiman). REPRODUCTION IN SOUTHERN BRAZIL. *Caiman latirostris* is a widely distributed species found in both natural and urbanized environments, although studies have indicated that urban expansion is one of its major threats in Brazil (Coutinho et al. 2013. Biodivers. Bras. 3:1320). The species' nests are mounds of vegetation located in forests, savannas, or on floating mats (Mourão and Campos 1995a. Biol. Conserv. 73:2731; Montini et al. 2006. Phylomedusa 5:9196) and the nesting period extends from December to March, with hatching been reported in early March (Campos and Mourão 1995b. Herpetol. Rev. 26:203204).

On the nights of 21 and 22 March 2015, during nocturnal spotlight count surveys of *C. latirostris* in a set of lagoons of the Tramandaí River Basin on the Coastal Plain of Rio Grande do Sul, Brazil, we captured, measured, and marked the two groups of hatchlings on a carpet of dense floating vegetation in the freshwater Fazenda Ipê Lagoon. The Fazenda Ipê is 23.87 ha², and is one of the 41 lagoons of the Tramandaí River Basin. The lagoon is 4 and 7 km, respectively, from the urban centers of Osório and Tramandaí municipalities, and is surrounded by native vegetation and non-native *Eucalyptus* plantations. The 21 March group consisted of 15 neonates (mean SVL = 13.37 cm ± 0.26 SD, mean total length = 27.37 cm ± 0.49 SD, mean mass = 3.42 g ± 0.29 SD) found along the northern edge of the lagoon (29.9195°S, 50.1959°W; WGS 84; 1 m elev.; Fig. 1), and the 22 March group consisted of 27 neonates (mean SVL = 12.46 cm ± 0.27 SD; mean total length 26.01 cm ± 0.54 SD; mean mass = 2.63 g ± 0.21 SD) found along the southern edge of the lagoon (29.9235°S, 50.1993°W; WGS 84; 1 m elev.; Fig. 1).

During a survey on 20 February 2015 in the lagoon, we detected juveniles, sub-adults and adult individuals, but no neonates; and according to the known reproductive period of the species, we believe the young we saw in March hatched within this interval (Campos and Mourão 1995b, *op. cit.*). Because neonates remain together close to the nest in sibling groups

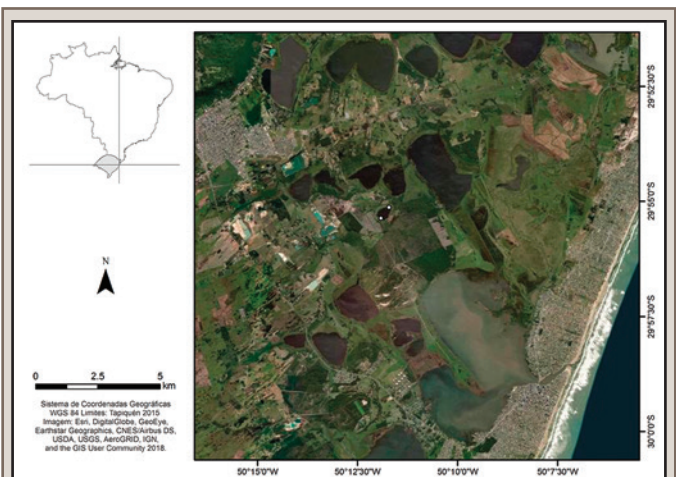


FIG. 1. Location of the two groups of *Caiman latirostris* hatchlings found (white circles) at the Lagoon Fazenda Ipê of the Tramandaí River Basin, Rio Grande do Sul, southern Brazil.

after hatching, their occurrence in the Fazenda Ipê Lagoon is evidence that at least two females nested in the vicinity of the lagoon (Borteiro et al. 2006. *Phyllomedusa* 5:97108; Eversole et al. 2018. *J. Urb. Ecol.* 2018:19).

This report is significant because it is the first observation of *C. latirostris* reproduction in the Tramandaí River Basin, a region under increasing urbanization. The sensitivity of this species to urbanization is an unknown threat, and continued monitoring is needed, especially in places that may harbor nests but remain unknown. This population is not under legal protection, unlike the closest known population (Melo 2002. *In Verdade and Larriera* [eds.], *La Conservación y el Manejo de Caimanes e Cocodrilos de América Latina*, pp. 119–125. CN Editora, Piracicaba, São Paulo, Brazil), which is being studied and inhabits a legally protected area on the south of the Rio Grande do Sul Coastal Plain, the Taim Ecological Station (Federal Law 9.985/2000).

All procedures described were registered in the National System of Biodiversity Information–SISBIO (ICMBio) with the authorization number 44234–1, and in Ethics Committee on the use of Animals–CEUA (UFRGS) with the number 27317. We thank Bruna Arbo Meneses for the map.

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CROCODYLUS ACUTUS (American Crocodile). HOMING. Crocodilians have well-developed homing abilities that include using the Earth's magnetic field (Rodda 1984. *J. Comp. Physiol. A* 154:649–658). This allows them to detect their position and orientation from displaced points outside area of familiarity, e.g., translocated juvenile crocodilians may be homeward oriented when released (Rodda 1984. *Behav. Ecol. Sociobiol.* 40:444–451). American Crocodile adults disperse through oceanic water as their sublingual salt glands are fully developed and functional (Mazzotti et al. 1989. *Amer. Zool.* 29:903–920), differently from juveniles who experience a physiological boundary for oceanic migration (Ellis 1981. *J. Herpetol.* 15:187–192). Young individuals exhibit smaller home ranges and move short distances. For example, 22-month-old radio-tagged *C. acutus* remained 700 m from the nest (Rodda 1984. *Herpetologica*. 40:444–451); a 3.5-year-old recaptured individual showed movements of 1.6 km from the nest; furthermore, homing behavior for translocated individuals is only known for adults and has not yet been reported for juveniles (Cupul-Magaña 2012. *Bol. Invest. Mar. Cost.* 41:479–483).

On 1 May 2019 a juvenile *C. acutus* (41.0 cm SVL, 37.2 cm tail length) was accidentally captured by fishermen in the Medihuaca River Delta, Departamento del Magdalena, Colombia (11.2754°N, 3.8599°W; WGS 84; 4 m elev.) and was turned over to the local environmental authority CORPAMAG. The animal was tagged with a microchip implanted under the nuchal rosette (#[900]113000077183), had its crest scales clipped with a unique identifier, and had a plastic tag (M1) attached. Later in the day, this individual was relocated at the wetland formed by Quebrada Valencia and Quebrada del Tigre (11.2544°N, 73.7907°W; WGS 84; 8 m elev.), 7.92 km from the capture site. Seven months later, on 1 December 2019, this individual was recaptured (49.5 cm SVL, 43.9 cm tail length, 2254 g) at its initial capture site in the Mendihuaca River Delta, having travelled at least 7.92 km from the relocation site.

To our knowledge this record is the longest homing movement reported for a juvenile *C. acutus*. Surrounding flood plains may have facilitated homing after translocation, during the wet season, freshwater paths are formed between the capture and release sites, allowing the tagged individual to navigate back home.

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PALEOSUCHUS PALPEBROSUS (Cuvier's Dwarf Caiman). NEONATE VOCALIZATION. Adult crocodilians reserve acoustic interactions for courtship and territorial protection events (Garrick et al. 1982. *Bull. Amer. Mus. Nat. Hist.* 160:53–192). In small caimans, these vocalizations are structurally basic and display few variations (Marler 1961. *J. Theor. Biol.* 1:295–317; Campbell 1973. *Zoologica* 58:1–11; Herzog and Burghardt 1977. *Zeitschrift für Tierpsychologie* 44:294–304). In neonate caimans, vocalizations are present even before egg hatching and are used to establish communication with both parents and siblings (Vergne and Mathevon 2008. *Current Biol.* 18:513–514). Among their vocal repertoire, an incubation call issued in association with an egg-hatching context and an agonistic call, of paramount importance in parental care, aiming at predator avoidance and other threats (Vergne et al. 2009. *Biol. Rev.* 84:391–411; Roberto and Botero-Arias 2013. *Zootaxa* 3647:593–596), have been reported.

Paleosuchus palpebrosus is a small South American crocodilian that exhibits parental care, where after nesting the young are usually accompanied by their mother and begin leaving the group at approximately twelve months of age (Campos et al. 2012. *J. Nat. Hist.* 46:2979–2984). Due the species' cryptic behavior there is a general lack of behavioral information (Campos et al. 2013. *J. Therm. Biol.* 38:20–23), especially for hatchlings. For example, hatchlings of some crocodilians have pre- and post-hatching calls that provide cues to the mother or siblings from a nest (Vergne et al. 2009. *Biol. Rev.* 84:391–411), but to our knowledge such vocalizations have not been reported in *P. palpebrosus*. Herein we report the first vocalizations in post-hatching *P. palpebrosus* from northeastern Brazil and compare their acoustic parameters with other crocodilians.

Data collection took place at the Dois Irmãos Reservoir located in the Dois Irmãos State Park (PEDI), in an Atlantic Rainforest fragment in the city of Recife, Pernambuco, Northeastern Brazil (8.0143°S, 34.9467°W; WGS 84; 10 m elev.). On 29 March 2015 we located a *P. palpebrosus* nest, constructed with leaves and branches, with 14 eggs near the water line along the shore of the reservoir. We monitored the nest until the 14 eggs successfully hatched on 8 May 2015 at ca. 1700 h (Correia et al. 2019. *Herpetol. Rev.* 50:778–779) and at this time heard the hatchlings emit vocalizations. We recorded eight different vocalizations from two hatchlings (measured with a digital pachymeter 0.1 mm; individual A: 21.3 cm total length, 33 g; individual B: 20.5 cm total length, 37 g) with a Marantz PMD 620 recorder coupled to a unidirectional Sennheiser ME 66 microphone configured at 44 KHz in 16 bits. At the time of recording relative humidity was 53% and air temperature was 30°C.

The acoustic data were analyzed using the Raven Pro 1.5 software (settings: DFT = 256, type = Hann; brightness and contrast = 50, standard values; Cornell Lab of Ornithology, USA).