

## SHORT COMMUNICATION

### PREDATION OR SCAVENGING OF GIANT OTTER (*Pteronura brasiliensis*) CUBS BY LIZARDS?

Fernando César WEBER ROSAS, Márcia Munick MENDES CABRAL,  
Gália Ely de MATTOS

Instituto Nacional de Pesquisas da Amazônia (INPA). Laboratório de Mamíferos Aquáticos. Caixa Postal 478. Manaus, AM, Brazil, 69011-970. e-mail: frosas@inpa.gov.br



(received 10<sup>th</sup> December 2008, accepted 28<sup>th</sup> January 2009)

**Citation:** Weber Rosas, F.C., Mendes Cabral, M.M. and Mattos, G.E. de (2008). Predation or Scavenging of Giant Otter (*Pteronura brasiliensis*) Cubs by Lizards? *IUCN Otter Spec. Group Bull.* 25 (1): 100 - 103

**Abstract:** Despite the fact that several species have been mentioned as being giant otter predators, there is no direct evidence of most of them actually preying on *P. brasiliensis*. In this study we report for the first time a lizard (*Tupinambis teguixin*), commonly known as a tegu, either preying or scavenging on a giant otter cub. We also present some interactions of free-ranging giant otters with other potential predators, showing that their interactions are not always negative.

**Keywords:** *Pteronura brasiliensis*, Amazon, *Tupinambis teguixin*, tegu

Natural predators of giant otters mentioned in the literature include the jaguar (*Panthera onca*), the puma (*Puma concolor*), the black caiman (*Melanosuchus niger*), the spectacled caiman (*Caiman yacare*), the anaconda (*Eunectes murinus*) and the white-lipped peccary (*Tayassu pecari*) (Duplax, 1980; Carter and Rosas, 1997). According to Schenck (1999), unattended giant otter cubs of a few weeks old can also be predated by ocelots (*Felis pardalis*), margays (*Felis wiedii*), jaguarondi (*Herpailurus yaguarondi*), American harpy eagles (*Harpia harpyja*), crested eagles (*Morphnus guianensis*), South American bushmasters (*Lachesis muta*), common lanceheads (*Bothrops atrox*) and collared peccaries (*Tayassu tajacu*). However, apart from a report of Brecht-Munn (1988) of black caimans attacking giant otters, there is no direct evidence reported in the literature of the other potential predators actually preying on *P. brasiliensis* while scavenging on dead bodies of any species is a common process.

During a seven-year project on giant otter biology and ecology developed in Balbina hydroelectric lake (01°55'17.3"S; 59°29'09.7"W) in the Central Brazilian

Amazon, we reported only once an encounter of four adult giant otters and an adult black caiman of about 4.5 meters long. The otters were swimming upriver when they found the black caiman partially submerged close to the river edge. The caiman tried to catch the otters, but they were very quick and managed to avoid its jaws. The giant otters then started teasing the caiman. While one otter approached the caiman from behind, the other three were swimming very close in front of it. The giant otters were acting as if it were a game. The caiman jumped toward the otters once or twice before giving up and left the water. Nevertheless, it was clear that the caiman was only trying to send the giant otters away, and not definitely acting as a predator at that moment.

On another occasion, also in Balbina hydroelectric lake, we found three newborn giant otter cubs screaming very loudly in the water, completely by themselves. They had probably rolled out of the den where they were born and fallen into the water. The three babies, still with the umbilical cord, were drowning and were barely able to keep their heads out of the water. We rescued the cubs, put them on the riverbank above the entrance of their den to dry in the sunshine, and crossed the river to the other bank before waiting to see if their family group would approach and take care of them. A few minutes later, however, we heard and observed two black caracara falcons (*Daptrius ater*) flying and crying above the young cubs. The caracaras were flying lower and lower in a threatening manner so we returned to make a hole on the bank just above the den and slipped the cubs into it to the interior of the den. Later on, the same day, the family group arrived and moved the cubs to another den. Despite the fact that the falcons did not actually attack the cubs due to our interference, it was quite clear that such young giant otter cubs are easy prey for those birds.

Cannibalism may be regarded as an extreme case of predation, and has been documented for *Pteronura brasiliensis* in the Brazilian Pantanal (Mourão and Carvalho, 2001). Agonistic behavior between different giant otter groups may, sometimes, result in the death of individuals and in these cases not only cubs, but also adults can be the victims (Schweizer, 1992; Rosas and de Mattos, 2003).

As has already been said, despite all the potential predators, there is very little direct evidence of predation on giant otters. In this paper, however, we report an unexpected case of a lizard preying on a giant otter cub, observed during a regular field trip to monitor giant otter groups and their dens in Balbina hydroelectric lake. In August 2008, during two consecutive days, an adult giant otter was seen inside a den throughout the day. Although the otter was unintentionally driven away by our nearby presence, there was always an adult otter in that den again the next day. It is well known that at least a portion if not all territory is patrolled by the giant otters each day starting shortly after dawn (Duplaix, 1980). Therefore, according to Rosas et al. (in press) the presence of an adult giant otter in the den during the day can be attributed to parental or alloparental care. However, despite spending long hours and days close to that den, not a single cub squeak was heard. Judging by the amount of new feces, tracks, humidity and trampled vegetation observed in front of the den, it was clear that the rest of the group had already left the burrow earlier in the morning. This situation was recorded during two consecutive days. Apart from the presence of an adult in the den, there were also more frequent giant otter movements in the water throughout that area than usual. As recommended by Rosas (2003), some branches were left close to the den's entrance in order to help decide if the den was in fact being used. On the third day, when we arrived in front of the same den again at 06h15am, we observed that it was still in use and all the branches placed the previous afternoon had been removed.

At 07h30am a giant otter was observed in the water, swimming towards the den without noticing our presence on the other edge of the river, where we were hidden among the trees of the flooded forest. This otter, however, did not climb the riverbank and after a few minutes left the area. At 11h10am a giant otter was seen in the water again, in front of the den, looking at it, but once again disappeared a few minutes later. Two hours later a giant otter was observed in the water swimming towards the same den again. When this otter started to get out of the water, it was surprised by something on the riverbank in front of the den and jumped back into the water. The otter's frightened reaction was caused by a lizard, which was leaving the den carrying a giant otter cub crosswise in its mouth. The lizard, identified as *Tupinambis teguixin*, commonly known as a tegu, was about 80cm long and started eating the giant otter cub. We crossed the river to get closer and record the event better, and the lizard left the cub on the riverbank and disappeared into the forest above the giant otter den. The cub was a male giant otter in the beginning of decomposition. Its fur was already gone, the tongue was extremely swollen and the tail had already been eaten by the lizard (Fig. 1). Despite the cub's decomposition, it was possible to observe that the eyes were still closed (Fig. 1). The animal's total length was 27cm (without the tail) and the total weight was 330g. Judging by the length and weight of other giant otter cubs mentioned in the literature (McTurk and Spelman, 2005), this was probably a newborn animal, not more than two weeks old.



**Figure 1.** The 27cm-long male giant otter cub, which was being eaten by a tegu lizard in Balbina hydroelectric lake. Note that the tail of the cub had already been eaten by the lizard. Photo: F. Rosas.

It is quite probable that the persistent presence of an adult giant otter seen during the two days before the lizard brought out the dead cub from the den was the mother or a baby-sitter, who was uncertain of the cub's death. Despite the high temperatures of the Amazon, the state of decomposition of the cub was not extremely advanced and the cub probably died no more than three days before we started monitoring the den.

Despite reptiles having been mentioned as potential predators of giant otters (Duplaix, 1980; Schenck, 1999) or even as prey items of some other otter species (e.g. Rossi-Santos, 2007, reported a Neotropical otter *Lontra longicaudis* preying on a lizard *Tupinambis meriannae* in southern Brazil), this is the first record of a lizard either preying or scavenging on a giant otter cub. It is not clear whether the lizard only

entered the den to take the cub because it was already dead, or if lizards can prey on live giant otter cubs as well if they are left unattended. Trying to solve this question is important for the ecology of giant otters and their potential predators but also important in understanding lizard food habits.

**Acknowledgements** - We thank Fundação O Boticário de Proteção à Natureza (Project N° 0719\_20062), Reserva Biológica Uatumã (ReBio Uatumã/IBAMA), Manaus Energia S.A. and CNPq Processo N°305892/2006-1, for financial and/or logistical support. We thank Kesä K. Lehti, who kindly revised the English version of the manuscript. We also thank the two anonymous referees who provided critical and insightful comments on the manuscript.

## REFERENCES

- Brecht-Munn, M. (1988).** The Amazon's gregarious giant otters. *Animal Kingdom*, **91**(5): 34-41.
- Carter, S.K. and Rosas, F.C.W. (1997).** Biology and Conservation of the Giant Otter, *Pteronura brasiliensis*. *Mamm. Rev.* **27**(1): 1-26.
- Duplaix, N. (1980). Observations on the ecology and behaviour of the giant otter *Pteronura brasiliensis* in Suriname. *Revue Ecol. (Terre Vie)*, **34**: 495-620.
- Mourão, G. and Carvalho, L. (2001).** Cannibalism among giant otters (*Pteronura brasiliensis*). *Mammalia*, **65**: 225-227.
- McTurk, D. and Spelman, L. (2005).** Hand-rearing and rehabilitation of orphaned wild giant otters, *Pteronura brasiliensis*, on the Rupununi River, Guyana, South America. *Zoo Biol.* **24**: 153-167.
- Rosas, F.C.W. (2003).** Técnicas de campo que podem auxiliar no estudo de populações naturais de ariranhas (*Pteronura brasiliensis*). *Boletim da Sociedade Brasileira de Mastozoologia*, **38**: 4.
- Rosas, F.C.W. and de Mattos, G.E. (2003).** Natural deaths of giant otters (*Pteronura brasiliensis*) in Balbina hydroelectric lake, Amazonas, Brazil. *IUCN OSG Bull.* **20**: 62-64.
- Rosas, F.C.W., Cabral, M.M.M., de Mattos, G.E. and Silva, R.E. (in press).** Parental and alloparental care of giant otters (*Pteronura brasiliensis*) in Balbina hydroelectric lake, Amazonas, Brazil. *Revista de Etologia (São Paulo)*.
- Rossi-Santos, M.R. (2007).** Sighting of an interaction between a Neotropical otter, *Lontra longicaudis* and a teju lizard, *Tupinambis merianae* in a lagoon ecosystem of southern Brazil. *IUCN OSG Bull.* **24**: 41-46.
- Schenck, C. (1999).** Lobo de Rio *Pteronura brasiliensis*. Presencia, uso del hábitat y protección en el Perú. INRENA. Disertación, Facultad de Biología, Universidad Ludwig-Maximilians, 176pp.
- Schweizer, J. (1992).** Ariranhas no Pantanal: Ecologia e comportamento da *Pteronura brasiliensis*. Edibran-Editora Brasil Natureza Ltda. Curitiba, Brasil. 202pp.

## RESUME

### DES LÉZARDS AGISSANT EN PRÉDATEURS OU CHAROGNARDS SUR DES LOUTRONS DE LOUTRES GÉANTES (*Pteronura brasiliensis*)?

Bien que plusieurs espèces soient mentionnées comme des prédatrices de loutres géantes, aucune d'entre elles n'a jamais été observée entrain d'attaquer *Pteronura brasiliensis*. Dans cette étude nous relatons pour la première fois un lézard (*Tupinambis teguixin*), plus communément appelé tégu commun, agissant en prédateur ou charognard sur des loutrons de loutre géantes. Nous présentons également quelques interactions entre des loutres géantes vagabondes et d'autres prédateurs potentiels démontrant que leurs interactions ne sont pas toujours négatives.

## RESUMEN

### PREDACIÓN O NECROFAGIA DE CRÍAS DE NUTRIA GIGANTE (*Pteronura brasiliensis*) POR LAGARTOS?

Se han mencionado algunas especies como posibles predadores de nutrias gigantes. Sin embargo, para la mayoría de ellas hasta el momento no existe evidencia directa de su actividad como predadores de *P. brasiliensis*. En este estudio, se reporta por primera vez al lagarto *Tupinambis teguixin*, comunmente conocido como "tegu", predando crías de nutria gigante. También se presentan algunas interacciones entre nutrias gigantes silvestres y otros predadores potenciales, mostrando que sus interacciones no siempre son negativas.