

SHORT COMMUNICATION

PREDATION EVENT ON *Iguana iguana* BY *Pteronura brasiliensis* IN THE MID TILLAVÁ RIVER BASIN, COLOMBIA

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Abstract: The Giant otter (*Pteronura brasiliensis*) is a semi-aquatic mammal listed as Endangered (EN) at national and international levels. On 20th April 2021, a *P. brasiliensis* was sighted and a video recorded the killing a Common green iguana (*Iguana iguana*). In this short note we report the first record of attack and consumption of iguana by giant otter and include the Giant otter in the list of the occasional predators of these widespread lizards in a tributary of Tillavá River, tributary of the Vichada River, department of Meta, Colombia.

Keywords: Occasional attack, prey, interspecific interaction, large lizard, Orinoco region.

INTRODUCTION

The Giant otter (*Pteronura brasiliensis* Zimmermann, 1780) is the largest freshwater otter in the world. In Colombia this monotypic and semi-aquatic carnivore inhabits the Orinoco and Amazon basins (Noonan et al., 2017; Duplaix et al., 2015; Trujillo et al., 2015). The giant otter is classified as Endangered (EN) at national and international levels (Groenendijk et al., 2015; Rodríguez-Mahecha et al., 2006; Trujillo et al., 2016). At national level threats include the retaliation of the fishermen by fishing resource, because the local people consider that the presence of this mammals decreases fish availability, or that they can remove fish from fishing nets, illegal traffic as pets, fishing overexploitation, and the mercury bioaccumulation in dam fishes by the illegal minery in the basin (Rodríguez-Mahecha et al., 2006; Trujillo et al., 2015). In particular, the Orinoco giant otter populations suffer additional pressures such as accelerated transformation of habitats, depletion of fish stocks and contamination of freshwater (Trujillo and Mosquera-Guerra, 2018).

The common Green Iguana, *Iguana iguana* (Linnaeus, 1758), is a widespread arboreal reptile that occurs from North of Mexico to Paraguay, including numerous islands (Bock, 2013; Bock et al., 2018). In tropical humid forest the iguanas appear to select the branches of trees where they can thermoregulate or rest near rivers, lakes and open areas into which they can escape when threatened (Bock, 2013; Oliveira and Castro, 2017).

METHODS

This record was obtained opportunistically as part of a study on river dolphins (*Inia geoffrensis*) and giant otter (*P. brasiliensis*) and their interrelations with other hydrobiological resources and wetlands of Tillavá River (Orinoco basin), department of Meta, Colombia. During 14 to 23 of April 2021 we surveyed the Tillavá River and

tributaries (Rubiales and El Puente) for approximately 277 km in a boat at a velocity of 15 km per hour. This clear water river is located in a vast area known as Altillanura (part of the Colombian Shield), a landscape that extends from the east of the department of Meta to the department of Vichada, with an area of 86,211 km², equivalent to 7.5% of the area of Colombia (Serrato, 2018).

RESULTS

On April 20, 2021, two subadult giant otters were recorded in the Caño El Puente, a tributary of Tillavá River (N 3°45'3.146"N latitude and -71°20'52.263"W longitude), Vereda Rubiales, department of Meta. At around 11h40, one of these animals hunted an iguana (approximately 70 cm length including the tail) that was in the water; this lizard threw himself from a tree branch. The attack consisted of biting the head and immersing it in the water by turning on its body. Once the iguana was dead, the giant otter swam upstream (Figure 1). We hypothesized that the iguana would shortly be eaten.

Additional video is available at the following link: <https://www.youtube.com/watch?v=SmILJbYV-z4>

DISCUSSION

P. brasiliensis is primarily piscivorous (orders Characiformes, Perciformes and Siluriformes) especially when fish concentrate in small areas under dry conditions, but it will opportunistically add crustaceans, mollusks, birds, amphibians, reptiles and small mammals to its diet (Duplaix et al., 2015; Noonan et al., 2017). Giant otters have been documented consuming some lizards, snakes, turtles, and small caimans (Duplaix et al., 2015; Trujillo and Mosquera-Guerra, 2018). Surprisingly, drought conditions may have resulted in *P. brasiliensis* feeding on caimans in the Pantanal wetland (Ribas et al., 2012). The giant otter prefers fish ranging from 7-30 cm in length, although the species has been seen catching prey up to 100 cm (Duplaix et al., 2015). For this reason, the attack to the iguana is not surprising; according to Falcón et al. (2013) the head-body length of an adult of iguana can reach up 50 cm and approximately 200 cm head to tail length; the tail represents almost two thirds of their body length.

The present study includes *Iguana iguana* in the list of diet item of *Pteronura brasiliensis*. Juvenile iguanas are preyed upon by crocodiles, caiman, and fish while swimming during their dispersal away from the nesting sites, and by other large lizards for example, *Basiliscus* sp. (Bock et al., 2018). Previously, two predators of the Mustelidae family (*E. barbara* and *L. longicaudis*) have been reported attacking or consuming iguana. Nevertheless, the attempt by *L. longicaudis* does not configure a predation event because the iguana managed to escape (de Lima et al., 2020). Other studies documented ten predatory carnivorous mammals of iguana (eight wild and two domestic) and presumably *L. longicaudis* (de Lima et al., 2020). On the other hand, and not less important, humans are regarded as their main enemy (Falcón et al., 2012); the consumption of iguana by humans is a common issue and in some places the rate of overexploitation is not sustainable (Bock, 2013).



Figure 1. Attack and consumption of iguana by giant otter (*Pteronura brasiliensis*). a and b: The otter bites the iguana's head. c: Swimming with the dead iguana. d: Unique markings of white or cream fur on the throat and under the chin on the otter.

In summary, here we report the first known case of predation by *P. brasiliensis* on a large lizard (*I. guana*). This opportunistic feeding behavior can be associated with the high-water season, as documented by Duplaix et al. (2015), when fish are dispersed throughout large areas in the flooded forest. In the Orinoco region, this month (April) of the year usually corresponds with the dry season (January-April; Trujillo and Mosquera-Guerra., 2018). Nevertheless, the increase in water level is notable, and our observation confirms the activity of the giant otters in tributaries when the main rivers have high water levels.

A fundamental aspect to consider in this type of predation event is the relatively high availability of iguanas in the area. In a 20 km stretch of the Rubiales River, a tributary of the Tillavá River, researchers reported 93 iguanas throwing themselves from the trees into the water every time they sensed the boat (4.6 iguanas per km. pers. com). This evasive behavior of the iguanas seems to be induced by the active hunting of these reptiles by indigenous communities in the area.

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RESUME

PREMIERE PREDATION SUR *Iguana iguana* PAR *Pteronura brasiliensis* DANS LE BASSIN MOYEN DE LA RIVIERE TILLAVÁ EN COLOMBIE

La loutre géante (*Pteronura brasiliensis*) est un mammifère semi-aquatique répertorié comme en danger (EN) aux niveaux national et international. Le 20 avril 2021, une loutre géante *P. brasiliensis* a été observée et une vidéo a enregistré une attaque mortelle d'un iguane vert commun (*Iguana iguana*). Dans cette courte note, nous rapportons le premier enregistrement d'attaque et de consommation d'un iguane par la loutre géante et incluons la loutre géante dans la liste des prédateurs occasionnels de ces lézards répandus sur un affluent de la rivière Tillavá, tributaire de la rivière Vichada, dans le département de Meta, en Colombie.

RESUMEN

EVENTO DE DEPREDACIÓN DE *Iguana iguana* POR *Pteronura brasiliensis* EN LA CUENCA MEDIA DEL RÍO TILLAVÁ, COLOMBIA

La nutria gigante (*Pteronura brasiliensis*) es un mamífero semiacuático que se encuentra en Peligro (EN) a escala nacional e internacional. El 20 de abril de 2021, *P. brasiliensis* fue registrada y filmada en video depredando una iguana verde común (*Iguana iguana*). En esta nota corta reportamos el primer registro de ataque y consumo de iguana por parte de la nutria gigante e incluimos la nutria gigante en la lista de depredadores ocasionales de estas iguanas ampliamente distribuidas en un tributario del río Tillavá, afluente del río Vichada, Meta, Colombia.