

Field Reports

Pampas foxes as prey of yellow anacondas

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Abstract

Carnivore predation by other predators is rarely observed in nature. We describe here two predation events and report a third one of adult pampas foxes by yellow anacondas in Corrientes province, Northeast of Argentina.

The pampas fox (*Lycalopex gymnocercus*) is a medium-sized fox (4.6kg) whose geographical distribution comprises the south of South America, from eastern Bolivia, western and central Paraguay, and southern Brasil, to Uruguay, and northern and central Argentina (Lucherini and Luengos Vidal 2008). It lives in a variety of habitats, from open forests, grasslands, marshes, coastal dunes, and even agricultural and rangelands (Redford and Eisenberg 1992, Lucherini and Luengos Vidal 2008).

Pampas fox's main predator is the human being, as a result of predator control by hunting, because they are blamed for lamb losses in sheep breeding farms, and for commercial hunting for the pelt trade (Lucherini and Luengos Vidal 2008, Macdonald and Sillero-Zubiri 2010). Little is known about death causes in nature, and their potential predators. Fox remains have been found in puma excrements (*Puma concolor*) in National Park Lihue Calel (Argentina) and some cases of foxes killed by feral dogs have been cited (Pessino et al. 2001, Lucherini and Luengos Vidal 2008).

In this note we describe predation events of pampas foxes adult by yellow anacondas (*Eunectes notaeus*) in the Iberá Provincial Reserve and in the Mburucuyá National Park (Corrientes province, Argentina).

Results

The first predation event took place on 8th October 2013 at 19:45h, during a nocturnal mammal survey in Estancia Yaguareté Corá (27°56'S, 57°00'W) in the Iberá Provincial Reserve. Among the marsh vegetation at border of the water, a yellow anaconda was observed wrapped around a fox. The observation was conducted with the light of a torch. This fox was identified as a pampas fox by the colour of its back legs and tail. Apparently, the fox was already dead at the time of the observation and the snake was beginning to swallow it. Several caimans (*Caiman yacare*) were seen at a short distance but none of them approached the snake. The observation lasted 15 minutes but unfortunately no photographic or video record of the event could be obtained. Some days later, following this record, we received information about a similar event, which happened in Estancia San Ignacio (27°49'S, 56°50'W), located at approximately 40 km of the former Estancia (M. Blanco, pers. comm.).

The other event took place on 31st March 2017 in the Mburucuyá National Park at approximately 8:00h, in a short-grass area at one side of the entrance road to the Santa María Park Ranger Department (28°02'S, 58°05'W). A yellow anaconda was seen in the middle of a constriction process of a pampa fox which seemed to be dead (Fig.1). Two adult foxes were in the same place, circling around the snake and harassing it with bites on its tail while they vocalized. The snake reacted with sudden movements but without releasing its prey (Fig. 2). They ran away once the snake started to swallow the fox beginning by its head (Fig.3). This process lasted an hour and after this, the snake began to slither slowly towards a small nearby marsh. When its body was fully extended its total length reached 3.5m (Fig. 4). [There is a video about this event on the web site <https://youtu.be/LDnvO4dE0LU>].

Discussion

There were no records of pampas fox predation by boas, although Almirón et al. (2011) suggest that they are potential prey of the Argentinian boa constrictor (*Boa constrictor occidentalis*).

The yellow anaconda known as “curiyú” in the Northeast of Argentina is the largest boa in size of the region, exceeding 4m long and weighing approximately 30 kg (Ceí 1993, Waller et al. 2007). Its habits are mainly aquatic and it is found in big rivers and their flood plains, lagoons, swamps and marshes. This snake is one of the main predators in these environments because it captures a wide variety of prey: fish, big snakes (*Hydrodynastes gigas*), young caimans (*Caiman latirostris* and *C.yacare*), aquatic birds and, small and medium size mammals including crab-eating raccoons (*Procyon cancrivorus*), crab-eating foxes (*Cerdocyon thous*) and young capybaras (*Hydrochoerus hydrochaeris*) up to 6kg (Strüssmann 1997, Waller et al. 2007, Miranda et al. 2017). As other boas, the yellow anaconda hunts its prey by means of the “sit-and-wait” technique, that is to say ambushing them. It kills the larger ones during constriction by significantly affecting the cardiovascular system of the prey, squeezing until circulatory arrest occurs (Boback et al. 2015).

However, it eats eggs and even carrion, which means that it carries out an active search for food, or that it is an occasional predator (Strüssmann and Sazima 1991). The predation event in the Mburucuyá National Park happened in a short grass area where the boa was visible and it is unlikely that it was unnoticed to ambush the fox. Since it was not observed how the event occurred, it can not be confirmed whether it was an ambush or an opportunistic capture. Predation is rarely observed in nature; these records and documentation are important because they contribute to the knowledge of the ecology of the involved species.

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Biographical sketches.

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List of attachments

Figure 1. A 3.5 m long yellow anaconda in the constriction process of a pampa fox while observed by two other foxes in the Mburucuyá National Park, Corrientes, Argentina.

Figure 2. While harassed by one of the pampas foxes, the boa begins to place itself in order to swallow the captured fox, starting by its head.

Figure 3. The yellow anaconda has already swallowed half the fox. Notice the jaws and body distension of the snake to swallow the prey.

Figure 4. The yellow anaconda leaves the capture place after swallowing the fox completely. The swelling in the central part of the snake body is due to the fox it has eaten.





