

First Official Record of Human Killed by Jaguar in Brazil

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Large felids are not commonly known worldwide as predators of humans, although such cases are sometimes reported in African and Asian countries. However, once habituation to human presence and activities increases, the possibility of aggressive confrontation rises proportionally. Deadly conflicts thus become more probable and coexistence between predators and humans is jeopardized. On the American continent, pumas *Puma concolor* are well known as attackers of humans, as shown by several lethal attacks. Although attacks by jaguars *Panthera onca* have been recorded in several areas (CENAP, unpubl. data), they were all provoked and most of them were caused by an animal cornered during hunting; man-eating jaguars have never been reported throughout their range. This report presents a unique case of a predatory attack by a jaguar in the Pantanal, Mato Grosso State (western Brazil) that happened in June 2008.

Some members of CENAP, the National Research Center for Predator Conservation (within the Brazilian Environmental Ministry) responsible for human-carnivore conflict mediation and management in Brazil, visited the site where a 21-year-old fisherman had been killed by a jaguar three days before. We intended to obtain evidence at the attack site, to observe any unusual behavior of local people and jaguars, to interview people involved in the event, and to discuss the autopsy with the responsible physician. From the reports of several people we reconstructed the event on the basis of common facts and mainly the father's observations, since he was a primary witness and thus the person most involved. Police and psychological interrogation techniques were used in order to ensure that only truthful information was obtained.

The circumstances of this event were curious and the predator's behavior was surprising in some aspects. We

may never understand properly what happened in the attack since the victim did not survive, the site was found not intact when we conducted our investigation, and the individual animal could not be identified. However, we based our hypothesis and conclusions on a careful examination of the site and the surrounding area, and on a series of interviews with local people involved either directly or not.

The attack happened on 24 June 2008 at a campsite on the bank of the Paraguay River, Pantanal, in the municipality of Cáceres (UTM 21K 0457289 / 8115963; Fig. 1), when a 21-year-old fisherman was killed while sleeping inside his tent (ca. 7:30 pm, local time). The young man worked, along with his father, as a bait seller to tourists in the region. Both father and son had stayed there for 4 days and usually remained at the same location for 20 days living on the riverside. The father left the site to catch bait at around 7 pm and left the victim sleeping in his tent. When he returned to the site 30 minutes later, he went to wake up his son, whereupon he saw the tent slashed on the back and sides with blood inside and in the surroundings. At the same instant he heard a noise from the back and in the light of his flashlight saw a jaguar dragging the body to the forest. He started to shout and make noises with objects near to hand, but the animal did not let go of the body and continued to move directly away from the river. The fisherman then called for help via radio and in 10 minutes his friends who were nearby arrived.

The three fishermen started to look for the body following the blood marks on the ground and pieces of clothes. The dead body was located 65 m away from the campsite. Using a lamp and flashlights, they checked the area to see if there were animals close to the body, but nothing was found. They spent about one hour at the site before taking the body to the nearest town (Cáceres). The following morning, other friends visited the site to organize all the fisher-

men belongings and found the father's tent slashed and the victim's tent totally destroyed together with his clothes and objects that he had apparently used during the last few days. The fishermen reported and documented in pictures that the victim's belongings were spread widely throughout the site.

The autopsy was not conducted until the next morning. The examination indicated that death was mainly caused by lesions in the head and neck. In the official medical report, multiple fatal injuries were listed as follows (in order of lethal importance):

- 1) Highly traumatic cervical vertebrae disjuncting with severe lesions on the spinal cord (through the marrow) and associated fractures of several fragments;
- 2) Multiple lesions from isolated or associated actions (stabbing, slicing, bruising, stabbed-slicing, and sliced-bruising), with highest degree of force directed to posterior areas of the cervical region of the spinal column;
- 3) Significant injuries in the neck area compromising veins, arteries, and nerves;
- 4) Cranial fracture, with loss of part of the skull exposing the brain.

The characteristics of the injuries to the victim's body recall those of animals killed by jaguars:

- A main lesion coming from a bite in the neck, with powerful traction disjuncting the spinal vertebrae, together with removal of nervous and muscle tissue is one of the main killing methods used by the species, provoking instant death;
- Injuries on both sides of the face indicate that the animal grasped the head between its paws to hold it firm before directing the lethal bite to the neck;
- Deep lesions in the victim's shoulders indicate strong pressure against the ground, and smaller scratches on the chest, back and shoulders suggest that the animal was not familiar with that kind of body (perhaps it was looking

for better places to feed or ways to hold or carry the body);

- The skull fractures indicate an initial feeding process, as in observed carcasses, but in this case the brain was intact. We believe the animal was still exploring the body when the father arrived to rescue the victim;
- The attack surprised the victim who did not react. There were no signs of self defense. The majority of injuries indicate that the killing process was quick and from behind since they were located on the back.

The *in situ* observations were conducted where objects left at the site were collected and jaguar's indirect signs were observed. The measurements of tracks at the exact site where the body was found and close to the campsite indicated almost no differences in dimensions, indicating that only one animal was involved in the attack. Specific marks tell us that the individual was probably a male weighting over 100 kg (the average size for this region). According to the father's report (prepared especially for the journalists), two individuals were responsible for the attack. However, there are several inconsistencies when he mentioned this fact. Apart from the collected evidence indicating that only one animal was involved, he did not express absolute certainty when talking about a second jaguar.

Although we cannot be sure about what triggered the jaguar's attack, on the basis of the evidence collected we suggest three possible causes for the predation upon the fisherman:

- 1) *High level of habituation of jaguars towards humans*: local tourist agents and fishermen have been attracting jaguars in the last years in order to become more seductive for visitors. This practice includes baiting and calling. There have been many cases in which people have driven the boat a few meters from the wild cats without any negative reaction. This proximity, together with the camping practices of the fishermen, might have increased the jaguars' tolerance to humans and consequently increased the possibility of encounters;
- 2) *High exposure/vulnerability of fishermen to conflicts*: Linked to the previous point, the camp sites are locat-

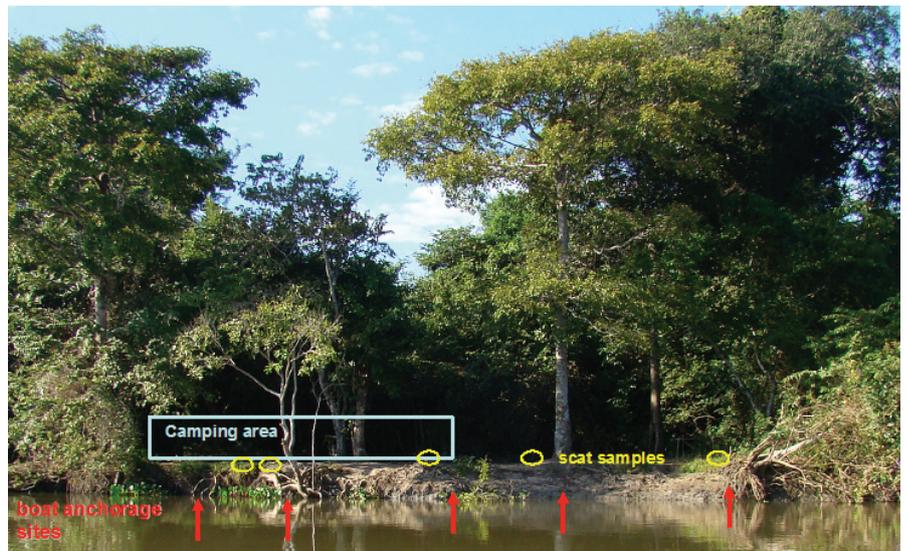


Fig. 1. Camp site where fisher man was killed and location of jaguar signs in the Pantanal (Photo R. de Cunha).

ed in areas where one can easily find territorial markings such as scats on the riverside or trails in the forest and scratches on trees. These indicate areas where wild animals are defining their home range. The fishermen's fragile campsites and their life style overexpose them to possible conflicts. This risk is increased by the practice of attracting an animal that shares the same area.

- 3) *Territorial defense*: Although more information is required in order to infer that one of the causes of this attack was a territorial dispute, some evidence points to personal persecution and attack from the animal. We have no information about previous events involving the victim and a jaguar in that specific spot. However, both campers (the father and his son, the victim) were aware of the jaguar's presence there not only during that week of camping, but from previous expeditions. They had noticed scats on the riverside, fresh tracks during the days they were camping, and other signs but ignored them all, believing that it was not possible that the animal could cause any harm. All the territorial marks and the response specifically aimed at the victim's belongings after the body was removed suggest to us a possible territorial defense.

The attack was discussed by several specialists involved in studying lethal conflicts with large cats within Brazil.

Conflict managers and researchers from Asia and Africa kindly discussed this event with us. There are some similarities with attacks by tigers and lions, but there are also many differences, leading us to redefine some management strategies already in course:

- Immediate change of attitude on the part of tourist agents, tourists, and fishermen to decrease jaguars' habituation towards humans;
- Incentives not to use the riverside as campsites in specific areas where jaguars are habituated (use houseboats as substitutes);
- Choosing specific locations for permanent campsites and fencing them all;
- Detailed investigation of jaguars' demography and ecology in the area;
- Identification of specific individual man-eaters and their removal from the wild.

This report is a warning signal about the vulnerability and fragility of humans in the face of attacks by jaguars in remote places where the contact is at close quarters. Although this is a single event and would not be enough to include the jaguar among the man-killing large cats, it stresses the possibility of new events in locations where excessive habituation occurs.

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