



JAGUAR NEWS

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First jaguar capture in the flooded forests of Amazonia, Brazil

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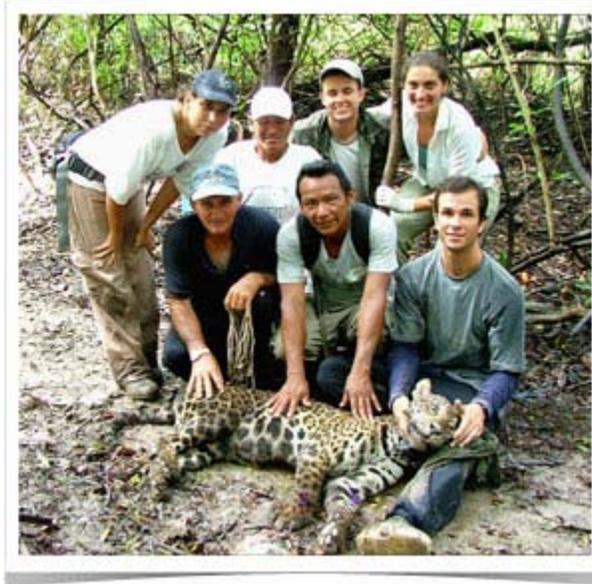
On the 31st of October 2008 I and my team participated in an unprecedented event in the history of jaguar research in Brazil. For the first time, we captured a jaguar in the flooded forests and marshes of Amazonia. The capture took place in the Reserve for Sustainable Development Mamirauá (RDSM) in the state of Amazonas. The jaguar was captured after 11 trapping nights on the banks of Lake Mamirauá, in the heart of the reserve, a place of high diversity and abundance of life, prey and jaguars. The jaguar was an adult female, young (about three years old), well fed, healthy and in good physical condition. Almost 50 kg and 1.8m of total body length. She was neither pregnant nor lactating, which indicates that she did not have offspring. Perfect dentition. The objective of capturing her was the installation of a GPS collar to investigate questions related to behavior and movement patterns of the species in the flooded forests. We hope to capture 10 more jaguars in Mamirauá this year.

My research in Mamirauá began in 2004 during my Master's thesis. The objectives were to describe basic ecological characteristics of the jaguar and test methods for sampling the species in the flooded



Captured jaguar after having received the anesthetic via dart. The jaguar was named Iauaretê. Photo by Martin B. Main.

forests and marshes of Amazonia. Results were interesting. The species' diet in this environment consisted primarily of caimans (*Caiman crocodilus* and *Melanosuchus niger*) and their eggs, sloths (*Bradypus variegatus*) and howler monkeys (*Alouatta seniculus*).



Team of the lauaretê Project: Standing, from left to right: Joana Macedo, Mr. Wanderlei, Paulo Faiad, Juliane Cabral. Bending over, from left to right: Dalvino, Anselmo, Emiliano Esterci Ramalho. Photo by Martin B. Main.

Although these prey species had already been cited in other studies, in the marshes they represent 80% of the jaguar's diet. In other studies they rarely represent more than 20% of the diet. Data also revealed that jaguars used the banks of practically all lakes in the study area, indicating that these areas are intensively used to search for prey.

In 2005, I initiated an effort to sample the area with camera traps to obtain a jaguar density estimate for Mamirauá. Population density was estimated at 10-13 individuals/100 km². Through the pictures it was possible to determine that three-fourths of the population are females, that the jaguars are reproducing and raising their offspring in the flooded forests and that some individuals show a high fidelity to their home range (one female was photographed in the same place in four consecutive years).

The lauaretê Project ("Projeto lauaretê") was created in March 2007 with the objective to establish and consolidate a monitoring program of the jaguar population in Mamirauá, as well as to study the relation between jaguars and local residents. The information raised by the project will serve as a base for implementing efficient conservation strategies for the species in the Reserve and in the Amazonia region. The project's activities today are largely concentrated in Mamirauá due to limited financial, logistic and personnel resources. However, the project plans to expand its activities to the Amanã Reserve, both reserves' surroundings and the cities of the region.

[ARTICLE]

Requiem for a Jaguar: thoughts on Macho B from the biologist that knew the rare borderlands jaguar

By Emil B McCain M.S. Borderlands Jaguar Detection Project emilmccain@gmail.com;

Macho B lived a long and magnificent life in a vast and



Picture of Macho B taken by a trail camera in 2005, with approximately 12 years of age. Picture by Borderland Jaguar Detection Project.



Picture of Macho B taken by a trail camera in 2009, one month before his capture. Picture by Borderlands Jaguar Detection Project.

magnificent wilderness. His presence will be missed greatly. But we need to remember one thing. In the final days of his long life he placed his foot into a snare and gave us a great gift, a gift that will help us to ensure a future for his kind, and quite possibly his offspring, in southern Arizona and New Mexico and northern Mexico. He was a very old animal with limited time left; he was going to pass on in the days or weeks to come regardless. All jaguars die. But he did not die unseen and unknown. All living creatures ultimately strive to ensure the survival of their family. Before Macho B passed on he presented himself to the research and conservation efforts of an amazing collaborative Arizona/New Mexico Jaguar Conservation Team. His capture drew international attention to this unique and valuable treasure of the Sierra Madres of northern Sonora, Mexico and the Sky Islands of Arizona and New Mexico.

From the day he changed the lives of hunters Jack Childs and Matt Colvin, to the days he posed for trail camera photographs, and then to the day he was air-evacuated to one of the country's leading wildlife veterinary clinics, he has made the world aware that jaguars still roam in the wild and diverse southwestern United States. His story now ranks with that of Smokey the Bear.

He gave us his valuable DNA, a first for modern science, which will give us genetic information about his origin, his relatedness to other jaguars, and thus the viability of borderlands jaguars. Macho B has completed his work for the conservation of borderlands jaguars. His death is terribly sad. But it is now up to us to cherish and learn from Macho B's gift, and we must work together towards conservation for the continued presence of his kind in our wild country.

Macho B was the oldest known wild jaguar in history and that is a clear testament to the habitat quality here in southern Arizona. The fact that this jaguar was able to survive in this habitat for longer than any other jaguar in any other habitat, not only confirms that jaguars can indeed thrive here, but also that a huge network of public and private lands is currently being managed in a healthy and sustainable way. But that landscape and that collaborative conservation network is fragile, and we must do everything in our power to maintain that habitat for this magnificent cat.

Macho B roamed over large portions of southern Arizona for at least 13 years, yet to the best of our knowledge, he was only ever seen twice. It remains unknown how many other jaguars may remain unseen within or partially within Arizona and New Mexico. So far the Borderlands Jaguar Detection Project has only surveyed 12% of the potential habitat in Arizona, and there is more to

be surveyed in New Mexico.

One important aspect of big cat biology is territoriality, especially in adult males. We know Macho B was a territorial male from the videos we obtained of him exhibiting three different territorial scent-marking behaviors. When a jaguar's territory becomes empty it is often filled by another younger male. It is quite possible that another jaguar will take over Macho B's territory. However, with no confirmed reproduction in the US since the 1920's, jaguar presence here is entirely dependant upon dispersal from northern Mexico. That means we must maintain habitat connectivity across the border and insure their safety in northern Mexico. We clearly have a lot of work to do.

The re-capture of Macho B was absolutely necessary. I had been monitoring his every move from satellite technology. Immediately after the original capture the cat appeared to be totally fine. He behaved exactly as you would expect, he fled the capture site to a secluded area to recover. However, in the following days it became clear that his movements were not normal, and that he was spending a huge portion of the time not moving. Collectively, we made the decision to check the sites where he had been, and the tracks found led to further concern. The following day a wildlife veterinarian made a visual assessment that the cat was in very poor condition and needed further attention. These things always happen on a Sunday, but the Arizona Game and Fish Department was able to put together the Dream Team overnight. The best possible individuals gathered with the best possible resources to capture the cat for a full veterinary assessment. The very difficult and delicate mission was beautifully orchestrated by AZGFD. Guided by my emails and phone calls from Spain regarding the cat's real time satellite location, the team performed a quick and low stress capture.

His condition of total kidney failure was terribly unfortunate, but somewhat to be expected in a cat of his age. Despite the tragic outcome, the Jaguar Conservation Team and its cooperators have pulled off an amazing feat. I want to personally thank each and every individual who made every effort possible to assist our old jaguar.

Macho B has become an international ambassador for jaguar conservation. As we grieve the great cat's very unfortunate death, we must not placing blame or let it divide us. Macho B has pulled many diverse sources together for a common goal, and Monday we pulled all of our resources together to help him. On his behalf, I urge us all to keep that momentum moving forward, beyond political interests and international boundaries and beyond the lifespan of one individual.

There are not words to describe how I feel about the cat's very unfortunate death. But I am comforted by the fact that his last sights and conscious thoughts where high on a mountain overlooking his favorite haunts. May his spirit roam there forever, and may his descendants as well.

[PICTURE OF THE MONTH]



Jaguar marking his territory in Emas National Park, central Brazil

During a study with camera-traps in Emas National Park in 2008, this adult male jaguar was photographed placing a urine mark on a tree, probably as an act of scent-marking his territory. The animal has been a known resident of the Park since 2004, when he was first camera-trapped. He was captured during efforts to radio-collar jaguars this February. Weighing 104 kg, he presented himself in excellent physical conditions. His telemetry data will hopefully contribute much to our understanding of jaguar ecology in the Cerrado of central Brazil.

By: Jaguar Conservation Fund

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"Our mission is to promote the conservation of the jaguar, its natural prey and habitat throughout the species geographical range, as well as its peaceful coexistence with man through research, management and conservation strategies."

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