



# JAGUAR NEWS

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## The Jaguar Along the Araguaia River Biodiversity Corridor – Central Brazil

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The current situation for the conservation of the jaguar in central Brazil is concerning, due to agricultural expansion, timber extraction and other issues that cause the fragmentation of natural habitat and the isolation of jaguar populations. To address these issues, in 2008 a systematic jaguar distribution survey was initiated along the 2000 km of the Araguaia River Biodiversity Corridor, crossing central Brazil and connecting various reserves. The results of the sampling will assist in supporting conservation initiatives for maintaining connectivity between jaguar populations of the region, thereby increasing their chance of survival. The study's main objectives are to:

- 1) determine jaguar distribution along the corridor
- 2) evaluate factors that may affect jaguar distribution in the medium term
- 3) predict future distribution by evaluating connectivity between habitat fragments.

Data about the occurrence of jaguars and their main prey species are been collected by interviewing local residents. In addition, local landscape variables are been recorded and geo-referenced. We intend to identify functional relationships between these



Jaguar Conservation Fund scientific expedition on the Araguaia River to collect data on jaguar occurrence and human impact on the river banks

variables and jaguar occurrence, which is been validated through camera trapping.

Interviews will also yield information about the incidence of jaguars preying on domestic livestock, leading to retaliatory hunting by livestock ranchers. To understand the range and intensity of this conflict, predation rates will be evaluated against the occurrence of natural prey species.

For jaguars, as well as for their main prey species, potential distribution along the corridor will be predicted using fundamental niche modelling; results will be refined in consideration of remaining fragments of natural habitat in the region.



Map of the potential Araguaia River Biodiversity Corridor showing preliminary data about current jaguar distribution

Landscape connectivity for the jaguar will be determined by evaluating fragments within its potential distribution that contain at least one prey species. To do so, we will use the model described by Hanski (1999) that incorporates the species' dispersal ability and the distance between fragments.

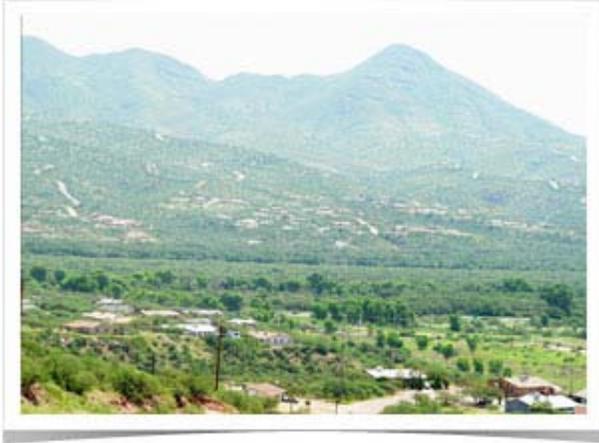
This study is part of the Master's thesis by Marina Zanin Gregorini from the Federal University of Goiás and is included in a project led by the Jaguar Conservation Fund, for the implementation of a biodiversity corridor along the Araguaia River. This study is expected to provide a scientific base for public policies aimed at conservation of regional biodiversity, guaranteeing the implementation of this corridor.

#### References

HANSKI, I. *Metapopulation ecology*. Oxford University Press, Oxford, 1999.

# Protecting Habitat for the Northern Jaguar, USA and Mexico

By Dr. Anthony Povillitis [tpovillitis@lifenetnature.org](mailto:tpovillitis@lifenetnature.org)



Uncontrolled urbanization has eliminated much habitat in the Santa Cruz River Valley, Arizona, once a prime movement corridor for jaguars between the U.S. and Mexico



U.S. government fencing along the US-Mexico border, intended to curtail illegal crossings by people, is severing habitat connectivity between the two countries

To address the problem, Life Net launched the Jaguar Habitat Campaign (<http://jaguarhabitatusa.wordpress.com>). It provides a clearinghouse for information on threats to habitat and on opportunities to protect it, particularly in Arizona, now the fastest growing state in the U.S. Focus is on protecting habitat corridors linking larger blocks of habitat essential for eventual jaguar recovery. Habitat connectivity is severely threatened by urban and highway expansion, and by construction of fencing along the US-Mexico border.

The world's most northern population of jaguar once extended from southern California, Arizona, and New Mexico, USA southward to Sonora and Chihuahua, Mexico. Beginning in the 1800s, the northern jaguar was decimated by hunting related to the arrival of domestic livestock. Today a remnant of that population, perhaps 100 jaguars, persists in rugged terrain of northern Sonora, where private conservationists have recently established a 18,200 hectare jaguar preserve, about 200 kilometers south of the Arizona border (<http://www.naturalia.org.mx/jaguardelnorte/JAGUAR.html>). Recovery of the northern jaguar population depends on ending hunting and on protecting jaguar habitat in both Mexico and the U.S.

In the U.S., recent sightings of jaguars and documentation of at least one resident animal provide hope that the species may restore its numbers in Arizona and New Mexico. In 1997, the U.S. government declared the jaguar a nationally endangered species in response to a request from Life Net ([www.lifenetnature.org](http://www.lifenetnature.org)), thereby giving it federal protection from hunting. However, government wildlife agencies failed to protect jaguar habitat during a political decade heavily favoring economic interests and development over conservation of endangered species.

[PICTURE OF THE MONTH]



**First photographic jaguar record in the Nascentes do Rio Parnaíba National Park – Tocantins/Piauí (north-eastern Brazil)**

By Marcela Lima, [marcela\\_gml@yahoo.com.br](mailto:marcela_gml@yahoo.com.br)  
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Because of the rare occurrence of encountering a jaguar face to face in the Cerrado of North-Eastern Brazil, it is necessary to utilise technologies such as camera traps to obtain a record like the one shown here. After months of intensive field work, we succeeded in capturing the first jaguar record for the Nascentes do Rio Parnaíba National Park, one of the largest reserves of the Cerrado biome. Preliminary results of my Master's thesis through the Federal University of Pará/Pará Emílio Goeldi Museum, supported by Jaguar Conservation Fund and Fundação O Boticário de Proteção a Natureza, indicate that jaguars are actually very rare in this area, despite contrary feedback from local residents.

If you have a picture catching a glimpse of a jaguar's life in the wild and want to distribute it through our newsletter, please send it to [jaguar@jaguar.org.br](mailto:jaguar@jaguar.org.br) with a description of the location, date and credits of the picture.

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The Jaguar Conservation Fund is not responsible for the content of texts written by members of other institutions.

"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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