

The problem of jaguars and space in western Paraguay

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The jaguar is the largest cat in the Americas and historically was found from southwestern USA to central Argentina. Today, jaguars are an endangered species throughout their natural habitat, and have almost been completely eliminated from the United States. The species has been lost from 50 percent of its original range, and outside of the Amazon it is present in only 20 percent of its original range. This drastic change is a result of human factors: habitat loss leading to reduced prey availability and persecution for cattle depredation.

An important component of [jaguar](#) conservation is understanding the species' spatial needs. Although there have been multiple studies of jaguar space use, there has been no such research in Paraguay up to now.

A recent study, published in the journal *Mammalia*, shows how researchers used GPS technology and new analytical techniques to produce the first rigorous estimates of jaguar spatial needs and movements in the Gran Chaco and Pantanal [ecosystems](#) of Paraguay.

Western Paraguay is dominated by the Gran Chaco ecosystem, the second largest forest ecosystem in South America (divided into the semi-arid Dry Chaco and the wetter, seasonally flooded Humid Chaco), but also contains 5 percent of the Pantanal ecosystem. The researchers found that jaguars in the Dry Chaco had the largest home ranges ever recorded for jaguars, attributable to relatively low productivity of the ecosystem. Also, regardless of the ecosystem type, jaguar daily movements were large, on average greater than 15 km per day.

Since 2000, western Paraguay has undergone some of the highest deforestation rates in the world with about 800 hectares a day on average of [natural habitat](#) converted for cattle production; allowing Paraguay to be the world's 6th largest beef producer.

This ongoing land use change, and the large spatial needs of jaguar, means that jaguars are increasingly affected by human activities and subjected to retaliatory killing for preying upon livestock. This was evident in the study as greater than 50 percent of the jaguars followed in the study were confirmed to have been killed by people.

There is an urgent need to mitigate jaguar-human conflict in the region. Less than 5 percent of western Paraguay is protected; in light of continuing deforestation, conservation efforts must take into account the amount of space needed by jaguars in the region. Consequently, the long-term conservation of the jaguar in western Paraguay depends upon private land and diminishing conflict with the continuing expanding ranching sector.

More information: Roy T. McBride et al. Space use and movement of jaguar (*Panthera onca*) in western Paraguay, *Mammalia* (2018). [DOI: 10.1515/mammalia-2017-0040](#)

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