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Twitter thread by the piece's author here:

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Youtube link (with lots more in the description) here:

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Why a new jaguar sighting near the Arizona-Mexico border gives experts hope

<https://www.nationalgeographic.com/animals/article/jaguar-near-arizona-border-wall-mexico>

The exclusive finding suggests the jaguar's range may be expanding—and a new study verifies the U.S. has plentiful habitat to reclaim if the cats can reach it.

BY DOUGLAS MAIN -- PUBLISHED MARCH 23, 2021

Jaguars once roamed throughout much of Arizona and New Mexico, even as far north as the Grand Canyon. But throughout the 19th and 20th centuries, hunters exterminated the U.S. population of North America's only big cat.

But with a breeding population in adjacent Sonora, Mexico, that numbers up to 200, cats from their ranks are increasingly wandering north into Arizona. At least seven male jaguars have been seen in the southern part of the state in the last 25 years—including one that resides in southeastern Arizona—and another handful have been spotted in Mexico close to the border over the same period.

Now researchers have captured videos of a new jaguar on a ranch in Sonora, a couple miles south of the spot where Arizona, New Mexico, and Mexico intersect—and where border wall construction ceased only two months ago.

This rare sighting came as a joy to [Ganesh Marin](#), a doctoral student at University of Arizona and a National Geographic explorer who studies local wildlife abundance and movement using a grid of about a hundred

camera traps at this ranch. “It was like finding a needle in a haystack,” he says.

Analysis of videos taken by four cameras between December 2020 and March 2021 show the jaguar was the same young male, which scientists have named El Bonito (“the beautiful”). Finding a juvenile so close to the border suggests that the breeding range of the species may be extending north as the cats reclaim old territory, says [Gerardo Ceballos](#), a researcher with the National Autonomous University of Mexico.

Ceballos says this jaguar was likely born less than 60 miles to the south, and that the animals “are breeding now on the doorstep of the United States.” The International Union for Conservation of Nature lists the jaguar as near threatened due to habitat loss and poaching, and the species is protected under the U.S. Endangered Species Act.

Meanwhile, a [study published March 16 in the journal *Oryx*](#) estimates that much of central Arizona and New Mexico is prime jaguar habitat, and could conservatively support a population of 150 or more animals. This contrasts with the estimated carrying capacity previously produced by the U.S. Fish and Wildlife Service, which is significantly lower.

The sighting—and the study—emphasize the importance of keeping wildlife corridors open between the United States and Mexico, a vast contiguous expanse of habitat for many creatures, including jaguars, Marin says. Throughout 2020, the Trump administration constructed more than 210 miles of the 30-foot-tall border wall in Arizona, cutting off some of these corridors. Some of the primary connections through mountainous areas remain intact, albeit degraded and shrunk. ([Learn more: The U.S. border wall tore through wilderness, right under our noses.](#))

To preserve a functioning ecosystem, “maintaining open wildlife corridors is hugely important,” says Eric Sanderson, lead author of the *Oryx* paper and a researcher with the Wildlife Conservation Society. “After all, wildlife don’t have passports.”

Borderland tigers

The history of the borderlands is peppered with tales of jaguars, sometimes known as *los tigres*. “We saw neither hide nor hair of him, but his personality pervaded the wilderness,” wrote Aldo Leopold in 1949 of the jaguar’s presence in the borderlands. But the cats didn’t fare well once European settlers arrived, partially due to a government-sponsored campaign to kill predators. In 1906, a trapper killed a female jaguar in the Chiricahua Mountains of Arizona, before selling her two cubs as pets. In 1932, a predator control agent for the U.S. government shot a female in a pine forest on the South Rim of the Grand Canyon. In 1963, the last recorded female in the state was shot by a hunter in the White Mountains, near Springerville, in east-central Arizona.

Female jaguars are the limiting factor in the species’ spread, because they don’t tend to disperse long distances from their mother’s range, as males do. Thus, the presence of females—or a juvenile born recently nearby—is key. The nearest known female is located less than a hundred miles south of the border, but the discovery of the young male suggests they may be even closer, Ceballos says.

For jaguars to reestablish a population in the United States, the Sonoran population needs to grow. In the last 15 years, conservation organizations, researchers, private citizens, and governmental groups have worked together to protect jaguars in Mexico and offer incentives to landowners, such as ranchers, to keep the animals alive, Ceballos says. Nevertheless, the animals remain threatened from retaliatory killings by ranchers after eating cattle, as well as prey depletion and road construction.

This juvenile jaguar was photographed in a ranch owned by a Sonora-based conservation organization called [Cuenca Los Ojos](#), whose mission is to protect and restore land in northern Mexico. The juvenile cat strolled past Marin’s cameras, all of them near a stream known as Cajon Bonito, a water source that supports black bears, pumas, beavers, and at least one ocelot, Marin adds.

Continental division

Jaguars, like many other large animals, inhabit the mountains and use them to move through habitat, and this jaguar may be one of the first to confront the border wall, says Rodrigo Sierra, a scientific advisor and board member of Cuenca Los Ojos. (One male jaguar resides in Arizona's Chiricahua Mountains, close to the border, according to camera trap evidence.)

The Trump administration built roads and walls throughout parts of the rugged, remote area near where the jaguar was seen, including a biologically rich spot called Guadalupe Canyon and the Peloncillo Mountains.

“Pretty much we are dividing a continent and stopping the flow of species across it,” which could lead to local extinctions—or in this case, prevent jaguars from expanding into the United States at all, Sierra adds. ([Read on: Arizona's border wall will include openings too small for many animals.](#))

President Joe Biden ordered a pause of border wall construction on his first day in office, January 20, but the next steps remain unknown. Many conservationists have called for sections of wall to be torn down. The Department of Homeland Security did not immediately respond to a request for comment.

Besides the Peloncillos, there are vital jaguar corridors in the nearby ranges of the Huachuca, Patagonia, and Pajarito Mountains, all of which have been narrowed and degraded by border wall and road construction, though not completely cut off, says Myles Traphagen, a researcher with the Wildlands Network.

Finding jaguars very close to the border on either side reinforces the point that these are not separate populations and should be considered as one, Traphagen adds.

In the *Oryx* paper, Sanderson and colleagues used various models to assess habitat suitability for jaguars, using factors such as vegetation type, prey availability, proximity to water, and other variables. As previously known, the Sky Islands—biodiverse mountain ranges that

rise above the desert of southeastern Arizona and northern Mexico—are prime jaguar habitat.

But they found millions of acres of pine forests to the north, in central Arizona and New Mexico—where jaguars were spotted only decades ago—remain ideal, with enough cover, prey, and water for these big cats.

Marit Alanen, a wildlife biologist with the U.S. Fish and Wildlife Service based in Arizona, says by email that the agency was not previously aware of this juvenile jaguar, but had seen the *Oryx* paper, which “represents new information to consider in our ongoing analysis of jaguars and their habitat.”

“Maintaining connectivity to Mexico is essential to the conservation of the jaguar and [we] are continuing to work with our partners to create more opportunities for transnational wildlife passage,” Alanen adds. “Peripheral populations such as these are an important genetic resource [that] may be particularly important considering the potential threats of global climate change.”

Moving north

Jaguars are ecologically important not merely because they are top predators, but because protecting land could help many other more common species, such as black bears, beavers, and mountain lions, Marin says.

“They are incredible wanderers,” says Randy Serraglio, a jaguar advocate with the Center for Biological Diversity. They range more widely than just about any American predator—and embody the necessity for connected landscapes.

The presence of a juvenile suggests that conservation activities, including the protection of land and work with ranchers to incentivize the cats’ presence on the landscape, are likely helping to a certain extent, Marin adds.

“We have a lot of things to do,” he says, “but if we continue, the females and the cubs will come to the borderlands soon.”