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The Return of the Jaguar

The desert roars to life with the voice of a long-lost tropical cat

By Ron Dungan

It is winter in sky island country, and everywhere there is movement. Border Patrol trucks cruise back roads, water flows in desert streams, a cool wind slips between canyon walls and scours the hilltops. The wind comes out of Mexico, pushing dark clouds over green hills in the Tumacacori Highlands. It tosses Jessica Lamberton's hair as she walks toward the border, pausing to look at tracks in the sand. Deer, javelina, bear, mountain lions and coyotes roam this canyon in southern Arizona, and in recent years, jaguars have been captured on film here. We have come here to talk about jaguars and their habitat, but the conversation keeps coming back to people. Lamberton is with the Sky Island Alliance, a group working to save land for both people and jaguars. Mike Quigley, wilderness campaign coordinator for the group, walks ahead, and we follow, the wind blowing north, the water flowing south.

The jaguar is the largest cat in the Western Hemisphere and the only one that roars. Large males can weigh more than 280 pounds. Jaguars, like most predators, eat deer and javelina, but will eat cattle as well. Jaguars are found in Mexico and Central and South America, and have lived in the North American Southwest for centuries. The Maya and Aztec revered them as warriors and gods. The Hopi, Navajo and other Southwest tribes honored them in stories, rock art or dance.

But American settlers killed the big cats until their presence was reduced to a historical footnote. The ensuing body count tells us that jaguars once had a breeding population here: A female and two kittens were killed at Grand Canyon in the late 1800s. Two more females and their young were killed in the early 1900s. The killings trail off and we are left with glimpses of transient males, presumably coming out of Mexico. These too, were killed. When the United States Fish and Wildlife Service took stock of animal populations after passage of the Endangered Species Act of 1973, it didn't even bother to list the jaguar.

Then in 1996, a lion hunter named Jack Childs treed a jaguar south of Tucson. He photographed the big cat, leashed his dogs, and left. That same year, a lion hunter named Warner Glenn had a similar experience along the Arizona-New Mexico border.

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Az Department of Game and Fish
Sky Island Alliance/El Aribabi

So the Arizona Game and Fish and New Mexico Game and Fish departments formed the Jaguar Conservation Team. The group included the United States Fish and Wildlife Service, the National Park Service and the Bureau of Land Management. It brought in environmentalists, biologists and ranchers. The group studied maps, discussed policy, heard reports from jaguar experts who had worked in Mexico and Central America. Childs started working with a biologist to photograph wildlife with cameras strapped to trees, tripped by movement. They sorted through thousands of photos over the years, pictures of bears, coyotes, coatis, bobcats, illegal immigrants, hunters and hikers. They photographed at least two - possibly three - other jaguars, but the jaguar Childs treed, identifiable by a spot on its side that looked like Pinocchio, showed up the most. Soon the cat had a name - Macho B - and a following.

After a while, differences between the various groups on the Jaguar Conservation Team became apparent. Talking about jaguar habitat was a political quagmire because jaguars eat cattle, and ranchers have political clout. The Center for Biological Diversity became so impatient with the process they started to call it the Jaguar Conversation Team.

"There wasn't widespread agreement at the outset," said Michael Robinson of the Center for Biological Diversity. The group felt that Fish and Wildlife should have listed the jaguar as an endangered species in the United States.

In 1996, it sued the agency to force it to list the species and won. Fish and Wildlife listed the jaguar, but it never came up with a recovery plan. Drawing up a recovery plan is standard procedure when a species is listed, Robinson said.

"We worked with the Jaguar Conservation Team for seven years, to see if they would actually do anything to protect jaguars, and they didn't." So the Center sued again, this time to get the agency to come up with a recovery plan.

But how do you come up with a plan when all you have is a few snapshots? There were a lot of questions about the jaguar. How big was Macho B's range? Were there other cats? Where any females out there? How would ranchers react to having jaguars on their land? To losing cattle? And what does a jaguar kill even look like? Would a recovery plan mean grazing restrictions? Over the years, a border fence was built to slow illegal immigration. Some felt the fence would stop the jaguar. Researchers wondered how often, or how far into Mexico Macho B went. Or maybe he just stayed in Arizona. Nobody knew.

In the spring of 2009, the Arizona Game and Fish Department announced that a biologist had "incidentally" trapped Macho B in a snare intended for lions or bears. The biologist put a radio collar on him, took a few tests, and set him free. Jaguars in the wild typically live to be 11 or 12 years old, but Macho B was 15 or 16, one of the oldest wild jaguars ever recorded. Before long, the Macho B stopped moving. They found him, determined that he suffered from severe and irreversible kidney failure, and euthanized him.

Sergio Avila, a biologist for the Sky Island Alliance, said that collaring jaguars is risky. Sometimes, the risks are worth taking, particularly when you can study territories, prey and breeding behavior of a large population. But following one jaguar around would be like following one person - it won't tell you much about the species as a whole. He said the Jaguar Conservation Team was told of the risks, but seemed intent on collaring a jaguar anyway.

As facts spilled out after Macho B's death, the Interior Department's Office of Inspector General took up an investigation and said in a report that researchers knew Macho B was in the area and that his capture may have been intentional. Game and Fish would not comment while the matter remains under investigation, but a Game and Fish employee has been dismissed.

The Fish and Wildlife Service agreed in January to come up with a recovery plan. That means a waiting period, a public comment period, a proposal of critical habitat, adjusting the plan - the whole process could take a year, maybe longer. In the meantime, the camera traps have been pulled - nobody really knows if there are any jaguars in the United States.

Jaguars have captured our imagination in part because they are charismatic, and in part because they give us hope that we have not damaged this ecosystem irreparably. But as you study the jaguar, two facts become apparent:

The jaguar is a tropical animal.

The Southwestern United States is a desert.

Talk to anyone who has studied the big cats, and he or she will tell you that the Southwest is the end of the line.

Robinson says the fossil record and jaguar petroglyphs in the Southwest show that the animals were once common.

"The jaguar evolved in North America," he said. Early explorers reported seeing them along the Gila River. Jaguar fossils have turned up in Tennessee, Maryland, Nebraska and Washington state. But jaguars were killed and pushed south, Robinson argues.

Biologists say that to use the fossil record is a bit of a stretch. There are fossil records of saber-tooth cats, says Eric Gese of Utah State University, but they're not part of the ecosystem today. Alan Rabinowitz, a biologist who has devoted his life to studying and saving big cats around the world, says the Pueblo clans drew jaguar petroglyphs not because the animals were common, but because they were so rare. "They must have been godlike to them," he said.

"That's a controversy when whenever you talk about restoring a species," Gese said. "What is the historical range and how far back do you go?" Gese and some of his colleagues recently published a paper on jaguar populations in the southern Pantanal in Brazil, a region of grasslands and forests where annual rainfall is six to nine feet. In the Sonoran Desert, annual rainfall may be 6 to 9 inches.

Rabinowitz dropped in to have a look at the jaguar country in the Southwest, and wasn't very impressed.

"I think it's terrible habitat for the jaguar. Jaguars, like most big cats, can put up with a lot of things, . . . but they need big water sources, and they need prey."

Mountain lions can live in arid climates, he said, but jaguars prefer river corridors, the same places that people often settle in.

“It’s a rough area. I’m not saying a few jaguars couldn’t live there, but there is no way I can envision a large population living there,” Rabinowitz said. He is concerned that, as more attention is devoted to jaguars in the desert, politics may override science, and money will be diverted to a population on the edges.

Rabinowitz and other biologists believe that securing habitat in Mexico, where ranches are held privately, is crucial to the jaguar’s recovery. The core issue there is similar to the one we face here - habitat keeps vanishing to ranching, farming and settlement.

Avila works with ranchers one at a time, placing camera traps on their property and reminding them that healthy ecosystems can draw tourism. They are starting to welcome the jaguar. Avila cannot get the cameras in place fast enough. He says the Mexican government has been supportive of jaguar recovery as well and declared 2005 the Year of the Jaguar. Other researchers have found that although jaguars can fall into the habit of eating cattle, many do so only occasionally. Dealing with problem animals may be more effective that a sweeping policy of predator control.

North of the border, what is left of public lands must be divided, or shared, between ranchers, hunters, hikers, miners and ATV riders. Although the United States does not always approach environmental issues with a deft touch, it has a lot of resources. The U.S. has more biologists than Mexico, an institutionalized system of wildlife protection and a number of environmental organizations.

Between the two countries is a line that jaguars can’t see and ecosystems ignore. Border Patrol watches the line carefully, but a stream of immigrants crosses it every day, confronting a deadly landscape that is also one of the most diverse ecosystems in the world.

Sky Island country is where the Rocky Mountains end and the Sierra Madres in Mexico begin. The islands are mountain peaks as high as 10,000 feet, the sea below waves of scrub hills and grassy flats, hard ground where the Sonoran and the Chihuahuan Deserts meet. This overlap of four ecosystems creates a rich assortment of plant and animal life - prickly pear cactus and pine, agave and oak, reptiles and bears, hundreds of species of birds.

The sound of the creek is slow and gentle. It is dry most months, except in the deepest pools. I follow Lamberton over gray cobble, shallow riffles and sandy flats, past gnarled oak roots and tall, bare willows. When the rains stop and the sun burns and the clouds spin off the creek will dry up, leaving a few deep pools. The region beyond will become a death trap for immigrants. Rabinowitz is right - it doesn’t look like much. But for a jaguar, there may be just enough. There is cover. There is prey. There is water.

Quigley and Lamberton are optimistic about the return of the jaguar. They are optimistic because they know this land supports a lot of wildlife despite its hard appearance, and because Avila recently photographed a jaguar just 30 miles from the border.

Avila spends half his time in the tropics, but he also spends a lot of time in sky island country. It’s true, he says, that the desert looks severe, but just because jaguars live in the tropics, doesn’t mean they can’t survive on arid lands.

“The jaguars are the ones telling us that,” Avila said.

In 1986, a rancher reportedly shot a jaguar and paraded his body around the southern Arizona town of Willcox. Ten years later, Macho B turned up and was released. The ongoing investigation may show that his capture was intentional and handled poorly, but nobody was trying to kill him.

Macho B taught us that maybe we don’t have to shoot. Just about everyone who has a stake in the land - ranchers, hikers, hunters - wants to see it preserved for future generations, Quigley said, and the big cats are an indicator species, a sign of how well we are doing.

In years to come, jaguars will face many obstacles - a border fence, a dysfunctional immigration policy, the details of a recovery plan, a public lands system overrun with competing interests and growing populations, poaching and drought. But winter rains have brought relief, and a new jaguar is nearby.

The wind blows north, the water flows south, and we are walking. The talk has ranged from a fire tower nearby where Ed Abbey spent a summer as a lookout to Chiricahua leopard frogs, whitetail deer and a wilderness bill rattling around the halls of Congress. From time to time we stop to look up at the ragged cliffs and listen to the stream.

“It still amazes me that there could be jaguars down here roaming around,” Quigley said.