Spotting the BIG CATS OF CORCOVADO

If you seek jaguars and pumas in this Costa Rican paradise, it may be *they* who will be watching *you*

BY CHARLES MONTGOMERY

DAWN HAS BARELY BROKEN, but the jungles of Costa Rica's Corcovado National Park are already steaming. Dr. Eduardo Carrillo hauls his battered aluminum boat down to the muddy mouth of the Sirena River and wipes the sweat from his moustache. Carrillo is smeared with grease from the outboard motor he's been carrying. Monkeys scream insults at him. Blood-sucking ticks cling to his calves. The 45-year-old biologist is exhausted, but his eyes sparkle. This wild place, refuge of the big cats of Central America, is his second home.

Carrillo's fascination with jaguars began when he was leading a group of students along the park's Pacific Coast. He noticed the tracks of a sea turtle, leading up from the surf towards the jungle. This was not unusual: hundreds of sea turtles crawl out of the Pacific to lay their eggs in the sand on these beaches every year. But there were no return tracks.

Up where the palms cast dark shadows across the sand, Carrillo saw paw prints and followed them into the forest. There was the bloodied corpse of the sea turtle, but no sign of its killer.

Back on the beach, Carrillo spotted a distant creature approaching along the surf line. He motioned his students behind a log and they waited. Sauntering along the damp sand, shoulder muscles rippling under its black-spotted coat, was a full-grown jaguar and, scampering behind it, a cub.

When they were just a few bounds away, Carrillo pressed the shutter on his camera. Click. The jaguar spun, crouched and flattened her ears. For a moment they stared at each other. Carrillo felt a chill run through his body: not of fear, but of awe at the intense power and beauty of the animal.

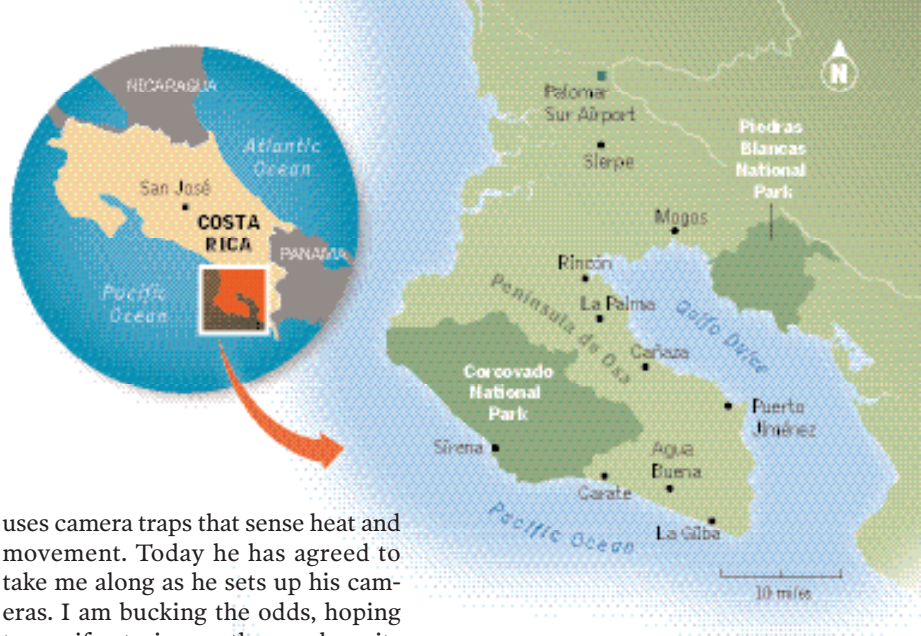
It was a life-changing moment. In the 17 years since then, he has been tracking and counting jaguars here in Corcovado, the national park that covers half of Costa Rica's remote Osa Peninsula.

Carrillo has seen jaguars hunting in the forest, lazing from trees and stalking crocodiles. Sometimes he has tracked a jaguar for days, only to realize that all the while, the jaguar was tracking him. Each sighting, he says, feels like a blessing. "My students tell me how lucky I am. But I see these encounters as gifts from God."

In more than 15 years, he has seen over two dozen jaguars, a remarkable number considering they are among the most shy and secretive animals in the world. Hunted or starved out of more than half their historical range from the southern United States to Argentina, jaguars have become more and more elusive.

To track jaguar numbers, Carrillo

Corcovado National Park provides a safe haven for thousands of species, including (from left) scarlet macaws, deer, sloths and howler monkeys.



uses camera traps that sense heat and movement. Today he has agreed to take me along as he sets up his cameras. I am bucking the odds, hoping to see, if not a jaguar, then perhaps its sleek and deadly competitor, the puma, or at least its diminutive spotted cousin, the ocelot.

Corcovado may not be big – at 475 square kilometres it's about eight times the size of Manhattan – but it is the crown jewel of Costa Rica's famous national park system. There are 500 kinds of trees here, 370 types of birds, more than 4,000 species of insects and thousands of wild pigs, making it a perfect haven for the jaguar, which can crack a pig's skull open with its powerful jaws. Pumas aren't as strong as jaguars, but they are lightning-fast runners, able to chase down and kill the park's plentiful deer with a single choking bite to the neck.

We push Carrillo's boat free of the river mud and hop in. He coaxes the outboard motor to life and points us

up the winding Sirena River, towards the heart of Corcovado. Carrillo's friend, Alvaro Ugalde, a short, solid tank of a man, bails water from the dented hull.

"If it weren't for Don Alvaro," says Carrillo, pointing at Ugalde, "There wouldn't be any animals here at all. This forest would be a golf course."

Ugalde drags a hand in the river and scowls. "The park isn't safe yet," he replies, as a bull shark drifts beneath his hand.

Ugalde is one of the fathers of Costa Rica's national parks system. He has spent almost 40 years shouting, screaming, arm-twisting and sweet-talking the country's presidents into protecting wilderness. He's one of the reasons that a quarter of the country now lies within a glittering necklace of national parks and other protected areas.

And Corcovado is his baby. Ugalde first hiked through the Osa Peninsula when he was 19. Like many of the area's pioneers, he had come in search of gold in the peninsula's streams.

He found no gold, but he fell in love with this jungle. In 1974, as general director of the country's entire national park system, he returned to convince hundreds of squatters, miners and hunters to move outside the boundary of his new park.

"In those days, hunters were shooting pigs and cats with machine guns," he says. "It took decades for the animals to return."

Forty years ago, Sirena, the research station on the park's Pacific coast, was a ranch. Now the trees at the edge of its airstrip grow ten stories high. The path to Sirena River has been thoroughly excavated by white-lipped peccaries, the most plentiful of the park's wild pigs. Tapirs have turned several creek beds into mud baths. Spider monkeys crash through the canopy, shaking branches with their curled tails. Mysterious shadows scurry through the undergrowth – a bit of fur here, a disappearing tail there.

The Sirena River itself is just as busy. "Jesus lizards" – named for their ability to walk on water – make panicked dashes across the surface on their hind legs like Olympic sprinters. Flocks of scarlet macaws burst into the sky like red, yellow and blue fireworks.

The motor grinds into gravel. We climb out and pull the boat up through shallows and rapids, finally hauling it ashore on the edge of a shoal.

The grass and sand have been dug up and trampled. "Crocodile nest. Watch out for eggs," says Carrillo. He's anxious, but not about crocs. He scans the riverbank for paw prints. A decade ago, he says, we would have seen jaguar and puma tracks on these shores. Today the only marks are the post-hole footprints of tapirs.

We climb through a knot of vines and fig tree roots into the shelter of the forest. Under the gaze of a troop of white-faced capuchin monkeys, Carrillo hacks away at the underbrush with his machete and pulls out one of his cameras. He uses networks of 24

Eduardo Carrillo (left) and Alvaro Ugalde are on a mission to save Costa Rica's threatened wildlife.

cameras to estimate how many jaguars live in an area. "Jaguars are at the top of the food chain," he tells me. "They show us how healthy the forest is."

Corcovado seems full of life, but its jaguar population recently plummeted by half. Back in 1997, Carrillo says there were as many as 100 jaguars in the park. Those numbers fell to 40 or 50 by 2004. Poachers were slipping into forests on the edge of the park and shooting the peccaries. With no pigs to eat, hungry cats ventured out into the farmland outside the park to hunt chickens and cattle – and met farmers' rifles.

Desperately worried, Carrillo showed his study results to Ugalde. "Those reports were horrifying," says Ugalde. "What's the point of saving the forest if there are no animals in it?" He came out of retirement to take over management of Corcovado and the surrounding conservation area.

Ugalde knew that the park needed more guards. Tiny Costa Rica didn't have the money to pay for them, so he convinced the San Francisco-based Gordon and Betty Moore Foundation to chip in $8 million. In 2005, 56 new guards fanned out across the park, many of them former hunters. After two years, wild pig numbers are on the rise again, says Carrillo. The jaguars should follow, but he hasn't seen one in Corcovado for nearly four years.

Ugalde never stops plotting his war for wilderness, even though the 61-year-old has finished his term as the park's director. The grant for park guards runs out at the end of 2007. When we hike out of the park, he'll

harass landowners nearby to help pay for new guards. Then he'll return to Costa Rica's capital, San José, where he's been lobbying President Oscar Arias to take conservation far beyond the country's park system.

Costa Rica's parks are like islands of wilderness in a vast sea of farmland. Biologists agree that parks need to be linked so that animals aren't stranded. Costa Rica has created so-called wildlife corridors, but there aren't enough guards to protect them. In a study last year, Carrillo found not a single jaguar in the forested corridor between Corcovado and nearby Piedras Blancas National Park.

Ugalde and others are now taking matters into their own hands. Ugalde, for example, has helped create a private cloud forest reserve in the northwest of the country called Nectandra – one of more than 100 private reserves in Costa Rica. Just like the old ranches of Corcovado, farmer's fields in Nectandra are returning to their forested origins, and the animals are coming back.

We stumble through the bush, searching for footprints, trails, scat – any sign of the big cats. Nothing. The air is thick with moisture and the electric buzz of cicadas. The noise and the sticky heat numb the senses.

We arrive back at Sirena Station as the sun begins to sink into the treetops. I should relax over lemonade with Carrillo and Ugalde. But the jungle has suddenly become quiet, and I feel a strange sense of urgency. It's my last night, so on impulse I duck back into the forest and hear Ugalde yelling: "*Cuidado* – careful – it will be dark in half an hour!"

I follow the trail back toward the river, savoring the moment. It's now so quiet that I can hear falling leaves hitting the ground. I scan the trail for snakes so carefully that I do not notice the eyes until I am a stone's throw away. The hairs on my forearms stand on end. The eyes don't move. Neither does the mouth, which is pulled back into a silent grimace. Seated on a fallen tree, its body long, sinewy and coated in tan fur, is a puma. The big cat seems not the least bit frightened. Strangely, neither am I.

We stare at each other for what seems like a lifetime as the light fades. Finally the puma eases to its feet, pads across the log and lopes to the dirt. There it pauses, gives me one last glare, and trots away into the shadows. I feel the same rush of awe and gratitude Carrillo experienced after his first encounter with a jaguar. Suddenly I understand: this is the real gift of Corcovado.