

By Robert and Patricia Cahn

## Treasure of parks for a little country that really tries

*Led by two energetic young conservationists, Costa Ricans are making an oversize effort to preserve their lands and very special wildlife*

We had been flying over more than 30 miles of Costa Rican countryside without spotting a house, a road or any sign of civilization—most unexpected in this tiny country of two million people—when the pilot pointed ahead to a small, narrow clearing at the edge of the sea and indicated he was going to land our aged single-engine plane there. We had left the urban sprawl of San José, the nation's capital, an hour earlier. Now, in the midst of a vast tract of lush tropical rain forest, we had reached our destination, Corcovado National Park. It is one of 20 parks and biological reserves set aside during the past decade for what in some ways is the most remarkable national-park system in the world.

The place we were visiting was very much unlike a park in the United States, where wilderness is reached after running a gauntlet of hotels, gas stations and restaurants. Corcovado, bordering the Pacific Ocean in southwest Costa Rica, has nary a road or motorized vehicle of any kind within its 89,000 acres. Indeed, a visitor cannot find many creature comforts in Costa Rican national parks. If a bed is available at all, in most parks it is a springless slat-board bunk used by rangers and scientists. At Corcovado you bring your own mosquito netting or suffer the consequences, and share in the beans and rice tastily prepared over a

A waterfall plunges down out of the rain forest in Corcovado National Park in southwestern Costa Rica.



A rare bird with iridescent plumage, the Quetzal dwells in cloud forest of Monteverde preserve.



woodburning stove for the staff. And at this park at least, you get around on foot.

But comforts—or the lack of them—are not exactly the point. What matters is that this Central American republic, slightly smaller than the state of West Virginia, has made an extraordinary commitment of its land and national budget to the preservation of its wild lands. This is all the more remarkable at a time when the destruction of rain forests in tropical countries around the world has become a matter of grave international concern. Although forest land has been and is being destroyed in Costa Rica too, since 1969 the country has placed 3.5 percent of its land in national parks and preserves, a larger percentage than has been set aside by the United States. Costa Rica is the little country that tried.

We had come here primarily for a meeting of the National Parks Commission of the International Union for the Conservation of Nature and Natural Resources (IUCN). But we also wanted to see the country that had produced, in fewer than a dozen years, a park system of world renown. In a part of the world notable for political unrest, Costa Rica is an island of participatory democracy and stability—all the more amazing considering its location between Nicaragua and Panama. It channels a third of the federal budget into education, has the highest literacy rate in Latin America, and has developed an excellent system of rural health care. The citizens are

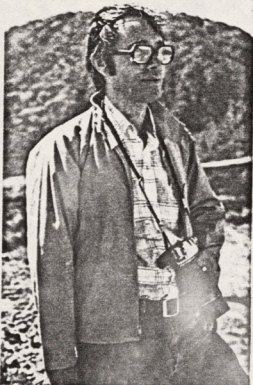
amiable and—increasingly rare these days—friendly toward Americans.

The high point of our seven-park pilgrimage came at Corcovado when we stepped out of the plane into the deep, cool shade of the tropical forest. Huge trees, some more than 200 feet high and six feet in diameter, towered over a rich tangle of smaller trees and vegetation. Here and there we heard a sound like the patter of rain and discovered it was thousands of tiny pink and yellow blossoms floating down from tall trees. Hummingbirds hovered above the fallen blossoms, whose fragrance mingled with the earthy odor of the damp, decomposing leaves underfoot. Now and then there was loud chattering as parrots flashed by.

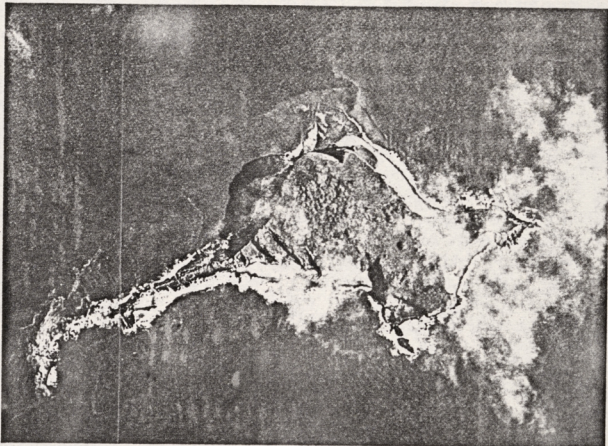
It is hard to imagine any place more suited to give pleasure to an amateur naturalist. In two days at Corcovado, though we were not experienced birders, we were able to identify 37 species. On one late-afternoon walk of about three miles, we saw huge Scarlet Macaws (p. 73), Scarlet-Rumped Tanagers, oropendolas, a Laughing Falcon and a Chestnut-Mandibled Toucan—a vivid, yellow, black, red and white bird with a preposterous bananalike beak.

We didn't encounter any of the dangerous snakes that inhabit the forest and grasslands. Nor did we see

*In 1969 Robert Cahn won a Pulitzer prize for his reports on U.S. national parks. He and his wife, Patricia, now write about environmental matters.*



Mario Boza, 37, launched Costa Rica's park system a decade ago.



Guyabo Island on Pacific coast, haven for seabirds and turtles, is protected as a biological preserve.



any of the six species of rare cats that can be found there (Corcovado is one of the last places in Central America where one might see an ocelot [p. 72] or a jaguar). But we did see the wild pigs called peccaries, and the long-tailed relatives of the raccoon called coati mundis. And we came across a troop of spider monkeys (p. 70), comical acrobats that shrieked at us, shook limbs, and threw leaves and twigs to scare us away from their territory.

During one of our walks on Corcovado's jungle trails, we were puzzled to see plastic streamers staked near big, red passionflowers. We got our answer when we came across Dr. Frank B. Gill, as he stooped beside the blossoms. An ornithologist and behavioral ecologist at the University of Pennsylvania, Gill explained that he had observed Long-tailed Hermits (humming-birds) sipping passionflower nectar at that spot. We watched him while, syringe in hand, he measured the amount of nectar each blossom produces. "It's a way of calculating the birds' feeding habits and how many flowers they require in order to meet the day's energy needs," Gill said. "It's all a part of understanding what the birds are doing and why."

Our experiences in Corcovado revealed the key differences between Costa Rican parks and those in the United States or, say, Kenya: the emphasis on scientific research and the low priority given to tourism. Although some of the more accessible parks attract numbers of tourists, all of them are intended primar-

ily as preserves for tropical ecosystems. Of Corcovado's 200 or so annual visitors, more than 90 percent are scientists, frequently from the United States.

The presence of all this science is no accident, for Costa Rica is a kind of mecca for tropical research. It has sweltering lowland rain forests along both Caribbean and southern Pacific coasts; dry, thorny forests along the northern Pacific Coast; and cool, lush cloud forests in the central mountains. As part of a narrow land bridge joining two continents, it has an exceptional variety of fauna and flora. At Corcovado, American scientist Gary Hartshorn once identified 111 different species of trees on a two-acre plot. Costa Rica has close to 800 species of birds, over 100 more than can be found in all of North America above Mexico.

As might be expected, scientists and conservationists from abroad had a good deal to do with the development of the park system. But the people who had the most to do with it were two young Costa Ricans, Mario Boza and Alvaro Ugalde (opposite and below). When Boza first visited the United States in 1967, Costa Rica was a country without large amounts of public land, without a strong citizen conservation movement, and without any political backing for conservation. A thin, bespectacled forestry student of 25, he went on a group tour of U.S. national parks and national forests. The leader of the trip was Dr. Kenton Miller, a research scientist in wild-land management who had been teaching in Costa Rica.



Main crater of Poás Volcano, a popular park, contains a steaming lake. Volcano was last active in 1978.



Alvaro Ugalde, 33, is director of the National Parks Service.



*Treasures of Costa Rica's new parks*

On our own trip to Costa Rica we spent some time with both Boza and his former teacher, Miller, who had returned to chair the IUCN parks conference, and talked with them during a visit to one of the new parks, Santa Rosa, on the country's Pacific coast. As we hiked up a cliffside trail, Miller reminisced about how it all began. "On a free day just outside Great Smoky Mountains National Park, I asked if anyone wanted to go back into the park for a day. Boza did, and that evening he turned to me and said, 'Is there a possibility that I could change my thesis and study how to develop a real national park for my country? And would you be my faculty adviser?' " Miller agreed. Boza completed his thesis on a park-management plan for one of Costa Rica's volcanoes, and then went to work for the Ministry of Agriculture.

Boza's first opportunity to create a park was to come here at Santa Rosa. It was an appropriate beginning. From the tops of the cliffs we looked down on a rugged coastline with its giant rock formations. To the north were beaches that are now protected as a haven for the threatened Pacific Ridley and other marine turtles that come ashore here each year to lay their eggs. Bordering the coast were mangrove and transition forests leading upward to a vast lowland dry forest. In this variety of habitats live 200 species of birds and 60 species of mammals.

During breaks in our walk, Boza told me something of the park's background. Santa Rosa was famous in Costa Rica as the site of a brief battle in 1856, in which an improvised army of Costa Rican peasants had defeated a well-equipped invading foreign mercenary force led by William Walker, the notorious North American adventurer. Eventually the historic battle site and some 23,000 acres of land were acquired by the government's Tourism Institute.

"And that's how things stood in 1969, when a na-



Saturniid moth (shown double its size) is one of many colorful insects harbored in Costa Rica's forests.







Spectacular golden toad (here about triple life size) occurs only in Monteverde, was found in 1960s.



tional parks department was set up in the Ministry of Agriculture under the Forest Service," Boza said. "The new department was given responsibility for all of Costa Rica's volcanoes, a nature reserve and the Santa Rosa National Monument. The only problem was that it had no budget and only one employee—me."

But Boza was not discouraged. He recruited his friend, Alvaro Ugalde, who had just returned from the United States where he had been trained in national parks management, as had Boza the previous year. There was no money to pay him, but Ugalde agreed to go to Santa Rosa as superintendent on a volunteer basis until Boza could scrape up funds for a salary.

Turning Santa Rosa into a real park was not easy. Ugalde found some of the "park" occupied by the cattle of nearby ranchers, and by squatters who were burning stubble to clear their fields. Government forestry officials were closing their eyes to the damage. To stir things up, Boza wrote to the Ministry of Agriculture and sent a copy to the newspapers, which subsequently carried headlines, he remembered: "Santa Rosa in flames; national park being ruined." The publicity had its effect; Ugalde was able to start moving the squatters and ranchers out.

Then came another crisis. Daniel Oduber, the president of the Legislative Assembly, sponsored a bill to take Santa Rosa away from the parks department and return it to the Tourism Institute—a move which would probably open the area to grazing again. Said Ugalde to Boza: "Mario, we are only six months old, and already we are an endangered species."

#### *A job for the fairy godmother*

But the two young men did not give up. They found an obscure clause in Oduber's bill proposing a tax on liquor, visited businessmen who would be affected by it and pointed out what it would cost them. They got the Biologist's Association to write letters and pressure the legislature. "And then," Boza told us with a smile, "we called on our fairy godmother."

The fairy godmother was American-born Karen de Figueres, the wife of the President, José Figueres. Earlier, she had told the two young advocates that she would help them, and now they went to see her. "She was wonderful," Boza said. "Doña Karen talked with or wrote letters to every one of the members of the legislature, asking them to oppose Oduber's bill."

She also wrote a letter to Oduber himself, urging him to withdraw the bill. Showing considerable political artistry, she asked her husband—without telling him the contents of the letter—if he would deliver it himself to Oduber. And he did. Oduber persisted, but when the bill came before the legislative committee, it failed to get a single favorable vote.





Troops of agile, acrobatic spider monkeys dwell in Tortuguero National Park on Caribbean coast.



Blue tang or surgeonfish are common on coral reef at Cahuita;

Boza and Ugalde had won that round by astute maneuvering. With the First Lady's help, they also got two new national parks decreed by the President: Tortuguero and Cahuita, both on the Caribbean coast. And the Legislative Assembly created a 9,800-acre park at Poás Volcano.

Then, in 1974, when Figueres' term came to an end, the new President of Costa Rica was none other than their old adversary, Daniel Oduber.

Ugalde told us the rest of the story as he drove us back from Santa Rosa to visit another park, Cahuita. Ugalde at 33 is a charming, urbane bachelor who appears to be in perpetual motion. His lightly accented, fluent English is peppered with American slang, attesting to his days as a graduate student at the University of Michigan.

"Mario and I feared the worst when Oduber took office," Ugalde said. "We were scared he would remember how we beat him on his Santa Rosa bill." To make matters worse, Boza had run into trouble with his own boss, the Minister of Agriculture, who was unhappy at the way his young subordinate was trying to achieve more independence for his parks department. Boza, learning that he was to be transferred, resigned to develop a school of environmental sciences at the National University. But he did maneuver to get Ugalde appointed his successor as director of national parks. "It helped," Ugalde admitted, "that I was a member of Oduber's political party." (Some people surmise that the two friends maintain affiliations with opposing parties so that no matter which side wins an election, the parks will have an advocate with connections.)

Same party or not, for the first few months Ugalde tried to stay out of Oduber's sight: "But one day I ran plunk into the President coming out of a building.

"Ah, Ugalde! Where are you now?" the President asked. 'In the parks department,' I replied. 'Come see me,' he said. My heart sank.

"But I was surprised. Instead of Oduber being revengeful, he became the greatest friend the national parks ever had."

Some good years followed. Three decades earlier, Costa Rica had abolished its armed forces in favor of using the money and manpower for social programs. Now, with strong presidential backing, the country started turning swords into parks. "Through legislation and presidential decrees, 400,000 acres were protected," Ugalde told us. "We tripled our personnel and got the parks department made into a full-fledged National Parks Service. And we were given a comparatively large budget."

The most important new park was Corcovado. Ugalde estimated it would cost 1.5 million colones (\$176,000 today) for relocating about 45 families of squatters and starting the park. He and Joseph Tosi jr., of San José's nonprofit Tropical Science Center—a private organization which had already established a cloud-forest preserve called Monteverde—obtained promises of financial assistance from three U.S. conservation groups. But after deeper study of the remote area, Ugalde was dismayed to learn that there were many more squatters than anyone had realized, and that the cost of relocating them would be ten million colones (\$1.2 million)—a huge sum in Costa Rica.

"I was sure I'd be fired the day I had to tell the news to the President," Ugalde recalled. "But he took it calmly, telling me: 'It may cost ten million colones now, but how much would it cost 50 years from now? We will do it.'"

Thus Corcovado National Park got under way.





spines near the base of their tails can inflict a painful prick.



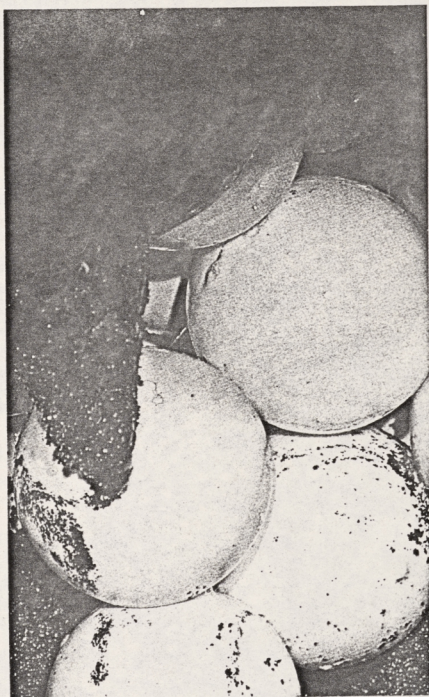
Three-toed sloths, which Costa Ricans call "lazies," live—usually upside down—in several of the new parks.

There were different problems with Cahuita National Park. In Spanish, Costa Rica means "rich coast," and at Cahuita it is easy to understand why early explorers chose the name. It is the sort of place one associates with Caribbean islands—swaying coconut palms, white sand beaches and turquoise water—but there is one difference: it is not acrawl with tourists.

At Cahuita in 1975, Ugalde had encountered stiff opposition from hostile fishermen and farmers who felt that a park would intrude on their livelihoods. "When a public hearing was held," Ugalde said to us, "it seemed like I was the only defender. But after I explained to Cahuitans that the real threat came from the land developers and wealthy people from San José who wanted beach-front vacation homes or land for speculation, the local people realized that the park would give the best protection to their way of life." After Ugalde's forceful presentation, a vote was taken. The park won almost unanimously.

At Cahuita we donned masks, snorkels and fins for a foray to the coral reef just offshore. Plunging into the tranquil sea, we were soon among gardens of stag-horn and brain coral. Brightly colored blue tang (above), parrot fish and dozens of others darted about, sometimes very close to our masks. When we finished our swim, we took a walk in the small rain forest just behind the beach. We have toured many of the parks in the United States, and have had the thrill of encountering everything from bears to bison. Here the excitement came from spotting a huge iguana climbing out on a mangrove limb, or sighting that curious animal, the three-toed sloth (above), moving with deliberate slowness, if at all.

When Oduber's term ended in 1978, some Costa Rican park boosters wondered whether the good days



A green turtle lays her eggs at night at Tortuguero, one of last Caribbean refuges for these big reptiles.



*Treasures of Costa Rica's new parks*



The ocelot, an endangered species somewhat larger than the domestic cat, still survives at Corcovado.

were over. But the new President, Rodrigo Carazo, a member of a different party, had a surprise for them. Not only did he retain Ugalde as parks director, but he brought Boza back to influence as Adviser to the President for Natural Resources.

Now, with the country under economic stress because of oil shortages and depressed prices for its key agricultural exports, Carazo has severely cut the parks' funds and personnel as part of a government-wide budget-tightening process, but he has nevertheless approved the purchase of private land holdings within the parks and for extensive park expansion.

Before leaving Costa Rica, all of the delegates to the IUCN parks conference went with Boza and Ugalde for a picnic lunch at Poás Volcano. Poás last was active in 1978, but is very much alive. From a trail around the rim we peered into the deep cavity at a hot, gray lake emitting clouds of steam (p. 67). Another crater nearby, long inactive and lined with lush vegetation, held a sparkling blue lake.

We were not alone. It was a holiday Sunday, and the park lies only an hour from San José. People started arriving in midmorning, and before the day was over there had been at least 4,000 visitors. Although that number is far more than the park can really handle because trails and picnic areas are still lacking, the crowding didn't seem to bother the visitors, who hiked about, picnicked among the trees and listened to pop music or soccer-game broadcasts blaring from what seemed to be 4,000 portable radios.

Some IUCN delegates, experts on national-park matters, had sounded a note of caution about the future of Costa Rica's young parks program. They noted that the parks service is dangerously short of trained professionals, and that protection is inadequate in most areas, with the result that poaching and other intrusions cannot be completely controlled.

Yet we found it hard to be pessimistic about the future. After our IUCN picnic at Poás, we noticed two men walking around picking up soft-drink bottles and collecting leftovers and used paper plates. They happened to be the Adviser to the President and the Director of the National Parks Service, Mario Boza and Alvaro Ugalde.

So much for the trappings of rank in the Costa Rican park system. And perhaps a symbol for the IUCN delegates of how a small country can build itself a sound conservation program. What it takes, it seems, is a couple of people with the right ideas, a lot of devotion, political savvy and a little true grit.

The yard-long Scarlet Macaw, shown perching at nest hole in tree limb, is found in parks near Pacific.