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Challenges that rangers must face: Four rangers from Mexico, Costa Rica, Honduras, and Colombia tell their stories of diverse realities across Latin America

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## Challenges that rangers must face: Four rangers from Mexico, Costa Rica, Honduras, and Colombia tell their stories of diverse realities across Latin America

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### Introduction

A set of articles in a previous issue of *Parks Stewardship Forum* (**volume 37, number 1, 2021**) focused on how to implement the 2019 Chitwan Declaration of the 9th World Ranger Congress covering issues such as rangers' role in conservation, relationships with communities, and challenges to professionalize the career. Here I build on those articles by collaborating with four Latin American rangers so that they can tell their stories of how they became rangers and what they face. The four represent different park systems, habitat types, educational levels, gender issues, community relationships, and major duties, among other aspects. Their stories lend a human face to the earlier general discussions.

### Guarding the biodiversity of 10,000 protected areas

"In a sense, we are all park guards," says Dr. Clara Osorio, a protected area planning and management expert who has worked 32 years with Colombia's National Natural Parks agency (*Unidad Administrativa Especial del Sistema de Parques Nacionales Naturales de Colombia*), mostly in the central office. In Latin American Spanish the term she uses, "guardaparque," unlike its English equivalent "ranger" or "park guard," often includes all folks who participate in the protection of natural heritage, not just law enforcement and interpretation (see IRF definition and work profile in [Singh et al. 2021](#)). Indeed, Latin America needs all those people too to face the enormous task of conserving **60% of the world's biodiversity** in some of **the world's most biodiverse countries** such as Brazil, Colombia, Perú, Ecuador, Venezuela, and México (see [Singh et al. 2021 on vital role of rangers](#)). The 52 countries in Latin America and the Caribbean, in fact, employ nearly **10,000 protected areas** to cover 24% of the land area and 17.5% of marine waters. Most Latin

American countries also split management jurisdiction of natural and cultural heritage among different ministries operating in the same spaces. Cultural heritage guards then may not identify themselves as rangers, though they often serve the same functions.

### Honduras, where co-management reigns supreme

In Honduras the National Institute of Forest Conservation, Protected Areas, and Wildlife (Instituto de Conservación Forestal) oversees the management of 91 protected areas including 24 national parks. The largest protected area is the Río Plátano Biosphere Reserve (832,339 ha) and World Heritage site. Together the system covers 28% of Honduras's land area. That the government has signed co-management agreements with non-governmental organizations (NGOs) and municipalities for the overwhelming majority of its protected areas distinguishes Honduras among many Latin American countries. Its first protected area, the San Juancito Forest Reserve, earned its declaration in 1952 and eventually became La Tigra National Park, where Gerardo Servellon has worked almost his entire life.

### Gerardo Servellon, district park guard chief, *La Tigra National Park*

Born in a tiny group of ex-mining camp houses in the middle of what today is La Tigra National Park, Gerardo Servellon split his childhood between family agriculture in the park and odd jobs in Tegucigalpa, Honduras's capital city, 15 km from the park entrance. "I didn't know what a protected area was then. I knew we were inside a park, but I didn't know anything about its rules," admits Servellon. Later his uncle rented a market booth in the city. Servellon discovered he could make respectable



money hunting park armadillos to sell there. On a good afternoon he could trap three animals.

Years later in 1993 the non-profit AMITIGRA began operation as the park co-manager and offered Servellon, as a lifelong resident of the park's forests, a position as park guard (see Woodside et al. 2021 on community-ranger relationships). But Servellon immediately faced the challenge of finding people to sign his monthly invoice, since "I didn't know how to read or write. I was never in school. Signing paperwork was a different world than I was brought up in."

When opportunity arose to join a vocational trip for tourist guides and park guards around Honduras to learn about guiding in other protected areas, coordinators disqualified Servellon because he could not read (see Woodside and Vasseleu 2021 on ranger capacities). The missed opportunity awoke an interest in him, to which his uncle said that if he wanted to attend the next trip, he would have to learn. So, he joined a class with a tutor and a radio-based learning program during which, at the scheduled hour, Servellon sat down wherever he was in the middle of the forest, took out his books, and for an hour and a half studied to earn his primary school degree

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The Choluteca River in La Tigra National Park. LUCAS PALMA







Park guards with the non-profit AMITIGRA investigate an illegal cut in La Tigra National Park. LUCAS PALMA

(see [Appleton et al. 2021 on ranger professionalization](#)). After two years he graduated and went on that trip that he so long desired.

For the next 16 years Servellon worked as park guard during the week and tour guide on weekends. He led university students and school groups along the trails. That double function was common for park guards back then. But five years ago, the role would change when the park offered him one of two park guard director positions, one for each half of La Tigra.

Despite his role change, fighting fires remains the guards' principal challenge, even more so for Servellon. During the 4–5 months of dry season, he coordinates 30–40 part-time firefighters in addition to his regular ten-ranger staff. Since all fires occur in the buffer zone where communities are, every fire represents a potential threat to life and property. While he has noted a general increase in fires, likely due to climate change, Servellon points out an even clearer threat driven by the warming atmosphere. In 2001 a pine bark beetle outbreak required that park guards cut down 1.5 ha of forest to contain it. In 2013, however, the same beetle ravaged pine trees across the country, and this time a team of 90 cut 5,000 ha in La Tigra, including

not just infected trees but healthy ones as well to block the beetle's advance. Gerardo says that many people attribute this infestation surge to climate change.

Park guards also routinely participate in sting operations accompanied by soldiers and environmental authorities to thwart deforestation, mostly for agricultural expansion. Two and a half years ago, in fact, Servellon led a team to the park's upper part to investigate a clearcut in progress. The workers admitted that they served in the employ of a top government minister who intended to plant coffee and avocados. Servellon recalled, "I didn't feel too happy [to find out that a current minister masterminded the deforestation], but knowing that it was a high government official was a good example for communities that even powerful people are not above the law" (see [Woodside et al. 2021 on community relationships](#)).

His favorite activity, however, is the opposite of deforestation. La Tigra rangers often collaborate with community groups and businesses to plant trees. Servellon muses that his love of tree planting might trace back to his childhood roots planting corn and carrots in this very same park.



Despite the park's proximity to Tegucigalpa, it does not receive more than 400 people per day even in high season, so rangers concentrate mostly on fires and agriculture-driven deforestation, among other functions. Servellon nevertheless enjoys learning about different aspects of park management, even though, as he says, he's getting up in age. "But in the end, you learn to have fun amidst the complexity."

### Costa Rica: Small country, big ideas

In the 1970s Costa Rica established its national park system. Combined with its relative proximity to the United States, abolition of its army in 1949, and high education level, the small country—often called the Switzerland of Central America—quickly established itself as a global natural heritage destination. Over time the system evolved from a traditional park system to today's National Conservation Areas System (SINAC, Sistema Nacional de Áreas de Conservación). The entire country is divided among 11 conservation areas to decentralize control and integrate protected area management with surrounding agricultural, urban, and other land uses. Costa Rica has [149 nationally protected areas](#) including 29 national parks covering 25.5% of the land area and 2.6% of its marine surface. Cocos Island National Park, for example, is a World Heritage site and part of the same underwater mountain chain as Galápagos National Park in Ecuador. Costa Rica also is one of the few countries in the world whose forest cover has increased in recent decades, doubling over the past 30 years to [nearly 60%](#). This amount includes the contribution of more than 215 private reserves. The highest peak is in Chirripó National Park, where Laura Díaz serves as director.

#### Laura Díaz, director, Chirripó National Park

In high school, someone showed Laura Díaz a postcard of Chirripó National Park's *crestones*, its famous mountaintop rock formation, reminiscent of points on a crown. She remembers, "When I saw this postcard, I thought that if this is in Costa Rica, I want to go!" Little did she know that not only would she go multiple times in upcoming years, but she would become the park's director.

Laura studied at the National University to become a forester. For her graduation project, she did a rapid ecological assess-

ment over two months in protected areas of the Osa Peninsula in southern Costa Rica. A park guard job opened while there, and she thought, "Part of me would love to work for the Ministry of the Environment, to work more in conservation than forest production." So, she accepted the post without having any ranger experience or even having finished her graduate studies, which she would do late in 2009 ([see Appleton et al. 2021 on ranger professionalization](#)).

Díaz worked as a ranger for two years, taking full advantage of her forestry skills. She and fellow rangers carried out inventories, evaluations, species identifications, and mapped state-owned coastal lands in protected area buffer zones to determine if their natural heritage warranted integration into those protected areas ([see Cronin et al. 2021 on technology](#)).

Despite her good job fortune, it came with difficulties. Imagine being a small, 22-year-old woman, without work experience, still a student, from outside the area, and starting alongside experienced male rangers in their 40s and 50s ([see Seager et al. 2021 on gender equality](#)). The work was hard, very hard in fact, but eventually the men

Laura Díaz and *crestones*, Chirripó National Park. LAURA DÍAZ







Cerro Chirripó (Mount Chirripó), part of the Talamanca Mountains (Cordillera de Talamanca), is the highest peak in Costa Rica. ALONSO TENORIO

came to respect her as co-equal, though her future would soon bring her north.

Chirripó National Park contains Costa Rica's highest peak at 3,820 m. On a clear day a climber can see both Atlantic and Pacific. The park itself, established in 1975, covers over 50,000 ha and forms part of the **Talamanca Range-La Amistad Reserves/La Amistad National Park World Heritage Site** shared with Panama. It also contains most of Costa Rica's high-altitude *páramo* habitat.

Because Laura had got to know park employees, on a trip to Chirripó one asked if she would like to work there. Although aware of an administrative restructuring, she had no idea that the position in mind was the directorship. She gladly accepted and began in October 2018.

When asked what she considered her park's most distinctive feature, this writer thought that she was

going to mention the *crestones* or that the park reached farther into the sky than any other point in Costa Rica. But no. She answered that Chirripó “has a buffer zone with biological corridors and communities with their own agendas. This place is different because we focus not only on guarding the border so that no one enters without permission, and that no one hunts there, rather instead of turning our backs to communities, we sit down with them to forge partnerships and define shared responsibilities.” Indeed, with only eight employees today (see Singh et al. 2021 on vital roles of rangers), the park in 2007 began a process of community empowerment, eventually issuing one concession and three use permits to communities. With perhaps more community collaboration experience than any other park (see Woodside et al. 2021 on community relationships), communities offer all tourism services including housing, food, parking, backpack porters, guides, maintenance of the 60-person mountaintop lodge, and the trails to get there. Last year



the park implemented an online reservation system so tourists pay park fees neither to communities nor employees. The park charges 5% overhead on all such services, used to upgrade park infrastructure and programming.

Visitors then enter one of three gateway communities, park their cars in residents' lots, purchase their services, and walk four km to the park border, and hike six more up to the lodge. Two hours and five km later, tourists reach the skyscraper peak.

The threat that the entire Talamanca range shares is that of fires. Díaz says that there has not been one within the park in eight years but there have been several in the buffer zone. Sometimes tourists light fires to keep warm, or hunters to cook their food, and lose control. The park must act quickly to identify the fire, come up with strategies to attack it, and mobilize volunteer community-based firefighter brigades. "Our protected areas are protecting very vulnerable ecosystems such as *paramo*. With just one bad decision, a fire could reach the *paramo*, a place very slow to recover. I believe this is our greatest challenge," Díaz says.

### México, where biosphere reserves lead the way

México is the **fifth most megadiverse** country in the world and contains **182 national natural protected areas**, including **67 national parks and 44 biosphere reserves**. The system, managed by the National Commission for Natural Protected Areas (Comisión Nacional de Áreas Naturales Protegidas, CONANP), covers 11% of Mexico's land area and 22% of its marine area. Many of its most well-known Mayan civilization sites are also natural protected areas with significant forest cover, such as Palenque National Park and Calakmul Biosphere Reserve, both World Heritage sites. Its largest protected area by far is the Pacífico Mexicano Profundo Biosphere Reserve, which covers over 43.6 million ha of ocean, while the largest land area is Valle de los Cirios Flora and Fauna Protected Area, consisting of over 2.5 million ha. The tallest mangroves in Mexico can be found in La Encrucijada Biosphere Reserve in the state of Chiapas, where Reynerio Ovalle works as a ranger.

#### Reynerio Ovalle, ranger, *La Encrucijada Biosphere Reserve*

"Given his long career, Reynerio is both an institution and a legend at La Encrucijada," says Claudia Virgen, a



Fishermen in La Encrucijada Biosphere Reserve. JON KOHL



well-known conservationist in Chiapas who taught Ovalle in a course on nature guiding. Ovalle was born in 1963 in the fishing village of La Palma inside of what would become La Encrucijada Biosphere Reserve, 145,000 ha along the Pacific coast of Chiapas.

After finishing fifth grade within the reserve, he had to leave to complete high school. After four months of university, he felt too close to the city and too far from La Palma, where he returned to fish shrimp and bass with his father using hook, harpoon, and canoe along the rivers and freshwater estuaries of the reserve.

In 1995 the government established the reserve under management of the Natural History Institute, a non-profit that recruited locals to become park guards. Ovalle's local fishing cooperative—comprised just two families, one of which was his—nominated him because he could read and write. The institute hired him and a woman from another community to join six guards already there. They alternated between 20-day tours in the field and 10 days off.

Though the institute closed in 2007 and CONANP took over the following year, Ovalle's responsibilities remained largely the same. Foremost he worked as an enforcement ranger. He patrols the reserve for illegal hunting, fishing, cutting, and burning. Before CONANP, most adults did not want to hear him talk about rules or conservation since they participated in such activities. The reserve thus decided to focus its environmental education on kids who could go home, as Ovalle explains it, and pressure their parents: "Daddy, the animals have a right to live, too."

Over time, however, three factors contributed to a change in community attitudes toward the reserve. First, as Ovalle puts it, "Today, people in the communities see the damage that they caused and live with the effects and now are realizing the importance of protection." Second, unlike with the institute, CONANP sponsors many projects that help people to sustainably use natural resources, earning trust. Third, people largely from outside the reserve now inflict most damage rather



Reynario Ovalle in mangroves, La Encrucijada Biosphere Reserve. JOSÉ DOMINGO CARBAJAL

than locals. Consequently, CONANP facilitated the establishment of community-based patrols that work voluntarily with the agency to identify illegal acts. (See [Woodside et al. 2021 on community relationships](#).) Some 64 communities, more than 50% of the total within the reserve, contribute their own people to these patrols, complementing the 20-person reserve staff, all of which consider themselves park guards; but only Ovalle and one other guard actually spend most of their time under the hot sun doing enforcement and environmental education (see [Belecky et al. 2021 on employment conditions](#)).

Fortunately, many of the reserve's technical staff also help with these duties when they visit the reserve. So his



colleagues don't overhear him during his Zoom interview, Ovalle admits quietly, "I very much like conservation in the field. When I'm in the office," he pauses, "I get a little bored."

As in other parts of Latin America, Ovalle frequently carries out missions accompanied by soldiers, police, navy personnel, and municipal agents to track down and stop illegal activity. Though community relations have been improving, Ovalle notes, "It is important that the people see the presence of authorities. If they don't see anyone with guns, they aren't afraid. If they see armed police, then for a time they don't do anything illegal."

The reserve boasts the tallest mangroves in Mexico, which also offer habitat for many kinds of animals. Hunters, he says, often set fire to mangroves and other habitat types to flush out crocodiles, caimans, turtles, iguanas, birds, and mammals. Fires that break loose can then threaten communities. Because of deforestation, warming temperatures, and reduced rainfall—the reserve's most obvious signs of climate change throughout Ovalle's life—large patches of dry vegetation remain exposed, and staff applies prescribed burns to reduce their flammability during the dry season.

Even with the help of armed assistance, Ovalle at times finds himself face to face with people committing crimes—his greatest challenge as a ranger. Despite that he wields no power of arrest, hunters and cutters have threatened his life on multiple occasions (see Singh et al. 2021 on dangers to rangers). "If I am going to die," declares Ovalle, "it will be defending the natural resources. I don't care if they kill me for that. In the meantime, I will continue educating people."

### Colombia, second most biodiverse country in the world

Colombia is the second most biodiverse country in the world, after only Brazil, with nearly 10% of the world's biodiversity, the second highest number of plant and amphibian species, and the most bird species. To protect such diversity requires all of Colombia's 1,343 protected areas, which cover 16% of its land and 14% of its national waters; this includes 122 nationally protected areas and over 900 managed locally. The National Natural Parks agency manages its national parks and other categories with 1,910 employees, 1,135 of which actually work in protected areas themselves. One of the country's most famous park rangers is Roberto "Paiton" Ariano.

#### Roberto "Paiton" Ariano, ranger, El Cocuy National Park

Most rangers must face threats that include forest fires, agricultural encroachment, and illegal wildlife hunting.

For Ariano, his principal threat is that perpetrators of illegal acts hunt *him*. Shot at, caught in crossfire, and declared a military target, his life commitment to El Cocuy National Park has not been easy.

The national park near the Venezuelan border boasts more than 25 snow-capped peaks and dozens of glacial lagoons. El Cocuy starts almost at sea level and rises over 5,000 m, embracing most of Colombia's ecosystems. And like many places in Colombia during wartime with guerrillas and narcotraffickers, the park suffered. In 1987 guerrillas assassinated its director after which the government abandoned it. Since then, two other staff related to El Cocuy also died in service (see Singh et al. 2021 on dangers to rangers).

Though from the Caribbean coast, Ariano could not resist the allure of snow-covered mountain peaks. As early as 13 he began a lifelong obsession with high-tech, high-mountain climbing. He has joined teams that have climbed famous peaks around the world, such as those in Yosemite National Park (USA), Mount Kilimanjaro (Tanzania), Aconcagua (Argentina), and Mount Elbrus (Russia), and he was part of the first Colombian team to peak Mount Everest although he didn't complete the ascent. After finishing his compulsory military service in 1985, he decided to study economics at university. Why economics? Because the class schedule allowed him to

Roberto "Paiton" Ariano (standing) and the author at a PUP guide training course.  
CARLOS ROSERO







The remains of a visitor center in El Cocuy National Park that was destroyed by guerrillas. JON KOHL

climb in the afternoons and weekends. “I would perhaps be a theologian if the schedule allowed me to climb” (see [Appleton et al. 2021 on ranger professionalization](#)). He linked up with a program that sent him to work in El Cocuy. Then for his master’s degree in rural development, again he did his work in El Cocuy, a park in which he had climbed many times during his life.

After returning from a world climbing tour in 1994, Ariano joined an organization of climbing and environmental groups that pressured the government to reopen El Cocuy. He offered himself to go to the park without pay to help the process. Shortly thereafter the government hired him, after which he ascended eventually to interim director in 2006. Because of his deep passion for the mountains, he later decided to return to the number two position. “I would like to be 24/7 in the mountains. According to my rank, I should not do that. In 2019 I was the park ranger that spent the most nights outdoors, 62. I can’t stand the office, man. Neon lights do not tan my skin,” he said in English. So, to date he has spent his entire 26-year ranger career in El Cocuy.

During this time, he has participated in many projects, especially those involving community development, education, working with the Uwa tribe native to these lands, and training other park guards; he signs up for any outdoor task available. This includes ground truthing satellite imagery of the region (see [Cronin et al. 2021 on technology and innovation](#)), scouting abandoned trails, monitoring glacial retreat, and suppressing fires, especially those that threaten the park’s mountain *paramo* habitat. Because the high-altitude vegetation grows so slowly, a fire could be devastating.

His activism takes him beyond El Cocuy too, such as being a founding member of the Colombian Park Guard Association (see [Galliers et al. 2021 on ranger associations](#)). Also, in 2019, the International Union for Conservation of Nature awarded for the first time **three park guard prizes** at the III Latin American Congress for Protected Areas in Lima, Perú (see [Appleton et al. 2021 on ranger professionalization](#)). Before having been notified of his award, Ariano had scheduled a trip to Spain where he was going to research an alleged land grant by



a Spanish king to the Uwa of El Cocuy (see Woodside et al. 2021 on community relationships). Rather than cancel, he quickly flew to Lima to accept the award and give a quick speech chastising Colombia for having closed all its mountains to climbing. As soon as he finished, he flew back to Bogotá just in time to catch his flight to Spain.

Violence has been increasing recently in the park, but Ariano harbors absolutely no intention of working anywhere else (see Belecky et al. 2021 on employment conditions). His lifelong fight for the conservation of El Cocuy's mountains will continue for as long as he remains alive. He says, "Colombian park rangers used to have weapons but since the mid-80s guerrillas started assaulting them to get their weapons so the government took them away. Our only weapon now is our tongue and our capability of talking and convincing all stakeholders that we work for the common good."

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#### On the cover of this issue

A glacial river on Kodiak Island, Alaska, meets the North Pacific Ocean. Coastal deltas represent the critical interface between terrestrial, freshwater, and marine connectivity. | **STEVE HILLEBRAND / USFWS**