



**AMAZON
CONSERVATION
ASSOCIATION**
ANNUAL REPORT 2014

FROM THE ANDES TO THE AMAZON: CONSERVING THE HEADWATERS OF THE WORLD'S GREATEST WATERSHED

Letter from the Executive Director

Dear Friend of Amazon Conservation,

In 2014, we celebrated 15 years of our work in Peru and 10 years in Bolivia—a decade and a half of science-based conservation in the field. Alongside community, research, and government partners, we've kept our boots dirty, so to speak, preserving the vibrant biodiversity of the southwestern Amazon. We remain tirelessly committed to our mission: protect the life that thrives where the towering Andes Mountains meet the lush Amazon rainforest.

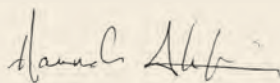
Our approach to conserving these globally important forests follows four major strategic areas: protecting habitats, identifying threats and proposing solutions, supporting sustainable livelihoods, and promoting science and education. Behind each one of these areas you'll find talented, passionate staff working where it matters, in the field—planting trees, holding training workshops for small-scale farmers, designing wildlife monitoring programs, learning to fly drones to gather data on the state of the forest, or cooking dinner for a group of hungry researchers.

The Amazon Conservation Association was founded on two central projects: the Los Amigos Conservation Concession, which protects 360,000 acres of lowland rainforest; and a Brazil nut program supporting harvesters whose livelihood gathering wild nuts provides for their families and simultaneously maintains vast tracts of standing forests. These activities remain the backbone of our protected areas and sustainable livelihoods work, even as we undertake new initiatives. This year, for example, we strengthened partnerships intended to safeguard more than 1.8 million acres of forest via new conservation areas. And by growing ACA's capacity to detect, monitor, and map deforestation in the Amazon, we are better equipped to act in advance of conservation threats.

We believe that the planet's richest forests ought to be its most studied, and that there is nothing quite like experiencing their wonder firsthand at our three biological stations. This year, we welcomed the first undergraduates participating in the School for Field Studies' study abroad program at our Villa Carmen station, in addition to over 900 other students, researchers, professors, and naturalists across all three stations.

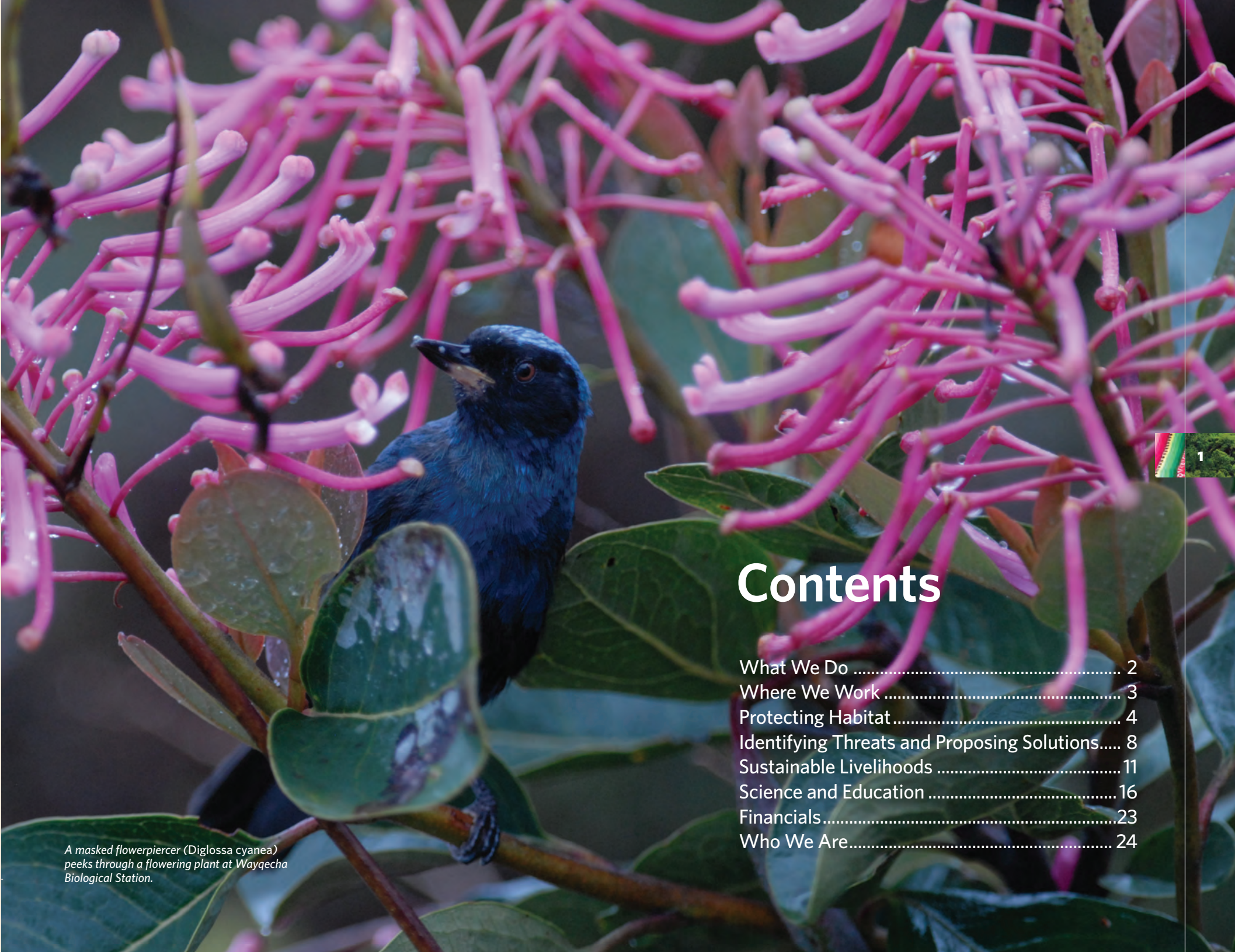
We hope you will join us for the next 15 years and beyond. Together, we'll keep these spectacular landscapes flourishing for generations to come.

Sincerely,



Hannah Stutzman

Cover photo: This vibrant clown treefrog (Dendropsophus leucophyllatus) was spotted by an ACA scholarship recipient completing a study on treefrog larvae at Los Amigos Biological Station.



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A masked flowerpiercer (Diglossa cyanea) peeks through a flowering plant at Wayqecha Biological Station.



What We Do

The Amazon Conservation Association (ACA) works to conserve the biological diversity of the Amazon basin. Since 1999, we have directed our efforts where the rainforest meets the Andes in southeastern Peru and northern Bolivia. This area has long been recognized as one of the most biologically rich regions on Earth.

We currently work with more than 100 communities in the Andes–Amazon; we protect over 2.2 million acres of Amazonian rainforest through conservation concessions (learn more on page 7), other designated areas, biological research stations, and sustainable livelihood and reforestation projects.

Using cutting-edge science and innovative conservation tools, ACA is creating models for others to follow. We are committed to protecting habitat; we established the world's first conservation concession and assisted in forming the world's first indigenous conservation concession. We form personal relationships in local communities, working together to help them earn forest-friendly incomes. We manage some of the best research stations in the tropics. We monitor diverse threats to the Andes–Amazon in near-real time and are able to directly address deforestation. We consider all stewards of this region's forests important partners in our work.

Closely allied with two main partner organizations, *Conservación Amazónica–Asociación para la Conservación de la Cuenca Amazónica* (ACCA) in Peru and the *Asociación Boliviana para la Investigación y Conservación de Ecosistemas Andino-Amazonicos* (ACEAA) in Bolivia, we concentrate our resources where they have the most profound impact: on the ground.

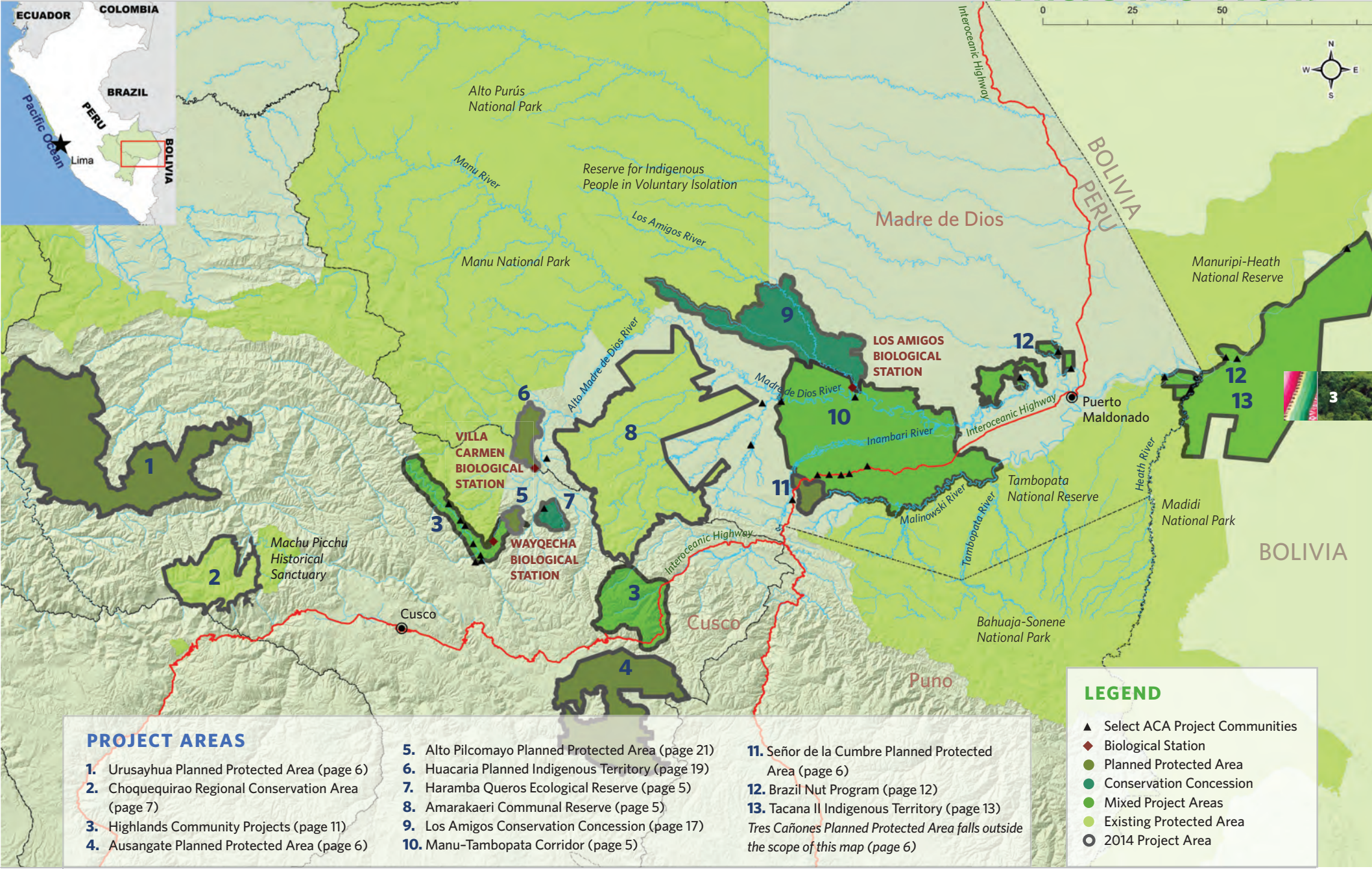
Epiphytes and mosses thrive in moisture-rich cloud forest.



ACA'S STRATEGIC AREAS

- Protecting Habitat
- Identifying Threats and Proposing Solutions
- Sustainable Livelihoods
- Science and Education

Where We Work



PROJECT AREAS

- 1. Urusayhua Planned Protected Area (page 6)
- 2. Choquequirao Regional Conservation Area (page 7)
- 3. Highlands Community Projects (page 11)
- 4. Ausangate Planned Protected Area (page 6)

- 5. Alto Pilcomayo Planned Protected Area (page 21)
- 6. Huacaria Planned Indigenous Territory (page 19)
- 7. Haramba Queros Ecological Reserve (page 5)
- 8. Amaraeri Communal Reserve (page 5)
- 9. Los Amigos Conservation Concession (page 17)
- 10. Manu-Tambopata Corridor (page 5)

- 11. Señor de la Cumbre Planned Protected Area (page 6)
 - 12. Brazil Nut Program (page 12)
 - 13. Tacana II Indigenous Territory (page 13)
- Tres Cañones Planned Protected Area falls outside the scope of this map (page 6)*

LEGEND

- ▲ Select ACA Project Communities
- ◆ Biological Station
- Planned Protected Area
- Conservation Concession
- Mixed Project Areas
- Existing Protected Area
- 2014 Project Area



On what it means to receive an ACA scholarship: "It's a joy, because I can do research on the spectacled bear. It's exciting, because I will do my research in a place that seemed impossible for me, Wayqecha...It's an opportunity to continue growing as a biologist."

DENISSE MATEO, MASTERS CANDIDATE AT UNIVERSIDAD PERUANA CAYETANO HEREDIA

Lush forest within Urusayhua, a planned protected area ACA supported in 2014

Protecting Habitat

World-record biodiversity doesn't stop at the borders of Peru's Manu National Park, so land conservation around Manu is central to what we do. In 2001, we helped Conservación Amazónica-ACCA establish the world's first private conservation concession at Los Amigos, a concept that extends forest protection to more than 360,000 acres adjacent to Manu National Park. Since then, we have continued expanding the network of protected lands in southeastern Peru, building a living, ever-growing conservation mosaic. We helped establish the 17,238-acre Haramba Queros Ecological Reserve (the world's first conservation concession managed by an indigenous group), plus four private conservation areas totaling nearly 47,000 acres.

Conserving land around and between protected areas effectively extends their protective benefits: it provides additional defense against encroaching threats, safeguards critical waterways and watersheds, and expands the habitat available to roaming wildlife. We protect landscapes with an eye toward the big picture of linking protected areas over time, magnifying our impact for biodiversity conservation.

Creating protected areas is a multi-step, multi-year process involving partnerships between ACA, regional governments, and local communities. First, we conduct baseline technical, biological, and social surveys, which are used in the official application for consideration of protected areas. Then, with our partners, once a protected area is declared, we develop effective management plans, provide training, and offer ongoing technical support.

In 2014, we partnered with the regional government of Cusco to ensure that its first regional conservation area is strong and well-managed (see page 7). We also continued funding two park guards to patrol a point vulnerable to illegal entry within Manu National Park, as well as supported management of the Tambopata National Reserve and Amarakaeri Communal Reserve (including training park guards there).



Majestic Andean peaks as seen from Wayqecha Cloud Forest Biological Station

HOW DO CONSERVATION CORRIDORS PROTECT BIODIVERSITY?

Preserving continuous stretches of southwestern Amazonian forest is essential for the long-term survival of species that need large territories, such as jaguars, macaws, and white-lipped peccaries. In 2009, ACA developed the Manu-Tambopata (MAT) Corridor to maintain forest cover over a large expanse threatened by the paving of the Interoceanic Highway—destructive activities including illegal logging, gold mining, and forest-clearing for agriculture typically follow new road development. This initiative connects Manu National Park with Tambopata National Reserve via a network of protected areas, indigenous territories, and the Los Amigos Conservation Concession. The corridor includes a mosaic of land uses, including protected areas and areas zoned for economic activity. Covering 519,000 acres, the MAT Corridor remains the Amazon's most ambitious biological corridor initiative to date.

Protecting Habitat

This year, we continued to support the creation of:

- three regional conservation areas in Cusco, together totaling more than 1.4 million acres: Urusayhua, Tres Cañones, and Ausangate
- two conservation concessions covering just over 12,000 acres
- two private conservation areas covering as many as 61,000 acres
- the first regional conservation area in Madre de Dios, Señor de la Cumbre, an initiative of the regional government and local residents

We are also committed to rehabilitating degraded lands, one tree seedling at a time. In 2014, about 30,000 seedlings were planted on degraded land, and an additional 30,000 new seedlings were grown and cared for in ACA-sponsored community tree nurseries in Cusco's highlands. The new seedlings will also be used to reforest degraded areas within communal territories in early 2015, bringing the total number of trees we have planted for highlands reforestation to nearly 249,000. Additionally, local communities are often familiar with medicinal, artisanal, and other particular uses of local species, receiving even more benefits from their reforestation efforts.



Left: Local villagers in Challabamba tend to native tree species in a community tree nursery.

Center: A woman from an Andean community plants precious seedlings as a part of ACA's reforestation efforts.

Right: Primary forest in the Los Amigos Conservation Concession



UNDERSTANDING PROTECTED AREA DESIGNATIONS

National parks are a familiar conservation cornerstone, but ACA employs other types of protected areas in its biodiversity protection strategies—particularly across landscapes with diverse ecosystems, communities, and political dynamics. Below are some other forms of protected areas:

Regional Conservation Area: Peru's equivalent to a U.S. state park, often to protect areas that have a significant regional ecological importance. This is a fairly new segment of the protected area system with great potential for growth. In Bolivia, this is known as a departmental protected area.

Conservation Concession: a contractual partnership between the Peruvian government and a private organization, community, or individual in which the government entrusts long-term protection of publicly owned land to the partner in exchange for investments in conservation (patrolling, scientific research, etc.). This allows Peruvian organizations like Conservación Amazónica-ACCA to assist the government in achieving its national biodiversity conservation goals.

Private Conservation Area: land owned privately by an individual, community, or organization that is legally designated by the landowner for conservation purposes. These areas are officially recognized by the Peruvian government as part of the country's protected area system and must fulfill certain requirements to ensure their protection.

Communal Reserve: an area designated for the conservation of wildlife to benefit nearby rural communities that participate in reserve management with the Peruvian National Park Service. Within these reserves, communities can use natural resources—they can hunt, fish, or selectively log, for example—as long as they follow a strict management plan that ensures the long-term continuity of the resource and doesn't threaten the reserve's biodiversity.

Indigenous Territory: ancestral territories belonging to indigenous groups that are generally communally owned and managed. Research in the Amazon has shown the forest conservation impact of indigenous territories to be similar to that of protected areas, making these areas a key part of conserving biodiversity across large landscapes.

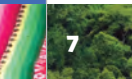
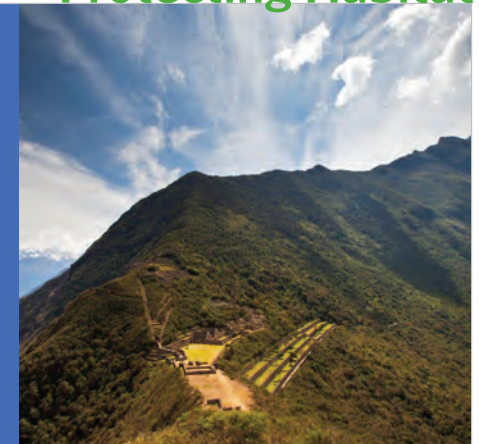
SPOTLIGHT

Choquequirao: Saving Highlands Cultural and Biological Heritage

Just 30 miles from Machu Picchu lies Cusco's first declared regional protected area, Choquequirao—more than 250,000 acres of precious space for threatened species like the spectacled bear. Declared in 2010, Choquequirao's staggering landscapes, Incan archaeological sites, and vibrant biodiversity make it an area of national importance, a conservation hotspot, and an ideal ecotourism destination.

Public support, effective management, and sources of long-term funding are all essential to ensuring the park's long-term success. This year, ACA helped Choquequirao engage the region's public through easy-to-understand educational materials in Spanish and Quechua that explain the area's value and management plan. We directly supported the hiring of key park staff, including the head of the reserve and two park guards; previously, we helped create Choquequirao's master plan, an overarching planning and management document that guides the area's protection.

With ACA's support, Choquequirao also unveiled a new strategy for spectacled bear conservation in 2014, including a groundbreaking study already underway on spectacled bears. This study, overseen by a consortium including ACA, will be the first-ever appraisal of the notoriously aloof bear's status within the park.



“The mode of meaning of conservation in the Amazon is Franciscan: you’re helping something you love, something right in front of you, and you can see the results.”

JONATHAN FRANZEN, AUTHOR, WRITING IN *THE NEW YORKER* ON SEEING OUR WORK FIRSTHAND



A hoatzin (Opisthocomus hoazin) when encountered at an oxbow lake near the Los Amigos Biological Station

Identifying Threats and Proposing Solutions

Within the Andes-Amazon, vast tracts of relatively intact, highly diverse, and carbon-rich forests still stand—but the array and intensity of threats related to deforestation are constantly increasing. Protecting the health of the Amazon requires understanding the larger forces at work in the region, recognizing trends, and tracking threats as they emerge and develop. In 2014, we continued strengthening this area of our work, expanding our capacity to identify, analyze, and monitor the threats affecting the southeastern Amazon.

ACA's work is particularly effective because we combine national-, regional-, and local-scale projects in our approach. **Key examples in 2014 include:**

- analyzing satellite imagery to create an effective, near-real time deforestation monitoring system across five large-scale threats to the Amazon's trees—mining, logging, dams, oil and gas development, and agriculture at the expense of primary forest
- publishing a peer-reviewed paper which provides scientific evidence encouraging wider adoption of low-impact best practices in the oil and gas sector. We're especially focused on dramatically reducing the amount of forest—especially pristine forest—lost due to road construction and subsequent development.
- sharing key findings from our deforestation monitoring with policymakers and journalists at the local, national, and international level. 2014 press included articles in *La Region* (Loreto), *Actualidad Ambiental* (Peru), *The Guardian* (U.K), and *Newsweek* and *Mongabay* (U.S.).
- preparing for the 2015 launch of a new web portal designed to efficiently distribute deforestation monitoring results to civil society at large
- publishing a monthly synthesis of current events on political and technical complexities surrounding informal and illegal deforestation drivers or activities in Peru's southern Amazon. Analyzing the large-scale trends we see allows us to continue to develop best practices and innovative (but pragmatic) conservation policy—solutions we can promote locally, regionally, and internationally.



Top: Illegal and informal gold mining are a common threat to waterways and a primary driver of deforestation in the Madre de Dios region.

Bottom: A shantytown along the Intercoastal Highway near the city of Puerto Maldonado

Identifying Threats and Proposing Solutions

Sidney Novoa, Coordinator of Deforestation Monitoring

Sidney's passion is to use new technology to see what's happening across Amazonian forests. He harnesses the power of GIS (geographic information systems) and techniques for analyzing satellite imagery to map changes in forests over time—his work reveals new deforestation hotspots, shifting patterns of land use, and indications of conservation success.

His interest in GIS began while pursuing a master's in Biodiversity Conservation and Sustainable Development in Sao Paulo, Brazil. With many professors and colleagues who frequently used GIS, it wasn't long before Sidney realized that satellite imaging and cartography were valuable tools for planning, experimental design, and in-depth analysis of important landscapes. The rest, as they say, is history.

Since then, he has worked within Peru's Ministry of the Environment and as a team leader for the Smithsonian Conservation Biology Institute's work in the Amazon. Sidney joined ACA's research team this year to work alongside our research specialist, Dr. Matt Finer, and now plays a central role in our large-scale deforestation monitoring program. "I think my biggest motivation is to inform and contextualize the reality of what happens to Amazon forests," he says.

STAFF PROFILE

In 2014 we also:

- worked with partners to support formation and management of the Regional Environmental Authority in Madre de Dios—a new office of the regional government created to better regulate environmental and land use issues—which provides technical support to regional government agencies responsible for natural resources management, such as land use planning
- continued field work to quantify the impact of roads and gold mining on biodiversity and wildlife
- identified four priority conservation sites to further research forest connectivity, better focus conservation efforts, and assess impact on the ground in Madre de Dios
- piloted the use of drones to monitor forests at Los Amigos Biological Station and Conservation Concession. In 2014, Los Amigos staff and concession guards received initial training in drone use, with additional training to come in 2015. This technology will be paired with satellite imagery analysis to improve the effectiveness of deforestation monitoring; drones have the ability to record high-resolution photos (and video), can be directed to fly in specific areas as needed, and will record data regardless of cloud cover.
- expanded our team to include a technical specialist who oversees the remote sensing and mapping work involved in near-real time monitoring

“Nonprofits like ACA give me hope and motivation that things in my country can change.”

CARLA MERE, FORMER VOLUNTEER, SCHOLARSHIP RECIPIENT, AND MASTERS CANDIDATE AT GEORGE MASON UNIVERSITY



Women in the Queros Wachiperi indigenous community weave baskets by hand in their village, providing a means for community members to preserve their culture and environment.

We partner with communities in Peru and Bolivia—from the high Andes to low-elevation river valleys—and we work together to identify and support initiatives that enable them to secure sustainable incomes while protecting their forests. These lands provide spiritual, nutritional, and economic benefits that rural households depend on—significant not only for forest conservation, but also for people’s well-being throughout the Andes–Amazon. As threats to forests grow in southern Peru and northern Bolivia, maintaining the forest resources that communities depend on becomes even more critical.

Here is a snapshot of our work in 2014:

- In Cusco’s highlands, we helped two indigenous communities further establish tourism projects. In 2012, we supported these communities in the creation of two private conservation areas; rural community tourism offers a sustainable way for these communities to finance the protection of their traditional lands, a combined 46,000 acres.
- We also created conservation-friendly economic options for local communities along the Manu–Tambopata Corridor. By the end of 2014, we had planted 54,000 trees, installed 40 new native fish ponds, bringing the project total to 102 ponds, supported local ecotourism initiatives, and implemented agroforestry projects, impacting at least 220 households.

- In the Andean highlands, we continued to support over 83 small farmers as they grew organic tarwi, a protein-rich bean. We provided both seeds as well as technical and marketing support for the crop, which grows well at high altitudes, boasts a strong regional market, and replenishes soil nutrients. In 2014, farmers produced nearly 60,000 pounds of tarwi thanks to ACA support. We are also helping them improve present and future production by evaluating pests and disease that might damage tarwi growth, collecting resistant seeds for future crops.
- We trained 20 residents interested in tourism, guiding, and ecology drawn from rural communities near Wayqecha and Villa Carmen Biological Stations. The three-day workshop covered gastronomy, culture and photography, local flora and fauna, and other essentials of interpretation. Tourism is an important industry in the region, and trainings like these allow local people to develop the skills required in such a competitive market.
- In Bolivia, through joint work with ACEAA, we helped the Tacana indigenous community update their management plan for paiche (*Arapaima gigas*) and analyze markets for this fish species.



Sustainable Livelihoods

Conserving Brazil Nut Forests

Since 1999, ACA's "Conserving Brazil Nut Forests" program has supported more than 600 harvesters in the protection of nearly two million acres of rainforest. Native to the Amazon basin, Brazil nut trees are some of the largest in the rainforest and have a lifespan of several hundred years. Because these trees produce selenium-rich nuts only when growing in a healthy rainforest, the earnings from harvesting nuts (more than half the yearly income for these families) serves as an incentive for forest protection. Today, our work is focused on preserving forests and improving the livelihoods of indigenous Brazil nut harvesters in Peru and Bolivia.



In 2014, ACA assisted Brazil nut harvesters by:

- helping an indigenous forestry association in Peru apply for Fair Trade and organic certifications, which help the harvesters obtain better prices while ensuring best practices
- training more than 200 indigenous Brazil nut harvesters to survey and map their Brazil nut stands, create management plans, and achieve and maintain their certifications (all of which are requirements according to Peruvian law)
- improving Brazil nut management in two indigenous communities along the Tambopata National Reserve buffer zone. Our support includes trainings in organizational and marketing skills, developing Brazil nut management plans, and strengthening ecotourism initiatives.
- in Bolivia, through joint work with ACEAA, training 200 indigenous Tacana Brazil nut harvesters in best practices, organization, and negotiation, and securing funding for the construction of 31 drying sheds to prevent Brazil nut spoilage (see more on page 13)
- creating a direct link between the Tacana and a major international exporter, which helps the harvesters sell 33 tons of nuts at a price 35 percent higher than before
- empowering Tacana women to develop new enterprises, including producing edible oils like Brazil nut oil
- strengthening local leadership by training four Tacana to serve as on-the-ground support for ACEAA activities

In Madre de Dios, Ener Zambrano Huesembe collects Brazil nuts from beneath a large tree in his family's Brazil nut concession (intact forest area protected for the harvest of Brazil nuts). The nuts are gathered immediately after they fall in order to minimize insect and fungal damage.



A young Tacana community member fills a satchel with newly dried Brazil nuts.

Bags of dried Brazil nuts waiting to be sold



NOTE FROM THE FIELD

Improving Community Income from a Sustainable Harvest

The Bolivian Tacana people harvest Brazil nuts as a primary source of income every year. However, their territory is so extensive that Brazil nuts, collected from the most distant tree stands, must be stored in the forest for weeks or months until they are sold to processors along the river. Poor storage and drying conditions can lead to mold and contamination. In years past, the Tacana lost approximately 15 percent of the harvest to spoilage every year. This represents about \$130,000 in annual revenue, a tremendous loss for people who live on about \$1 a day.



Constructing a payol

Payoles, or Brazil nut drying sheds, provide an alternative to storing nuts on the ground and keep spoilage to a minimum. In 2013, ACA and partners helped the Tacana construct 72 sheds to store their harvest while waiting for river transport; this year, the Tacana refined their payol design and location map to make 25 additional payoles for individual families and six communal payoles (to be built in 2015) even more effective.

A central tenet of Tacana culture is community participation. To ensure fair distribution of work, the Tacana drew up a schedule outlining each community member's responsibilities so that the payoles could be constructed as efficiently as possible. After studying the Brazil nut value chain with ACEAA staff, the Tacana relocated several payoles to be constructed in strategic places near major Brazil nut loading areas. This minimizes spoilage while in transit to river points where processors purchase Tacana Brazil nuts.

Sustainable Livelihoods

STAFF PROFILE

Yessenia Apaza, Field Coordinator and Fish Farming Technician (MAT Corridor Project, Puerto Maldonado)

Even as a child, Yessenia gravitated toward both conservation and the water. Growing up in the Mazuko community of Madre de Dios, every year her father took her and her siblings to watch turtles hatch on an island near her family's *chacra*, or small farm. Each August she and her siblings would guard over the eggs and help the small turtles reach the water. "My father instilled in all of his children the value of conservation and preserving the natural environment," she says.

Yessenia first came to know Conservación Amazónica-ACCA as a volunteer at the Los Amigos Conservation Concession. Working as a field course research assistant and then in environmental education along the Interoceanic Highway motivated her to join our field team in 2009. Understanding its potential for rural families in Madre de



Dios, Yessenia learned fish farming on the job. She began managing fish farming activities for the MAT Corridor project in 2012, the same year she received an advanced forestry degree from the Universidad Nacional de San Antonio Abad del Cusco.

Yessenia's technical expertise and her familiarity with the area have made her an invaluable asset to local farmers. Fish are a dietary staple and an important source of protein in Madre de Dios. As illegal and informal gold mining activity has grown, so has mercury contamination in the region's waterways and in its wild fish populations. Fish farming offers a sustainable, healthy, and profitable alternative. As of 2014, Yessenia has helped beneficiary families construct 102 ponds—peace of mind grown one fish at a time.

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*A community member tends to a cacao sapling (*Theobroma cacao*) as a part of ACA's agroforestry projects within the MAT Corridor.*



A member of the Queros Wachiperi indigenous community teaches an ecotourist archery.



“After working with ACEAA over a number of years, we believe that we can improve the management and conservation of our forests, and we have faith that ACEAA will [continue to] help us in this...”

EDGAR GARCIA, PRESIDENT OF THE ORGANIZATION OF TACANA INDIGENOUS PEOPLE OF THE MADRE DE DIOS RIVER

Science and Education

Researchers, students, volunteers, and travelers from around the world journey to our three Peruvian biological stations to witness their rich wildlife and see conservation in action. Spanning an altitudinal gradient from 750 to nearly 10,000 feet above sea level along the eastern border of Manu National Park, one of the world's most important biodiversity hotspots, our stations are active learning centers and serve as a base for ACA's on-the-ground work. The stations offer diverse accommodation options for individuals and groups, lab and classroom space, access to over 100 miles of trails, rivers, and waterfalls, and delicious Peruvian cuisine made with locally sourced ingredients. ACA biological stations typically host 25 research projects and 15 field courses each year, attracting researchers who have catalogued over 6,900 species and published more than 261 scientific papers to date.

In 2014, we built new facilities at our Wayqecha and Villa Carmen stations that allow us to receive even more researchers, courses, and wildlife enthusiasts, renovated buildings at our Los Amigos station, and strengthened our science program by adding a staff science coordinator at each station. The coordinators are an on-the-ground resource for researchers and their projects. They lead environmental education programs for area school groups, conduct wildlife monitoring and analysis to further inform conservation decisions in these landscapes, and oversee our scholarship recipients during their field research on site (see page 20).

Left: A student treks across a fallen log on a trail near Villa Carmen Biological station.

*Right: A black-capped squirrel monkey (*Saimiri boliviensis*) hanging from a branch in the Los Amigos Conservation Concession*



Los Amigos Biological Station and Conservation Concession



Lowland Amazonian Forest

Elevation: 755 to 886 feet above sea level

Established in 2000, Los Amigos Biological Station was built on the conviction that the greatest forest on Earth deserves one of the best research centers in the world. The station is immediately adjacent to the 360,000-acre Los Amigos Conservation Concession (LACC) managed by Conservación Amazónica-ACCA. With up to 60 miles of trails to explore between the concession and the station, its landscape is a mosaic of habitats including palm swamps, bamboo thickets, oxbow lakes, and forests nestled in a floodplain. In 2014, both the University of Toronto and the Smithsonian-Mason School of Conservation offered courses at Los Amigos.

LACC was established in 2001 as the world's first conservation concession (see page 7). It borders Manu National Park and serves as a buffer to over 800,000 acres of forest, home to uncontacted indigenous people. Work at the concession focuses on forest protection, research, and conservation education. In 2014, park guards from LACC's patrol team collected data about mammal, bird, insect, and plant species in the concession, registering over 4,300 species within its borders. Research there ranged from monitoring giant river otters in the Madre de Dios River to a study on the effects of climate change on amphibians led by a former ACA scholarship recipient.



Left: The blunthead tree snake (Imantodes cenchoa) is known for its long, thin body and enormous eyes, which occupy approximately 25 percent of the length of its head.

Science and Education



Birdwatchers enjoy an incredible variety of bird species in south-eastern Peru, one of the world's biodiversity hotspots.

Villa Carmen Biological Station



Andean Foothills

Elevation: 1,700 to 3,940 feet above sea level

Established in 2010, Villa Carmen Biological Station integrates biodiversity conservation, research, education, sustainable agriculture, and ecotourism into a single campus. The 7,600-acre station boasts over 25 miles of trails spanning old-growth rainforest, lower montane forest, secondary forest, and former and current agricultural fields, streams, rivers, and waterfalls.

Since 2011, our sustainable agriculture program has grown to include 60 varieties of garden vegetables and other crops—the program supplies more than a quarter of the produce needed to feed station visitors and staff in Villa Carmen's new dining hall. A two-acre pond added in 2013 triples the station's previous native fish farming capacity. And it has become a high-profile destination for conservation education with the launch of the School for Field Studies' "Biodiversity and Development in the Amazon" undergraduate semester program there (the only SFS program in the region).

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NOTES FROM THE FIELD

Biochar: Ancient Amazonian Technology for Today's Farmers

Thanks to a partnership with researchers from Wake Forest University, Villa Carmen received a permanent visitor in 2014: a kiln to produce biochar from bamboo. Biochar is a form of very porous charcoal produced by cooking down plant material in the absence of oxygen, ideal for the growth of beneficial microbes.

In Amazonian ecosystems, most of the rich nutrients that support rainforest species are held in the forest canopy, not in the forest's soil. Slash-and-burn agriculture is a common practice for the area's small-scale farmers, but because the agricultural plots it creates are only productive for about five years, new land is continuously cleared—a cycle that drives deforestation. Adding biochar to the soil is a simple way to prolong agricultural productivity, boost plant yields by as much as 40 percent, and break the slash-and-burn cycle.

Over the past year, we have tested our biochar by applying it to sustainable agriculture plots growing three of the region's most common crops: pineapple (*Ananas comosus*), plantain (*Musa spp.*), and corn (*Zea mays*). Local technical school students, members of pineapple and yucca growers associations, and local government representatives also gained hands-on experience with biochar.

Biochar is not a new technology for this region; in fact, creating biochar is an ancient Amazonian practice used before the Spanish arrived. Our findings will not only contribute to sustainable agriculture globally, but also help bring the use of biochar back to small farmers in the Amazon.



Villa Carmen is unique for its proximity to two indigenous communities that, with ACA's help, have continued expanding into ecotourism and earn a living from conserving their natural resources. Station visitors can immerse themselves in traditional culture, crafts, and flavors with trips to nearby Santa Rosa de Huacaria and Queros. At Huacaria, visitors will see the ACA-supported fish farming program, which bred nearly 15,000 native fish hatchlings in the winter of 2013–2014. Over a homecooked lunch in the community, visitors will even have the opportunity to taste fresh paco (*Piaractus brachypomus*) for themselves, try their hand at archery, and browse the traditionally-styled baskets, bags, and jewelry for sale. Queros is home to the Haramba Queros Wachiperi Ecological Reserve, the first conservation concession in Peru run by an indigenous community, established with assistance from ACA. Today, ACA is helping both communities connect with interested tourists. Thanks to the strength of their cultural traditions, six members of the Queros and Huacaria communities were selected to participate in the 2015 Smithsonian Folklife Festival honoring Peru in Washington, D.C.



A proud fish farmer at an ACA-supported fish farm maintained by the Huacaria community



Top: New cabins at Villa Carmen ready to host ecotravelers



Center: Each necklace made by the women's association of Santa Rosa de Huacaria is tagged with the name of the woman who made them.



A jaguar is spotted by a Villa Carmen camera trap.

Science and Education

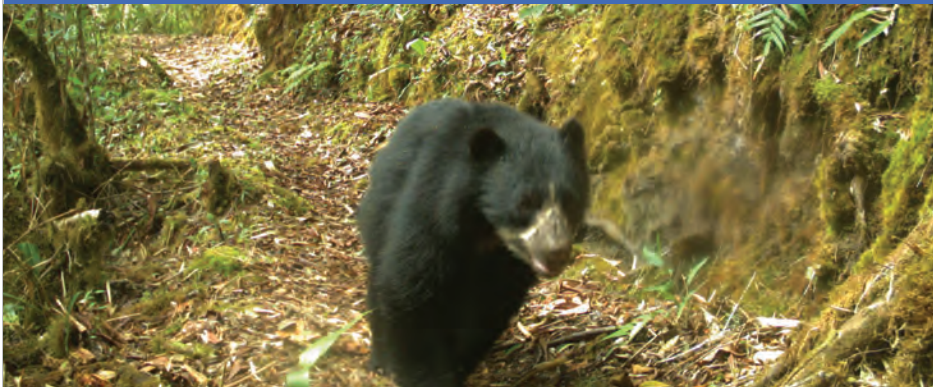
NOTE FROM THE FIELD

Inspiring the Next Generation of Amazonian Conservationists

Protected areas ensure refuge for far-traveling species, but knowledge of these species often remains elusive. Developing this understanding is essential for designing effective conservation strategies. Meet Denisse Mateo, whose thesis research will help unlock the secrets of the spectacled bears' diet. The 30-year-old student is pursuing her master's at Universidad Peruana Cayetano Heredia in Lima, and is one of six Peruvian university students who received a research scholarship from ACA in 2014. (And thanks to additional donor support, we will be able to offer even more scholarships in 2015.) "I've been interested in the spectacled bear my whole life," she says.



Thanks to this scholarship to study at Wayqecha, she will be able to spend more than a month tracking what the (mostly) vegetarian bears consume, comparing her findings with field research on the same topic in northern Peru. She hopes to better understand the role that wide-roaming bears play in seed dispersal and the impact of bear excretion on the seed germination process. Such factors make this vulnerable species essential for reforestation and maintaining biodiversity.



Wayqecha Cloud Forest Biological Station



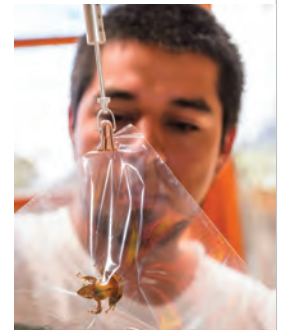
Andean Cloud Forest

Elevation: 6,500 to 9,875 feet above sea level

In 2005, ACA created Peru's only permanent field research center focused on cloud forest ecology and management. This 1,400-acre research center, called Wayqecha ("little brother" in Quechua), serves as a protective buffer for Manu National Park where the Andean grasslands transition into lush cloud forests and montane forests below. It is home to more than nine miles of trails crossing these habitats, which sustain myriad species like the Andean cock-of-the-rock and the spectacled bear. Trails include a 1.5-mile orchid walk that showcases many of the over 200 orchid species found at the station, and, high above the trees, the world's first high-elevation cloud forest canopy walkway. Ranging from 65 to 144 feet above the forest floor, the walkway provides an unparalleled view of life at the canopy level as well as of the forest below. In 2014, we completed the frame for an interpretive center at the canopy walkway trailhead. Scheduled to open in 2015, its exhibits will illustrate the importance of the cloud forest, groundbreaking research taking place at the station, and more.

In 2014, the first students occupied Wayqecha's new dorm, which provides sleeping quarters for up to 32 young researchers. Both the University of Kansas and the University of Washington offered courses at Wayqecha in 2014, and 78 local schoolchildren visited the station on field trips.

We also began construction on a new dining hall, which will allow us to repurpose the former dining hall for use as the first-ever dedicated lab space at the station. Our new greenhouse and tree nursery, installed in 2014, will allow us to study plant propagation at Andean altitudes and provide organic vegetables to station chefs.



Left: A spectacled bear (*Tremarctos ornatus*) caught on film by a Wayqecha camera trap

Right: A researcher examines a specimen collected near Wayqecha Cloud Forest Biological Station.



STAFF PROFILE

Dr. Renzo Piana, Director of Science and Research

Renzo Piana's passion for raptors started early, with a pair of his father's old binoculars. "I was eight and already spending one hour a day observing a female migratory peregrine falcon that used to perch on a tall tree in front of my house," he remembers. It wasn't long until that passion extended to biodiversity, conservation, and science education at large. "Raptors have been my gateway into biodiversity conservation," Renzo admits; he studied several species within Peru for both his master's (University of Copenhagen) and Ph.D. (Manchester Metropolitan University). Since starting as ACA's Director of Science and Research in November 2014, Renzo, a native of Peru, has applied this passion to the wide variety of science and education programs based at our three biological stations.




He has worked in conservation in his home country since 2000, most recently for the United Nations Development Program. Renzo describes Peru as "an enormously neat laboratory," and in his current role he promotes the stations as a prime location for researchers to conduct field research, publish their results, and raise ACA's scientific profile as a leader within Peru and elsewhere.

Additionally, he oversees the stations' science coordinators and manages ACA's in-field volunteer program.

For him, it still comes back to raptors. "I recently took my son to watch peregrine falcons in southern Denmark. Seeing the birds among the white cliffs and beaches, my kid's smile was a blast...suddenly all the pieces came together."

Our commitment to research and education extends beyond our biological stations. **In 2014, we also:**

- broadcast nearly 40 episodes of a radio show with information on conservation and sustainable enterprise to up to 8,000 rural Amazonian residents
- trained 28 teachers in all 13 schools within the Manu-Tambopata Corridor to use environmental education curricula and provided educational programs for more than 1,393 schoolchildren. As most teachers are not from the Amazon region, this training allows them to teach about the local environment.
- monitored river health within the Amaraeri Communal Reserve, co-managed between ten indigenous communities and the Peruvian National Park Service. Alongside indigenous community members, we collected data on water quality, fish populations, and contamination—establishing a scientific baseline for the waterways of the reserve.
- completed a market survey for Madre de Dios analyzing local supply and demand for 48 fish species
- studied gray woolly monkeys and their role as seed dispersers within Alto Pilcomayo, a planned protected area in Cusco



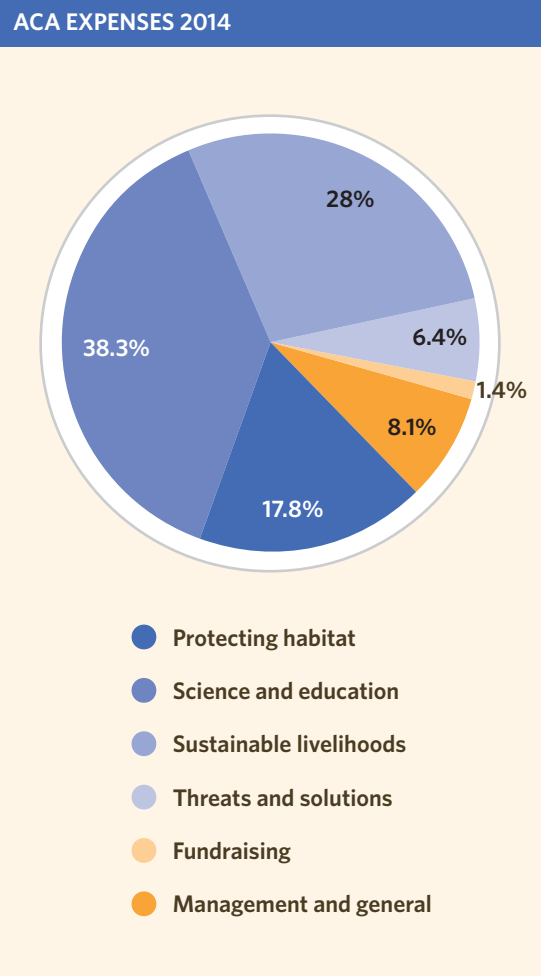
**“When I learned about the Amazon
rainforest in the second grade, I only
dreamed about exploring one of the
greatest forests in the world.”**

**ASHLEY FUNK, WELLESLEY COLLEGE, SCHOOL FOR FIELD STUDIES
AT VILLA CARMEN**

*From the canopy tower at Los Amigos,
researchers, students, and visitors can
observe the vast, verdant forest of the
Los Amigos Conservation Concession.*

REVENUE AND SUPPORT		
Grants and donations from organizations	\$4,464,181	75.4%
Contributions from individuals	633,670	10.7%
Research station income	397,272	6.7%
In-kind contributions	123,929	2.1%
Other income	302,026	5.1%
Total Income ACA 2014	\$5,921,078	

EXPENSES		
<i>Program services</i>		
Protecting habitat	\$802,180	17.8%
Science and education	1,726,965	38.3%
Sustainable livelihoods	1,266,260	28.0%
Threats and solutions	289,875	6.4%
<i>Total program services</i>	<i>\$4,085,280</i>	<i>90.5%</i>
<i>Support services</i>		
Fundraising	\$65,305	1.4%
Management and general	364,015	8.1%
<i>Total support services</i>	<i>\$429,320</i>	<i>9.5%</i>
Total Expenses ACA 2013	\$4,514,600	



Please note: At the time of printing, ACA's 2014 financial audit was not yet complete. For updated, audited financial information, please see our webpage at www.amazonconservation.org/about/financials.html, where we will post the final numbers once they are available.

All information on this page refers to ACA's 2014 fiscal year ending December 31, 2014 and includes income and expense for ACA's partners in Peru and Bolivia (Conservación Amazónica-ACCA and ACEAA, respectively).

Our Thanks

We would like to thank the many generous individuals and institutions whose contributions made our work possible in 2014. Institutions providing us with substantial support included: American Bird Conservancy, Andrew Sabin Family Foundation, blue moon fund, Boxcar Press, DermaTend, Dermatology and Cosmetic Surgery Associates, P.A., Environ Foundation, Erol Foundation, FONDAM, Gordon and Betty Moore Foundation, HJW Foundation, Inter-American Development Bank, International Conservation Fund of Canada, Jeff and Connie Woodman Foundation, Margot Marsh Biodiversity Foundation, Mitsubishi Corporation Foundation for the Americas, Morrison & Foerster, New Venture Fund, Paul G. Allen Family Foundation, PROFONANPE (Peruvian Trust Fund for National Parks and Protected Areas), The John D. and Catherine T. MacArthur Foundation, USAID, Vitol Foundation, Wildlife Conservation Society, World Resources Institute, and World Wildlife Fund.



Who We Are

Board of Directors: ACA (USA) and Conservación Amazónica-ACCA (Peru)

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Vice President for Programs,
blue moon fund
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Board Member
Professor of Forestry Sciences, La
Molina National Agrarian University
LIMA, PERU

Walter Wust
Conservación Amazónica-ACCA
Board Member
Director, Wust Ediciones
LIMA, PERU

* We regret his passing in December 2014.
He will be greatly missed.

Affiliations are for identification purposes only.

Staff

Executive Director: Hannah Stutzman

Total staff: 94 (ACA, ACEAA, and Conservación Amazónica-ACCA)

Offices:

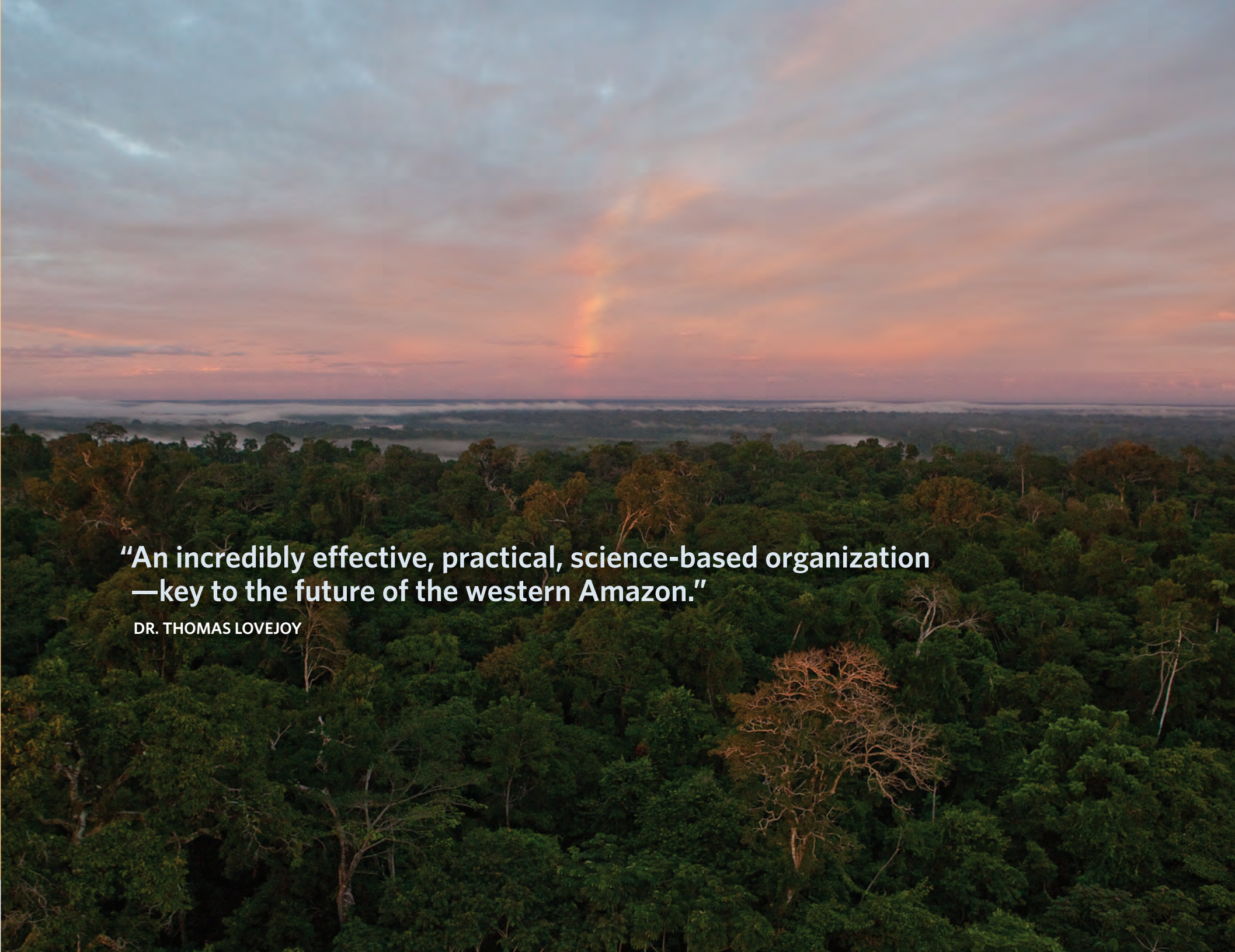
Washington, D.C., USA (ACA) 8 staff
Lima, Peru (Conservación Amazónica-ACAA) 4 staff
Cusco, Peru (Conservación Amazónica-ACCA)
(includes Wayqecha & Villa Carmen, and
Challabamba) 44 staff
Madre de Dios, Peru (Conservación Amazónica-ACCA)
(includes Los Amigos) 32 staff
Bolivian partner in La Paz (ACEAA) 6 staff

All positions current as of December 31, 2014

Photo Credits

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INSIDE COVER: Enrique Ortiz
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PAGE 3: map: ACA
PAGE 4: Trond Larsen
PAGE 5: Trond Larsen
PAGE 6: left to right: Enrique Ortiz; Porfirio Zegarra; Thomas Haney
PAGE 7: José María Fernández Díaz Formentí
PAGE 8: Gabby Salazar
PAGE 9: top: Walter Wust; bottom: Gabby Salazar
PAGE 10: Jorge Herrera
PAGE 11: Gabby Salazar
PAGE 12: Gabby Salazar
PAGE 13: top: S. Caballero/ACEAA; bottom: Gabby Salazar
PAGE 14: left: José María Fernández Díaz Formentí; right: Gabby Salazar; box: Jorge Herrera
PAGE 15: Gabby Salazar
PAGE 16: left: Jessica Suarez; bottom right: Thomas Haney
PAGE 17: bottom, left: Trond Larsen; right: Renzo Piana
PAGE 18: Daniel Huamán; box: Yngrid Espinoza
PAGE 19: left to right: Laura Samaniego; Sarah Campbell; ACA; top, right: Persi Luna
PAGE 20: top, left: Denisse Mateo; bottom, left: ACA; bottom, right: Emanuele Biggi
PAGE 21: top, left: Emanuele Biggi; box: Percy Summers
PAGE 22: Rosemarie Lerner
PAGE 23: Enrique Ortiz
INSIDE BACK COVER: Gabby Salazar
BACK COVER: Walter Wust

Design:
Jennifer Paul Design

An aerial photograph of a vast, dense Amazon rainforest. The forest is a deep, lush green, with a few taller, more prominent trees scattered throughout. In the distance, a layer of mist or low clouds hangs over the forest floor. The sky is a mix of soft pinks, oranges, and blues, indicating a sunset or sunrise. A faint rainbow is visible in the sky, arching over the forest. The overall mood is serene and majestic.

**"An incredibly effective, practical, science-based organization
—key to the future of the western Amazon."**

DR. THOMAS LOVEJOY



Francisco Elacma, known to friends as "Panchito," prepares to take a photo from the canopy walkway at Wayqecha Cloud Forest Biological Station. He discovered his skill at photography while working as the head cook (now warehouse manager) at Wayqecha.



Amazon Conservation Association (ACA)
1012 14th Street NW, Suite 625
Washington, DC 20005
Phone: (202) 234-2356
E-mail: info@amazonconservation.org
www.amazonconservation.org



ACCA

Peruvian Partner: Conservación Amazónica-Asociación para la Conservación de la Cuenca Amazónica (ACCA)
Calle Gio Batta Isola 272
Barranco, Lima, Peru
Phone: 011 + (511) 251-4513
www.acca.org.pe



Bolivian Partner: Asociación Boliviana para la Conservación e Investigación de Ecosistemas Andino-Amazonicos (ACEAA)
Pasaje Flores Quintela (entre calles 13 y 14)
Zona de Calacoto, La Paz, Bolivia
Edificio Nro. 7, Oficina 1B
Phone: 011 + (591) 2-212-4987
www.conservacionamazonica.org.bo