



South America Conservation Region: Southern Andes

BOLIVIA: TARIQUÍA FLORA AND FAUNA NATIONAL RESERVE

*Cross-Border Wildlife Corridor,
Park Patrols Protect Native Species*



Tariquía is one of the largest tropical montane cloud forests—known as yungas—under protection in all of South America. © Ivan Arnold

FISH SUCH AS DORADO, robal and surubí could hold their own when residents of far southern Bolivia used lines and nets. But that all changed when dynamite became the “bait” of choice—allowing fish to be harvested by the thousands. The blasts killed aquatic life and tore up riverbanks and bottoms.

That prompted The Nature Conservancy to collaborate with Bolivian partner PROMETA (Protección del Medio Ambiente Tarija) to launch a patrol program at Tariquía Flora and Fauna National Reserve. Since 1994, the park guard program has reduced illegal hunting and dynamite fishing by 70 percent.

Tariquía is a 610,000-acre reserve on the Argentine border in a mountainous area of steep elevations, abrupt cliffs and unstable soils with high risk of erosion. It is one

of the largest examples of tropical montane cloud forest (yungas) under protection in all of South America. The Tarija and Bermejo rivers are two of the main waterways that form what’s known as the Bermejo River basin on the Bolivia-Argentine border. The surrounding forest acts as a water regulator.

Scientists have recorded 247 plant species in Tariquía. Native trees and large shrubs include South American cedar, lapacho, red Brazil cherry, guayabi, pine of the hill, aliso (alder), cebil, ceiba, tips, quinine, wild walnut and laurel.

The forests are home to a wealth of mammals such as jaguars, ocelots, spectacled bears, collared peccaries, brown capuchin monkeys, tapirs, nine-banded armadillos and brocket deer. Andean condors, whistling herons, Chilean

flamingos, red shovelers, white-rumped hawks, osprey, great egrets, scaly-headed parrots, Andean pygmy owls, giant hummingbirds, spot-billed ground tyrants, toucans and Bolivian military macaws are among the 250-plus bird species in Tariquía.

Besides overfishing, threats to Tariquía include timber harvesting, oil prospecting, lack of clear park boundaries, and the building of access roads. Poor agricultural practices such as overgrazing, burning forests for cultivation, insufficient crop rotation and growing crops on steep slopes all cause severe problems with erosion.

The Conservancy and PROMETA are working together to protect habitat in Tariquía by stitching together a wildlife corridor that reaches southward to Argentina, teaching local residents about more sustainable land uses and limiting the invasive impact of oil and gas exploration and extraction.

A Link for Wildlife

When endangered species such as the Andean condor, spectacled bear or jaguar need food or shelter, they don't care what country they're in—only that there's enough clean water and forest cover.

That reality has motivated the Conservancy and its Bolivian partner PROMETA to close the nine-mile gap between Tariquía and northern Argentina's Baritú National Park. Almost half of the planned 40,000-acre, cross-border ecological corridor already has been purchased from private owners. Cost ranges from \$70 to \$170 per hectare. One hectare equals about 2.5 acres.

Jungles, dense cloud forests and grasslands characterize this enormous expanse, reaching elevations of almost 12,000 feet. Purchasing the corridor doesn't put it off limits but does mean that Bolivia and Argentina will have to factor the environmental welfare of the land into decisions about development and growth.

A Sense of Community

In addition to significantly reducing illegal fishing and hunting, the park guard program started in 1994 has reduced illegal logging by 90 percent. Forests are being logged selectively instead of clearcut. Also, native tree species are planted in areas where logging takes place. Local people have the chance to make a stable living near their homes now that Conservancy partner PROMETA has created a community carpentry shop that uses wood from native forests in a sustainable manner.

To take pressure off the local forests, some of the 3,600-plus reserve residents are learning about other ways of making a living such as beekeeping and honey production. Women and young adults participate in community

honey cooperatives that increase family income.

To prevent soil degradation and erosion caused by overgrazing cattle, the Conservancy and its partners are developing a long-term strategy to improve their farming practices. A key part is introducing the practice of rotating land where cattle graze in and around the reserve. A regular schedule will keep native grasslands healthy.

Oil and Gas Reforms

Extraction of oil and gas in Bolivia started at the beginning of the 20th century, mostly in the dry Chaco, east of Tariquía near the border with Paraguay. Three oil wells are situated inside or near the borders of Tariquía. Though inactive now, the Conservancy and PROMETA figure it's only a matter of time until oil and gas exploration expands to the region. People have moved to the nearby town of Tarija recently, anticipating that jobs in the oil and gas sector will be available soon.

It's a given that the development of hydrocarbon reserves is an essential element to the country's economic development and well-being. Many Bolivians see the industry as their ticket out of poverty. It's also a given that the oil and gas industry pollutes air and water with toxic wastes, forces animals from their native habitats because of loud explosives, helicopters and vehicles, is disruptive to local people because of changes in customs, cultures and economies, and provides access to areas that were previously uninhabited.

That has prompted the Conservancy and its partners to work with the Bolivian government, oil and gas companies and local communities to figure out the least damaging way to extract and transport hydrocarbons. Key to the discussion is how to handle the opening up of pristine habitat within or near biologically significant areas for inevitable gas and oil exploration. The roads carved into these areas also open the region to uncontrolled civilization, and illegal hunting and logging. Though Bolivian law requires the gas and oil companies to clean up what they leave behind, that has not been the case thus far. The Conservancy and its partners are developing a strategy that will encourage oil companies to improve their practices.

contact information

Anna Gibson
South America Conservation Region
4245 N. Fairfax Drive, Suite 100
Arlington, Virginia 22203-1606
phone: (703) 841-4109
email: agibson@tnc.org
nature.org