



PARKS WATCH

Strengthening Parks to Safeguard Biodiversity

ParksWatch Peru Representative Visits Podocarpus National Park in Ecuador

Podocarpus is the scientific genus name of a tree that typically occurs in very humid montane forests, commonly known as “romerillo.” It is the only conifer species native to the Andean region of Ecuador.

Abundant rains, isolation, and very irregular topography, among other factors, have created special conditions allowing the existence of unique and highly diverse flora and fauna in Podocarpus National Park. Thus far, the excellent conservation status of these ecosystems has allowed for the preservation of regional ecological balance on which neighboring park populations rely.



Podocarpus National Park was created on December 15, 1982, through Ministerial Agreement #A-0398, with an area of 146,280 has (1,463 km²). It is located in the Provinces (States) of Loja (25%) and Zamora (75%). It ranges in altitude from 3,000 to 11,800 feet above sea level. Average temperature in high altitudinal zones is between 46° and 60°F; and the high temperature in lower zones is 68°F. The climate is temperate and permanently humid. The park contains the following life zones: montane

humid forest, low montane humid forest, very humid montane forest, very humid pre-montane forest, and very humid lowland forest.

The goals and objectives of the area are to provide opportunities for outdoor recreation, ecotourism, and scientific research; to protect water sources that ensure the survival of species in the region as well as supply drinking water for human consumption in the nearby towns of Loja and Zamora; to maintain natural habitats and protect the flora and fauna typical of the region, which are in imminent danger of extinction (in particular the podocarpus and cinchona forests); to preserve and keep intact the ecosystems



of montane humid and lowland montane forests found at the Sabanilla knot, as well as the montane and premontane very humid forests of the Numbala River watershed; and to conserve the soil-protecting vegetation and hydric resources of the region, including the high watersheds of the Jamboé, Sabanilla, Bombuscaro, Numbala, San Luis de Loyola, Nangaritzza, and Vilcabamba Rivers.

The predominant forest in the park is known as the Andean cloud forest. It is estimated to contain three to four thousand plant species, with an interesting combination of lowland and high Andean species. Bromeliads, ferns and orchids are part of the enormous species' diversity of this forest, some of which are endemic and/or new to science.

Among the most important plant species are the "cascarilla" (*Cinchona* sp.), of which bark quinine and other medicinal alkaloids are extracted to combat malaria; a giant bamboo (*Chusquea* sp.), which forms a massive shrub of fast growth, quickly colonizing any forest gap, preventing soil erosion until other, taller species recolonize; and the "romerillo" (*Podocarpus montanus*), the only conifer adapted to life in tropical forests of South America. There are also cecropias (*Cecropia* sp.) and tree ferns reproduced by spores requiring high humidity to complete their reproductive cycles.

In terms of fauna, this is an outstanding area for birds, with over 600 species recorded, representing 37.5% of those found in Ecuador. It is home to more than 60 hummingbird



species, the Andean cock-of-the-rock (*Rupicola peruviana*), parrots, toucans, and tanagers, and a recently discovered species, the jocotoco antpitta (*Grallaria ridgelyi*).

Approximately 97% of the animal species found in the park are invertebrates. There is a rich and diverse fauna; some of the most important flag species include the spectacled bear (*Tremarctus ornatus*), torrent duck (*Merganetta armata*), mountain tapir (*Tapirus pinchaque*), northern pudu (*Pudu*

mephistopheles), opossum (*Didelphys* sp.), shrew opossum (*Caenolestes fuliginosus*), and lesser long-nosed long-tongued bat (*Choeroniscus minor*).

In terms of hydrology, the most important river watersheds originating in the park are those of the Malacatos, Zamora, San Francisco, Sabanilla, Bombuscaro, Jamboe, and Nangaritzza Rivers, which run to the northeast and flow into the Amazonas. On the southeast, the Numbala, San Luis, Loyola, and Valladolid Rivers drain their waters in the Marañón River, which also flows into the Amazonas. At the center and southwest, the Campana, Yambala, Capamaco, Maza, Yangana, and Palmira form the Catamayo-Chira, which flows into the Pacific Ocean.



The Compadre lagoons are found on the Nudo de Sabanilla, in

the Picachos del Condor region. This lake system of more than 100 lagoons is a result of geologic formations caused by ancient glaciers, and has incredible scenic value.

There are no large volcanoes in this region. Most of the rocky outcrops in the park show sedimentary strata from the Miocene era: the layers are well-cemented and partly covered by lavaic and pyroclastic rock stratum from ancient volcanism. The inter-Andean alley practically disappears when the eastern and western branches of the Andes cordillera join, at a point in the park no higher than 11,500 feet.



*Fires and agriculture around Podocarpus
National park*

The main threats to the protected area include: human colonization; deforestation; agriculture; hunting (which is particularly affecting the spectacled bear, deer, and tapir populations); illegal fishing, often with use of explosives and poisons; uncontrolled tourism; and lack of park staff to conduct appropriate vigilance and enforcement. Currently the park has only seven park guards and three control stations.

** Information based on personal communication with one of the park guards, and on the park's brochure, produced by the Ministry of Tourism in Ecuador.*

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Mapa de ubicación en las Provincias de:
Loja y Zamora Chinchipe

