



Report at a Glance

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Report at a Glance

A RAPID BIOLOGICAL ASSESSMENT OF THE TEPUIS IN THE UPPER NANGARITZA RIVER BASIN, CORDILLERA DEL CÓNDROR, ECUADOR

Dates of RAP Survey

April 6-20, 2009

Description of RAP Survey Sites

The survey was conducted in the Colono-Shuar Nangaritza Tepuis Conservation Area, located in the Cordillera del Cóndor in southeast Ecuador (Fig. 1). This conservation area is 4,232 hectares in size and is administered by the Association of Shuar Tayunts and the San Miguel de las Orquídeas Association of Independent Workers.

Annual rainfall in the area ranges between 2,000-3,000 millimeters. Average temperature is 20-22° C and elevation ranges from 950 to 1,850 m. The soils of the tepuis are extremely poor and are composed principally of medium to large grain sand with high silica content. The vegetation of the zone includes the following formations: Paramillo, Dwarf Forest, Pre-montane Wet Forest.

Reasons for the RAP Survey

The southeast region of Ecuador is an area with great biological, ecological and cultural richness. One of the areas in this region that still maintains significant natural vegetation and its associated biodiversity is the Nangaritza River Basin. The upper part of this basin was declared a “Bosque y Vegetación Protectora Cuenca Alta del Río Nangaritza” (BVP-AN), as the result of work among the Ministry of Environment Regional 8 Loja – Zamora Chinchipe, the Nangaritza Municipal government, the Association of Shuar Tayunts, the PROSENA Project and the Fundación Ecológica Arcoiris.

After the declaration of the BVP-AN, an action plan was needed to define management of the territory. A management plan presented in 2004 proposed various concrete actions for the zone. One of these was the creation of the Colono-Shuar Nangaritza Tepuis Conservation Area, under the category of Private Protected Forest. At present, the San Miguel de las Orquídeas Association of Independent Workers and the Association of Shuar Tayunts are managing the Protected Forest. They have petitioned Ecuador’s Ministry of the Environment to increase the protection category of the site which would ensure its conservation in the long term. In order for this proposal to succeed, it is necessary to document the area’s biodiversity and ecology. A RAP survey was proposed to evaluate the flora and fauna of the site. This survey would provide data to support claims of the site’s importance and biological wealth. The study presented here contains this information.

Major Results

Number of Species Recorded

Plants: 274 species
 Ants: 51 species
 Katydid: 27 species
 Stick Insects: 15 species
 Amphibians: 27 species
 Reptiles: 17 species
 Birds: 205 species
 Mammals: 65 species

New Records for Ecuador

Stick Insects: 2 species
 Amphibians: 1 species
 Mammals: 2 species

Species Likely New to Science

Plants: 3 species
 Katydid: 13 species
 Stick Insects: 10 species
 Amphibians: 4 species
 Reptiles: 1 species

RECOMMENDATIONS FOR CONSERVATION

The most direct threats to the area's biodiversity are: (i) expansion of agriculture and ranching on the part of local inhabitants and colonists, (ii) logging, (iii) large and small scale mining, (iv) the introduction of diseases to the site and (v) the effects of climate change. Given these threats, conservation of the tepuis will only be possible if the following actions are taken as soon as possible:

- Consolidation of the Nangaritza Tepuis Conservation Area. This process should be led by the Association of Shuar Tayunts and the San Miguel de las Orquídeas Association of Independent Workers. Official zoning of the area and the provision of land titles to the Association of Shuar Tayunts and the San Miguel de las Orquídeas Association of Independent Workers is fundamental to finalizing this process. Simultaneously, it is necessary to clearly delimit the protected area, including distinctions of zones for scientific use, ecotourism and areas that are completely off-limits. Sanctions for trespassing within unauthorized zones should be established and enforced.
- Conservation of additional ecosystems. Through the Ecuadorean Ministry of the Environment's Socio Bosque Program, local communities have the oppor-

tunity to amplify their benefits from the conservation area. The Socio Bosque program provides economic incentives to land owners and communities (with legal land titles) that voluntarily preserve native forests on their land.

- Carbon capture. By means of reforesting denuded areas with native species, local communities can access economic resources through international carbon capture programs, with the additional benefit of creating ecological corridors by connecting forest fragments that are currently isolated.
- Avoid small scale mining operations. To avoid impacts from small scale mining, local communities should organize and develop viable alternatives to this practice. For example, it will be necessary to establish whether or not tourism is a viable economic activity for the local populations. The points mentioned above (Socio Bosque and reforestation) are other possible alternatives.
- Avoid large scale mining operations. We anticipate that eventual large scale industrial mining activity (particularly open-pit mining) in this area will bring with it serious sociological and environmental consequences, similar to those produced by the oil industries in the eastern part of the country. For this reason, we recommend that the communities of the Cordillera del Cóndor organize and inform themselves with respect to these issues so that they are able to negotiate deals from a socially and ecologically responsible perspective.
- Creation of a National Park that includes the Cordillera del Cóndor and the Cordillera del Cutucú. This project would conserve one of the most diverse biological and cultural areas in South America. However, for the park to be a significant step in conservation, it should explicitly prohibit exploitation of its subsoils (i.e., mining).