



FIELD REPORT

**Pennant #3 Expedition
The Mindo Cloudforest, Ecuador
January 10 to 14, 2016**



Prepared by
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February 10, 2016

Area Explored:

The Mindo Cloudforest is located on the western slopes of the Andes Mountain range in Ecuador covering an area of 268 square kilometers. It is located 101.7 kilometers northwest of the country's capital city of Quito at 0.0512° S, 78.7783° W. It is at an approximate altitude of 1,100 metres on a North South axis.

Area Description:

One of the most biodiverse ecosystems in the world is found in this region where the Tropical Andes meets the Chocoan Lowlands. Altitudes range from 960 meters to 3,440 meters. There are three main rivers: *Mindo*, *Saloya*, *Cinto* feeding 15 waterfalls.

Notable Fauna Populations:

As of 2015, there are more species of bird (450) and butterfly (1,200) than any place on earth. One species of bird – the hummingbird – has more than 130 subspecies alone represented in the area.

Expedition Reporting Methodologies:

- Log Notes
- Video Capture and Interview Footage
- Photography
- Observations made and recorded by foot, by air, by car

Expedition Team:

The team was known as **Team EcuaCan**, representing the joint partnership of explorers and researchers from Ecuador and Canada. The team uniform was a red and black lumberjack shirt with a team patch on the left shoulder. Team members:

- Mark Terry: Expedition Leader (Canada)
- Christine DiCecco: Expedition Co-Leader (Canada)
- Brian Krohnke: President, Mindo Cloudforest Foundation (Ecuador)
- Herb Terry: International Relations Director, National Polytechnic University (Ecuador)
- Herb Terry: Retired Teacher (Canada)
- Miriam Terry: Retired Teacher (Canada)
- Angela Macri: Retired Teacher (Canada)
- George Macri: Real Estate Developer (Canada)
- Gustavo Salazar Ruiz: Judge (Ecuador)
- Melissa Salazar Terry: Lawyer (Ecuador)
- Mary Anne Terry: Explorer (Canada)
- Ricardo Resendes: Explorer (Canada)
- Grace Wettlaufer: Student (Canada)
- Ashley Wettlaufer: Research Coordinator (Canada)
- Dustin Tzirulnick: Accountant (Canada)

Mindo Cloudforest Expedition Area:

The area we explored is a relatively new nature reserve administered by the Mindo Cloudforest Foundation. The foundation began the reserve known as Los Bancos-Milpe in March, 2004, planting trees from saplings (*pictured*). On January 11, 2016, we walked through a dense and vibrant forest that was farmland just 11 years ago.



The Los Bancos-Milpe reserve comprises of 100 hectares or 350 acres and has an altitude of 1,020 to 1,150 metres or an average of 3,600 feet. Its habitat is classified as a Chocó-Andean foothills rainforest. It is located in a geographic area known as the Andean Brow. This dense ecosystem is one of the most biodiverse areas in the world.

The foundation owns and operates six forest reserves as conservation reserves and birding and ecotourism destinations. These reserves are arrayed on a loose altitudinal transect on the west slope of the Andes in northwest Ecuador. Combined, these reserves have a bird list representing more than 600 species including two Red List of Endangered Birds designated by the International Union for Conservation of Nature, including many endemics and migrants.

Previously, the area had no bird habitat due to industrial farming. The clear cutting for farmland saw all mahogany stripped out and extirpated in the Cloudforest.

Plant Species:

There are 500 species of trees per hectare in this extremely biodiverse area. Most rainforests have only four per hectare. Some of the species we observed include:

1. **Bromeliads** (*pictured*):

Related to ginger, the species of Bromeliaceae is a family of flowering plant with 3,170 varieties, including the pineapple. Its tightly overlapping leaves are characteristic of this plant with most of its varieties found in the tropical regions of Central and South America.



2. **Wild orchids** (*pictured*) -

There are approximately 4,500 species in the Cloudforest area with a number of species still not identified. In fact Ecuador boasts the highest orchid diversity of any country in the world, regardless of size. Orchids grow in all ecosystems throughout Ecuador, and some species grow as high up as 4,000 metres (more than 13,000 feet).



3. **Ecuadorian Walking Tree** (*pictured*):

The *Socratea exorrhiza*, the Walking Palm or Cashapona, is a palm native to rainforests in tropical Central and South America. It usually grows to 25 metres in height, but the ones we encountered are up to 30 metres in height. Their unique claim to walking is explained by their ability to uproot themselves and move closer to the light. They can move as much as 20 metres per year. Their unique exposed roots play an important role in water management for the forest.



4. **Heliconia** (*pictured*)

There are about 40 different species of heliconia to be found in the Mindo Cloudforest. The leaves of this plant are paddle-shaped, and they are related to the banana family. Heliconias are sometimes called "lobster claws" or "parrot flowers".



Bird Species:

There are 280 bird species in the Mindo Cloudforest. As well, there are 600 species in nearby Quito. Compare these figures to what we have on this continent: There are only 700 species of bird in all of North America. Some of the birds we observed on this expedition include:

1. **Club-Winged Manakin** (*pictured*):

Of the 60 varieties of this bird, there are three type of Manakin bird found in the Cloudforest: red (*pictured*), black and white. As part of their mating ritual, they beep and display their wings. Their typical weight is 10 to 12 grams.



2. **Woodcreeper** (*pictured*):

Similar to the Woodpecker, the Woodcreeper gets its name from its position on tree trunks as it climbs up and down eating insects found in their bark. Woodcreepers range from 14 to 35 centimetres in length. The Woodcreepers we observed maintain an upright and vertical posture, supported by their stiff tail feathers.



3. **Grey-breasted Wood Wren** (*pictured*):

These common birds can be found in large supply in the Cloudforest and other mountainous rainforests in Ecuador. They grow about 10 to 11 cm in length and have an average weight of 6.4 grams. They usually eat invertebrates and insects. They are not known to eat any vegetation.



4. **Sickle Bill Hummingbirds** (*pictured*):

With a total length of 13 to 15 cm (five to six inches) and weighing only 35 grams, it is a relatively large hummingbird. Males and females are virtually identical, differing only in size (especially wing measurements), with the females being some 20% smaller.

Its upperparts are iridescent dull greenish, while the underparts are white. They feed on heliconia (see *above*).



Butterfly Species:

Owl Butterfly (*Two varieties pictured*):

This prehistoric butterfly is very large by butterfly standards, measuring 65 to 200 mm (2.6 to 7.9 inches), and fly only a few metres at a time. They usually rest on tree trunks making good use of their “owl” eye spots to deter predators. Two varieties of the owl butterfly (*pictured*) were observed: the Grey Owl Butterfly (*left*) and the Blue-tipped Owl Butterfly.



THE EXPLORERS MUSEUM
Pennant #3 Expedition Team (Team Ecuacan)
Mindo Cloudforest, Andes Mountains, Ecuador
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