

# Andean Flora of Ecuador

Naturetrek Tour Report

5 - 20 November 2005

---

Report compiled by Gustavo Cañas-Valle

---



Naturetrek Cheriton Mill Cheriton Alresford Hampshire SO24 0NG England

**T:** +44 (0)1962 733051

**F:** +44 (0)1962 736426

**E:** [info@naturetrek.co.uk](mailto:info@naturetrek.co.uk)

**W:** [www.naturetrek.co.uk](http://www.naturetrek.co.uk)

Tour leaders:           Gustavo Cañas-Valle  
                              Hugolino Oñate

Tour participants:     Judith Cain  
                              Susan Penny  
                              Helge Vindenes  
                              Barbara Vindenes

## Introduction

In Ecuador botanists have catalogued up to 16,087 plant species, in 273 families. More than 3200 of these species are orchids (Moeller-Joergensen & Leon-Yanez, 1999). The rainy seasons usually trigger blooming in most plants, and therefore different species bloom at different times of year. The three geographical regions of Ecuador have different rainy seasons, thereby corresponding with three different periods of blooming. In the coastal region, west of the Andes, the rains start between December and January and stop around May or June. In the Highlands the peak of the rainy season occurs in May, though it starts between March and April. For the Ecuadorian Amazon – Eastern Andean Slopes and basin, the rains start between July and August and start to calm down around September and October.

Throughout the Orchid Trip, we visited 18 different localities on the Eastern Mountain Range of the Ecuadorian Andes. This report describes most of the plant species we saw in bloom in November 2005 when we visited the Eastern Andes in Ecuador. November is a good month for keen botanists to visit the Eastern Mountain range of the Andes and the slopes of the Ecuadorian Amazon when the dry season begins, and there is still rainfall but in smaller amounts. Our group was looking for orchids in bloom, including those observable en route between the locations we had selected.

In this report you will find a description, by locality, of the most numerous flowering plant families and Orchid genera we found. All the identified species observed throughout our journey are also listed at the end of the report for reference. Incidentally we also photographed birds, mountains and landscapes. We photographed some of the birds we saw by digiscoping, using a digital camera, a telescope and an adaptor to make the camera lens fixed onto the ocular of the telescope. A 20 species bird list is compiled at the end of the report, and there is also a list of the snowcapped peaks and volcanoes we saw during our inland flight from Loja to Quito.

Considering all the plants seen in flower, we found 370 records of flowering plants, classified in 152 genera and representing 73 families. Of these records, 127 belong to the Orchid family (*Orchidaceae*): about 10 different species seen per day! We identified 118 species of orchids: 87 records confirmed, 21 records described in terms of their affinity to a known species, and 10 records yet to be confirmed. In this trip, we saw three times more orchid flowers than in 2004, almost twice the number of species and more than four times more genera.

## Observed Flora by Location:

### Cotopaxi National Park (6th November)

We arrived in Ecuador on the 6th of November. On our way to Baños (3 hours away from Quito) we took a detour to visit the Limpiopungo Lake Area at the Cotopaxi National Park. In the morning we left the Panamerican Highway in Machachi which is the northern access to the park. Before entering, we saw and photographed 10 species in 8 families. Rosaceae and Solanaceae the most recorded species recorded in this area.

When inside the Cotopaxi National Park, we recorded 11 species in 9 families. The family with the most species in flower was Asteraceae (Compositae).

Among the birds, we took pictures of Andean Lapwing, Andean Teal, and Greater Yellowlegs. We also saw Andean gull, Bar-winged Cinclodes, Great Thrush and we also heard Tawny Antpitta.

After a quick visit to Hostería La Ciénega for lunch we arrived at Hostería Luna Runtun in Baños. We made this our base camp during our stay in Baños, in order to visit Puyo and its surroundings.

### Baños, Puyo and surroundings (7th-9th November)

In Baños we found 34 species in 22 families. In the Orchid family we registered seven species in three genera: *Epidendrum*, *Maxillaria* and *Phragmipedium*, of which *Epidendrum* was the most numerous with 5 species. Other families with more than two species observed were *Gesneriaceae*, *Fabaceae*, *Melastomataceae*, and *Passifloraceae*.

In Puyo we found 66 species in 18 families. Here, the Orchid family presented 34 species in 21 genera. *Maxillaria* was the genera with the most species recorded (4 species) followed by *Phragmipedium* and *Gongora*, with 3 species each. The most numerous families recorded were *Bromeliaceae* (7 species), and with 3 species each *Araceae*, *Cyperaceae*, *Heliconiaceae*, and *Melastomataceae*.

### Loja and Zamora Provinces (10th-13th November)

In the Loja-Cajanuma area we found 9 species in 7 families. The most numerous family was Ericaceae (3 species). No orchids were recorded here. So far I have been able to identify the following three species as endemic to the Loja Area: *Centropogon cf. comosus*, *Centropogon bartwegii*, *Fuchsia cf. steyermarkii*.

We visited the Loja County Orchid Garden and found that there were 54 species of flowering plant in 5 families. Orchids were the most frequently seen here, with 50 species in 29 genera. The dominant genera were *Epidendrum* (8 species), *Oncidium* (7 species) and *Maxillaria* (4 species).

In Catacocha to Dry Forest we observed seven flowering species in seven families. We took several pictures of which the identifiable species were few. The most interesting plants included one *Cucurbitaceae* and several *Bombacaceae*: species of trees similar to the African Baobabs.

Yangana and Cerro Toledo regions had 38 species in 23 families. Three families were the most frequently seen in this area: *Ericaceae* (5 spp), *Compositae* (3 spp) and *Orchidaceae* (3 spp).

The Tapichalaca Reserve had 9 species in 7 families. Two families were dominant here: *Onagraceae* and *Orchidaceae*, with 2 species each.

In San Francisco on the road to Zamora we observed 10 species in 9 families. The *Orchidaceae* was the only family with more than one species seen in this area.

### Papallacta and the Lava Flow, El Guango, San Isidro, and Cosanga (14th-17th November)

Though the weather during our trip was excellent, we were not always moved to take pictures of the landscape unless it was absolutely breathtaking. This happened twice. Firstly when we were at La Ciénega and we saw the Cotopaxi Volcano during sunset coming out of the clouds, and secondly, during our flight from Loja Airport to Quito, where we enjoyed watching the Volcanoes Avenue, with a clear blue sky and excellent visibility. We saw from South to North the following Volcanoes; on the Eastern Range - Altar, Sangay, Tungurahua, Cotopaxi, Rumiñahui, Antisana and Cayambe; and on the Western Range we saw Chimborazo, Carihuairazo, Quilotoa and Illinizas.

When we arrived at the Papallacta Pass and the Lava Flow we found 50 species in 13 families. All the orchids (16 species in 8 genera) were seen at the Lava Flow region which seems to present the best habitat for orchids in the area. The genera with the most species were *Pleurothallis* (5 spp) and *Epidendrum*, *Odontoglossum*, *Pterichis* y *Stellis* with 2 species each. In these two locations, three families were the ones with the most species present, these included Composite (22 spp), *Orchidaceae* (16 spp) and *Gentianaceae* (7 spp).

At the Termas de Papallacta Lodge we found only one species. The area where the lodge is located is an agricultural-rural setting: planted gardens with some introduced and some local species, pasture land on the slopes around the lodge, and surrounding the pasture, an Andean forest that extends up to the tree line (3400 meters, 11,154.86 feet). In the gardens of the lodge, we saw a single interesting species: *Physalis peruviana*, *Solanaceae*, which we did not find elsewhere even though it is considered to be a common plant which is easy to disperse.

From the El Guango to San Isidro Lodge there were 45 flowering species in 19 families. We recorded 13 species in the Orchid family, which was also the family with the most numerous species seen in this area. From the 11 genera observed in the family, the two most numerous, *Elleanthus* and *Odontoglossum*, presented 2 species each. The other numerous families were *Araceae* (6 spp), *Cyperaceae* (3 spp) and *Melastomataceae* (3 spp).

In San Isidro and Cosanga, 29 species in 15 families were recorded. Again, the Orchids represented the most records with 8 species: 4 belonged to the genus *Epidendrum* and 2 to *Maxillaria*. Other numerous families were *Campanulaceae* (3 spp), and with two species each: *Alstroemeriaceae*, *Gesneriaceae*, *Malvaceae*, *Melastomataceae*, and *Solanaceae*.

### San Isidro to Quito (18th-19th November)

On the way back to Quito, from San Isidro Lodge, we stopped just before Baeza, a small village at the main road junction on the way to the Ecuadorian Amazon. There, next to an old-fallen bridge we saw five orchid species, from five different genera: *Elleanthus*, *Epidendrum*, *Lepanthes*, *Pleurothallis*, and *Trychoceros*.

Besides botany, two of our passengers had particular interests. Judith collected ideas for textures, colors, scenes and landscapes to be used later at home during her creative process when she paints. Helge, who was interested in photography, took on the challenge of photographing butterflies as well as the different plant species.

Three of us had digital cameras: Hugolino, Judith and I. We recorded the majority of the plant species blooming at the time of our visit. The areas we scanned were mainly along the trails we walked and along the sides of the roads we drove by. Time constraints meant that occasionally we were not able photograph every single plant species we saw in bloom along the roads, while driving between destinations.

However, at the end of the trip we were able to compile a CD which was presented to the members of our group. The CD included all the photographs taken, which proved very useful for plant and bird identification, and is there to remind us of our memories of our successful and enjoyable trip.

## Discussion

In certain groups, plant identification has been difficult even to genus, for example, with the species in the Compositae Family because of its diversity in Ecuador. After the *Orchidaceae*, this is the most diverse family in our country (Jorgensen & Leon, 1999). Other families with high species numbers are *Melastomataceae*, *Rubiaceae*, *Poaceae*, *Bromeliaceae*, *Piperaceae*, *Araceae*, *Solanaceae* and *Driopteridaceae*.

Finally, when evaluating our trip we found that in 2005 we had a very productive trip. We saw three times more orchid flowers than in 2004, almost twice as many species and more than four times more genera. Out of these, we identified 9 out of 10 times which genus the flower seen belonged to, almost as many as in 2004, when all the species seen were at least described to genus.

The amount of orchids seen in 2005 challenged our identification skills. We identified 38% of the orchids seen to species level, in comparison to 55% of effective identification for the orchids seen in 2004. Therefore, it is necessary to collect more information to describe the orchid species to keep up with the amount available to be seen. A table with a detailed description of this data follows:

	Orchid Trip 2004	Orchid Trip 2005
Orchid forms seen	>31	126
Orchids identified to species	17	45
Orchids identified to genus	14	73
Orchid genera represented	21	42
Plant Species / Forms seen	205	356
Plant Species identified to species	101	119
Genera represented	171	152
Families represented	80	73

## Species lists

### Plants

Family	Genus	Species
<i>Acanthaceae</i>	<i>Thunbergia</i>	<i>Thunbergia alata</i>
<i>Actinidaceae</i>	<i>Saurauia</i>	<i>Saurauia ursina</i>
<i>Agavaceae</i>	<i>Agave</i>	<i>Agave mexicana</i>
<i>Alstroemeriaceae</i>	<i>Bomarea</i>	<i>Bomarea cf multiflora</i>
<i>Amaryllidaceae</i>	<i>Eucrosia</i>	<i>Eucrosia eucrosiodes</i>
<i>Anacardiaceae</i>	<i>Schinus</i>	<i>Schinus molle</i>
<i>Anacardiaceae</i>	<i>Mangifera</i>	<i>Mangifera indica</i>
<i>Araceae</i>	<i>Anthurium</i>	<i>Anthurium andreanum</i>
<i>Araceae</i>	<i>Xanthosoma</i>	<i>Xanthosoma sagittatum</i>
<i>Araucariaceae</i>	<i>Araucaria</i>	<i>Araucaria cf heterophylla</i>
<i>Arecaceae</i>	<i>Iriartea</i>	<i>Iriartea deltoidea</i>
<i>Asclepiadaceae</i>	<i>Asclepias</i>	<i>Asclepias curasavica</i>
<i>Balanophoraceae</i>	<i>Helosis</i>	<i>Helosis cayanensis</i>
<i>Begoniaceae</i>	<i>Begonia</i>	<i>Begonia parviflora</i>
<i>Betulaceae</i>	<i>Alnus</i>	<i>Alnus acuminata</i>
<i>Bignoniaceae</i>	<i>Jacaranda</i>	<i>Jacaranda mimosifolia</i>
<i>Bignoniaceae</i>	<i>Uncaria</i>	<i>Uncaria tomentosa</i>
<i>Bixaceae</i>	<i>Bixa</i>	<i>Bixa orellana</i>
<i>Bombacaceae</i>	<i>Ceiba</i>	<i>Ceiba trischistandra</i>
<i>Bromeliaceae</i>	<i>Puya</i>	<i>Puya hamaca</i>
<i>Bromeliaceae</i>	<i>Tillandsia</i>	<i>Tillandsia cyanea</i>
<i>Cactaceae</i>	<i>Opuntia</i>	<i>Opuntia cilíndrica</i>
<i>Cactaceae</i>	<i>Opuntia</i>	<i>Opuntia ficus-indica</i>
<i>Caesalpiniaceae</i>	<i>Caesalpinia</i>	<i>Caesalpinia gillesii</i>
<i>Caesalpiniaceae</i>	<i>Caesalpinia</i>	<i>Caesalpinia pulcherrima</i>
<i>Caesalpiniaceae</i>	<i>Delonix</i>	<i>Delonix af regia</i>
<i>Campanulaceae</i>	<i>Siphocampylus</i>	<i>Siphocampylus gigantea</i>
<i>Capparaceae</i>	<i>Cleome</i>	<i>Cleome cf anomala</i>
<i>Capparidaceae</i>	<i>Cleome</i>	<i>Cleome anomala</i>
<i>Caricaceae</i>	<i>Carica</i>	<i>Carica papaya</i>
<i>Cecropiaceae</i>	<i>Cecropia</i>	<i>Cecropia platenses</i>
<i>Cochlospermaceae</i>	<i>Cochlospermum</i>	<i>Cochlospermum vitifolium</i>
<i>Commelinaceae</i>	<i>Commelina</i>	<i>Commelina cyanea</i>
<i>Compositae</i>	<i>Baccharis</i>	<i>Baccharis latifolia</i>
<i>Compositae</i>	<i>Baccharis</i>	<i>Baccharis sagittalis</i>
<i>Compositae</i>	<i>Bidens</i>	<i>Bidens andicola</i>
<i>Compositae</i>	<i>Chuquiraga</i>	<i>Chuquiraga jussieui</i>
<i>Compositae</i>	<i>Culcitium</i>	<i>Culcitium canescens</i>
<i>Compositae</i>	<i>Culcitium</i>	<i>Culcitium uniflorum</i>
<i>Compositae</i>	<i>Diplostephium</i>	<i>Diplostephium rupestre</i>
<i>Compositae</i>	<i>Dorobaea</i>	<i>Dorobaea pimpinellifolia herb, yellow flowers</i>
<i>Compositae</i>	<i>Galinsoga</i>	<i>Galinsoga parviflora</i>
<i>Compositae</i>	<i>Hypochaeris</i>	<i>Hypochaeris sessilifolia yellow dandelion-like</i>
<i>Compositae</i>	<i>Hypochaeris</i>	<i>Hypochaeris sonchoides</i>
<i>Compositae</i>	<i>Lasiocephalus</i>	<i>Lasiocephalus ovatus</i>
<i>Compositae</i>	<i>Loricaria</i>	<i>Loricaria thuyoides</i>
<i>Compositae</i>	<i>Taraxacum</i>	<i>Taraxacum officinale</i>

Family	Genus	Species
Compositae	Werneria	Werneria nubigena
Compositae	Werneria	Werneria pumila
Compositae-Mutisieae	Chuquiraga	Chuquiraga jussieui
Compositae-Senecionae	Lasiocephalus	Lasiocephalus cf ovatus
Coriariaceae	Coriaria	Coriaria ruscifolia
Coriariaceae	Coriaria	Coriaria thymifolia
Crassulaceae	Echeveria	Echeveria quitensis
Crassulaceae	Kalanchoe	Kalanchoe fedtschenkoi
Cruciferae	Eudema	Eudema nubigena
Cyperaceae	Carex	Carex rotundifolia
Ericaceae	Cavendishia	Cavendishia bracteata
Ericaceae	Cavendishia	Cavendishia zamarensis
Ericaceae	Disterigma	Disterigma empitriifolia
Ericaceae	Dysterigma	Dysterigma empetrifolium
Ericaceae	Gaulteria	Gaulteria resoluta
Ericaceae	Psamisia	Psammisia equadorensis
Eriocaulaceae	Paepalanthus	Paepalanthus ensifolius
Euphorbiaceae	Jatropha	Jatropha nudicaule
Fabaceae	Astragalus	Astragalus geminiflorus dwarf purple
Fabaceae	Dalea	Dalea coerulea
Gentianaceae	Gentiana	Gentiana postrata
Gentianaceae	Gentiana	Gentiana sedifolia
Gentianaceae	Gentianella	Gentianella cerastioides purple
Gentianaceae	Gentianella	Gentianella difusa
Geraniaceae	Geranium	Geranium sibbalioides
Gesneriaceae	Alloplectus	Alloplectus quadricornus
Gesneriaceae	Kohleria	Kohleria cf villosa
Gymnosperm	Araucaria	Araucaria heterophylla
Haloragidaceae	Gunnera	Gunnera magellanica
Haloragidaceae	Gunnera	Gunnera brephogea
Heliconiaceae	Heliconia	Heliconia af regalis
Heliconiaceae	Heliconia	Heliconia orthotricha
Hypericaceae	Hypericum	Hypericum hieracefolium
Hypericaceae	Hypericum	Hypericum cf laricifolium
Labiatae	Clinopodium	Clinopodium nubigenum
Labiatae	Salvia	Salvia mexicana
Lamiaceae	Salvia	Salvia cf macrophyla
Loganiaceae	Buddleja	Buddleja incana
Loganiaceae	Potalia	Potalia amara
Malvaceae	Abutilon	Abutilon darwinii
Malvaceae	Nototriche	Nototriche pichensis
Melastomataceae	Brachyotum	Brachyotum cf campanulare
Melastomataceae	Brachyotum	Brachyotum ledifolium
Melastomataceae	Monochaetum	Monochaetum lineatum
Melastomataceae	Tibouchina	Tibouchina cf longifolia
Melastomataceae	Tibouchina	Tibouchina lepidota
Mimosaceae	Acacia	Acacia macrantha
Mimosaceae	Calliandra	Calliandra haematocephala
Mimosaceae	Mimosa	Mimosa quitense
Moraceae	Cecropia	Cecropia sciadophylla
Myrtaceae	Eucaliptus	Eucaliptus globulus

Family	Genus	Species
Orchidaceae	<i>Brassia</i>	<i>Brassia af arcuigera</i>
Orchidaceae	<i>Brassia</i>	<i>Brassia lanceana</i>
Orchidaceae	<i>Brassia</i>	<i>Brassia warscewiczii</i>
Orchidaceae	<i>Catasetum</i>	<i>Catasetum saccatum</i>
Orchidaceae	<i>Cattleya</i>	<i>Cattleya maxima</i>
Orchidaceae	<i>Chaubardia</i>	<i>Chaubardia heteroclita</i>
Orchidaceae	<i>Cryptocentrum</i>	<i>Cryptocentrum af pergracile</i>
Orchidaceae	<i>Cyrtorchilim</i>	<i>Cyrtorchilim macranthum</i>
Orchidaceae	<i>Elleanthus</i>	<i>Elleanthus af tovarensis</i>
Orchidaceae	<i>Elleanthus</i>	<i>Elleanthus oliganthus</i>
Orchidaceae	<i>Encyclia</i>	<i>Encyclia vespa</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum af cochlidium</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum af longiflorum</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum af melanthum</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum af pichincae</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum af pichinchensis</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum agoyanense</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum arachnoglossum</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum arachnoides</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum dialychilum</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum lacustre</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum longiflorum</i>
Orchidaceae	<i>Epidendrum</i>	<i>Epidendrum schistochilum</i>
Orchidaceae	<i>Gongora</i>	<i>Gongora ecornuta</i>
Orchidaceae	<i>Gongora</i>	<i>Gongora pardina</i>
Orchidaceae	<i>Gongora</i>	<i>Gongora rufescens</i>
Orchidaceae	<i>Gongora</i>	<i>Gongora scaphephorus</i>
Orchidaceae	<i>Habenaria</i>	<i>Habenaria monorhiza</i>
Orchidaceae	<i>Hofmeisterella</i>	<i>Hofmeisterella eumicroscopica</i>
Orchidaceae	<i>Huntleya</i>	<i>Huntleya gustavi</i>
Orchidaceae	<i>Huntleya</i>	<i>Huntleya lucida</i>
Orchidaceae	<i>Lycaste</i>	<i>Lycaste biloba</i>
Orchidaceae	<i>Lycaste</i>	<i>Lycaste monoptera</i>
Orchidaceae	<i>Lycaste</i>	<i>Lycaste mucronata</i>
Orchidaceae	<i>Lycaste</i>	<i>Lycaste gigantea</i>
Orchidaceae	<i>Lycaste</i>	<i>Lycaste xytriphora</i>
Orchidaceae	<i>Masdevalia</i>	<i>Masdevalia lenae</i>
Orchidaceae	<i>Masdevalia</i>	<i>Masdevalia lucantha</i>
Orchidaceae	<i>Maxillaria</i>	<i>Maxillaria acuminata</i>
Orchidaceae	<i>Maxillaria</i>	<i>Maxillaria fletcheriana</i>
Orchidaceae	<i>Maxillaria</i>	<i>Maxillaria rufescens</i>
Orchidaceae	<i>Maxillaria</i>	<i>Maxillaria splendens</i>
Orchidaceae	<i>Mormolyca</i>	<i>Mormolyca polyphyla</i>
Orchidaceae	<i>Odontoglossum</i>	<i>Odontoglossum af pardinum</i>
Orchidaceae	<i>Odontoglossum</i>	<i>Odontoglossum af ramosissimum</i>
Orchidaceae	<i>Odontoglossum</i>	<i>Odontoglossum af sanguinolentum</i>
Orchidaceae	<i>Odontoglossum</i>	<i>Odontoglossum myanthum</i>
Orchidaceae	<i>Oerstedella</i>	<i>Oerstedella thurstonorumrecently</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium pardinum</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium baueri</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium excavatum</i>



Family	Genus	Species
Orchidaceae	<i>Oncidium</i>	<i>Oncidium hyphaematicum</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium klotzscheanum</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium macranthum</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium saltabundum</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium sanguinolentum</i>
Orchidaceae	<i>Oncidium</i>	<i>Oncidium serratum</i>
Orchidaceae	<i>Ornithocephalus</i>	<i>Ornithocephalus polyodon</i>
Orchidaceae	<i>Otoglossum</i>	<i>Otoglossum axinopterum</i>
Orchidaceae	<i>Pachyphyllum</i>	<i>Pachyphyllum crystallinum</i>
Orchidaceae	<i>Phragmipedium</i>	<i>Phragmipedium lindenii</i>
Orchidaceae	<i>Phragmipedium</i>	<i>Phragmipedium longifolium</i>
Orchidaceae	<i>Phragmipedium</i>	<i>Phragmipedium pearcei</i>
Orchidaceae	<i>Phragmipedium</i>	<i>Phragmipedium reticulatum</i>
Orchidaceae	<i>Pleurothallis</i>	<i>Pleurothallis pearcei</i>
Orchidaceae	<i>Pleurothallis</i>	<i>Pleurothallis bivalvis</i>
Orchidaceae	<i>Pleurothallis</i>	<i>Pleurothallis dodsoni</i>
Orchidaceae	<i>Prosthechea</i>	<i>Prosthechea af vespa</i>
Orchidaceae	<i>Psygmorechis</i>	<i>Psygmorechis pusilla</i>
Orchidaceae	<i>Pterichis</i>	<i>Pterichis af galeata</i>
Orchidaceae	<i>Pterichis</i>	<i>Pterichis af triloba</i>
Orchidaceae	<i>Sobralia</i>	<i>Sobralia rosea</i>
Orchidaceae	<i>Sobralia</i>	<i>Sobralia setigera</i>
Orchidaceae	<i>Stellis</i>	<i>Stellis af ciliaris</i>
Orchidaceae	<i>Telipogon</i>	<i>Telipogon af maldonadoensis</i>
Orchidaceae	<i>Telipogon</i>	<i>Telipogon hausmannianus</i>
Oxalidaceae	<i>Oxalis</i>	<i>Oxalis cf peduncularis</i>
Passifloraceae	<i>Passiflora</i>	<i>Passiflora mixta</i>
Passifloraceae	<i>Passiflora</i>	<i>Passiflora mollissima</i>
Plantaginaceae	<i>Plantago</i>	<i>Plantago rigida</i>
Poaceae	<i>Bambusa</i>	<i>Bambusa guadua</i>
Poaceae	<i>Bambusa</i>	<i>Bambusa vulgaris</i>
Podocarpaceae	<i>Podocarpus</i>	<i>Podocarpus oleifolius</i>
Polemoniaceae	<i>Cobaea</i>	<i>Cobaea scandens</i>
Polygalaceae	<i>Monnina</i>	<i>Monnina obtusifolia</i>
Proteaceae	<i>Lomatia</i>	<i>Lomatia hirsuta</i>
Proteaceae	<i>Oreocallis</i>	<i>Oreocallis grandiflora</i>
Proteaceae	<i>Oreocallis</i>	<i>Oreocallis grandiflorum</i>
Ranunculaceae	<i>Ranunculus</i>	<i>Ranunculus guzmannii</i>
Ranunculaceae	<i>Ranunculus</i>	<i>Ranunculus praemorsus</i>
Rosaceae	<i>Prunus</i>	<i>Prunus capuli</i>
Rosaceae	<i>Rubus</i>	<i>Rubus glaucus</i>
Rubiaceae	<i>Galum</i>	<i>Galum hypocarpium</i>
Saxifragaceae	<i>Ribes</i>	<i>Ribes andicola</i>
Scrophulariaceae	<i>Castilleja</i>	<i>Castilleja fissifolia</i>
Scrophulariaceae	<i>Castilleja</i>	<i>Castilleja pumila</i>
Solanaceae	<i>Brugmansia</i>	<i>Brugmansia candida</i>
Solanaceae	<i>Brugmansia</i>	<i>Brugmansia sanguinea</i>
Solanaceae	<i>Nicotiana</i>	<i>Nicotiana tabacum</i>
Solanaceae	<i>Physalis</i>	<i>Physalis peruviana</i>
Solanaceae	<i>Solanum</i>	<i>Solanum cf oblongifolium</i>
Solanaceae	<i>Solanum</i>	<i>Solanum lycioides</i>

Family	Genus	Species
<i>Solanaceae</i>	<i>Solanum</i>	<i>Solanum quitoense</i>
<i>Solanaceae</i>	<i>Streptosolen</i>	<i>Streptosolen jamesonii</i>
<i>Tropaeolaceae</i>	<i>Tropaeolum</i>	<i>Tropaeolum adpressum</i>
<i>Umbelliferae</i>	<i>Azorella</i>	<i>Azorella pedunculata</i>
<i>Valerianaceae</i>	<i>Valeriana</i>	<i>Valeriana plantaginea</i>
<i>Valerianaceae</i>	<i>Valeriana</i>	<i>Valeriana microphylla</i>
<i>Valerianaceae</i>	<i>Valeriana</i>	<i>Valeriana rigida</i>
<i>Verbenaceae</i>	<i>Lantana</i>	<i>Lantana camara</i>
<i>Violaceae</i>	<i>Viola</i>	<i>Viola polycephala</i>
<i>Zingiberaceae</i>	<i>Hedychium</i>	<i>Hedychium coronarium</i>

## Birds

English Name	Trip / Location
Andean Teal	Machachi to Cotopaxi
Osprey	San Isidro
Andean Lapwing	Machachi to Cotopaxi
Greater yellowleg	Machachi to Cotopaxi
Croacking dove	Catacocha to Dry forest
Scarlet macaw	Puyo
Pacific parrotlet	Catacocha to Dry forest
Blue headed parrot	Puyo
White bellied woodstar	Tapichalaca Reserve
Sword billed hummingbird	Termas to El Guango - Baeza
Collared Inca	Tapichalaca Reserve
Chestnut breasted coronet	Tapichalaca Reserve
Amethyst throated sunangel	Tapichalaca Reserve
Inca Jay	San Isidro
Vermillion Flycatcher	Baños
Cliff flycatcher	Baños
White banded swallow	Puyo
Masked Flowerpiercer	Termas to El Guango - Baeza
Russet backed oropendola	Puyo / San Isidro

## References

Moeller-Joergensen, P & S. Leon-Yanez, (ed) 1999. *Catalogue of the Vascular Plants of Ecuador*. Missouri Botanical Garden Press, St. Louis, Missouri.

Lozano, P., T. Delgado y Z. Aguirre. 2003. *Estado Actual de la Flora Endémica Exclusiva y su distribución en el occidente del Parque Nacional Podocarpus*. Funbotánica – Herbario y Jardín Botánico “Reinaldo Espinosa”, Loja, Ecuador

Freire-Fierro, A., D. Fernández & C. Quintana. 2002. *Usos de Melastomataceae en el Ecuador*. SIDA 20(1): 233 – 260

Cotton, E. 2000. *Six new species of Melastomataceae from Ecuador*. Nord. J. Bot. 20(2) : 179 – 192