

IPS Biennial 2018

Field trips

1. The stands of the wax palm *Ceroxylon quindiuense* in the Cocora Valley and in Tochechito

The Quindío wax palm, *Ceroxylon quindiuense*, is Colombia's National Tree and is also the world's tallest species of palm. Individuals 40-45 m tall are abundant both at the Cocora Valley and in Tochechito, and we will visit both localities during a fascinating trip through dirty Andean roads in a caravan of fancy World War II Willys Jeeps.

Although the Cocora Valley is renowned for its wax palms, it is actually the lesser-known Tochechito area that holds the world's largest stands of this species –600.000 adult palms are to be found in Tochechito, against just 2000 individuals in Cocora. But it is not their sheer number: the dense palm forests of Tochechito are unrivalled in density and beauty. Once described as one of the world's nature wonders, these magnificent forests should be visited at least once by every palm fan. Standing by the world's tallest palm currently known to be afoot (59.5 m or 195 ft) is a one-in-a-lifetime experience.

On our way to the Cocora valley we will see the closely related *Ceroxylon alpinum*, which grows at lower elevations. Both species were mistaken for one by its discoverers, Humboldt and Bonpland, in 1801, a confusion that remained for over a century. We will stop at a place where both species can be seen side by side, and visitors will be able to appreciate the difference between them.

On our way to Tochechito, we may see isolated individuals of *Prestoea acuminata* and the spiny *Aiphanes concinna*, both of them characteristic of Andean forests.

At Tochechito we will see also the remains of the National Trail, the harsh mule path that linked Bogotá and Quito between the 16th and 19th centuries. Once renowned as one of the most difficult passes in the Andes, this trail was undertaken by famous explorers like Alexander von Humboldt and Aimé Bonpland (1801), Boussingault (1827), Isaac Holton (1852), Edouard André (1876), and by Colombia's liberator Simón Bolívar and his troops (1830).

2. The National Palm Collection at the Quindío Botanical Garden

Located just 30 minutes from our venue at Hotel Las Camelias, the Quindío Botanical Garden harbors the world's largest collection of Colombian palms. This collection started in 2007, and now includes 200 out of the 252 species of palms currently known in the country, and figures increase month to month, as new expeditions are undertaken.

Although most of the individuals in the collection are still young, visitors will be able to appreciate rarely-seen species, and to see some of the smaller plants that have already started to flower and set fruit.

The collection is divided in five areas that represent the country's geographical regions: Pacific lowlands, Amazon, Andes, Inter-Andean valleys, and Caribbean.

The following species can be seen at the collection:

<i>Acoelorrhaphe wrightii</i>	<i>Attalea cohune</i>	<i>Bactris simplicifrons</i>
<i>Acrocomia aculeata</i>	<i>Attalea cuatrecasana</i>	<i>Calyptrogyne costatifrons</i>
<i>Aiphanes acaulis</i>	<i>Attalea iguadummat</i>	<i>Ceroxylon alpinum</i>
<i>Aiphanes argos</i>	<i>Attalea insignis</i>	<i>Ceroxylon ceriferum</i>
<i>Aiphanes buenaventurae</i>	<i>Attalea maripa</i>	<i>Ceroxylon parvifrons</i>
<i>Aiphanes concinna</i>	<i>Attalea microcarpa</i>	<i>Ceroxylon quindiuense</i>
<i>Aiphanes erinacea</i>	<i>Attalea nucifera</i>	<i>Ceroxylon sasaimae</i>
<i>Aiphanes gelatinosa</i>	<i>Attalea plowmanii</i>	<i>Ceroxylon ventricosum</i>
<i>Aiphanes graminifolia</i>	<i>Bactris acanthocarpa</i>	<i>Ceroxylon vogelianum</i>
<i>Aiphanes hirsuta</i>	<i>Bactris balanophora</i>	<i>Chamaedorea allenii</i>
<i>Aiphanes horrida</i>	<i>Bactris barronis</i>	<i>Chamaedorea deneversiana</i>
<i>Aiphanes killipii</i>	<i>Bactris bidentula</i>	<i>Chamaedorea linearis</i>
<i>Aiphanes leiostachys</i>	<i>Bactris bifida</i>	<i>Chamaedorea pauciflora</i>
<i>Aiphanes lindeniana</i>	<i>Bactris brongniartii</i>	<i>Chamaedorea pinnatifrons</i>
<i>Aiphanes linearis</i>	<i>Bactris campestris</i>	<i>Chamaedorea ponderosa</i>
<i>Aiphanes macroloba</i>	<i>Bactris charnleyae</i>	<i>Chamaedorea pygmaea</i>
<i>Aiphanes parvifolia</i>	<i>Bactris coloniata</i>	<i>Chamaedorea ricardoi</i>
<i>Aiphanes simplex</i>	<i>Bactris coloradonis</i>	<i>Chamaedorea sullivaniorum</i>
<i>Aiphanes tricuspidata</i>	<i>Bactris concinna</i>	<i>Chamaedorea tepejilote</i>
<i>Aiphanes ulei</i>	<i>Bactris corossilla</i>	<i>Chamaedorea warscewiczii</i>
<i>Ammandra decasperma</i>	<i>Bactris elegans</i>	<i>Chamaedorea woodsoniana</i>
<i>Asterogyne martiana</i>	<i>Bactris fissifrons</i>	<i>Chelyocarpus dianeurus</i>
<i>Astrocaryum acaule</i>	<i>Bactris gasipaes</i>	<i>Copernicia tectorum</i>
<i>Astrocaryum aculeatum</i>	<i>Bactris guineensis</i>	<i>Cryosophila kalbreyeri</i>
<i>Astrocaryum chambira</i>	<i>Bactris halmoorei</i>	<i>Desmoncus cirrhifer</i>
<i>Astrocaryum ciliatum</i>	<i>Bactris hirta</i>	<i>Desmoncus mitis</i>
<i>Astrocaryum ferrugineum</i>	<i>Bactris hondurensis</i>	<i>Desmoncus myriacanthos</i>
<i>Astrocaryum gynacanthum</i>	<i>Bactris killipii</i>	<i>Desmoncus polyacanthos</i>
<i>Astrocaryum jauari</i>	<i>Bactris macroacantha</i>	<i>Desmoncus setosus</i>
<i>Astrocaryum malybo</i>	<i>Bactris major</i>	<i>Desmoncus vacivus</i>
<i>Astrocaryum standleyanum</i>	<i>Bactris manriquei</i>	<i>Dictyocaryum lamarckianum</i>
<i>Astrocaryum triandrum</i>	<i>Bactris maraja</i>	<i>Elaeis oleifera</i>
<i>Attalea allenii</i>	<i>Bactris martiana</i>	<i>Euterpe catinga</i>
<i>Attalea amygdalina</i>	<i>Bactris pilosa</i>	<i>Euterpe oleracea</i>
<i>Attalea butyracea</i>	<i>Bactris riparia</i>	<i>Euterpe precatória</i>
<i>Attalea cephalotes</i>	<i>Bactris setulosa</i>	<i>Geonoma bernalii</i>

Geonoma brongniartii
Geonoma calyptrogynoidea
Geonoma camana
Geonoma chlamydostachys
Geonoma chococola
Geonoma concinna
Geonoma cuneata
Geonoma deversa
Geonoma fosteri
Geonoma frontinensis
Geonoma galeanoae
Geonoma interrupta
Geonoma lehmannii
Geonoma leptospadix
Geonoma longepedunculata
Geonoma macrostachys
Geonoma maxima
Geonoma oligoclona
Geonoma orbignyana
Geonoma paradoxa
Geonoma poeppigiana
Geonoma santanderensis
Geonoma stricta
Geonoma triglochis
Geonoma undata
Hyospathe elegans
Hyospathe frontinensis
Hyospathe pittieri
Hyospathe wendlandiana
Iriartea deltoidea
Iriartella setigera

Itaya amicum
Leopoldinia piassaba
Leopoldinia pulchra
Lepidocaryum tenue
Manicaria saccifera
Mauritia carana
Mauritia flexuosa
Mauritiella aculeata
Mauritiella armata
Mauritiella macroclada
Mauritiella pumila
Oenocarpus bacaba
Oenocarpus balickii
Oenocarpus batua
Oenocarpus minor
Parajubaea cocoides
Pholidostachys dactyloides
Pholidostachys panamensis
Pholidostachys pulchra
Pholidostachys sanluisensis
Pholidostachys synanthera
Phytelephas macrocarpa
Prestoea decurrens
Prestoea ensiformis
Prestoea longepetiolata
Prestoea schultzeana
Raphia taedigera
Reinhardtia gracilis
Prestoea acuminata
Prestoea carderi
Phytelephas tenuicaulis

Reinhardtia koschnyana
Reinhardtia simplex
Roystonea oleracea
Sabal mauritiiformis
Sabinaria magnifica
Socratea exorrhiza
Socratea hecatonandra
Socratea rostrata
Syagrus orinocensis
Syagrus sancona
Syagrus smithii
Synechanthus warscewiczianus
Welfia regia
Wettinia anomala
Wettinia castanea
Wettinia disticha
Wettinia drudei
Wettinia equalis
Wettinia fascicularis
Wettinia hirsuta
Wettinia kalbreyeri
Wettinia lanata
Wettinia maynensis
Wettinia microcarpa
Wettinia oxycarpa
Wettinia praemorsa
Wettinia quinaria
Wettinia radiata
Wettinia verruculosa

3. Bahía Málaga – Exploring one of the world’s rainiest and palm-richest areas

The Pacific lowlands of Colombia are among the world’s rainiest places. With annual rainfall of up to 12,000 mm (472 inches), this area is a paradise for rainforest palms. We will explore the Pacific lowlands at Bahía Málaga, north from the port of Buenaventura. This bay, recently erected as the Uramba Bahía Málaga National Park, is the breeding place of the humpback whales (*Megaptera novaeangliae*), which swim every year from Antarctica to the warm waters of the Pacific, where they remain between July and October.

The bay itself is surrounded by pristine rain forest, where 40 species of palms can be found. Among them we will see some really rare species, like the unusual *Ammandra decasperma*, the endemic *Chelyocarpus dianeurus* and the uncommon *Aiphanes tricuspidata*. We might even bump into an individual of the extremely rare *Socratea hecatonandra*.

The following species may be found during the visit to Bahia Málaga

<i>Aiphanes buenaventurae</i>	<i>Chelyocarpus dianeurus</i>	
<i>Aiphanes tricuspidata</i>	<i>Desmoncus cirrhifer</i>	
<i>Ammandra decasperma</i>	<i>Euterpe oleracea</i>	
<i>Asterogyne martiana</i>	<i>Euterpe precatoria</i>	<i>Manicaria saccifera</i>
<i>Astrocaryum standleyanum</i>	<i>Geonoma calyptrogynoides</i>	<i>Mauritiella macroclada</i>
<i>Attalea allenii</i>	<i>Geonoma chococola</i>	<i>Oenocarpus bataua</i>
<i>Attalea cuatrecasana</i>	<i>Geonoma cuneata</i> subsp. <i>cuneata</i>	<i>Oenocarpus minor</i>
<i>Bactris barronis</i>	<i>Geonoma cuneata</i> subsp. <i>linearis</i>	<i>Pholidostachys dactyloides</i>
<i>Bactris coloniata</i>	<i>Geonoma cuneata</i> subsp. <i>procumbens</i>	<i>Pholidostachys pulchra</i>
<i>Bactris coloradonis</i>	<i>Geonoma deversa</i>	<i>Prestoea decurrens</i>
<i>Bactris gasipaes</i>	<i>Hyospathe frontinensis</i>	<i>Socratea exorrhiza</i>
<i>Bactris hondurensis</i>	<i>Hyospathe elegans</i>	<i>Socratea hecatonandra</i>
<i>Bactris manriquei</i>	<i>Iriartea deltoidea</i>	<i>Synechanthus warscewiczianus</i>
<i>Bactris maraja</i>		<i>Welfia regia</i>
<i>Bactris setulosa</i>		<i>Wettinia aequalis</i>
<i>Chamaedorea deneversiana</i>		<i>Wettinia quinaria</i>
		<i>Wettinia radiata</i>