

Expedition on the River Tuichi

The expedition took place between November 22 and December 13, 2005. It was lead by Alejandro Araujo-Murakami, with the participation of thesis students Sandra Paredes and Abraham Poma and Pilar Garagorri (Ph.D. student from Madrid as volunteer). We were guided by Cosme Cuevas, Evert Cuevas, and Dante Chambi. The purpose of the expedition was to cover as much ground within the dry forest as possible and collect as many fertile specimens as possible. We collected 585 numbers, all fertile, with 6–8 duplicates.

Notes from the expedition

The road from La Paz to Apolo was again not a problem, that can however not be said about the entrance to Pata via Santa Cruz del Valle Ameno. We have in the past used up to 2 days to reach Pata, and the road is still bad and we were nervous and tense about the road conditions, it took a full day to reach Pata, and it was a very difficult trip. We had to make repeated stops during the trip to solve many problems with the road surface and bridges. The dirt road surface is mostly clay and it is slippery surface combined with the steep drop-offs, was constantly on our minds.

The road from Apolo to Santa Cruz, had been completely destroyed by deep ruts cut in the road surface by the rain. That part took more than six hours, after filling in holes and ditches to be able to pass with the trucks. After lunch in Santa Cruz we continued to Pata, where we arrived about six in the afternoon. We set up camp and met our guides with the horses and mules ready to move on towards Virgen del Rosario the following day.

The expedition can be characterized by its many camp sites. The first was in Pata, the second at Virgen del Rosario, thereafter Yarimita, Pintata, and finally Puerto Tuichi.

In **Pata**, 24 November 2005, the community is well organized with church, toilets and bathing facilities with running water and all the house have the most beautiful roofs made of local grasses. Pata is located high above the Tuichi river, with a very steep terrain, and fairly humid. The people cultivate coca, onions, corn, yuca, and beans but all the crops are growing together in the same field. We spend a day in and around the village collecting what we could find in flower or fruit, but then we moved on to Virgen del Rosario, a four hours walk from Pata, collecting along the way.

In **Virgen del Rosario**, 25–27 November 2005, we set up camp in the school library and we really enjoyed the



Catholic church and the Plaza in Pata (A. Araujo-M.).



Field in Pata where coca, corn, and manihot are grown interspersed. Rafting the Tuichi at the confluence with Mojos (A. Araujo-M.)

company of the people in this community. The community is located along the banks of the Tuichi at the upper edge of the dry forest. We collected along the river and on Cerro Sapatayo, the next day we explored Cerro Cuatro Vientos where we clearly saw the transition to the humid montane forest, represented by elements such as palms, Melastomataceae, Moraceae, and Araliaceae. In the late afternoon we played a game of soccer with the youngsters from the community, we are not too proud of the result, so let us just say it was to build good relations with our guides and the community in general.

After three days in Virgen del Rosario we decided to begin the voyage down the Tuichi to Yarimita, where we arrived later the same day. This was our first experience in rafting, but the river was relatively calm except where the Tuichi river was joined by the Mojos river, this was the most turbulent part of the river.



Dry scrubby grassland and dense humid forest with palms in the Taruzani valley (A. Araujo-M.)

In **Yarimita**, 29 November–1 December 2005, we made a nice hike up along the Taruzani river until we reached the spring below a steep cliff. In the Taruzani canyon we find dramatic changes in the vegetation, from open scrub and grass vegetation to closed humid forest over very short distances, depending on the orientation of the slopes in the valley in respect to the predominant wind and rain direction.

While walking along the Taruzani, Cosme Cuevas told us that the “Reflejos” live in a cave nearby. The “Reflejos” got their name because their eyes reflect the light. Cosme further told us that his grandfathers used the birds as a source of oil or fat. We decided to go and have a look at the cave; around the entrance we found numerous seeds of different palm species as *Oenocarpus bataua*, *Dictyocaryum lamarckianum*, *Iriarteia deltoidea*, *Euterpe* ssp., *Socratea exorrhiza*, but also many seeds from Lauraceae. So we knew that Cosme was talking about the Guacharos or oilbirds and our photos confirmed our hypothesis. Oilbirds are known from Trinidad and throughout Northern South America, they fly at night and live of fruits that it plucks from the trees in flight they never perches to get their food.



The Guacharo cave. Right a closeup and improved contrast of the photo to the left (A. Araujo-M.).

On the second day in Yarimita we made several hikes, particularly to visit the different permanent plots that we established in March. The objective was to recollect and reconfirm the more doubtful identifications of the trees in the permanent plots. Cosme caught a 2 m long bushmaster (*Lachesis muta*), it is called Pucarara locally, it is venomous and both feared and respected both by our guides who typically wear sandals made out of rubber from car or truck pneumatics with very limited protection against snake bites.

We continued down the river Tuichi from Yarimita, our goal was to stop at Pintata, but we had to overnight in Pata Grande. The rafting was impressive, very impressive, on top of the pleasure of passing through the rapids without any problems or accidents we took full advantage of this trip through the beautiful dry forests of the Tuichi river.

In Pintata, 4–7 December 2005, the forest is much dryer than at Yarimita, we made many collections along the river, but paradoxically the daily rain shower, limited our collecting somewhat. On the opposite side of the river, inside the National park we found tree trunks of Mara or Mahogany (*Swietenia macrophylla*) cut illegally. The forest here at Pintata showed some differences to other parts that we previously had inventoried. Apart from Mahogany the differences were the presence of *Syagrus sancona* (Arecaceae) and *Cavanillesia umbellata* (Bombacaceae). *Cavanillesia* is a beautiful tall slender tree, which, when we visited, was without flowers and fruits, and most individuals were also leafless. Up the slopes and on the ridges we also found species that we had not seen elsewhere such as Chepereque (*Jacaranda mimosifolia*) and Alcornoche (*Tabebuia aurea*).

After collecting what was possible at Pintata we continued down the river to the junction with the Machariapo

river where we landed at Puerto Tuichi. It was a short trip, the river had grown considerably in width, the temperature had risen about 2°C, and the forest was much taller. We continued to enjoy the panorama, but we also observed a pump used to mine gold in the river bed, and a few camps that seemed to be established by illegal loggers in the search of Mahogany.

At **Puerto Tuichi**, 8–11 December 2005, we found “La Sensible” (*Mimosa pudica*) at our campsite, it rapidly closes its leaflets when touched, it has for many decades been a favorite in botanical gardens because of that feature, but here appeared to be growing wild in a disturbed area.

Puerto Tuichi is also very dry, but the valley was broader and the slopes less steep than elsewhere where we have made inventories. The gradual change in vegetation from Virgen del Rosario until the Resina river was dramatic, although many species are found throughout the valley. At Puerto Tuichi, a ranch also called Tuichi, is in the process of converting into a rustic hotel particularly for people interested in ecotourism.

The trip from Puerto Tuichi also called Suyo Suyo to La Paz went over the Machariapo river, and Apolo. The truck had arrived in Puerto Tuichi as planned, and we started the trip towards Apolo, the only difficult part was the passage of Machariapo. The river was high and we spent the night sleeping sitting upright in the truck because we could not cross the river. Only through the help of the guides and their boats did we manage to get out. All the equipment was loaded back on the inflatable boats and across the river, while some crossed the river on the hanging bridge, on the other side of the river transportation was arranged with another truck to take us all to Apolo. The next day we continued to La Paz. We started from Puerto Tuichi on December 11 and arrived in La Paz late at night on the 13th. A successful trip that gave us a great over all impression of the dry forests and made it possible reach places that never before had been collected by any botanists.



Cosme with the Bushmaster, top left (S. Paredes). Dry forest along the Tuichi river, top right. Mahogany trunk, bottom left. *Mimosa pudica*, bottom right (A. Araujo-M.).