Expedition to Chirimayu

The expedition was executed under the leadership of Leslie Cayola, with the collaboration of students Consuelo Campos, Vania Torrez and Angel Fernandez. Our guides were Guzmán Jove, Ramiro Jove and Lorenzo Sánchez (photo 1). The expedition lasted 24 days (November 22–December 15, 2005).

Results

We installed three permanent plots of 1 ha each (Table 1) at three localities named Arroyo Javillas, Río Chiriuno, and Arroyo Huanechaquimayu. We measured 2,246 trees and made 201 collections all pressed in the number series of L. Cayola.

1. Participants in the expedition. (L. Cayola).

Table 1: Permanent plots made

Plot no.	Coordinates	Altitude (m)	# Individuals inventoried
1	14º15'08,7''S 68º31'31,2''W	933	855
2	14º14'47,5''S 68º35'08,6''W	853	664
3	14º19'01,9''S 68º31'09,1''W	794	727

2. A. Fernandez probing the debt of the Machariapo river to see if the truck can pass. (L. Cayola).

Notes from the expedition

The objective of the expedition was to install three permanent plots in three different areas at three different elevations so that the composition in relation to that variable could be elucidated. We also in this expedition completed the entire transect of dry forest plots in and around the Tuichi river dry forests.

The trip to Azariamas was complicated, the rainy season had started early and it was raining hard. Consequently the rivers were high, and presented serious obstacles whenever we had to cross them. At some rivers we had to measure the dept of the rivers to make sure that the trucks would not stall or be swept away in the middle of the river (photo 2).

Despite all the rains it was still difficult to find good sources of water near the desired plots sites, it is after all a dry forest area. For each plot we ended up setting up camp at the river or creek closest to the plot site and using them as our water source.

We stayed at each site for a week, and it took us a total of four days to move the camp site from plot to plot. It was difficult work with the daily showers, but we managed to complete our goals.

Localidad Arroyo Javillas (14º15'20.8"S 68º31'38.8"W)

On November 24, we hiked from Azariamas to arroyo Javillas, it was a two hour hike. We shipped all the equipment on the traditional balsas on the river, such balsas has been used in these areas of Bolivia for decades or potentially hundred or thousands of years. The community at Azariamas does not dispose of many horses so it was the most convenient and practical way of transporting our gear.

The Javillas creek is small (photo 3), and crosses a more or less undulated terrace and drains into the Tuichi river. From the terrace there are slopes with rocky outcrops and ridges that reach medium levels, the highest ridges are covered by scrubs and grasses (photo 4).

We established a plot in the semi-deciduous forest on a very irregular relief. The dominant trees are *Oxandra espintana*, *Capparis polyantha*, *Tabebuia ochracea*, and *Aspidosperma cylindrocarpon*. We collected a Myrtaceae with very interesting fruits (photo 5) and a fruiting palm (photo 6). We also observed many butterfly larvae (photo 7) and land snails (photo 8) that seem to appear in larger quantity during the rainy season.

1. View of arroyo Javillas, note the Mahogany boards left behind from illegal extraction. 2. View of the serrania de Azariamas, the ridge tops are dominated by grasslands. (A. Fernandez). 3. Immature fruts of an interesting Myrtaceae. (L. Cayola). 4. Mature fruits of *Anthurium gracile* (Araceae). (A. Fernandez). 5. Butterbly larvae with urticant hairs. 6. Terrestrial snails (*Achatina* sp.) are abundant during the wet season in the dry forests. (V. Torrez).

Localidad Río Chiriuno (14º14'47.3"S 68º34'47.9"W)

On November 30 we left the Javillas creak and moved to Río Chiriuno, following the trail connecting Azariamas and San Juan. We camped on the shores of Río Chiriuno (photo 9), the river had grown significantly due to a torrential rain storm. About 500 m from the river, a large almost flat terrace is found where the forest is very well preserved, but during the dry season the trees are completely deciduous because the water deficit and the understory disappear almost completely. Due to the flat terrain installing a plot here turned out to be very easy.

The forest is a low stature forest dominated by *Capparis polyantha* (Capparaceae) and *Piptadenia viridiflora* (Fabaceae). The understory was dominated by bromelias (photo 10) and Araceae mainly *Pseudananas sagenarius* and *Anthurrium* sp. We also collected a species of *Erythroxylum* sp. (photo 11) with mature fruits that

we had not recorded in the dry forest previously. The people of the local community had shot a Jochi (*Cuniculus paca*) and we got their permission to photograph the trophy (photo 12).

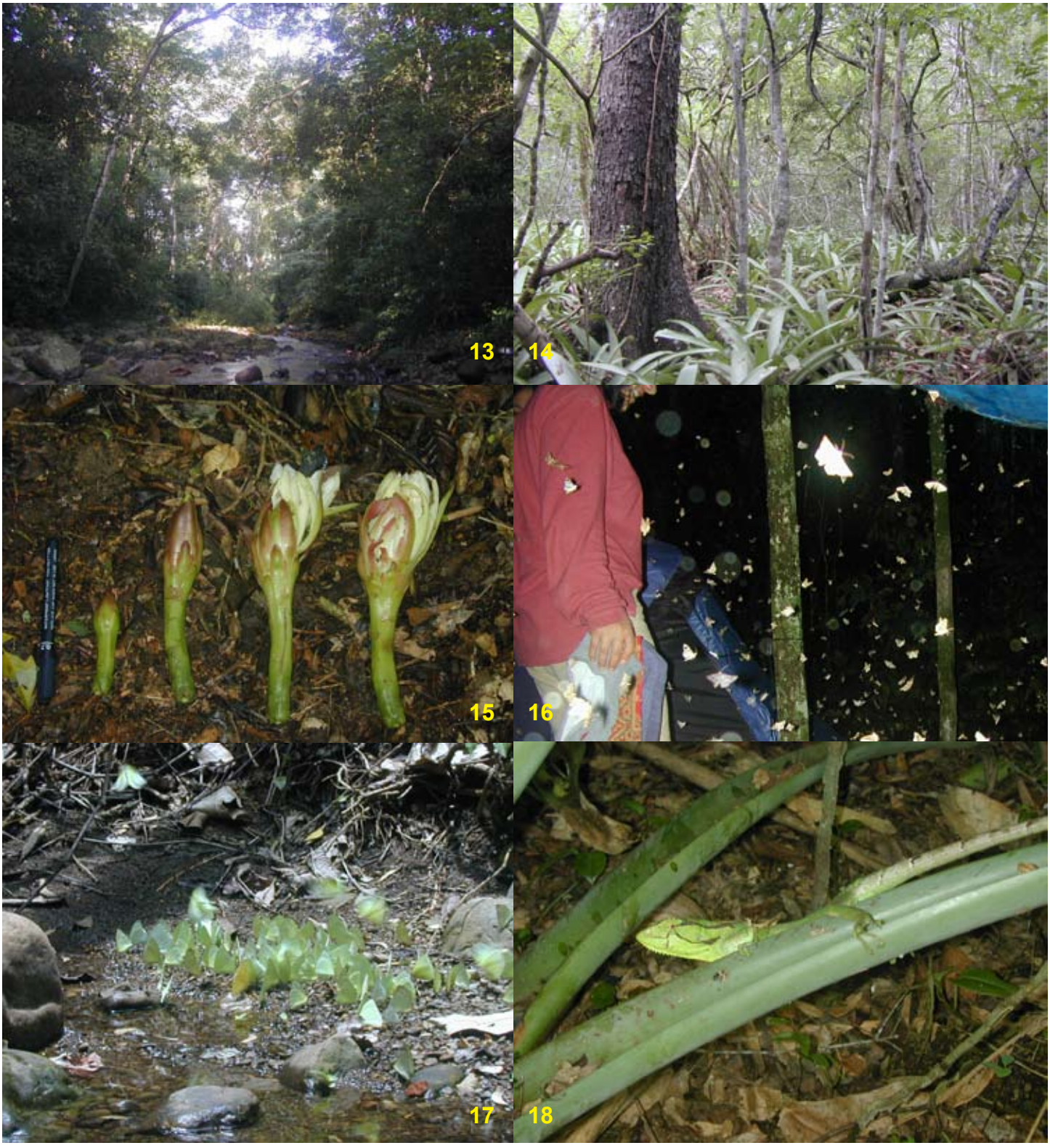
9. Río Chiriuno in flood. 10. Plot at Chiriuno, low forest and aunderstory dominated by Bromeliaceae. (A. Fernandez). 11. Immature and mature fruits of *Erythroxylum* sp. (Erythroxylaceae). (L. Cayola). 12. Jochi (*Cuniculus paca*), shot by the locals in the area. (A. Fernandez).

Localidad Arroyo Huanechaquimayu (14º18'35.9"S 68º32'37.5"W)

On December 8 we arrived at the Huanechaquimayu creek, about a four hour hike from Río Chiriuno. Here we had to explore the area considerably to find a site that was relatively homogeneous and large enough to place a permanent plot. We finally located an ideal location, but it was located far from our campsite. To reach the plot we had to circumvent several ridges and take advantage of the small creeks to get to the plot site, doing so we also avoided making new and obvious trails in the forest.

The forest is low and very dry (photo 14), the dominant species are *Phyllostylon rhamnoides*, *Oxandra espintana*, *Capparis coimbrana*, and *Capparis polyantha.* The understory is dominated by Bromeliaceae and *Chusquea* sp. (Poaceae). We collected a new species of Myrtaceae, that we had found on previous expeditions to the dry forest and we collected a tree shaped Cactaceae (photo 15) that potentially also is a new species.

At night we were given a surprise that was interesting, fascinating, and irritating — moths appeared by the thousands attracted by the lights we needed to press our collections from the day in the forest (photo 16). During the day we also found many butterflies along the creek (photo 17). In the middle of the plot we found an interesting reptile, when it felt threatened it changed colors from brown to brilliant green (photo 18).



13. View of the arroyo Huanechaquimayu, it only carry water in the wet season. 14. Plot at Huanechaquimayu, with a low and open forest, and the understory dominated by Bromelias. (A. Fernandez). 15. Buds and flowers of a tree shaped Cactaceae potentially a new species. (L. Cayola). 16. Cloud of nocturnal moths. 17. Butterflies seeking salts along the arroyo Huanechaquimayu. 18. Color shifting reptile on a Bromeliaceae. (A. Fernandez).