Project Update: February 2013

Good news! For the first time in the Bolivian Cerrado biome, a project acquired information about the ecology and reproductive biology of threatened narrow endemics of rock outcrops. The fieldwork portion to collect this information has concluded at the end of 2012. We collected specific ecological and biological data of seven species, moreover, we were able to generate information and increase the knowledge of other endemics of the habitat (Table 1).

Chart 1. List of the species from which we gathered general information about their ecology and reproductive biology. Local endemic (EL), national endemic (EN). Type of rockoutcrop: Campo rupestre (CR), torre de roca (TR), laja (L).

Family	Species	Distribution	Habitat
Acanthaceae	*Justicia adhaerens* *	EL	L
Amaranthaceae	*Gomphrena cardenasii*	EL	CR, L
Apocynaceae	*Blepharodon crabronum*	EL	TR
Apocynaceae	*Blepharodon philibertioides*	EL	CR, L, TR
Asteraceae	*Calea dalyi**	EL	CR, L, TR
Asteraceae	*Praxelis chiquitensis**	EL	TR
Bromeliaceae	*Pitcairnia chiquitana*	EL	CR, L, TR
Bromeliaceae	*Pitcairnia mohammadii*	EL	CR
Bromeliaceae	*Pitcairnia platystemon*	EL	CR, L
Cactaceae	*Cleistocactus samaipatanus**	EN	L
Cactaceae	*Frailea chiquitana*	EL	L
Euphorbiaceae	*Manihot* sp. nov.	EL	L
Leguminosae	*Mimosa dalyi**	EN	CR, L
Leguminosae	*Mimosa jacobita**	EL	CR, L, TR
Leguminosae	*Mimosa auriculata**	EL	CR, L
Melastomataceae	*Tibouchina* sp. nov.	EL	TR
Poaceae	*Paspalum* sp. nov.	EL	CR
Rubiacae	*Galianthe chiquitosiana*	EL	CR, L
Rubiaceae	*Mitracarpus bicrucis*	EL	CR, L

* Species in which deeply ecological and biological studies where performed.

We conducted a series of experimental and observational studies of their microhabitat requirements. We collected soil samples to analyse soil nutrient and soil moisture, installed data loggers to gather data about temperature and we evaluated vegetation cover, plant diversity and altitude.

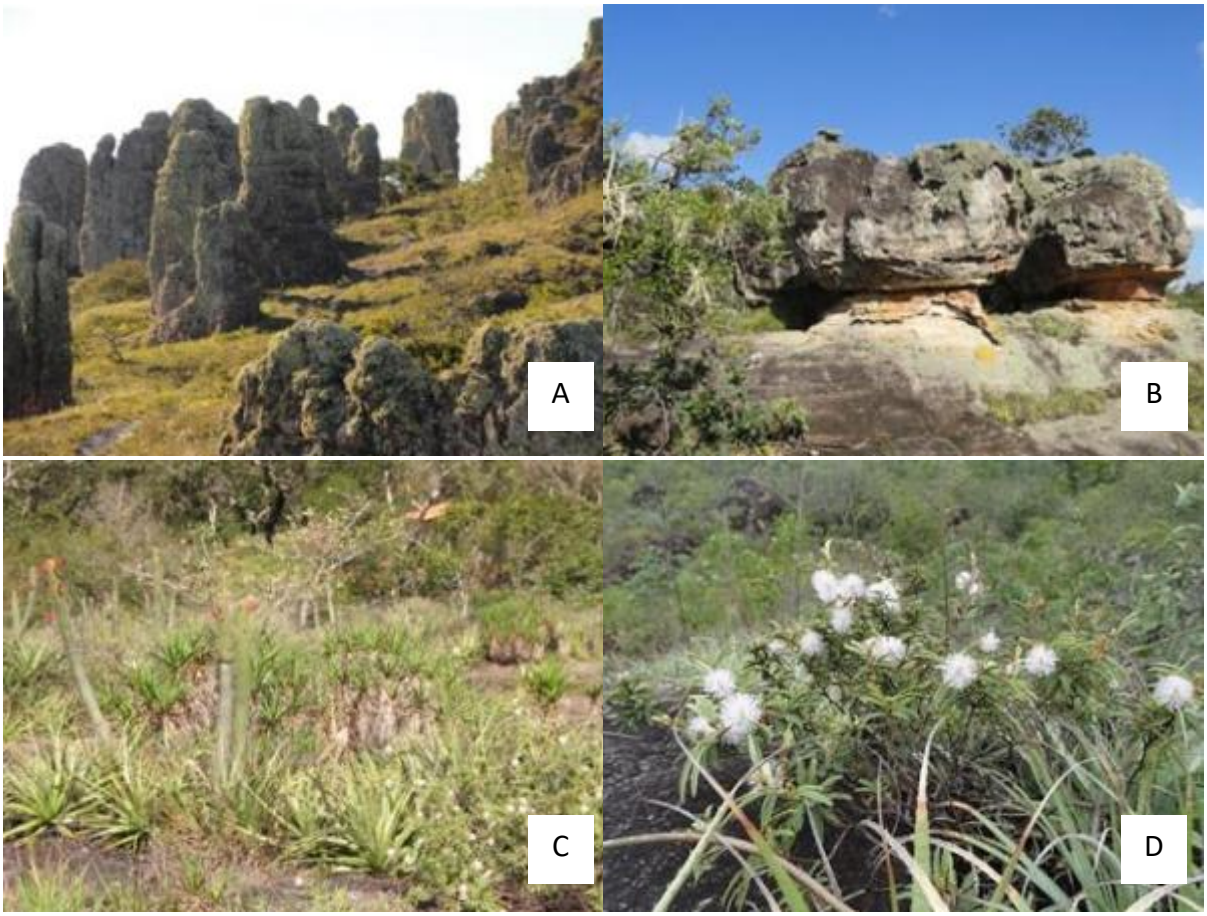

Fig. 1 A: torres de roca in “El Mirador”, habitat of the narrow endemics *Praxelis chiquitensis* and *Blepharodon crabronum.* B: laja in “Las Pozas”, habitat of *Justicia adhaerens*, the most endemic and endangered plant of the rock outcrops of Roboré. C: Laja in “Santiago- Roboré”, habitat of the endemics *Blepharodon philibertioides, Pitcairnia chiquitana* and *Cleistocactus samaipatanus.* D: laja in “La Aeropista, habitat of the endemics *Mimosa jacobita, Pitcairnia chiquitana, Mitracarpus bicrucis* and *Manihot* sp. nov.

We generated information about the reproductive biology and ecology of these species. Floral visitors were censored; representative floral visitors were trapped for identification. We also studied the breeding system of the species and the reproductive output.

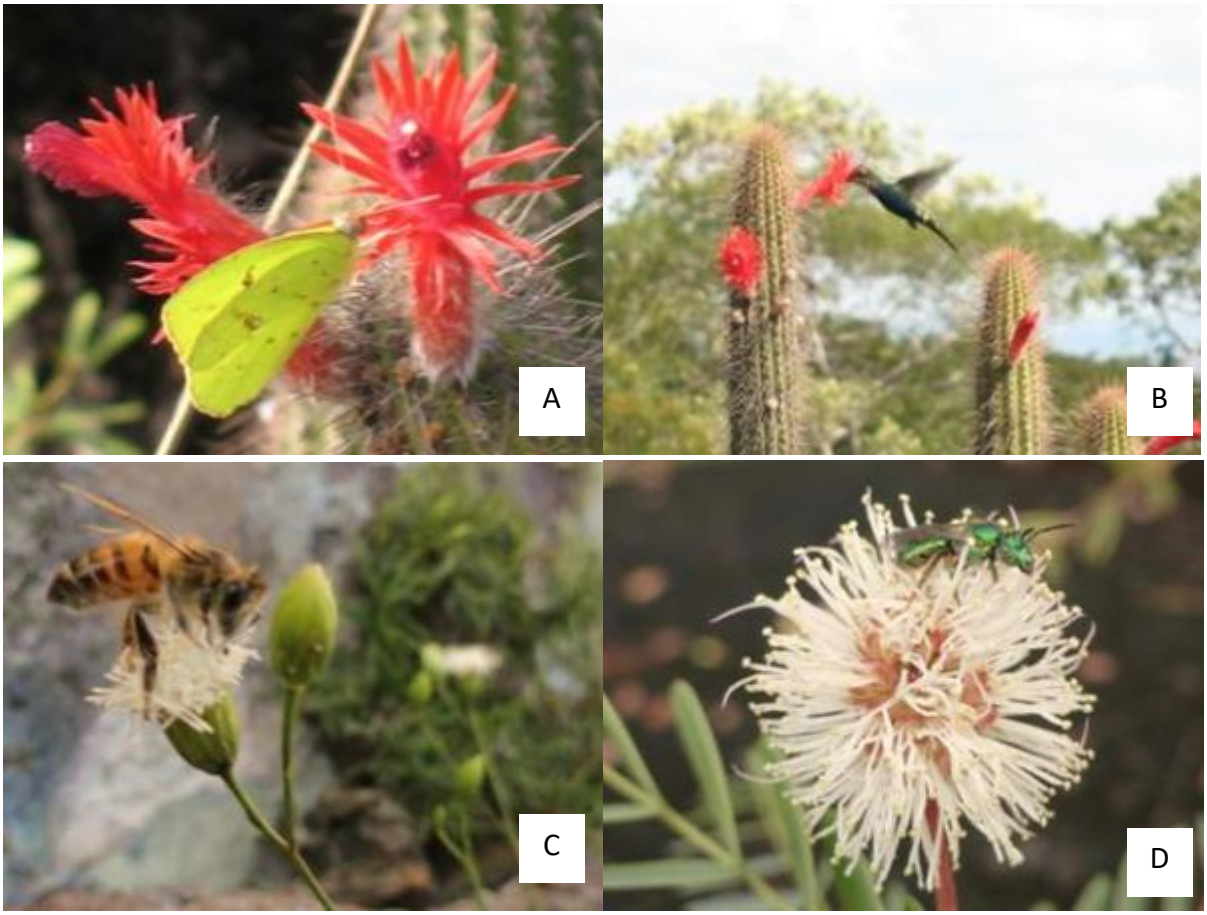

Fig. 2. Flower visitors of endemics. A, B: flower of *Cleistocactus samaipatanus* visited by the butterfly *Phoebis sennae* and the hummingbird *Heliomaster furcifer*. C: flower of *Praxelis chiquitensis* visited by the bee *Apis mellifera.* D: flower of *Mimosa jacobita* visited by the bee *Eudriesea* sp.