

Project Update: November 2016

To date, we are monitoring reproductive phenology, sugar concentration and volume measurements of nectar, mating system experiments. In order to record floral visitor behaviour on the flowers we make focal observations and camera trap (see floral visitors Figure 1). Data collection have been conducted, specially for *Cleistocactus baumannii*, *Echinopsis rhodotricha* and *Stetsonia coryne*. I have great difficulty finding cacti species with enough individuals bearing flowers and fruits. For example, *Pereskia sacharosa* and *Frailea* spp., we found only three and eight plants, respectively. In other words, we observed the reduced availability of individuals in reproductive stage. I expect to finish field activities in February 2017. Some field activities are shown in Figure 2.

Field guide is in progress. For all species, besides the photos, we gathered information on some morphological traits, such as life forms, flowers and fruits. The maps and conservation status for each species were made following the information provided by the IUCN Red List and Flora do Brasil. The next step is to identify all the species, writing topics about cactus family, main threats and how can we help to conservation of cacti. Additionally, we have to plan the meeting with farmers, teachers and students to show and deliver our field guide to them. Below, we present the preliminary list of cacti species that occur in the Brazilian chaco to date.

Ultimately, we published the paper: Vertebrate florivory on the short-columnar cactus *Echinopsis rhodotricha* K. Schum. in the Brazilian Chaco. Plant Ecology (September 2016). In this article, we evaluated the effects of florivory on the reproductive success of *E. rhodotricha*. We quantified and compared the fruit set between damaged and undamaged flowers in a natural population of this cactus. <http://link.springer.com/article/10.1007/s11258-016-0659-9>

CACTI SPECIES FROM THE BRAZILIAN CHACO

1 *Cereus bicolor* Rizzini & A. Mattos

Nome popular/ Common name: Mandacaru

Status de conservação/ Conservation status: Menor Preocupação/ Least Concern

2 *Cleistocactus baumannii* (Lem.) Lem.

Nome popular/ Common name: Rabo de macaco

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

3 *Frailea cataphracta* (Dams) Britton & Rose

Nome popular/ Common name: Tuna

Status de conservação/ Conservation status: Quase ameaçada/ Near Threatened

4 *Frailea schilinzkyana* (K.Schum.) Britton & Rose

Nome popular/ Common name: Tuna

Status de conservação/ Conservation status: Vulnerável/ Vulnerable

5 *Echinopsis rhodotricha* K. Schum.

Nome popular/ Common name: Tuna

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

6 *Gymnocalycium anisitsii* (K.Schum.) Britton & Rose

Nome popular/ Common name: Tuna

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

7 *Harrisia balansae* (K.Schum.) N.P.Taylor & Zappi

Nome popular/ Common name: Rabo-de-raposa

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

8 *Harrisia tortuosa* (J.Forbes ex Otto & A.Dietr.) Britton & Rose

Nome popular/ Common name: Rabo-de-raposa

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

9 *Hylocereus setaceus* (Salm-Dyck) Ralf Bauer

Nome popular/ Common name: Pitaia vermelha

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

10 *Monvillea cavendishii* (Waiting for specialist confirmation)

11 *Monvillea phatnosperma* (Waiting for specialist confirmation)

12 *Opuntia elata* Salm-Dyck

Nome popular/ Common name: Tuna, Arumbeva

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

13 *Opuntia retrorsa* Speg.

Nome popular/ Common name: Tuna

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

14 *Pereskia sacharosa* Griseb.

Nome popular/ Common name: Ora-por-nobis/ Cacto folha

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

15 *Praecereus saxicola* (Morong) N.P.Taylor

Nome popular/ Common name: S/N

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

16 *Rhipsalis* sp. (Waiting for specialist confirmation)

17 *Stetsonia coryne* (Salm-Dyck) Britton & Rose

Nome popular/ Common name: Tuna

Status de conservação/ Conservation status: Menor preocupação/ Least Concern

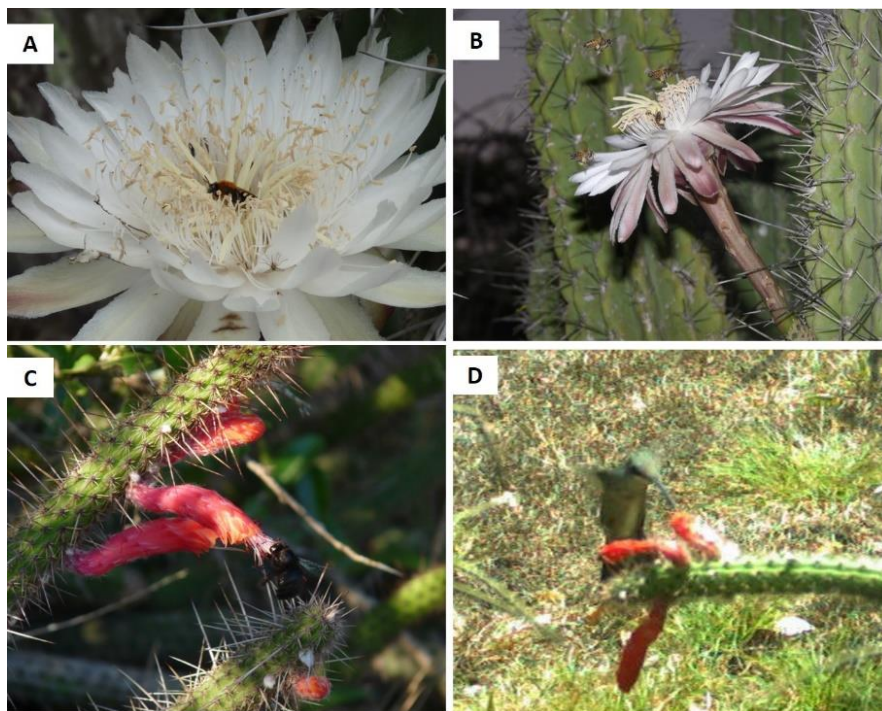


Figure 1. Records of floral visitors: *Stetsonia coryne* (A – B) and *Cleistocactus baumannii* (C – D). A) *Melipona orbignyi*; B) *Apis mellifera*; C) *Xylocopa splendidula*; D) *Heliomaster furcifer*. These photos are mine. I agree to post on Rufford's website.



Figure 2. Field activities. A) Collecting pollen samples: stigma of flowers and bodies of captured animals; B) Mating system experiments using voile bags before and after the treatments; C) Bagged flower; D) Camera trap for monitoring the visits of pollinators; E) UV light trap for moths capture; F) Focal observations of floral visitors. These photos are mine. I agree to post on Rufford's website.