Project Update: February 2016

Days are passing very fast and a busy schedule has been applied to our project, even considering the complicated situation of Venezuela, we have been working in our project to accomplish all our conservation and research goals. Currently, the following activities have been performed:

1. Paperwork and granting of research permissions is finished. All requirements were finally accepted by the Ministerio of Ecosocialismo y Aguas in the last week of November 2015 and our research permissions are nowadays guaranteed.
2. The major part of the equipment has been obtained and the preparations for fieldwork in Palmichal and Altos de Pipe were arranged. Both field season scheduled were completed and the next research trips are progressing. We are currently working in the preparations for the upcoming fieldwork in the Andean location.
3. In Altos de Pipe, another graduate student, Anais Bastidas is also interesting in assessing the phenology of hummingbird plants in Altos de Pipe. As part of her mastership project, I am advising her in collaboration with Dr Jafet Nassar.
4. During November 2015 we began our field work in Altos de Pipe and continued with the assessment of Palmichal Forest Reserve.
5. In Palmichal, we have established now eight line transects for bird and plant surveys. Each transect is marked with flagging and it currently georeferenced. A picture of the entrance of each one is showed in Figure 1.

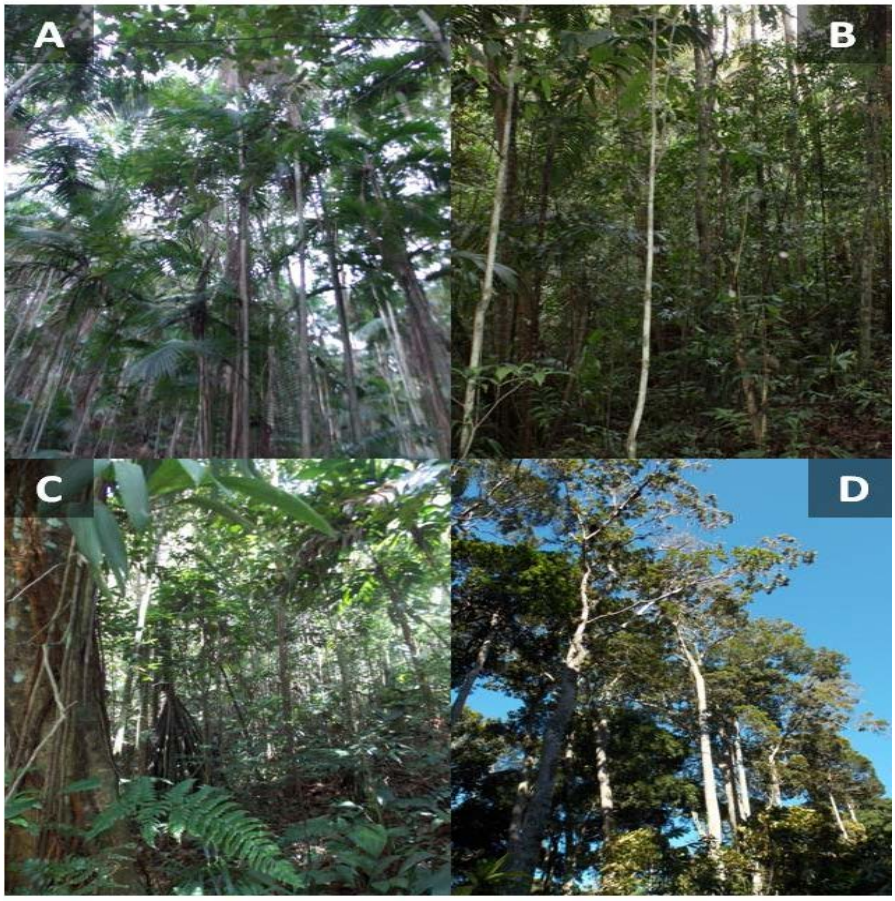

Figure 1. Entrance of our eight transects in the Palmichal Forest Reserve, Carabobo, Venezuela. Above: entrance to transects in the lower zone (1000-700 masl); Down: entrance to transects in the upper zone (1100-1300 masl).

6. Our fieldwork in Palmichal has documented 180 species of birds, including several endemics such as the handsome fruiteater (*Pipreola formosa*) and the rufous-cheeked tanager (*Tangara rufigenis*). Our preliminary observations suggest that several fruit-eating bird and hummingbird species seems to perform altitudinal migrations, although our data are not strong enough to resolve their patterns.
7. Clear differences have been noted in Palmichal and Altos de Pipe related to the flowering and fruiting of several tree species. During the last months of the year, hummingbird diversity increase in both areas, and they will reach the maximum during the rainy season from April to May, although a severe dry season related to ENSO is expected in the coastal Cordillera montane forests.
8. Preliminary comparisons of bird species richness detected in Palmichal indicated light differences between our samplings in the dry and rainy season (based on exploratory data obtained in March 2015).
9. Our fieldwork has also documented an extreme episode of drought associated to the ENSO event in Palmichal during January 2016. Their impact in bird-plant interactions will be assessed in the next months, however, our data indicated that climatic changes could be a serious threat for cloud forest ecosystems in the coastal Cordillera of Venezuela and our data will be extremely valuable.

10. A large number of native and exotic plants have been observed to be consumed by nectarivore and frugivore birds in Palmichal. Exotic plant species were especially preferred by hummingbirds during the dry season when few native species with flowers were recorded in Palmichal. These effects will be also assessed in the next months.
11. During January 2016 we carried out the botanical survey in company of botanist Angel Fernández (Herbarium IVIC), among the most interesting findings are the dominance of endemic tree palm species such as *Socratea karstenii* and *Euterpe kasteniana* (below in the photographs). Angel Fernandez also collected a possible new species of shrub in the Violaceae family, nevertheless all individuals' lack of flowers during the dry season and a new visit will be needed to confirm the taxonomic status of the samples.

Figure 2. Botanist Angel Fernández identifying botanic specimens recorded in Palmichal Forest Reserve.

12. The first post in our blog is currently in the blogosphere, it is in Spanish as planned to increase awareness about the importance of cloud forests and we hope to have time to translate to English some entrances for increasing their diffusion. Blog link is: http://facebookoftropicalforest.blogspot.com/