

Project Update: August 2015

Activities Development

- Between October 2014 and March 2015, we built a database considering records and localities per species from the following sources: national herbaria and ornithological collections of Mexico, online databases (<http://www.gbif.org>), and field works. The resulting database was used to reconstruct the “Seasonally Dry Tropical Forests” or “Tropical Dry Forests” distribution (in Mexico, Colombia-Venezuela, Peru-Ecuador, and Bolivia), and to forecast future distributional changes in order to understand how the geographic distribution of these threatened ecosystems will respond to climate change. Reconstruction of forests in the current and future scenarios was performed using the potential distribution models (obtained by Maximum Entropy [MaxEnt] algorithm) of associated species to these forests.
- In June and July 2015, in order to promote our project and its results regarding the identification of priority units of conservation within the Tropical Dry Forests, we sent the first two papers to two scientific journals with the purpose to be analysed and be considered their publication. These two documents are in review and evaluation process yet.
- In March and July 2015, we visited the three main museums in Venezuela (Ornithological Collection Phelps, Museo de Historia Natural Fundación La Salle and Estación Biológica Rancho Grande), in order to review the data collections of birds associated at Tropical Dry Forests. Additionally, we visited the Museo de Biología of Universidad del Zulia and the Herbario Nacional de Venezuela (Fundación Instituto Botánico de Venezuela) to obtain the information associated with plants selected in the climatic reconstruction of forests.
- In April 2015, as part of educational campaigns at the Universidad del Zulia, we carried out motivational talks entitled "Why to study Biology? (¿Por qué estudiar biología?; in Spanish)" These talks had the purpose to show the need to address problems about biodiversity conservation in the present time, and mainly we focused on demonstrating, based on increasing evidence, how the distribution and survival of species and the ecosystems in which they inhabit, are being affected by climate change; which shows the need of more biologists in the world to study this effects and develop of conservations strategies.
- In May and June 2015, we performed fieldwork in order to assess the performance of ecological and geographical distribution models of the Bolivian tropical dry forests. These models of distribution were obtained during the analysis laboratory in Mexico, between February and March 2015. Additionally, we visited the two main museums in Bolivia (Colección Boliviana de Fauna at Museo de Historia Natural and the Museo de Historia Natural Noel Kempff Mercado) in order to obtain information associated at Tropical Dry Forests.
- In June 2015, we developed an academic course for undergraduate and postgraduate students of the Universidad Nacional de San Antonio Abad del Cusco; in Peru. The academic course was titled “Use of Geographic Information Systems (GIS) for Ecological and Conservation studies” (Uso de Sistemas de Información Geográfica para estudios ecológicos y de conservación; in Spanish)”. Through this course, students were trained in the following topics: the different uses of GPS; the development of spatial analysis of maps; the need of integrate social, ecological and biological components in the development of future

Conservation Projects; and the importance to attend problems about the local and national distribution of species, ecosystems and biodiversity.

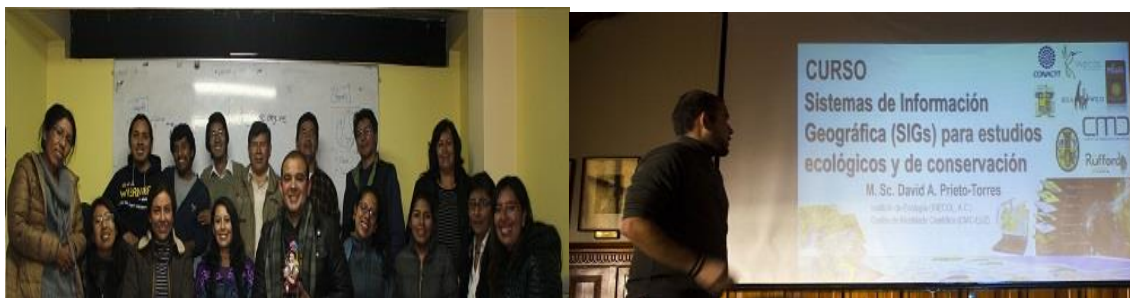
- From June-July 2015, we visited the Museo Ecuatoriano de Ciencias Naturales (MECN; Quito), in order to review the data collections of birds associated with tropical dry forests.

FIGURE CAPTIONS



- **Fieldwork personal during the assessing of performance of ecological and geographical distribution models of the Bolivian Tropical Dry Forests.** Since left to right: Juan Carlos Catari, Zamir Perez-Durán and David A. Prieto-Torres.





- **Tropical Dry Forests of Bolivia, Santa Cruz Province.** Localities visited during the assessing of performance of ecological and geographical distribution models.



- **Academic course "Use of Geographic Information Systems (GIS) for Ecological and Conservation studies",** performed in Peru during June 2015.