

Project Update: May 2011

We have very exciting and promising news to share from this first part of our project. We started our field work in December 2010. We covered a *ca.* 1500 km north-south linear transect. During more than 25 sampling days we collected native and alien bumblebees in six National Parks - from north to south: PN Lanin, Nahuel Huapi, Lago Puelo, Los Alerces, Perito Moreno and Los Glaciares. Our study area encompassed the whole continental range of *B. dahlbomii* in Argentina. Now, I am doing the statistical analyses of the spatial patterns of distribution and abundance of the three species with the aim to find a signal of geographical displacement of the native by the alien species. The good news is that in the very south tip of continental Argentina, where alien species did not arrive yet, the native *Bombus dahlbomii* is still abundant.

At the Laboratory of Agrozoology, Ghent University, Belgium, my co-equipper Marina analysed old samples collected from 1998 to 2009. Using a multiplex PCR with broad range primers she screened for the presence of six parasites. In agreement with our predictions, she detected two parasites (*Apicystis bombi* and *Crithidia bombi*) in samples of the two alien species collected after the invasion of *B. terrestris*. We are writing a manuscript with these results to submit to a scientific journal. In addition, Marina is now processing the samples collected last summer and setting up the non-invasive methods for DNA extraction

We gave talks at a Secondary School in Bariloche city, at the Visitors Center of the Los Glaciares National Park. These talks were attended by a diverse public of naturalists, park rangers, tourists and scholars. We also presented our projects and preliminary results at the following scientific meetings: the “Iberoamerican Workshop on habitat degradation and plant-animal interactions” (<http://sites.google.com/site/tallerinteracciones/home>), the “Regional meeting of Natural sciences in the Patagonia”, Argentina, and the “International course of construction of microsatellite-enriched libraries”, Brazil.

As results of these outreach activities we were consulted by the wild life service of Neuquén Province and also of Argentina to give technical advice regarding permits for collecting and exporting native bumblebee species for commercial rearing. Furthermore, I have been invited to serve as Regional Coordinator for the recently created International Union for the Conservation of Nature (IUCN) Species Survival Commission (SSC) Bumblebee Specialist Group (BBSG) for the region of South America (http://www.iucn.org/about/work/programmes/species/about_ssc/specialist_groups/directory_specialist_groups/directory_sg_invertebrates/). The first objective of this new BBSG will be to organise an assessment of the status of all bumblebee species worldwide. Based on this, the BBSG will then promote the conservation of the most imperiled species.

We keep working hard on this project and hopefully can share definite results in the short term. If you want to read articles related with my previous work on bumblebees

ecology and conservation, please visit my page:
<https://sites.google.com/site/carolinalauramorales/>



Left: Carolina collecting bumblebees in Southern Patagonia. Right: Carolina giving a talk at the Visitors Center of the Los Glaciares National Park, © Maxi Köpcke.