

Project Update: March 2021

Executive summary

Pollinators play an essential role for ecosystem health and biodiversity maintenance. However, they are declining worldwide. Previous work suggests that habitat heterogeneity can support great biodiversity. In landscapes managed for agriculture, a useful strategy to conserve pollinators may be to integrate local and landscape factors that promote an increase in agro-ecosystem heterogeneity. The purpose of this project is to analyse the quality and quantity of the pollination service delivered by wild pollinators to horticultural seed crops of family farmers in a semi-arid zone of Argentina based on the wild plants at field edges, landscape heterogeneity and pollinator diversity.

In early March 2020, Covid-19 restrictions began in Argentina. This made purchasing supplies, field work and office work difficult, and led to some delays in the project execution, so we are still working on it today.

Tasks performed

From August 2020 until today, I analysed landscape images and did fieldwork. Also, I worked on a manuscript that was submitted to an indexed journal and is currently under revision. In addition, I wrote an information note about native bees for a local newspaper. I am currently working on a pamphlet to show all bees recorded at San Juan's fields and to highlight the importance of native bee maintenance. This pamphlet will be shared with farmers, beekeepers and community at large.

Community scope

Because of Covid-19 I could not develop face-to-face workshops with farmers and beekeepers but I participated as an exhibitor on an open course of crop pollination from Fundación Fortalecer (Agreement between INTA, F. Fortalecer and Federación Agraria), and in a conference of native bee diversity and its importance for students of Zootechnics, Agronomic Engineering and Veterinary at Universidade Federal do Paraná (Brazil, Professor Tomaz Longhi).

During field work, I worked with one undergraduate student at UNSJ. He learned about field techniques, sampling protocols, plants and insects' collection and preparation, and logistic organisation.

Project next steps

In the next months I will continue with data analysis. Also, I would like to participate in the XXIX Argentina Ecology Meeting. Finally, I would like to finish the pamphlet of the bees from San Juan and share it with the community.



Aerial landscape image taken with the drone.



Xylocopa sp. visiting flowers of *Zinnia* sp.



Germán, student at UNSJ conducting flora survey at a pumpkin lot.