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Education

El Colegio de la Frontera Sur Ph.D. Ecology and Sustainable Development – Agroecology and Society, 2024 (Mentor: Rémy Vandame)

El Colegio de la Frontera Sur M.Sc. Natural Resource Management and Rural Development – Agroecology, With Honors, 2018 (Mentor: Rémy Vandame)

Universidad de San Carlos de Guatemala B. Sc. Biology, 2016 (Mentors: Eunice Enríquez-Cotton, Rémy Vandame)

Relevant training

Course: Participatory and multi-stakeholders socio-ecological research tools. Instituto de Ecología, A.C., Xalapa, Veracruz: May 2022

Course: Ecological Niche Modeling. National Institute for Mathematical and Biological Synthesis, Knoxville, Tennessee, United States: December 2018

Course: Bee Course 2016. American Museum of Natural History, Arizona, United States: August-September 2016

Course: IUCN Red-list Assessment of bumble bees from Mesoamerica. El Colegio de la Frontera Sur, San Cristobal de Las Casas, Chiapas, Mexico: April 2015.

Employment and Professional Experience

2024-present Postdoctoral Researcher, University of California Riverside (mentor: S. Hollis Woodard)

Conservation status of Mesoamerican Bees: Using IUCN methodology to evaluate the conservation status of Mesoamerican Bees. January – December 2019.

Research assistant: Preliminary evaluation of the conservation status of five native bee stingless species (Apidae: Meliponini) of economic and cultural importance in Guatemala using the Red List Criteria of the IUCN 2019.

Curator: In charge of the Native Bee Collection of Guatemala 2016.

Publications (most relevant)

Red List Assessments – Apoidea: Published and peer-reviewed assessments for 107

Mesoamerican Bees: <https://ecdysis.org/checklists/checklist.php?clid=12214>

Martínez-López O, Walker A, Hochkirch A, Hatfield R, Vandame R. 2025. Red List assessments of wild bee species in Mesoamerica and Europe suggest a consistent pattern that could disrupt pollination networks worldwide. *In preparation for Global Change Biology*.

Martínez-López O, Aldasoro Maya EM, Hsu Chen W, Vandame R. 2025. ¡Está es tierra de honon! Mam contemporary knowledge (saberes) of bumble bees in Mexico and Guatemala. *In preparation for Ethnobiology and Conservation*.

Martínez-López O, Arnold N, Sagot P, Mérida-Rivas J, Aldasoro Maya EM, Vandame R. 2024. Diversity and Conservation of Mesoamerican Bees: Relative Effects of Three Major Threats Within the Potential Distribution of Bee Species. In: *Insect Decline and Conservation in the Neotropics*. Springer International Publishing. p. 235–250.

Vergara C, Perera F, Fierros H, Jimeno H, Sagot P, **Martínez-López O**, Ayala R, Vandame R. 2023. Atlas de los *Bombus* de México. Ediciones Comunicación Científica S.A. de C.V. Ciudad de México, México.

Martínez-López O, Koch JB, Martínez-Morales MA, Navarrete-Gutiérrez D, Enríquez E, Vandame R. 2021. Reduction in the potential distribution of bumble bees (Apidae: *Bombus*) in Mesoamerica under different climate change scenarios: Conservation implications. *Global Change Biology*. 27(9):1772–1787. doi:10.1111/gcb.15559.

Escobedo-Kenefic N, Landaverde-González P, Theodorou P, Cardona E, Dardón M, **Martínez-López O**, Domínguez C. 2020. Disentangling the effects of local resources, landscape heterogeneity and climatic seasonality on bee diversity and plant-pollinator networks in tropical highlands. *Oecologia* 194: 333-344. <https://doi.org/10.1007/s00442-020-04715-8>

Vandame R, Vergara C, González I, Ayala R, Enríquez E, Aguilar I, Quezada J, **Martínez-López O**. 2019. Recommendations for the management and conservation of native bumblebees from Mesoamerica. CONABIO.

Escobedo N, Dardón M, Esmeralda J, **Martínez-López O**, Cardona E. 2014. Effect of landscape ecology in the communities of bees (Apoidea) in three localities from Sacatepéquez and Chimaltenango. *Ciencia, Tecnología y Salud*.

Synergistic activities

1. Co-organizer of the Bee Conservation Workshop at the congress of Entomological Society of America (2024): Talks regarding Mesoamerican bee assessments using the IUCN Criteria and co-development of a framework to assess US bees and building a road map for Bee Conservation in the US.
2. Red List Authority for the World Bee Specialist Group of the International Union for Conservation of Nature (2021 – present): Co-review bee species assessments worldwide submitted to the IUCN and co-organize IUCN Red List workshops worldwide using the Red List Criteria
3. Regional Coordinator for Mesoamerica as part of the Bumble Bee Specialist Group of the International Union for Conservation of Nature (2021 – present): Coordination of regional activities across the region

4. Outreach contributions across Mesoamerica: Mesoamerican Bee Conservation and Threats talks across the region (Mexico, Guatemala, Costa Rica) and workshops created for the use of ecological niche modeling with bee emphasis in the XIII Native Bee Mesoamerican Congress.