Javier Gerardo Miguelena Bada

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PERSONAL

Born: July 21, 1985 – Mexico City, Mexico.

EDUCATION

2008-2015	Ph.D. in Entomology with a minor in Ecology and Evolutionary Biology. Graduate Interdisciplinary Program in Entomology and Insect Science (Advisor: Dr. Paul B. Baker). University of Arizona, Tucson, AZ. GPA: 3.968 Dissertation: Ants in an Arid Urban Landscape: Biodiversity, Community Composition, and Factors Behind the Success of an Exotic Ant Species. Revalidated as Doctorate in Biological Sciences by SEP Mexico. Cédula: 11471834
2003-2008	Bachelor's Degree in Biology (cum laude). Universidad de las Americas- Puebla (UDLAP), Mexico (Advisors: Dr. Carlos H. Vergara and Dr. Jorge E. Valenzuela). GPA: 3.84. Thesis: Comparative Study of the Ant Communities in the State Reserve "Flor del Bosque" in Puebla, México.

EXPERTISE/SKILLS

Languages: Spanish (native speaker) and English (full written and spoken proficiency).

Educational technology: Experience with online instruction, both in synchronous and asynchronous modalities. Previous experience using Canvas and Blackboard course management applications and videoconferencing applications such as Skype, Zoom, and CISCO video conferencing. Also, proficient in creating class videos and sharing them through YouTube and other platforms.

Data analysis: advanced competence in fundamental and ecological statistics. High proficiency using JMP and PAST statistical software, as well as basic experience using ArcGIS, QGIS, and R.

TEACHING EXPERIENCE

August 2019-Present	Biological Science faculty at Elisia Education Hub. Courses taught: Biology of Plants, Evolution, General Entomology, Invertebrate Zoology, Wildlife Management, Organismal Biology, and associated laboratories.
Fall 2017	Adjunct Professor with Project Dragonfly at Miami University in Ohio. Courses taught: *Conservation Science and Community*, and *Habitat, Adaptations, and Evolution*.
Fall 2015-Summer 2017	Visiting Assistant Professor with Project Dragonfly's Biology Master's program at Miami University in Ohio. Courses taught: *Conservation Science and Community*, *Biology in the Age of Technology*, *Issues in Biodiversity*, *Leadership in Science and Inquiry*, *Amazon: Avian and Tropical Ecology,* and *Costa Rica: Neotropical Ecology*.
Spring 2012, Spring 2013	Teaching Assistant for the introductory organismal biology laboratory (EEB-182L) at the University of Arizona.
Fall 2012	Teaching assistant for the Insect Discovery Program, participating in outreach activities during the Arizona Insect Festival, and performing classroom visits in elementary schools in Tucson, AZ.

Courses

2025	Artificial Intelligence for Professors by the Microsoft Network for Cybersecurity
2024	Certificate in the Effective Teaching Practice Framework by the Association of College and University Educators and the American Council on Education.

POSTERS AND TALKS

2025	(Talk) Córdova-López, K.*, & **Miguelena, J.** "What do ants do for the semi-desert?" In the X Lectures of the Semidesiert by the Cadereyta Regional Botanical Garden, Cadereyta, QRO, México.
2024	(Poster) **Miguelena J.G.***, Trejo-Pimentel B.A., Quintana-Calderón L.E., Zamora-Prieto X., and Santillan-Delgadillo I. "Ant (Hymenoptera: Formicidae) diversity loss in a recently urbanized area in Querétaro, Mexico" In the Meeting of the Entomological Society of America. Phoenix, AZ.
2024	(Talk) **Miguelena J.G.***, Pérez-Toledo, G., Cuautle, M., Castillo-Guevara, C. "Species, phylogenetic, and functional diversity of ant (Hymenoptera: Formicidae) communities in a simplified habitat over a ten-year period" In the Meeting of the Entomological Society of America. Phoenix, AZ.
2024	(Talk) Santillan-Delgadillo I.*, Trejo-Pimentel B.A., Quintana-Calderón L.E., Zamora-Prieto X., and **Miguelena J.G.** "Ant (Hymenoptera: Formicidae) diversity loss in a recently urbanized area in Queretaro, Mexico." In the Southwestern Branch Meeting of the Entomological Society of America. Albuquerque, NM.
2024	(Poster) **Miguelena J.G.***, Pérez-Toledo, G., Cuautle, M., Castillo-Guevara, C. "Species, Phylogenetic and Functional Diversity of the ant communities in a simplified habitat" In the LIX National Meeting of the Mexican Academy of Entomology. San Luis Potosí, SLP, Mexico.
2024	(Poster) Quintana-Calderón L.E.* and **Miguelena J.G.** "Ant (Hymenoptera: Formicidae) diversity loss in a recently urbanized area in Queretaro, Mexico." In the Southwestern Branch Meeting of the Entomological Society of America. Albuquerque, NM.
2023	(Talk) **Miguelena J.G.**, Trejo-Pimentel B.A.*, Quintana-Calderón L.E., and Zamora-Prieto X. Effects of urban construction and early succession on ant assemblages in an arid landscape in Querétaro, Mexico. In: VI Formicidae of Mexico Meeting. UNAM Juriquilla, QRO,
2022	(Poster) Castañeda-Ruan D.*, and **Miguelena J.G.** "Creation of a preliminary plant species catalog of the Arkansas State University campus in Querétaro, México with the aid of the iNaturalist platform." XII Congreso Mexicano de Botánica. Puebla, PUE.

***** Shows the presenter of the talk or poster.

EXTENSION/OUTREACH ACTIVITIES

2024-present	Technical Advisor of the Axolotarium ASUCQ, a conservation and environmental education student-led initiative dedicated to maintaining a live population of the endangered Mexican Axolotl (*Ambystoma mexicanum*).

2023-2025	Organizer and game master of the STEM Bowl, a STEM trivia contest as part of the STEM Week at Elisia Education Hub.
2025	STEM Week Organizing Committee member and master of ceremonies
2024	STEM Week Organizing Committee Chair
2023	STEM Week Organizing Committee Vice-Chair. STEM Week is a yearly week-long event featuring invited speakers, workshops, roundtables, and other events centered around the STEM disciplines.
2020	Participation in the science podcast "Ciencia al Chile" with the topic "Ants and other Social insects"

PUBLICATIONS

2025	Pérez-Toledo, G., Cuautle, M., Castillo-Guevara, C., & **Miguelena, J. G**. Unraveling spatio-temporal patterns of taxonomic, functional, and phylogenetic β-diversity of temperate ant communities after habitat simplification. *Biodiversity and Conservation*, 1-24, doi.org/10.1007/s10531-025-03116-8
2024	Pérez-Toledo, G., Cuautle, M., Castillo-Guevara, C., & **Miguelena, J. G**. Habitat simplification affects functional group structure along with taxonomic and phylogenetic diversity of temperate-zone ant assemblages over a ten-year period. *Oikos*, *2024*(6), e10472.
2021	**Miguelena-Bada, J.G.** Monitoreo Comunitario de la Biodiversidad: Planeación y Técnicas. En O.E. Ramírez-Bravo (Ed.), *Capacitación de Monitores Comunitarios en Áreas Naturales Protegidas* (pp. 29-59). Benemérita Universidad Autónoma de Puebla. ISBN: 978-607-525-738-9
2020	Baker, P. B., and **Miguelena, J. G**. Field Distance Effects of Fipronil and Chlorfenapyr as Soil Termiticides Against the Desert Subterranean Termite, *Heterotermes aureus* (Isoptera: Rhinotermitidae). *Sociobiology, 67*(1), 94-105. https://doi.org/10.13102/sociobiology.v67i1.4459
2019	**Miguelena, J. G.**, and Baker, P. B. Effects of Urbanization on the Diversity, Abundance, and Composition of Ant Assemblages in an Arid City. *Environmental Entomology, 48*(4), 836–846. https://doi.org/10.1093/ee/nvz069
2014	**Miguelena, J. G.**, and Baker. P.B. Evaluation of Liquid and Bait Insecticides against the Dark Rover Ant (*Brachymyrmex patagonicus*). *Insects, 5*, 832-848.
2014	Baker, P. B., and **Miguelena J. G.** Field and Laboratory Evaluations of Chlorantraniliprole as a Termiticide in Southern Arizona. *Journal of Economic Entomology,* 107, 1890-1899.
2012	**Miguelena J.G.** and Baker, P. B. Foraging populations of the tube-building termite *Gnathamitermes perplexus* (Banks) (Isoptera: Termitidae) associated with termiticide experiments in southern Arizona. *Sociobiology, 59*(3), 641-653.
2012	**Miguelena J.G.** and Baker, P. B. Ruining your picnic: prevalence of pest ants in urban parks in Tucson, Arizona. *Proceedings of the National Conference on Urban Entomology,* 47-51.