

Alejandra Martínez Blancas

Department of Plant Biology
Michigan State University
alemb.eco@gmail.com

Academic Appointments

Research Associate (2023), Department of Plant Biology, Michigan State University.

Education

Ph.D. (2023), Biological Science, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico.
Dissertation: Niche differentiation over a hydric stress gradient in a semiarid grassland.

Advisor: Dr. Carlos Martorell

Master of Science (2014), Biological Science, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico.

Thesis: Is their Phylogenetic Signal in plant's response to anthropogenic disturbance? Implications for conservation.

Advisor: Dr. Carlos Martorell

Bachelor of Science (2011), Biology, Universidad Nacional Autónoma de México (UNAM), Mexico City, Mexico.

Thesis: Cross-distance effect on fruit and plantlet production in *Opuntia microdasys* (Cactaceae).

Advisor: Dr. Israel Carrillo Ángeles

Publications

Martínez-Blancas A., Belastegui I.X., Martorell C. (2022) Species alliances and hidden niche dimensions drive species clustering along a hydric gradient in a semiarid grassland. *Ecology Letters*, 25: 2651-2662

McGuire R.M., Hayashi K.T., Yan X., Caritá Vaz M., Cinoglu D., Cowen M. C., **Martínez-Blancas A.**, Sullivan L. L., Vazquez-Morales S., Kandlikar G. S. (2022). EcoEvoApps: Interactive Apps for Theoretical Models in Ecology and Evolutionary Biology. *Ecology and Evolution*, 12: e9556

Martorell C., García-Meza D., **Martínez-Blancas A.**, Zepeda V. (2022, *Book Chapter*) Grasslands of the chocholteca region: An undervalued plant diversity world record. In: A study of the biodiversity of the state of Oaxaca. Ed. Alejandro Dávila. CONABIO. Oaxaca, México.

Domínguez-Castanedo O., Valdez-Carbajal S., **Martínez-Blancas A.**, Muñoz Campos T.M. (2022). Environmental cues and maternal age influence embryonic diapause in a North American annual killifish. *Developmental Dynamics*, 251: 1848-1861

Martorell C., **Martínez-Blancas A.**, Garcías-Meza D. (2021) Plant soil feedbacks depend on drought stress, functional group and evolutionary relatedness in a semiarid grassland. *Ecology*. 102:e03499

Martínez-Blancas A. and Martorell, C. (2020) Changes in niche differentiation and environmental filtering over a hydric stress gradient. *Journal of Plant Ecology*, 13:185–194.

Martínez-Blancas A., Paz H., Salazar G.A., Martorell C. (2018) Related plant species respond similarly to chronic anthropogenic disturbance: implications for conservation decision-making. *Journal of Applied Ecology*, 55: 1860-1870.

Martorell C., Zepeda V., **Martínez-Blancas A.**, Garcías-Meza D., Pedraza F. (2017) A diversity world record in a grassland at Oaxaca, México. *Botanical Sciences*, 95: 1-7.

Non peer-reviewed

Martínez-Blancas A., Bender A., Zepeda V., McGuire R., Tabares O., Amarasekare P., Mastretta-Yanes A., Miriti M., Santos A.M., Vaz M.C. (2022) Surviving Racism and Sexism in Academia: Sharing

Experiences, Insights, and Perspectives. *The Bulletin of the Ecological Society of America*, e2033

Mello F.N.A., Bender A., **Martínez-Blancas A.**, Vaz M.C., Provete D.B. (2021) Human Dimensions: The Latin America and the Caribbean Chapter of ESA - Embracing our diversity during adverse times. *The Bulletin of the Ecological Society of America*, e01883.

Fellowships and Travel Funding

Ecological Society of America, Diversity in Leadership Travel Funding	2022
Ecological Society of America, Plant Population Ecology Section Student Travel Award	2021
Ecological Society of America, Vegetation Section Student Travel Award	2021
Ecological Society of America, Plant Population Ecology Section Student Travel Award	2020
Ecological Society of America Student Travel Award	2019
National Commission of Science and Technology (Conacyt) Fellowship	2015-2019
Graduate Studies Support Program (PAEP UNAM) Conference Financial Support	2013
National Commission of Science and Technology (Conacyt) Fellowship	2012-2014

Honors and Awards

Ecological Society of America, Latin American Chapter Award for Best Poster Presentation	2020
--	------

Presentations

Invited

Martínez-Blancas A. (2022) Neutrality, competition, or facilitation: Why do species coexist in clumps along a hydric gradient in a semiarid grassland? First symposium of the Club Eco-Evo Latinoamérica.

Martínez-Blancas A. (2015) Phylogenetic signal in the response of plants to chronic anthropogenic disturbance: implications for conservation of tropical dry forests and grasslands. *Symposium: Chronic Anthropogenic Disturbances in Tropical Rainforests*. Annual Meeting of the Association of Tropical Biology and Conservation.

Contributed

Martorell C., Caballero-Rodríguez D., García-Meza D. **Martínez-Blancas A.** (2022) The temperate intertropical grasslands, the undervalued plant diversity world record of Mexico. Oral Presentation: VIII Mexican Ecology Conference.

Martínez-Blancas A., Martorell C. (2021) Clusters of ecologically similar species emerge along a water availability gradient in a semiarid grassland as a result of species interactions. Oral Presentation: Ecological Society of America Meeting.

Martínez-Blancas A., Martorell C. (2020) Changes in competition and facilitation along hydric stress and phylogenetic distance gradients in a diverse semiarid grassland. Poster Presentation: Ecological Society of America Meeting.

Martínez-Blancas A., Martorell C. (2019) The role of stabilizing niche differences and environmental constraints on species coexistence over a stress gradient. Oral Presentation: Ecological Society of America Meeting.

Martínez-Blancas A., Martorell C. (2013) Do related species respond similarly to anthropogenic disturbance? Conservation Implications. Oral Presentation: XIX Mexican Botanical Conference.

Martínez-Blancas A., Carrillo-Ángeles I., Mandujano M.C. (2011) *Opuntia microdasys*: Effects on production of sexual and clonal descendants. Poster Presentation: III Mexican Ecology Conference.

Symposium and Webinar organization

2022 **Co-organizer:** Symposium: "The state of ecosystems across the Global South: Perspectives on ecology, conservation and environmental justice", Ecological Society of America Annual Meeting

2022 **Co-organizer:** Symposium "La riqueza ignorada de los pastizales de México" VIII Mexican

- Ecology Conference.
- 2021 **Organizer:** Symposium: “Navigating a Gender-Biased World: Lessons from the Experiences of Women in Ecology Across Cultures and Generations”, Ecological Society of America Annual Meeting
- 2021 **Co-organizer:** Webinar “The Future of Biodiversity in Latin America” Co-organized by The Latin American Chapter of the ESA and the Association for Tropical Biology and Conservation.

Workshops

Comparative Macroevolution Methods in R Workshop. 2018
 Jointly held by University of Massachusetts and UNAM, June 26 – 29. (Competitive selection process)

Teaching Experience

- 2023, 2015 **Biostatistics course:** Facultad de Ciencias, UNAM (Teaching Assistant)
 Undergraduate course. Topics covered: probability, experimental design, hypothesis testing and regression. Responsibilities: graded tests and assignments, held office hours.
- 2021 **Guest Lecture:** “Mathematics in Biology” for Preparatoria Tec Milenio, Campus Querétaro.
- 2016 **Bachelor Thesis Reviewer and Panelist:** Brunei Hernández Sánchez, UNAM (Mexico).

Professional Service

Journal Peer Review: Scientific Reports (2022), Journal of Arid Environments (2022), Journal of Plant Ecology (2021), Environmental Research Letters (2020).

Conference Abstract Peer Review: Ecological Society of America Annual Meeting (2022).

- 2021-2023 **Communications Team:** International Year of Rangelands and Pastoralists (IYRP).
- 2021-2022 **Chair:** Latin America and the Caribbean Chapter, Ecological Society of America.
- 2020-2021 **Media Officer:** Latin America and the Caribbean Chapter, Ecological Society of America.

Outreach

Short video: Helped to develop a video on the importance of grassland conservation in the Chocholteca region of the Mixteca Alta, Oaxaca. 2020

Grassland Conservation Workshop for 3-6th graders: Developed materials, planned activities, and lead groups for an annual one-day outreach event on the value of local grasslands in Mexico. 2014-2019

Assistant on outreach climate change documentary: Worked with a production team scouting locations and explaining our study site for a short film. 2016