

LAUREL TREVIÑO MURPHY
The University of Texas at Austin
205 W 24th St., room 404, Austin, TX 78712
<https://w3.biosci.utexas.edu/jha/people>
ltrevino@austin.utexas.edu – (512) 232-3521

EDUCATION

University of California at Berkeley - Master's in Wildland Resource Sciences, 1993

Resource sociology, forest-rangeland ecology, agroforestry (nitrogen-fixing trees), germplasm property rights

University of California at Berkeley - Master's in Botany, 1988

Ethnobotany, plant domestication, agroecology

National University of Mexico - Bachelor's in Biology, 1986

Algae microhabitats in the Pacific watersheds and coast of Mexico

EXPERIENCE

Environmental Education

Outreach Program Coordinator (2014-present)

Conservation Biology, Population Genetics, Agroecology Lab, Shalene Jha, PhD., PI
Integrative Biology Department, The University of Texas at Austin

Coordinate an outreach program that includes organizing public educational events and developing educational content based on scientific research on native bees and plants, and focused on identification, ecology, and habitat conservation.

- Organized public engagement event for the College of Natural Sciences Family Day, UT Austin (2015)
- Host educational station/activity at the Lady Bird Johnson Wildflower Center's 'Nature Nights' (2016-)
- Collaborated with Texas Parks and Wildlife Department biologists to develop guidelines on native pollinator monitoring and habitat management for land managers with wildlife valuations (Pollinator Monitoring Program 2017)
- Presented pollinator survey protocols at TPWD native pollinator habitat conservation workshop
- Co-designed a simplified identification guide for Central Texas native bees (2017)
- Worked with a UT Austin committee to achieve Xerces Bee Campus certification.
- Organized educational events for Jean Andrews seminars, Lady Bird Johnson Wildflower Center (2016-2020)
- Co-developed the "Native Bees of Texas" course on bee identification, ecology, and conservation (2018)
- Taught the "Native Bees of Texas" course at the Lady Bird Johnson Wildflower Center (2018, '19, '21)
- Presented evaluation results for the "Native Bees of Texas" courses in conference talks, posters (2021, 2022)

Environmental Education Assistant/Program Coordinator (2009-2011)

Lady Bird Johnson Wildflower Center, The University of Texas at Austin

- Organized public events, such as, Nature Nights, Goblins in the Gardens, Luminations, PollinatorLive
- Collaborated with Austin Nature Days, Texas Nature Challenge, Groundwater to Gulf Institute, Women in Science
- Scheduled and hosted youth group visits for Earth Camp, Scouts, and schools
- Led docent tours and walks (Tree Talk Winter Walk) to increase public awareness of native flora
- Developed and maintained educational content and material, translated choice texts to Spanish
- Developed and implemented activities for Girl Scout Wildflower Badge, Youth Camp, Explore UT, and El Buen Samaritano's "Día de los libros"

Docent and Spanish interpreter volunteer at the Lady Bird Johnson Wildflower Center (2004-2009)

Educated the public on the Wildflower Center's history, mission, and work with native plants and landscapes

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Science Education

Science Teacher 9th-12th / Curriculum Development - Austin Waldorf School, Texas (2001-2002)

- Developed curriculum for accreditation by the Association of Waldorf Schools of North America, adapting National Science Teachers Association standards to Rudolf Steiner's anthroposophical education philosophy.
- Taught Environmental biology/geology, botany, zoology, ecology, evolution, cell biology, human anatomy, physiology, and embryology, botanical illustration.

Adjunct Instructor, Biology (2000)

Austin Community College, Texas

- Taught *Structure and Function of Organisms* course and labs to undergraduate biology majors

Adjunct Instructor - Biology and Human Biology (1994-1996)

Sacred Heart University, Fairfield, Connecticut

- Taught courses to undergraduate biology majors and labs for honors students

Biology and Life Sciences Teacher (1996)

Wooster School, Danbury, Connecticut

- Taught 7-10th grade life science and biology classes and labs

Graduate Student Instructor (1986-1992)

The University of California at Berkeley

- Taught *Introductory Biology* labs to biology majors
- Led discussion groups with environmental studies majors in *Ecology* and *Environmental Science* courses

Research Experience

Research Staff (2013-2018)

Integrative Biology Department, The University of Texas at Austin; PI: Dr. Shalene Jha

- Collaborated with Jha lab members on landscape genetics and pollinator efficiency research, performing lab work: leaf tissue DNA extraction, spectrophotometry, seed count and photography, and insect processing
- Researched literature for a meta-analysis on effects of shade on coffee in collaboration with Dr. Shalene Jha

Research Staff (2011-2013)

Biodiversity and Biocultural Conservation Lab, Integrative Biology Department, University of Texas at Austin
Sahotra Sarkar, Ph.D., PI (UT Austin), Victor Sanchez-Cordero, Ph.D. and Leia Sheinbaum, Ph.D. (Instituto de Biología-UNAM, Mexico (National University of Mexico))

- Analyzed 90 *Opuntia* and *Nopalea* species data points to produce species distribution models for Mexico
- Produced 57 species distribution models with Maxent-GIS software, using 24 environmental variables from WorldClim and a soils raster I made with resolution 30 seconds / $\sim 1 \text{ km}^2$ / $.0083^\circ \text{ DD}$.
- Drafted a text on the plant species and soils analysis.

Research Staff (2000-2001)

Plant Resource Center, The University of Texas at Austin

Entered data of Mexican plant collections into the *BIOTICA* database, a system for managing curatorial data, nomenclature, geographic data, ecological data, and bibliographic references of the National Commission for the Knowledge and Use of Biodiversity of Mexico (Conabio).

Research volunteer (1998-1999)

Instituto de Botánica Darwinion, Buenos Aires, Argentina

Researched Guaraní plant nomenclature and entered plant names and data into the *Flora of Misiones* database

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Herbarium Assistant (1987-1988)

The University of California and Jepson Herbaria, Berkeley, CA

- Processed loans
- Aided faculty and researchers of the Botany Department on specific studies

Research Librarian (1991-1992)

Conservation Resource Center, UC Berkeley

- Managed environmental literature collection, subscriptions, and acquisitions
- Processed book loans
- Assisted students with computer searches of environmental literature

Field Research Assistant (Summer 1987)

Mayan ethno-medical study in Chiapas, Mexico; ILAS, The University of California at Berkeley
PI's Brent Berlin, Ph.D. Anthropology Department and Tom Duncan, Ph.D., Botany Department

- I did field work on highland Mayan medicinal plants
- Assembled a plant-use exhibit for the Mayan workshop participants and local officials
- Wrote a report to document the summer workshop procedures and results

FELLOWSHIPS

- Graduate Opportunity Fellowship, The University of California at Berkeley, 1986
- Tinker Foundation Travel Grant, Institute of Latin American Studies Center, UC Berkeley, 1987

PROFESSIONAL DEVELOPMENT

Certificates/Diplomas/Training

- Certificate in research in social/behavioral studies - Collaborative Institutional Training Initiative (5-5-2021)
- Diplomas Native Plant Gardening & Sustainable Landscapes, Go Native U, Wildflower Center (2009)
- Workshops on flora, hydrology, and land stewardship Bamberger Ranch Preserve, Blanco, TX (2001, 2003)
- Certificate in Solar Energy International "Photovoltaic Design & Installation" (2004)
- Workshop on Design Sustainable Landscape/Buildings, Austin Green Garden/Building Programs (2002, 2003)
- Certificate Medical/Community Interpreter (Spanish) Texas Department of Health, Austin (1999)
- Diploma Simultaneous Interpreter, Lucille Barnes Studio, Buenos Aires, Argentina (1998-1999)

Contributed Talks at Meetings and Conferences

- Treviño-Murphy, Laurel, Shelly Engelman, John L. Neff, Shalene Jha. Native Bees of Texas: Evaluating a public engagement initiative in place-based and hybrid learning environments, Ecological Society of America (ESA-CSEE) 2022 Conference, Montreal, Canada (August 2022)
- Treviño-Murphy, Laurel, Shelly Engelman, John L. Neff, Shalene Jha. The University of Texas College of Natural Sciences Annual Teaching Discovery Days, poster presentation: *Evaluating a public engagement initiative: the Native Bees of Texas course* (Nov. 2021)
- Treviño-Murphy, Laurel, Shelly Engelman, John L. Neff, Shalene Jha. "Native Bees of Texas: Evaluating a public engagement initiative in Central Texas" Entomological Society of America, Virtual Annual Meeting. (Nov. 2020)

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- Treviño-Murphy, Laurel, and Shalene Jha. Pollinator Surveys for Beginners. Texas Parks and Wildlife Department Workshop on Pollinator Management on Private Lands, Hunt, Texas (March 2017)
- “Forestry Forum” department seminar organizer, Forestry Resource Management, UC Berkeley (Fall 1991)
- Ethnobiology in Conservation, Forest Resource Management Department, University of California at Berkeley Conservation Seminar (Fall 1990)
- Germplasm rights: Sustainable Agriculture Workshop, Praxis Aprovecho Inst. Michoacan, MX (Summer 1990)
- Treviño-Murphy, Laurel, Pacific Ocean breakwater algae microhabitats, American Phycological Society Meeting, Gainesville, FL (Summer 1985)
- Treviño-Murphy, Laurel, *Algas marinas de las escolleras de Lázaro Cárdenas, Michoacán*: 9th Mexican Botanical Society Congress, Mexico City (Fall 1984)

Publications - Journal Papers

- Treviño Murphy, L.; Engelman, S.; Neff, J.L.; Jha, S. The Native Bees of Texas: Evaluating the Benefits of a Public Engagement Course. *Insects* 2021, 12, 702. <https://doi.org/10.3390/insects12080702>
- Castilla A.R., Pope N., O’Connell M., Rodríguez M.F., Treviño L., Santos A. & S. Jha (2017) Adding landscape genetic & individual traits to the ecosystem function paradigm reveals the importance of species functional breadth. *Proceedings of the National Academy of Sciences*.
- Treviño, M. L. 1993. “Las semillas de la discordia”. *Etnoecológica I* (2): 53-64. México (Seeds of discord) [pdf](#)

Book Chapters

- Treviño, M. L. 1993. Derechos de Propiedad de los Recursos Genéticos Vegetales: consideraciones acerca de los impactos que tienen los acuerdos internacionales sobre agricultores en países no industrializados. En: Trujillo, A.J. (ed.) *Agroecología*. Universidad Autónoma Metropolitana – Limusa, México. (Plant Germplasm Property Rights: impacts of international treaties on farmers of non-industrialized countries regarding germplasm property rights.)
- García Barrios R, Álvarez-Buylla E, Cohen E, Miramontes O, Treviño L; *El movimiento estudiantil en la formación de la REPSA: memorias de los radicales*. En Zambrano, L. y Z. Cano-Santana (Compiladores) 2016. *Historias que brotan de las rocas. Experiencias sobre el Pedregal de San Ángel y su Reserva Ecológica*. UNAM-CONABIO. Ciudad de México. 325 pp. (The student movement and the establishment of the university ecological reserve REPSA: memories of the radicals.)

Languages and Skills - Fluent in English and Spanish, basic knowledge of German and French

Translations

- Lady Bird Johnson Wildflower Center, Jha Lab, UT Austin (2010-11)
- Medical Translator, Dept. Assistive & Rehabilitation Services-Disability Determination Services (2005-2010)
- Medical Translator, American Cancer Society, Austin, TX (2000)
- Austin Nature & Science Center, Bat Conservation International, Biomimicry Institute Magazine (2000)

Conference Interpreter

- “Biotic Diversity Indexes of the Conchos River, Chihuahua” Desert Program and Border Environment Cooperation Commission (BECC-WWF, 2009)

Botanical Art & Illustration coursework at the New York Botanical Garden, 1994-97