LAUREL TREVIÑO MURPHY
Austin, Texas
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EDUCATION

M.S. Wildland Resource Sciences, The University of California at Berkeley, 1993
Forest-rangeland Ecology and Natural Resource Sociology, focus topic: germplasm property rights and Indigenous agroforestry systems with multipurpose, Nitrogen-fixing trees (*Pithecelobium dulce)*
M.A. Botany, The University of California at Berkeley, 1988
Focus topics: Ethnobotany, plant domestication, and Indigenous agroecology
Graduate Opportunity Fellowship, The University of California at Berkeley
Tinker Foundation Travel Grant, Latin American Studies Center, UC Berkeley
B.S. Biology, The National University of Mexico, Mexico City, 1986
Thesis: Marine Algae Microhabitats of the Breakwaters in Lázaro Cárdenas, Michoacán, Mexico
Research Assistant: algae microhabitats of the Pánuco and Balsas river watersheds and Pacific Ocean project

EXPERIENCE

Environmental Education Experience

Outreach Program Coordinator (2014-present)
Shalene Jha, PhD (PI) Conservation Biology, Population Genetics, Agroecology Lab
Integrative Biology Department, The University of Texas at Austin

- Developed online-printed educational material to expand the public's knowledge of native bees and plants
- Collaborated with TPWD Pollinator Monitoring Program to develop guidelines and educational material on pollinator habitat management for land managers seeking agriculture-wildlife valuations.
- Presented on pollinator survey protocols at the 2017 TPWD pollinator habitat conservation workshop
- Designed a simplified identification guide for Central Texas native bees
- Coordinated and hosted public engagement events that contribute to natural science literacy on native bees
- Staff advisor and member of the UT Austin Bee Campus USA (Xerces Society) committee, 2018-2020
- Public engagement co-organizer/participant for the Jean Andrews, Plant Biology Program seminar series at the Lady Bird Johnson Wildflower Center, University of Texas at Austin, 2012-2018
- Public engagement organizer/participant in UT- CNS Family Day science outreach event, 2015
- Public engagement coordinator for Jha Lab's participation at the Lady Bird Johnson Wildflower Center, Nature Nights 2015-2019 to expand the public's knowledge of native bee biology and conservation
- Co-developed, implemented, taught and evaluated the "Native Bees of Texas" course on native bee biology, identification, and conservation at the Lady Bird Johnson Wildflower Center, 2018, 2019, 2021
- Published, presented posters, and gave talks on the evaluation results of the "Native Bees of Texas" course

Environmental Education Assistant/Program Coordinator (2009-2011)
Lady Bird Johnson Wildflower Center, The University of Texas at Austin

- Created and implemented activity-based Girl Scout *Wildflower Badges*
- Led docent tours in plant sales and *Tree Talk Winter Walk*, increasing public awareness of native flora
- Organized/oversaw large public events: *Nature Nights, Goblins in the Gardens, Luminations, PollinatorLive*
- Coordinated and worked with volunteers to engage the public in educational activities at various events
- Hosted: *Austin Nature Days, Texas Nature Challenge, Groundwater to Gulf Institute, Women in Science*
- Planned and did outreach events: Youth camps, *Explore UT, Día de los libros, El Buen Samaritano*
- Scheduled and gave educational support for large youth group visits: *Earth Camp,* Scouts, and schools
- Created and maintained online and physical educational material, including Spanish translations
- Educated the public on native plant landscapes as a docent/interpreter (English/Spanish), 2004-2009

Teaching Experience

Native Bees of Texas Course October 2018, 2019, 2021
The Lady Bird Johnson Wildflower Center https://www.wildflower.org/event/native-bees-tx/2021-10-16

- A three-part short course on biology, ecology, taxonomy and conservation of native bees in Central Texas including lectures, activities, labs, and outdoor observation of bees in native landscapes.

Natural Sciences Teacher/Curriculum Developer 9th-12th high school (2001-2002)
Austin Waldorf School, Austin, Texas

- Adapted National Science Teachers Association standards to Steiner's anthroposophical education for Association of Waldorf Schools of North America accreditation. Taught: environmental biology, geology, anatomy, physiology, embryology, cell biology, botany, zoology, ecology, evolution, math and 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 – Outreach Program Coordinator (2013-2018)
Integrative Biology Department, The University of Texas at Austin; PI: Dr. Shalene Jha

- Research native bee biology, taxonomy, ecology, and conservation to develop general educational material
- Collaborate with lab members on landscape genetics and pollinator efficiency research, performing lab work: leaf tissue DNA extraction, spectrophotometry, seed count/photography, insect processing; editing
- Research literature for a meta-analysis study on the effects of shade on coffee agroforestry systems

Research Staff (2011-2013)
Biodiversity and Biocultural Conservation Lab, Integrative Biology Department, University of Texas at Austin
Collaboration with Dr. Sanchez-Cordero and Dr. Sheinbaum (Institute of Biology, UNAM, Mexico)

- Analyzed 90 *Opuntia* species; produced 57 species distribution models in Mexico with Maxent-GIS software, using 24 environmental variables from WorldClim; made soils raster (resolution 30 seconds) / (~1 km^2) / (.0083˚ DD); drafted portion of paper on plant species-soils analysis

Field Research Assistant (Summer 1987)
Mayan ethno-medical study Chiapas, Mexico; ILAS, The University of California at Berkeley
PI: Dr. Brent Berlin, Anthropology Department and Dr. Tom Duncan, Botany Department

- Fieldwork on highland Mayan medicinal plants; wrote workshop report; made a plant-use exhibit for Mayan workshop participants and local officials (in Spanish)

Herbaria, Library, Database Experience
Research Staff (2000-2001)
Plant Resource Center, The University of Texas at Austin
- Data entry in English and Spanish on plants collected in Mexico since 1800 into *BIOTICA* database

Volunteer Research (1998-1999)
Instituto de Botánica Darwinion, Buenos Aires, Argentina
- Researched Guarani ethnobotany, populated database on Guarani plant data into *Flora de Misiones* (Spanish)

Herbarium Assistant (1987-1988)
The University of California and Jepson Herbaria, Berkeley, CA
- Processed loans, aided Botany Department faculty and researchers in specific studies

Research Librarian (1991-1992)
Conservation Resource Center, UC Berkeley
- Managed literature collection, processed loans, assisted students on computers

PROFESSIONAL DEVELOPMENT

Certificates/Diplomas/Training
- Collaborative Institutional Training Initiative (CITI Program) - University of Texas at Austin, Human Research curriculum satisfied requirements for investigators involved in Social/Behavioral research with human subjects, May 5, 2021
- Native Plant Gardening & Sustainable Landscapes, Go Native U - LBJ Wildflower Center (2009)
- Designing Sustainable Landscapes & Buildings, Austin Green Garden & Building Programs (2002, '03)
- Flora, hydrology, land stewardship, SELAH Bamberger Ranch Preserve, Blanco, TX (2001, '03)
- Medical/Community Interpreter (Spanish) Texas Department of Health, Austin (2000)
- Simultaneous Interpreter (Spanish-English), Lucille Barnes Studio, Buenos Aires, Argentina (1999)

Presentations
- The University of Texas College of Natural Sciences Annual Teaching Discovery Days, November 8, 2021, poster presentation: *Evaluating a public engagement initiative: the Native Bees of Texas course*
  Laurel Treviño-Murphy, Shelly Engelman, Ph.D., John L. Neff, and Shalene Jha, Ph.D.
- "Native Bees of Texas: Evaluating a public engagement initiative in Central Texas" presented at ESA Entomology 2020 Virtual Annual Meeting.
- Pollinator Surveys for Beginners. TPWD Workshop Pollinator Management on Private Lands, Hunt TX 2017
- Ethnobiology in Conservation Forest Resource Management Department (FRM), UC Berkeley, 1990
- "Forestry Forum" department seminar organizer, FRM, UC Berkeley, 1991
- Germplasm property rights: Sustainable Agriculture Workshop, Praxis-Aprovecho Institute, Michoacán 1990
- Pacific Ocean breakwater algae microhabitats, American Phycological Society Meeting, Gainesville, FL 1985
- *Algas marinas de las escolleras de Lázaro Cárdenas, Michoacán*: 9th Mexican Botanical Society Congress, Mexico City, 1984 (algae microhabitats of Pacific Ocean breakwaters in Michoacan)

Publications
- 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.*

- 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. (Chapter: The student movement and the establishment of the university ecological reserve REPSA: memories of the radicals.)

- 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. (Germplasm Property Rights: Consideration of the impacts of international treaties on farmers of non-industrialized countries regarding germplasm property rights.)

- Treviño, M. L. 1993. "Las semillas de la discordia". *Etnoecológica I* (2): 53-64. México (pdf

Certificates, Diplomas
- Go Native U certificates in "Native Plant Gardening" and "Sustainable Landscapes" 2009
- Solar Energy International "Photovoltaic Design & Installation" certificate, 2004
- "Green by Design" workshop, Austin Energy Green Building Program, 2003
- Flora, hydrology, land stewardship workshops, SELAH Bamberger Ranch Preserve, 2001-3
- "Designing Sustainable Landscapes" workshop, Austin's Green Garden Program, 2002
- Medical/Community Interpreter "Bridging the Gap" Texas Dept. Health, Austin, Texas, 2000
- Simultaneous Interpreter Diploma: Lucille Barnes Studio, Buenos Aires, Argentina, 1997-99

Languages:
Fluent in English and Spanish, basic knowledge of German and French
- Translated texts at Lady Bird Johnson Wildflower Center, 2009-11, Jha Lab, UT Austin, 2016
- Conference Interpreter: Biotic Diversity Indexes of the Conchos River, organized by WWF Chihuahua Desert Program and Border Environment Cooperation Commission (BECC), 2009
- Medical Translator, Dept. Assistive & Rehabilitation Services-Disability Determination Services, 2004-2009
- Medical Translator (2000) American Cancer Society, Austin, TX
- Pro-bono translations for Austin Nature & Science Center, Bat Conservation International, ZQ13 Biomimicry Institute Magazine

Community Volunteer Service
Volunteer, Docent and Interpreter (English/Spanish): Lady Bird Johnson Wildflower Center, 2002-2010
Translation of children's educational material: Austin Science & Nature Center, 1999

Skills
- Botanical Art & Illustration diploma coursework: New York Botanical Garden, 1994-97