

Melanie L. Truan Ph.D

Department of Wildlife, Fish & Conservation Biology
University of California, Davis
1 Shields Avenue
Davis, CA 95616
(530) 867-3610
mltruan@ucdavis.edu

EDUCATION

Ph.D. Ecology, Honors. University of California Davis, 2004.

Dissertation: Spatiotemporal longitudinal gradient analysis of shredded riparian ecosystems: response of bird, small mammal, and plant communities to environmental variables at multiple scales. Advisor: Dr. Deborah Elliott-Fisk.

B.A. Biology, Highest Honors. University of California Santa Cruz, Rachel Carson College, 1996.

A.S. Computer Science and Systems, Honors. Grossmont Community College, CA, 1980.

PROFESSIONAL EXPERIENCE

Staff Research Associate, University of California Davis, Museum of Wildlife & Fish Biology, 2004 to present.

Research into controls and drivers of biodiversity, ecosystem restoration, wildlife conservation, food web dynamics and interactions, lecturing, training and mentorship of graduate and undergraduate students. Founded Putah Creek Biomonitoring Program and Putah Creek Nestbox Highway, both long-term wildlife monitoring, conservation and outreach programs. Participate in various conservation and restoration partnerships throughout the region. Supervisor Andrew Engilis, Jr.

Project Ecologist, Kaloko-Honokohau National Historic Park, Hawaii, 2010-2015.

Investigate effective wetlands plant management strategies to protect significant archeological and cultural sites from destructive alien plant species and improve wetland habitat. Develop a site vegetation management plan for Aimakapa Fishpond to protect endangered waterbirds and cultural/archaeological resources and implement pilot program to test Management Plan guidelines and methods. Supervisor Sally Beavers, Chief of Integrated Resources, Kaloko-Honokohau NHP.

Project Ecologist, University of California Davis, Center for Watershed Sciences, 2007-2010.

“Innovative management options to prevent loss of ecosystem services provided by Chinook salmon in California: overcoming the effects of climate change.”

Funded by a USEPA Star Grant, research partners CDFW, Friends of Butte Creek, Yurok Tribe, and PG&E investigated controls on populations and food web dynamics for Butte Creek spring-run Chinook salmon. We documented the identity and activities of salmon consumers using camera traps and followed marine-derived nutrient subsidies using stable isotope analysis. Results from these analyses were used to refine and validate a conceptual salmon-based food web model and to document the relative contribution of marine-derived nutrients supplied by spring-run salmon to the ecosystem. Supervisor Lisa Thompson Ph.D.

Project Ecologist, Yolo County Parks and Recreation, 2004.

Prepared biological assessments and recommendations for habitat enhancement planning for the proposed Capay Open Space Park, Capay CA. Supervisor Linda Fiack.

Project Ecologist, Yolo County Planning and Public Works, 2003-2004.

Performed mitigation surveys for sensitive avian species in compliance with Final MND/MFONSI for Yolo County Juvenile Detention Facility construction project, Woodland CA. Supervisor Terry Vernon.

Graduate Researcher, University of California Davis, Dept. of Wildlife, Fish & Conservation Biology, 1996-2004.

Developed comprehensive, long-term, multitaxonomic, multimetric monitoring and database analysis protocols employing selected plant and wildlife bioindicators to assess baseline and post-restoration ecosystem function along a 23-mile reach of lower Putah Creek. Founded the Putah Creek Biomonitoring Program and Putah Creek Nestbox Highway. Developed a Geographic Information System for the UC Davis Experimental Ecosystem. Advisors: Dr. Deborah L. Elliott-Fisk, Dr. Douglas A. Kelt, Dr. John M. Eadie, Dr. Peter B. Moyle, Department of Wildlife, Fish & Conservation Biology, UC Davis.

Project Ecologist, American Land Conservancy, San Francisco, CA, 2002-2005.

Coordinated and supervised regional site assessments, avian surveys, and cavity nesting bird habitat enhancement for the Bear Creek Watershed Habitat Enhancement and Restoration Project (California Wildlife Conservation Board). Project Manager Craig Thomsen.

Project Ecologist, Cache Creek Conservancy, Woodland, CA, 1997-2006.

Performed baseline and post-project Mitigation Compliance Monitoring, including avian surveys and floristic analysis, for an Arundo Eradication and Habitat Enhancement Project at the Cache Creek Nature Preserve. Performed Biological Assessment and Endangered Species Mitigation Compliance Monitoring in collaboration with USFWS, County of Yolo, Yolo Flood Control District and the Cache Creek Conservancy (Gordon Slough Erosion Control and Habitat Enhancement Project, Cache Creek Nature Preserve). Preserve Manager Jan Lowrey.

Field Technician, Jones & Stokes Associates, Sacramento, CA. 1999.

Conducted CEQA Biological Assessment and Mitigation Compliance Monitoring for a proposed natural gas exploration project in the Montezuma Hills, Potrero Hills, Suisun Marsh, and Denverton Slough Area of Solano County, CA. Documented populations of sensitive plant and wildlife populations, including Suisun Song Sparrow, Soft Bird's-Beak, Carquinez Golden Bush, Delta Tule Pea, Delta Mudwort, Mason's Lilaeopsis, Suisun Marsh Aster, Contra Costa Goldfields, and others. Project Supervisor: Ron Unger, Senior Ecologist.

Interpretive Specialist, California State Parks, Santa Cruz, CA, 1994-1996.

Led interpretive programs, staffed interpretive centers, and trained and supervised volunteer docents at Natural Bridges, Sealiff, and Wilder Ranch State Parks. Supervisor Steve Radosovich.

Undergraduate Intern, University of California Santa Cruz, Dept of Environmental Studies, 1995-6.

Produced research report "Nonpoint source pollution and wetlands: Impacts of urban and agricultural nonpoint source pollution on sediments, groundwater and biota" for Nonpoint Source Pollution in Coastal Harbors & Sloughs of the Monterey Bay Region: Problem Assessment & Best Management Practices. Association of Monterey Bay Area Governments (AMBAG), Marina, CA. Project Manager Frank Barron.

Undergraduate Intern, University of California Santa Cruz, Dept of Environmental Studies, 1995.

Performed wetland and riparian delineation in the Crowley Lake Area and at the Sierra Nevada Aquatic Research Laboratory (SNARL) for La Hontan Water District, Mono Co, CA. Principal Investigator Robert Curry Ph.D, Watershed Institute, CSU Monterey Bay and UC Santa Cruz.

Undergraduate Intern, University of California Santa Cruz, Dept of Biology, 1995.

Performed nest searches and monitoring for the Snowy Plover Protection Project, Santa Cruz County. Supervisor Gary Page, Director of Wetlands Research, Point Reyes Bird Observatory, Stinson Beach, CA.

Laboratory Technician, University of California Santa Cruz, Dept of Biology, 1994.

Maintained insect populations for investigations into direct and indirect responses of parasitoids and plant quality on insect herbivore sex ratios and dietary breadth. Principal Investigator Laurel Fox Ph.D, Department of Ecology & Evolutionary Biology.

TEACHING EXPERIENCE

Lecturer, University of California Davis, 2004 to date.

Provide guest lectures for a variety of courses and workshops various university departments: Wildlife, Fish & Conservation Biology, Landscape Ecology, Plant Sciences, Human Ecology.

Education Abroad Instructor, University of Miami/Carnegie-Mellon Institute, Summer 2004.

Co-led study abroad opportunities in the Galapagos Islands and performed ecological Gap Analysis-Catalyzing Fieldwork in natural and cultural resource management of marine and terrestrial resources and local environmental decision-making and stewardship in an ethnographic context. Co-investigators: Liana Talaue McManus Ph.D and Sarah Keene Meltzoff Ph.D, Marine Department, University of Miami, Florida and Diego Quiroga Ph.D, Galapagos Institute of Arts and Sciences, Universidad de San Francisco de Quito, Ecuador.

Education Abroad Instructor, University of Arizona, Summer 2002.

Organized and co-led field course in Tropical Ecology and Field Survey methods for Amazonian birds and herpetofauna at Jatun Sacha Ecological Reserve, Ecuador. Taught course content in ornithology, including field exploration and survey techniques. Co-instructor Paul Hamilton Ph.D, Department of Biology, Arizona State University.

Teaching Assistant, University of California Davis, 1998-2000.

Lead teaching assistant for required course in the Wildlife, Fish & Conservation Biology major. Ran laboratory sessions and field exercises. Assisted with field trips. Lectured on faunal survey techniques and avian ecology. Supervising Faculty: Deborah L. Elliott-Fisk Ph.D, Department of Wildlife, Fish & Conservation Biology.

Tutor, University of California Santa Cruz, Disability Resource Center, 1993-1995.

Served as tutor for learning-disabled students in physics, chemistry, biology and writing for the sciences. Sharyn Martin, Director.

ACADEMIC & COMMUNITY SERVICE

Yolo Habitat Conservancy, Science and Technical Advisory Committee, 2014-date.

Friends of the Davis Public Library/Logos Books, 2016-date.

Science Advisory Committee, UC Davis Putah Creek Riparian Reserve, 2002-present.

Board of Directors, Lower Putah Creek Coordinating Committee, 2001-2010.

Science Advisory Committee, Yolo Basin Wildlife Area, 2002-2006.

Board of Admissions Student Representative, Graduate Group in Ecology, 2002-2003.

Board of Directors, Putah Creek Council, 2001-2003.

Ecology Graduate Student Association Restoration AOE Student Representative, 2000-2003.

UC Davis Natural Reserves Student Representative, 1999.

SELECTED PUBLICATIONS

- Dybala, K. E., Engilis, A., Trochet, J. A., Engilis, I. E., & Truan, M. L. (2018). Evaluating riparian restoration success: Long-term responses of the breeding bird community in California's lower Putah Creek watershed. *Ecological Restoration*, 36(1). <https://doi.org/10.3368/er.36.1.76>
- Trochet, J. A., Engilis, A., Truan, M. L., Engilis, I. E., Walsh, R. A., Whisler, E., & Dybala, K. E. (2017). New and extralimital records of breeding birds for Putah Creek, California. *Western Birds*, 48(3). <https://doi.org/10.21199/WB48.3.1>
- Dybala, K. E., Truan, M. L., & Engilis, A. (2015). Summer vs. Winter: Examining the temporal distribution of avian biodiversity to inform conservation. *Condor*, 117(4). <https://doi.org/10.1650/CONDOR-15-41.1>
- Truan, M. 2013. "Galapagos Xeric Scrub," "Hawaiian Intertidal Zones," "Mingo Swamp," "Mississippi Lowland Forests," and "Streams". In: Howarth R.W. (ed). *Biomes and Ecosystems: An Encyclopedia*. Golson media, Salem Press, US.
- Shutler, D., Hussell, D. J. T., Norris, D. R., Winkler, D. W., Robertson, R. J., Bonier, F., . . . Stanback, M. T. (2012). Spatiotemporal patterns in nest box occupancy by Tree Swallows across North America. *Avian Conservation and Ecology*, 7(1). <https://doi.org/10.5751/ACE-00517-070103>.
- Truan, M.L., A. Engilis Jr., and J.R. Trochet. 2010. Putah Creek Terrestrial Wildlife Monitoring Program: Comprehensive Report and Map Volume, 1997-2009. Department of Wildlife, Fish, and Conservation Biology, Museum of Wildlife and Fish Biology. University of California, Davis, CA.
- Melcer Jr., R.E., E. Lindgren, M. Truan, and A. Engilis, Jr. 2006. Yolo Bypass Riparian Bird and Wildlife Monitoring Program, 2005 Progress Report. Mus. of Wildlife and Fish Biol. University of California, Davis, CA.
- Castañeda, A.E. and M.L. Truan. 2006. UC Davis Arboretum Wildlife Management and Enhancement Plan. Mus. of Wildlife and Fish Biol. University of California, Davis, CA.
- Truan, M. 2004. Biological assessment for the Capay Open Space Park. Yolo County Department of Planning and Public Works, Woodland, CA.
- Truan, M. 2003. Western Bluebird as host for Brown-headed Cowbird: A new record from California. *Western Birds* 34(2).
- Truan, M. and J. Kampbell. 1998. Spatial analysis (Arc/INFO) of the effects of habitat heterogeneity on avian biodiversity in a riparian corridor, Internet publication of Department of Applied Biological Systems Technology, UC Davis.
- Truan, M. 1996. Nonpoint source pollution and wetlands: Impacts of urban and agricultural nonpoint source pollution on sediments, groundwater and biota, 70 pp. in *Nonpoint Source Pollution in Coastal Harbors & Sloughs of the Monterey Bay Region: Problem Assessment & Best Management Practices*, Association of Monterey Bay Area Governments, Marina, CA.
- Truan, M. 1994. Habitat Requirements of Wintering Monarch Butterflies. UC Santa Cruz Arboretum Publication Series.