

## Education

PhD	<b>University of California at Berkeley</b> Environmental Science, Policy & Management (ESPM) Advisor: Adina M. Merenlender	2016 (expected)
BA	<b>University of California at Berkeley</b> Integrative Biology	2000

## Grants, Fellowships, and Awards

2012-2015	<b>National Science Foundation (NSF) Graduate Research Fellowship.</b> Validating species distribution model predictions: the importance of human land use.	\$136,000
2016	<b>The Nature Conservancy.</b> The impact of land use and water availability on native mammal detections at camera traps in the Pajaro Valley, CA.	\$4,800
2016	<b>UC Berkeley, Graduate Division.</b> Travel award.	\$900
2016	<b>The Wildlife Society-Western Section.</b> Travel award.	\$300
2015	<b>UC Berkeley, Graduate Division.</b> Travel award.	\$1,500
2015	<b>Guadalupe Coyote Resource Conservation District, in collaboration with the Santa Clara Valley Open Space Authority.</b> Coyote Valley linkage assessment study: Evaluating the impact of human land use on bobcat population genetics.	\$5,000
2015	<b>Natural Community Conservation Planning Local Assistant Grant awarded by the Department of Fish &amp; Wildlife, in collaboration with the Santa Clara Valley Open Space Authority.</b> Coyote Valley linkage assessment study: Evaluating the impact of human land use on California ground squirrel population genetics.	\$5,000
2015	<b>UC Berkeley, Department of ESPM.</b> Travel award.	\$500
2014	<b>Sonoma Land Trust.</b> Analysis of the Sonoma Developmental Center property for maintaining connectivity along the Sonoma Valley Wildlife Corridor: Implications for wildlife movement and climate change adaptation.	\$7,500
2014	<b>UC Berkeley, Department of ESPM.</b> Travel award	\$1,250

## Publications

Harris, N., Garshong, R., and **M. Gray**. *In review*. Spatial variation in small mammal communities: assessing protected areas and environmental conditions. *Ecography*.

**Gray, M.**, and A.M. Merenlender. *In preparation*. Including land use improves the predictive ability of a species distribution model. *Diversity and Distributions*.

Merenlender, A.M., S. Feirer, **M. Gray**, J. Kreitler, and D.D. Ackerly. *In preparation*. Assessing local habitat corridors for climate change resilience and protected area planning. *Ecology Letters*.

**Gray, M.**, C.C. Wilmers, S.E. Reed, and A.M. Merenlender. 2016. Evaluating connectivity models using puma occurrence data in the Santa Cruz Mountains. *Landscape and Urban Planning* 147:50-58.

**Gray, M.,** J.M. Klip, A.R. Krohn, R.A. Marsh, and L.A. McGinnis. 2014. The Big bad wolf or a symbol of the American wilderness? *National Science Foundation, National Center for Case Study Teaching in Science.*

### Invited Talks

Gray, M. and A.M. Merenlender. Using GIS to inform wildlife connectivity amidst human land use. Society for Conservation GIS, Oakland, California. January 13, 2016.

Gray, M. and A.M. Merenlender. Landscape permeability, gene flow, and pathways for wildlife across Coyote Valley. Santa Clara County Open Space Authority, San Jose, California, November 9, 2015.

Gray, M. The importance of the human-wildlife interface for biodiversity conservation and management. Restoration Ecology Workshop, The Jepson Herbarium at UC Berkeley, California, October 17, 2015.

Gray, M. Finding the fantastic fox: How important is anthropic land-use in predicting the distribution of *Urocyon cinereoargenteus*? Departmental lightning talk, Environmental Science, Policy and Management, UC Berkeley, California, September 14, 2015.

Gray, M. and A.M. Merenlender. Landscape permeability and connectivity at the Sonoma Developmental Center: Implications for wildlife movement and climate change adaptation. The Sonoma Land Trust, Santa Rosa, California, July 15, 2015.

Gray, M. and A.M. Merenlender. The importance of land use in understanding carnivore distributions. Departmental seminar, Environmental Science, Policy and Management, UC Berkeley, California, April 9, 2015.

### Conference Presentations

Gray, M. and A.M. Merenlender. Integrating land use planning and conservation biology for more accurate species distribution models. Abstract accepted for North American Congress for Conservation Biology, Madison, Wisconsin. July 18, 2016.

Gray, M. and A.M. Merenlender. Assessing the importance of land use on species distribution model accuracy for gray foxes. The Bay Area Society for Conservation Biology Symposium, Stanford, CA. May 7, 2016.

Gray, M. and A.M. Merenlender. Quantifying landscape-scale human impacts on habitat connectivity: implications for wildlife movement and property management. American Association of Geographers Annual Meeting, San Francisco, California. March 31, 2016.

Gray, M. and A.M. Merenlender. The importance of the human-wildlife interface for biodiversity conservation and management. The Wildlife Society, Western Section Annual Conference, Pomona, California. February 26, 2016.

Gray, M. and A.M. Merenlender. How does the built environment act as a boundary to puma movement in the Santa Cruz Mountains? The Bay Area Society for Conservation Biology Symposium, Berkeley, California, May 2, 2015.

Gray, M., C.C. Wilmers, S.E. Reed, and A.M. Merenlender. What do pumas avoid when moving from the ocean's edge to the Santa Cruz Mountains? Ecological Society of America 99th Annual Meeting, Sacramento, California, August 10, 2014.

Gray, M., N.C. Harris, and R.R. Garshong. Variation of small mammal richness with land use: A case study from Digya NP, West Africa. Ecological Society of America 98th Annual Meeting, Minneapolis, Minnesota, August 8, 2013.

Gray, M., C.C. Wilmers, and A.M. Merenlender. Feature-based connectivity models predict puma occurrence in the Santa Cruz Mountains. The Society for Conservation Biology, North America Congress for Conservation Biology, Oakland, California, July 16, 2012.

Gray, M., C.C. Wilmers, and A.M. Merenlender. Evaluating connectivity using puma occurrence data in the Santa Cruz Mountains. The Wildlife Society, Western Section Annual Conference, Sacramento, California, February 1, 2012.

## Wildlife and Conservation Work History

- California Naturalist Program, Hopland, CA**  
*Graduate Student Researcher* 2013
- Transcribed and analyzed recorded interviews with California Naturalist Program participants.
- Northern Arizona University, School of Forestry, Flagstaff AZ**  
*Field Technician* 2012
- Set up camera traps in San Francisco Bay Area parks to determine the effects of non-motorized recreation on medium- and large-sized mammals in the San Francisco Bay Ecoregion.
- Monterey Bay Aquarium, Sea Otter Research and Conservation (SORAC) Program, Monterey CA**  
*Field Technician* 2010-2011
- Located, observed southern sea otters along the California coastline.
- Lindsay Wildlife Museum, Rehabilitation Hospital, Walnut Creek CA**  
*Rehabilitation Hospital Volunteer* 2009-2010
- Provided medical and general husbandry care for injured or orphaned native wildlife.
- Golden Gate National Recreation Area, San Francisco CA**  
*Restoration Volunteer* 2000
- Removed non-native plants, maintained park trails.
- Lawrence Hall of Science, Biology Discovery Room, Berkeley CA**  
*Research Associate* 1999-2000
- Provided daily husbandry care for over 60 species of animals. Educated general public on animal natural history.

## Laboratory and Management Work History

- Genomic Health, Redwood City CA**  
*Project Manager* 2008-2010
- Led process development project teams to support and improve Oncotype DX assay.
- Affymetrix, Santa Clara CA** 2006-2008  
*Research Associate*
- Managed a high-throughput genotyping lab. Trained, supervised lab staff. Led process improvements and advanced troubleshooting for genotyping products in Affymetrix portfolio.
- ParAllele (acquired by Affymetrix), South San Francisco CA** 2004-2006  
*Research Associate*
- Developed, verified the Molecular Inversion Probe targeted genotyping assay to ensure robustness and high-throughput compatibility.
- UC Berkeley, Department of Environmental Science, Policy & Management, Berkeley CA**  
*Research Associate* 2003-2004
- DNA and microsatellite sequencing in the laboratory of Dr. Richard Dodd. Managed a small academic research lab. Trained, supervised undergraduate researchers on all protocols.
- Investigen, Alameda CA**  
*Research Associate* 2000-2003
- Managed a start-up molecular lab and tissue library. Developed genetic test to identify genetically modified organisms.

## Professional Activities and Development

Reviewer	Journal of Natural History, Landscape and Urban Planning, PLoS ONE
Software	ArcGIS, R, MaxEnt, PRESENCE, Zonation
Membership	Association of American Geographers, Ecological Society of America, Society for Conservation Biology, The Wildlife Society

## Service and Outreach

### UC Berkeley, Department of ESPM, Berkeley CA

*President, Graduate Student Association*

2014-2016

- Official representative of ESPM graduate students at the department and college levels. Held monthly meeting to communicate graduate student concerns, ESPM and UC updates, and foster an inclusive ESPM community.

### Monterey Bay Aquarium, Monterey CA

*Mentor, Young Women in Science*

2014

- Shared my experiences as a woman in science with young women in middle school. Trained groups of 3-4 students in sea otter tracking; engaged students in a dialogue about the importance of sea otter conservation.

### UC Berkeley, Department of ESPM, Berkeley CA

*Ecosystem Science Division Representative, Graduate Student Association*

2013-2014

- Attended departmental faculty meetings, reported minutes to the division. Communicated with graduate students in ESPM to foster engagement and inclusivity, inform about current events.

### UC Berkeley, Berkeley CA

*Mentor, Undergraduate-Graduate Mentorship Program*

2013

- Met with an undergraduate 4 times throughout the semester for advice about research and employment in environmental science.

### Hayward Impact Academy High School, Hayward CA

*Panelist, Science, Technology, Engineering and Mathematics (STEM) outreach event.*

2012

- Answered questions from high school Algebra II students such as "Why do we study math?" and "Why is it important that we prepare students for STEM careers?"