

MARTHA ZILLIG (WOHLFEIL)

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EDUCATION

Current: PhD Candidate, **University of California, Davis**, Graduate Group in Ecology

B.A Biology, Magna Cum Laude, **Carleton College**, Northfield, MN, 2013

DOCTORAL RESEARCH

University of California, Davis
Graduate Group in Ecology

September 2016-Present

Member of Dr. Erica Fleishman's Lab

Research on biogeography and phenology of passerines in the Great Basin

- Conduct field work during avian breeding season in western Great Basin
- Data collection includes: point count surveys, nest searching/monitoring, vegetation identification and measurements, climate data collection, insect collection
- Analysis of field data using ArcGIS, R, and Bayesian modeling methods
- Extensive knowledge of Great Basin bird life history, phenology, and identification using visual and vocal cues
- Proficient in statistical modeling of data using Bayesian methods

Student leader in statistical and programming literacy

November 2017-Present

Extensive experience teaching and assisting graduate students in programming with R

- Co-leader of Davis R Users Group, a student run club focused on assisting graduate students with R; 2017-Present
- Founder of statistical modeling group for students in the Graduate Group in Ecology; Winter 2019 - Present
- Data Carpentries certified instructor and assistant in multiple carpentries courses taught at UC Davis
- Affiliate of the Data Science Initiative at UC Davis

TEACHING EXPERIENCE

Instructor of "R- DAVIS: R Data Analysis and Visualization in Science"

January 2018 – Present

Co-instructor of graduate-level introduction to R course taught every Winter term

Teaching Assistant for ESP001 "Environmental Analysis"

September – December 2019

Teaching Assistant for ESP172 "Public Lands Management"

January-April 2018

OUTREACH

President of "Kids into Discovering Science (KiDS)"

January 2016-Present

Graduate student run non-profit teaching underrepresented elementary age children place-based ecology

- President of KiDS, 2018-Present

- Weekly volunteer in fifth grade classroom teaching lessons
- Coordinator and volunteer of Field Day, the field trip that culminates the program each year
- Responsible for organization of the program, management of volunteers, coordination of Field Day

Member of Davis Chapter of Society for Conservation Biology

2016-Present

Co-President of “Davis R Users Group”

2017- Present

Club that meets once a week to assist fellow graduate students, undergraduates, and post-docs with R related problems.

- Proficient in assisting members with a multitude of R-related quandaries
- Taught a lesson once a term on an R-related topic
- Organized presentations and speakers, managed listserv and website

Co-Founder and President of “Statistical Support Group for Ecologists”

2019- Present

Group that offers weekly statistical presentations and a work-group environment to graduate students working on statistical analyses

- Co-founded group with three other graduate students in 2019
- Present/teach on a statistical topic once per term
- Manage listserv, website, coordinate presenters and group activities for weekly meetings

SCIENTIFIC PUBLICATIONS

Williamson, M.A., Fleishman, E., MacNally, R.C., Chambers, J.C., Bradley, B.A., Dobkin, D.S., Board, D.I., Fogarty, F.A., Horning, N., Leu, M., **Zillig, M.E.** 2019. Fire, livestock grazing, topography, and precipitation affect occurrence and prevalence of cheatgrass (*Bromus tectorum*) in the central Great Basin, USA. *Biological Invasions*. In press

Carter, S. K., Fleishman, E. Leinwant, I. F., Flather, C.H., Carr, N.B., Forgarty, F., Leu, M., Noon, B.R., **Wohlfeil, M.** & Wood, D.J.A. 2019. Quantifying ecological integrity of terrestrial systems to inform management of multiple-use public lands in the United States. *Environmental Management* 64:1, 1-9.

Forgarty, F., **Wohlfeil, M.**, Fleishman, E. 2018. Response to Horns et al. 2018: ‘Using opportunistic citizen science data to estimate avian population trends’ *Biological Conservation* 221, 151–159.

Savoca, M., **Wohlfeil, M.**, Ebeler, S., Nevitt G. 2016, Marine plastic debris emits a keystone infochemical for olfactory foraging seabirds. *Science Advances* 2(11): e1600395.

SCIENTIFIC PRESENTATIONS

Wohlfeil, M.E. 28 January 2013. The continuum of sex determination: Transitions between sex determining mechanisms in non-avian reptiles. Senior Thesis Presentation, Carleton College. Northfield, MN

Savoca, M.S., **Wohlfeil, M.E.**, Ebeler, S.E. and G.A. Nevitt. 15 February 2014. Marine plastic debris as an olfactory trap for procellariiform seabirds. 7th Annual Graduate Student Symposium in Ecology. University of California – Davis. Davis, CA

Wohlfeil, M.E. and Fleishman, E. May 18 2017. Potential mechanisms responsible for within-season elevational movements of passerine species. Great Basin Bird Conference, Reno, NV.

Wohlfeil, M.E. February 20, 2018. Potential mechanism responsible for within-season movements of birds in the Great Basin. 10th Annual Graduate Student Symposium in Ecology. University of California – Davis. Davis, CA

Wohlfeil, M.E. March 9th, 2019. Potential mechanism responsible for within-season movements of birds in the Great Basin. 2019 Wildlife Professional Development Conference. University of California, Davis. Davis, CA.

AWARDS

Henry A. Jastro Research Fellowship	2017-2019
Best Oral Presentation: Graduate Group in Ecology Symposium <i>UC Davis</i>	2018
Frances M. Peacock Scholarship for Native Bird Habitat	2018
The Charles Redd Center for Western Studies: Summer Award for Upper Level Division and Graduate Students	2018
Graduate Group in Ecology Fellowship	2018
William J. Hamilton III Memorial Fund Scholarship	2019

PROFESSIONAL EXPERIENCE

Research Assistant

December 2015-April 2016

Molecular Biology and Biotechnology
Monsanto, Woodland, CA

- Full time research assistant for project examining RNAi delivery in model plant systems
- Responsible for care and experimental treatments of plants, as well as for data collection and analysis
- Experience using image collection software, image analysis software (ImageJ), and data analysis and presentation software (Spotfire, Microsoft Excel)

Climate Change Indicators Intern

September 2015- December 2015

Office of Environmental Health and Hazards Assessment
California EPA, Sacramento, CA

- Volunteer research assistant on *Indicators of Climate Change in California* report
- Responsible for primary source literature analysis for the report's chapter on the effect of climate change on Californian bird phenology

Field Research Technician

May 2014-July 2014

University of Minnesota

Lab of Dr. Todd Arnold, Wildlife Biology

- Field technician for the PhD candidate Hannah Specht of Dr. Todd Arnold's lab at the University of Minnesota
- Worked in the prairie pothole region of North Dakota conducting surveys on shore bird population to determine their response to oil development in the region
- Duties included bird surveys, nest searching, experience using GPS unit, experience with ArcGIS, and a variety of bird trapping techniques

Sensory Ecology Research Assistant

July 2013-September 2014

UC Davis

Lab of Dr. Gabrielle Nevitt, Ecology

- Assisted with analysis of volatile samples for study of DMS recognition in Procellariiformes with Dr. Matt Savoca
- Experience working with Gas Chromatography and sulfur detection systems

- Used previous knowledge of ocean chemistry, especially air/surface water interactions, to conduct experiments at Bodega Marine Laboratory on bait fish species
- Presently assisting on publication of paper on sensory ecology in seabirds in relation to plastic ingestion