

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

- Instructor for R-DAVIS, a graduate level intro to R course (2019-2020)
- 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 – Feb 2020

Co-instructor of graduate-level introduction to R course, required course for Ecology grad students

Teaching Assistant for ESP001 "Environmental Analysis"

September – December 2019

Teaching Assistant for ESP172 "Public Lands Management"

January-April 2018

SCIENTIFIC PUBLICATIONS

Horning, N., Fleishman E., **Zillig, M.W.**, and Forgarty, F. Mapping of land cover with open-source software and ultra-high resolution imagery acquired with unmanned aerial vehicles. Remote Sensing in Ecology (in press).

- 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.W.** 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. Leinwand, 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.

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 PRESENTATIONS

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.

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

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

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

- Conducted surveys on shore bird population to determine their response to oil development in the prairie pothole region of North Dakota under the mentorship of Dr. Hannah Specht.
- Surveyed birds, conducted nest searches, experience with navigation using GPS units, mapped field sites with ArcGIS, and implemented a variety of bird trapping techniques

Sensory Ecology Research Assistant

July 2013-September 2014

UC Davis

Lab of Dr. Gabrielle Nevitt, Ecology

- Analyzed 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