

Capabilities Report

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JENNIFER MAE-WHITE DAY

Center for Conservation Biology
Department of Biology
University of Washington

This page is designed to give a sense of who Jennifer is as a person and professional, including her innate strengths, interests, and areas of excellence. It is not a resume of skills nor a CV of experience, but rather a distilled summary of her qualities.



Description

Inspires enthusiasm for science, learning, and nature. Bridges intellectual gaps across scientific disciplines and knowledge backgrounds, fostering true collaborations and active learning environments. Leads effective discussions by combining active listening, quick synthesis of new information, skilled articulation, and a focus on actionable outcomes. Passion for using visual design to improve communication clarity. A creative self-starter who takes initiative and seeks out the necessary resources to pursue new paths. A gritty field biologist who thrives in muddy boots and excels at adapting to changes and challenges.

Evidence of effectiveness

Sought out and led two highly successful inter-disciplinary collaborations, one with an EPA expert in computer simulations, and another with a big-data scientist at the UW eScience Institute. Received outstanding reviews as a Teaching Assistant across nine undergraduate biology courses at UW. Recruited to instruct Intro. Biol. - Animal Physiology, Su 2015. Wrote and designed a variety of educational materials, including a series of Classroom Resources for Conservation Magazine and a lesson protocol for a neuromuscular wet-lab. Mentored women seeking futures in STEM-related fields. Noninvasively sampled and genotyped jaguar and puma populations. Five years of remote field work in locations ranging from the deserts of CO to the jungles of Belize, followed by field-intensive graduate thesis work in MI (MS) and Mexico (PhD).

Background

- Pre-Doctoral Lecturer. Intro. Animal Physiology large enrollment course.
- Conservation Canines – Canine Handler
- Laboratory Technician – Wildlife Molecular Ecology, Michigan State University
- Wildlife/Research Technician (5 yrs): Virginia Tech (Belize-ocelot & jaguar ecology), Utah State (swift-fox ecology), Univ. Minnesota (plant ecology), Clemson Univ. (herpetology), Grand Canyon NP (plant ecology).
- Teaching Assistant: 20 quarters, 9 courses in Biology UW & 3 semesters, MSU
- Volunteer: Seattle Expanding Your Horizons (STEM workshop for middle-school girls), Burke Museum Meet the Mammals, UW Biol. Greenhouse Docent. Co-founder Young Naturalists' Society of the Pacific Northwest.
- Personal Interests: Hiking, traveling with husband and dog in Volkswagen camper van, live music, crafting, and gardening.

Education

- Ph.D. Candidate, University of Washington (UW). Seattle, WA
- M.S. Fisheries & Wildlife and Ecology Evolutionary. & Behavioral Biology, Michigan State University (MSU). East Lansing, MI.
- B.A. Biology and Environmental Studies, Gettysburg College. Gettysburg, PA
- Tropical Ecology Program, Boston University. Quito, Ecuador.

Education:

University of Washington – PhD Candidate. Dept. of Biology. 03/08- present. GPA: 3.81

Research Interests: Landscape Genetics, Wildlife Ecology and Conservation, Population Genetics, Endocrinology, Population and Community Ecology. Techniques in STEM Ed.

Michigan State University – Masters of Science. Dec 2010. Dept. of Fish. and Wildlife & Ecology, Evolution, and Behavioral Biology Program. GPA: 4.00 Thesis Topic: Noninvasive Monitoring

Techniques for Elusive Carnivores: A Case Study of Bobcats (*Lynx rufus*) in the Lower Peninsula, MI

Gettysburg College – BA Cum Laude. May 2001. Overall GPA 3.45 Double Major: Environmental Studies (Science Concentration) GPA 3.47. Biology GPA 3.56 Capstone Project Topic: Behavior and Ecology of Dwarf and Spectacled Caiman in Lowland Amazonia, Ecuador.

Universidad San Fransisco/ Boston University – Tropical Ecol. Program, Ecuador 01/00-05/00

Research Publications:

Day, J.M.W., and N. Schumaker. *In preparation.* Applications of eco-evolutionary models to spatial genetics, conservation biology, and evolutionary ecology through a novel spatially-explicit, individual-based simulation framework.

Solórzano-García, B., M. Gómez-Contreras, **J.M.W. Day,** J. Cristobal-Azkárate. *In preparation.*

Coprological survey of parasites of free-ranging Jaguar (*Panthera onca*) and Puma (*Puma concolor*) inhabiting two types of tropical forest in southeast Mexico.

Cristobal-Azkarate, J., J.C. Dunn, **J.M.W. Day,** C.F. Amabile-Cuevas. 2014. Resistance to Antibiotics of Clinical Relevance in the Fecal Microbiota of Mexican Wildlife. PLoS ONE 9(9): e107719. doi: 10.1371/journal.pone.0107719

White, J.M. Dec 2010. Development of Noninvasive Genetic Techniques to Monitor Elusive Carnivores; A Case Study of Bobcats (*Lynx Rufus*) in the Northern Lower Peninsula, Michigan. Masters Thesis. Dept. of Fisheries and Wildlife.

White, J.M., and J. Rivas, *Paleosuchus trigonatus* (Dwarf Caiman) Neonate time budget. 2003 Herpetological Review. 34(2): 141

Education Publications:

Day, J.M.W. 2015. Unlocking the Neuron Action Potential: An in-class active learning POGIL/JigSaw learning exercise for undergraduates. (Intro. Animal Physiology)

Day, J.M.W. 2012. Conservation magazine Classroom Resources: S2012 (Vol. 13, No. 2), F2012 (Vol. 13, No. 3), W2013 (Vol. 14, No. 1), Sp2013 (Vol. 14, No. 2). Conservationmagazine.org/educators

White, J.M. 2009. Neuromuscular Physiology Wet-Laboratory Exercise and Problem Set for Discussion Session. Instated into UW Biology curriculum (Intro. Animal Physiology) Fall 2009.

Teaching Experience:

University of Washington – Pre-Doctoral Lecturer. Summer 2015. Introductory Animal Physiology, large enrollment course (152 students).

University of Washington – Teaching Assistant. 2008-2015. 18 Quarters, 9 Courses

Michigan State University – Teaching Assistant. 2006-2008: 3 Quarters Into. Bio. Sci.

Research Presentations:

- 2015. International Congress for Conservation Biology.** “Using Eco-Evolutionary IBMs to Investigate Spatially-Dependent Processes in Conservation Genetics” *Poster*: “Considerations of Scale in Jaguar and Puma Resource Selection Models based on Scat Locations in Southern Mexico.”
- 2015. International Association of Landscape Ecologists.** “Incorporating Eco-Evolutionary Processes into Population Models: Design and Applications”
- 2014. Ecological Society of America.** “Successful mating of spatially-explicit demography and genetics in a new simulation modeling framework: Individual-based, spatial eco-evolutionary models at last”
- 2014. Society for Conservation Biology.** “Quantifying Resource Selection, Habitat Connectivity, & Genetic Patterns for Fragmented Large Mammal Populations of Southern Mexico using Scat”
- 2014. American Genetics Assoc. *Poster*** “Successful mating of spatially-explicit demography and genetics in a new simulation modeling framework: Individual-based, spatial eco-evolutionary models at last”
- 2012. Ecological Society of America.** “New developments in computer modeling advance ecological realism of landscape genetics simulations.”
- 2009. Carnivore Conference – Defenders of Wildlife.** “Gathering Noninvasive Genetic Samples from Elusive Carnivores: Quantitative Assessment of Variables Affecting Scat Detector Dog Success and Detector Dog Efficacy Relative to Hair Snares”

Research Experience:

- Conservation Canine Handler-** Wildlife Scat Collection Surveys. Yucatan, Mexico Jaguar Survey, Aug-Sept 2008. Sierra Nevada CA Fisher Survey, April-Aug 2008. Backcountry wildlife sign tracking, scat sample collection and processing.
- Wildlife Genetics Technician-** White Tailed Deer Population Genetics – Michigan, Michigan State University. April-Aug 2005. DNA extractions from tissue samples, PCR & gel electrophoresis
- Research Technician-** Ocelot Ecology Graduate Study- Chiquibul National Park, Belize, Virginia Tech. Feb-June 2004. Trapping/chemical immobilization/radio collaring, radio telemetry, camera trapping grids.
- Research Technician-** Swift Fox Ecology Graduate Study – S.E. Colorado, Utah State University. May-Aug 2003. Radio telemetry, spotlight surveys, small mammal trapping, den locations/observations, scent/track stations, and vegetation sampling.
- Research Assistant-** Tropical Ecology- Barro Colorado Island, Panama, STRI. Jan-Feb 2003. Collaborated with the Automated Radio Telemetry System crew from Princeton University. Research crew member for an ongoing seed-predator enclosure/plant diversity study with U.Pittsburg.
- Internship -** Plant Ecology- Cedar Creek Natural History Area, MN. May – Sept 2002. Independent project on C:N:P Stoichiometry within the Oak Canopy. Assisted with research on spatiotemporal niche differentiation and nutrient use and acquisition along a biodiversity gradient.
- Research Assistant-** Herpetofauna Biodiversity- South Carolina Coastal Plain, Clemson University Graduate Student Study. Sept – Nov 2001. Assisted with research on herpetology biodiversity within pine plantations of varying land-management practices. Designing/construction of traps.
- Fire Recovery, Non-native Species Investigator –** North Rim, Grand Canyon National Park. June-Aug 2001. Conducted a study of regrowth of native and non-native species in burn area throughout the Grand Canyon NP North Rim and Kaibab National Forest.
- Research Assistant-** Connecticut Agricultural Experiment Station. Dept. of Plant Pathology & Ecology May–August 1998. Assisted with various agricultural research projects investigating effectiveness of alternatives to fertilization and pesticide use.

Honors

WRF-Hall Fellowship, Biology Dept. UW	2013
Huckabay Teaching Fellowship, UW Graduate School	2013
R.A. Conservation magazine, Online Classroom Resources development. UW	2012
Ridiford-Truman Award for Research in Animal Physiology, Biology Dept. UW	2012
Wingfeild/Ramenofsky Award for Research in Wildlife Ecology. Biology Dept. UW	2010
Graduate Student Scholarship, Hartsough Award, Michigan State Univ.	2006
Graduate Student Fellowship, American Museum of Natural History	2006
Research Grant, Michigan Department of Natural Resources	2005
Gettysburg College Departmental Honors, Biology	2001
Travel Scholarship, G.C. Student Senate, U.N. COP Global Climate Change	2000

Outreach:

Workshop Leader 2011-2014. Seattle Expanding Your Horizons, STEM weekend for middle-school girls.

Public Interp. Volunteer 2008, 2009, 2014. Burke Museum, Meet the Mammals event day.

Docent 2009-2013. UW Biology Teaching Greenhouse, tour leader for K-undergraduate groups

Guest Speaker 2010 "Molecular methods in Wildlife Ecology & Conservation" Roosevelt HS Adv.App.Sci.