Curriculum Vitae

Stephanie M. DeMay

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PROFESSIONAL INTERESTS

Vulnerable species ecology, policy, and conservation; Management-oriented applied research, Conservation genetics

EDUCATION

PhD Environmental Science, **Graduate Certificate in Statistical Sciences,** University of Idaho (2015) GPA: 4.0/4.0

BS Environmental Science, Wildlife Resources minor, University of Idaho (2011) Summa Cum Laude GPA: 4.0/4.0

Relevant Coursework

Wildlife Ecology, Population Ecology, Conservation Biology, Natural Resource Policy Analysis, Politics of the Environment, Resource Selection Analysis Workshop, Occupancy Modeling Workshop, Statistical Analysis, Applied Regression Modeling, Experimental Design, Survey Sampling Methods, Population Genetics, Conservation Genetics, Mammalogy, Herpetology

EXPERIENCE

Research and Conservation

Assistant Research Scientist, Texas A&M Natural Resources Institute, December 2017 – Present

Provides scientific and project management assistance to produce Species Status Assessments (SSAs) for the U.S Fish and Wildlife Service (USFWS). Coordinates with external partners, compiles and synthesizes data and literature, performs science-based assessments of the current and projected future status of species that are federally threatened, endangered, or candidates for listing. SSA products inform Endangered Species Act (ESA) policy decisions and recovery actions including listing/delisting decisions and recovery planning.

Postdoctoral Scientist, Virginia Polytechnic Institute and State University
March 2016 – December 2017

Led statistical analysis for a range-wide SSA for the endangered Red-cockaded Woodpecker in close collaboration with USFWS and species experts. Compiled and processed GIS and time series data from > 90 populations to model past population trends and predict future trends under management scenarios to produce USFWS report to inform ESA policy decisions. Assisted with banding, resighting, and behavioral observations of woodpeckers.

PhD Candidate, University of Idaho, Washington Department of Fish & Wildlife
August 2011 – December 2015

Developed genetic tools to monitor demographic and genetic status of reintroduced endangered Columbia Basin pygmy rabbits. Performed genetic sampling and laboratory analysis of tissue and fecal pellets, radiotelemetry, captured and translocated animals. Led volunteer teams of all ages in capture, handing, and release of over 1200 pygmy rabbits, and winter burrow/fecal pellet surveys. Wrote grant proposals and acquired $4720 in research funds for laboratory analysis and development of a field course to bring undergraduates to the field to work with agency biologists. Trained and supervised 8 lab technicians, mentored 3 undergraduate summer interns. Summarized data in reports and provided recommendations to

agency. Served on pygmy rabbit science advisory team with state, federal, university, and NGO partners, providing data and input to guide recovery strategy. Created demographic and genetic database for long term monitoring and research. Designed and performed statistical analyses using Excel, R, SAS, and ArcGIS, and disseminated results via peer-reviewed publications in Ecological Applications, Molecular Ecology Resources, the Wildlife Society Bulletin, and Journal of Mammalogy, 11 presentations at professional meetings, and 6 invited presentations to local interest groups and undergraduate classes.

Volunteer Field Technician, University of Idaho, January – March 2016
Worked independently and in a small group to trap, collar, and monitor pygmy rabbits, and collect habitat measurements in winter snow conditions.

Wildlife Volunteer, Washington Department of Fish & Wildlife, June 2013 – August 2015
Volunteered on multiple field projects state-wide. Captured and banded ducks, geese, and doves; surveyed for jackrabbits; led field crew conducting leopard frog surveys, genetic, and chytrid sampling; performed trapping, telemetry, and egg mass surveys for Oregon spotted frogs; captured and translocated Washington ground squirrels; live-trapped and relocated beavers; tracked sage grouse with telemetry; tracked cougars and monitored kill sites.

Conservation Volunteer, Wildlife-ACT, South Africa, 23 May – 23 June 2015
Worked with a team to track with telemetry and record behavioral data on priority species in the field including African wild dog, cheetah, black rhino, elephant, spotted hyena, vulture, and lion. Identified individual wild dogs from coat patterns to monitor fate and population dynamics. Performed game counts; sexed, aged, and counted hooved herbivores including warthog, giraffe, impala, kudu, nyala, and zebra for population monitoring.

Research Assistant, University of Idaho, Utah Division of Wildlife Resources
January 2014 – May 2015
Performed genetic lab work and supervised 3 undergraduate lab technicians. Analyzed genetic structure of pygmy rabbits in Rich County and Box Elder County, UT and produced technical reports for Utah Division of Wildlife Resources.

NSF International Research Fellow, University of Idaho, Universidad Técnica Particular de Loja
15 May – 30 July 2011
Within interdisciplinary team framework, collaborated with Ecuadorian researchers to design study and collect habitat data in the field to analyze Andean bear foraging habits in the high Andean páramo of southern Ecuador. Published results in peer-reviewed journal Ursus.

Undergraduate researcher, University of Idaho, January – May 2011
Designed study, collected tree core samples, prepared samples and performed stable isotope analyses for senior thesis. Examined the effect of highway development on tree physiology by evaluating carbon isotope ratios of tree rings in Spokane, WA. Presented results at University-wide poster session, awarded 2nd place undergraduate research poster.

Volunteer Naturalist, Eagle River Nature Center, Eagle River, Alaska, May – August 2009
Led group natural history hikes detailing the geology and ecology of the Eagle River valley, co-led Kneehigh Naturalist programs for preschoolers and their families.

Women in Science Leadership Wetland Management Intern, University of Idaho
August 2008 – May 2011
Revitalized a constructed wetland in the community collaboratively with a 5-student team. Performed restoration work, led logistical research and purchasing for building a bird observation deck with living roof, led volunteers, represented team at conservation planning workshop at USFWS National Conservation Training Center.

Undergraduate laboratory assistant, Inorganic Soil Chemistry Lab, University of Idaho
January 2008 – May 2009
Prepared soil chemistry experiments, maintained lab, collected soil and water samples in the field.

Mentoring and Supervision

- Trained and supervised 8 undergraduate genetic laboratory technicians, 2012- 2015
- Mentored 3 undergraduate field interns, summer 2014
- Led volunteer teams of all ages during summer pygmy rabbit releases and winter burrow survey work 2012- 2015. Recruited undergraduate volunteers and coordinated logistics and training.

Teaching ***(all at University of Idaho unless otherwise noted)***

- **Endangered Species Population Monitoring** (Wlf 404), Co-created, 2015, 1 semester
  - Acquired grant funds to develop experiential service learning course for undergraduates to do field conservation with agency biologists. Organized logistical details, supervised field activities with agency biologists, and provided training to prepare students for winter burrow surveys and spring reintroductions of endangered pygmy rabbits.
- **Wildlife Techniques** (Wlf 315), Teaching Assistant , 2013- 2015, 2 semesters
  - Hands-on techniques course. Led students in capture and handling of songbirds, herptiles, and small mammals; species identification; population estimation; behavioral ecology data collection and analysis; telemetry and home range analysis; and scientific writing.
- **Env. Science Field Activities** (Envs 102), Teaching Assistant, 2011- 2014, 5 semesters
  - Coordinated and led field trips and activities related to environmental issues (e.g., recycling center tour, tour of hydroelectric dam with fish passage for salmon, stream water quality chemical testing).
- **Explorations in Conservation Biology** (Cors 230), Guest lecturer, 2015
- **Wildlife Genetics** (Natrs 318), Guest lecturer, 2014, Washington State University
- **Wildlife Habitat Ecology** (Natrs 446), Field trip guide, 2013, Washington State University
- **Strictly Swing** (Dan 105), Teaching Assistant, 2009- 2015, 11 semesters

Service

- **Pygmy Rabbit Recovery Science Advisory Team**, 2012- 2015
- **Swing Devils of the Palouse**, **Board of Directors** 2011- 2015, **Vice President** 2014- 2015
- **Small Group Discussion Leader**, English Language Class, Loja, Ecuador, May- July 2011
- **Growing Season Intern**, Backyard Harvest, May- November 2010
- **University of Idaho Environmental Club President**, 2009- 2010
- **Volunteer Math Tutor**, McDonald Elementary School, 2007- 2009

PUBLICATIONS AND PRESENTATIONS

Peer Reviewed Publications

DeMay, SM, PA Becker, JR Rachlow, LP Waits (2017). Genetic monitoring of an endangered species recovery: demographic and genetic trends for reintroduced pygmy rabbits (Brachylagus idahoensis). Journal of Mammalogy 98:350-364. doi: https://doi.org/10.1093/jmammal/gyw197. **Featured as "Editor's Choice"*

DeMay, SM, PA Becker, LP Waits, TR Johnson, JR Rachlow (2016). Consequences for conservation: population density and genetic effects on reproduction of an endangered lagomorph. Ecological Applications 26:784-795. doi: 10.1890/15-0931

DeMay, SM, JL Rachlow, LP Waits, and PA Becker (2015). Comparing telemetry and fecal DNA sampling methods to quantify survival and dispersal of juvenile pygmy rabbits. Wildlife Society Bulletin 13:654-662. doi: 10.1111/1755-0998.12104 **Featured on cover*

DeMay, SM, DA Roon, JL Rachlow, R Cisneros (2014). Selective foraging on bromeliads by Andean bears in the Ecuadorian páramo. Ursus 25:139-147. doi: http://dx.doi.org/10.2192/URSUS-D-14-00022.1

DeMay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, and LP Waits (2013) Evaluating DNA degradation rates in faecal pellets of the endangered pygmy rabbit. Molecular Ecology Resources 13:654-662. doi: 10.1111/1755-0998.12104.

Other Publications

Becker, PA and **SM DeMay** (2016) Reintroduction of the Columbia Basin pygmy rabbit in central Washington, USA. *in* Soorae, P. S. (ed.) Global Re-introduction Perspectives: 2015. Gland, Switzerland: IUCN/ SSC Re-introduction Specialist Group and Abu Dhabi, UAE: Environment Agency-Abu Dhabi.

Professional Meeting Presentations

DeMay, SM, M Marshall, W McDearman, J Walters (2017). A range-wide species status assessment to evaluate past trends and future viability of the Red-Cockaded Woodpecker. The Wildlife Society, Albuquerque, NM. (oral presentation)

DeMay, SM, PA Becker, LP Waits, JR Rachlow (2016). Consequences for conservation: population density and genetic effects on reproduction of an endangered lagomorph. The Wildlife Society, Raleigh, NC. (oral presentation)

DeMay, SM, LP Waits, JL Rachlow, and PA Becker (2015) Recovery Update for the Columbia Basin Pygmy Rabbit: Monitoring Using Fecal DNA. Washington Chapter of the Wildlife Society, Grand Mound, WA. (oral presentation)

DeMay, SM, C Warren, J Wisniewski, D Volsen, M Monda, and B Kohli (2015) In-situ Propagation as an Alternative to Traditional Captive Breeding: Techniques and Challenges from the Columbia Basin Pygmy Rabbit Washington Chapter of the Wildlife Society, Grand Mound, WA. (poster)

DeMay, SM, PA Becker, TR Johnson, LP Waits, and JL Rachlow (2015) Breeding like rabbits: Reproductive output, multiple paternity, and juvenile breeding by pygmy rabbits. Idaho Chapter of the Wildlife Society, Pocatello, ID. (oral presentation)

Waits, LP, **SM DeMay**, R Lonsinger and S Woodruff (2015) Noninvasive genetic sampling approaches for monitoring wildlife. Idaho Chapter of the Wildlife Society, Pocatello, ID. (oral presentation, first author presented)

DeMay, SM, LP Waits, JL Rachlow, and PA Becker (2014) Noninvasive genetic monitoring to assess the recovery of endangered Columbia Basin pygmy rabbits. Society for Conservation Biology North American Congress for Conservation Biology, Missoula, MT. (poster)

DeMay, SM, LP Waits, JL Rachlow, and PA Becker (2014) Noninvasive genetic monitoring of the Columbia Basin pygmy rabbit recovery. Washington Chapter of the Wildlife Society, Pasco, WA. (oral presentation)

Becker, PA, ***SM DeMay**, LP Waits, JL Rachlow, and C Warren (2013) Evaluating pygmy rabbit recovery efforts in Washington's Columbia Basin. The Wildlife Society, Milwaukee, WI. (oral presentation, *****presented in place of first author)

DeMay, SM, JL Rachlow, LP Waits, and PA Becker (2013) Comparing noninvasive genetic sampling and telemetry to monitor survival and dispersal of juvenile pygmy rabbits. The Wildlife Society, Milwaukee, WI. (poster)

DeMay, SM, JL Rachlow, LP Waits, and PA Becker (2013) Comparing telemetry and fecal DNA sampling methods to quantify survival and dispersal of juvenile pygmy rabbits. American Society of Mammalogists, Philadelphia, PA. (oral presentation)

DeMay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, and LP Waits (2013) Evaluating DNA degradation rates in faecal pellets of the endangered pygmy rabbit. Idaho Chapter of The Wildlife Society, Couer d'Alene, ID. (oral presentation)

DeMay, SM, PA Becker, CA Eidson, JL Rachlow, TR Johnson, and LP Waits (2012) Non-invasive genetic monitoring of the Columbia Basin pygmy rabbit: evaluation of fecal DNA degradation. The Wildlife Society, Portland, OR. (oral presentation)

Invited Presentations

DeMay, SM (2013). Pygmy rabbit recovery in the Columbia Basin. Palouse Audubon Society Guest Presentation, Moscow, ID.

Becker, PA and **SM DeMay** (2013). Pygmy rabbit recovery in the Columbia Basin. North Cascades Basecamp Winter Ecology Speaker Series, Mazama, WA. (co-presented)

Reviews for Professional Journals

Journal of Basic and Applied Zoology, Journal of Mammalogy, Molecular Ecology, Molecular Ecology Resources, Oryx

HONORS AND AWARDS

Best Fish & Wildlife PhD poster and Overall Best Poster, 2015 College of Natural Resources Poster Competition, University of Idaho

Outstanding Undergraduate Student Award, Environmental Science, University of Idaho, 2011

2nd Place Undergraduate Research Poster, 2011 Innovation Showcase, University of Idaho

Moscow Mayor's Earth Day Award (with 5 other recipients for wetland restoration work, 2010)

Alumni Award for Excellence, University of Idaho, 2010

2007-2011 Dean's List

National Merit Scholarship Finalist, 2007

GRANTS AWARDED

DeMay, SM (2014) Reintroduction and genetic monitoring of the endangered Columbia Basin pygmy rabbit. Sophie Danforth Conservation Fund, Roger Williams Park Zoo: $1000

Waits, LP, **SM DeMay** (2014) Course Development of WLF 404: Endangered Species Population Monitoring. University of Idaho Service Learning Program: $720

DeMay, SM (2013) Noninvasive genetic monitoring of the endangered Columbia Basin pygmy rabbit. Washington Chapter of the Wildlife Society Research Grant: $2500

DeMay, SM (2013) Noninvasive genetic monitoring of the endangered Columbia Basin pygmy rabbit. Palouse Audubon Society Graduate Student Research Grant: $500

OTHER TRAININGS

Managing Wildlife Conservation and Management Conflicts through Formalized Conservation Action Planning (2017) The Wildlife Society, Albuquerque, NM (8 hrs)

An Introduction to Spatial Capture-Recapture (2016) The Wildlife Society, Raleigh, NC (8 hrs)

Introduction to Structured Decision Making (2016) National Conservation Training Center, Shepherdstown, VA (36 hrs)

Occupancy Modeling Workshop (2015) University of Idaho, Moscow, ID (32 hrs)

Resource Selection Analysis Workshop (2015) University of Idaho, Moscow, ID (16 hrs)

Animal Trapping Techniques for Researchers and Managers Workshop (2013) The Wildlife Society, Milwaukee, WI (8 hrs)

Spanish language, conversationally proficient

PERSONAL INTERESTS

Hiking, camping, reading, vintage swing dance, astronomy, travel, playing music, gardening