

REESA CATHELIN YALE CONREY

Colorado Parks and Wildlife
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EDUCATION

Colorado State University

May 2010

Ph.D. Ecology

Fort Collins, CO 80523

Program for Interdisciplinary Mathematics, Ecology, and Statistics (PRIMES)

Dissertation title: Breeding success, prey use, and mark-resight estimation of burrowing owls nesting on black-tailed prairie dog towns: plague affects a non-susceptible raptor.

Advisor: Michael F. Antolin

Honors/Awards: National Science Foundation IGERT Fellowship (PRIMES)

University of Montana

Dec. 2002

M.S. Wildlife Biology

Missoula, MT 59812

Thesis title: Do highways influence population connectivity in small mammals?

Advisors: L. Scott Mills and Roland Redmond

Dartmouth College

June 1998

B.A. Environmental and Evolutionary Biology

Hanover, NH 03755

Honors/Awards: Magna cum Laude, Phi Beta Kappa Society, National Merit Scholar

Foreign Study: Biology (Costa Rica and Jamaica), Environmental Studies (Kenya)

PROFESSIONAL EXPERIENCE

Avian Researcher

June 2012 – present

Colorado Parks and Wildlife

Fort Collins, CO

Conduct research on game, non-game, and imperiled species with a focus on grassland bird species of concern. Major project: Avian response to plague management on Colorado prairie dog towns. Design and oversee field research, data management, analysis, and reporting. Consult on lesser prairie-chicken research, serve on committees (Animal Care & Use; Great Plains Landscape Conservation Cooperative), research climate effects on grassland birds and plague effects on burrowing owls.

Wildlife Biologist

March 2011 – June 2012

Rocky Mountain Bird Observatory

Fort Collins, CO

Conducted avian research and administered habitat conservation projects on private lands in shortgrass prairie. Coordinated projects among private partners and public agencies, designed scientific studies, secured funds, analyzed data, reported on results for funders, managers, scientists, and the general public. Focused on Mountain Plover conservation, nest and brood monitoring using banding and radio telemetry on crop fields.

Biologist (Post-doctoral Research)

June 2010 – June 2012

U.S. Geological Survey, FORT

Fort Collins, CO

Explored potential effects of climate change on a suite of shortgrass prairie breeding birds. Processed data from > 2500 bird nests and ~ 50 weather stations. Analyzed influence of precipitation and temperature on daily nest survival of Mountain Plovers and passerines using Program MARK.

Ph.D. Student (Dissertation Research)**Jan 2005 – May 2010**

GDPE and PRIMES, Colorado State University Fort Collins and Pawnee National Grassland, CO
Evaluated effects of rainfall and introduced disease on non-susceptible burrowing owls. Located and monitored 322 burrowing owl nests in Colorado, banded owls, and identified > 8100 owl prey items. Estimated abundance and survival using mark-resight modeling. Analyzed effects of rainfall and plague outbreaks in prairie dogs on owl nest fate, density, productivity, and prey use.

Instructor**May – August 2003 & June – July 2004*****Yellowstone Association Institute*****Gardiner, MT and Yellowstone National Park, WY**

Led educational programs for adults and school groups targeted at increasing understanding and appreciation of ecology, conservation, and park management issues.

M.S. Student (Thesis Research)**August 1999 – Dec. 2002*****Wildlife Biology Program, University of Montana*****Western MT**

Analyzed effects of highways on small mammal population connectivity using mark-recapture modeling, F-statistics, and genetic assignment tests. Recorded > 3800 live captures of 1600 small mammals and genotyped 1200 individuals at six microsatellite loci.

TEACHING POSITIONS AND ASSISTANTSHIPS

- **Teaching Assistant, Program MARK Workshop:** Colorado State University / Central Michigan University, May 2009.
- **Teaching Assistant, Principles of Plant Biology Lab:** Biology Department, Colorado State University, 2004–2007.
- **Teaching Assistant, Molecular and General Genetics:** Biology Department, Colorado State University, 2004.
- **Genetics Laboratory Research Assistant:** Wildlife Biology Program, University of Montana, 2003.
- **Spatial Analysis Lab Assistant:** Wildlife Spatial Analysis Lab, University of Montana, 1999–2000.
- **Wild Animal Keeper:** Prospect Park Zoo, Wildlife Conservation Society, Brooklyn, NY, 1998–1999.
- **Field Research Assistant:** Dartmouth College and Minnesota Dept. of Natural Resources, Itasca State Park, MN, 1998.
- **Foreign Study in Tropical Ecology:** Biology Foreign Study Program, Dartmouth College, Costa Rica and Jamaica, 1998.
- **Natural History Intern:** Wachusett Meadow Wildlife Sanctuary, Massachusetts Audubon Society, Princeton, MA, 1997.
- **Foreign Study in Conservation and Development:** Environmental Studies Foreign Study Program, Dartmouth College. Kenya, 1997.

PUBLICATIONS

- Dreitz, V. J., R. Yale Conrey, and S. K. Skagen. 2012. Drought and cooler temperatures are associated with higher nest survival in Mountain Plovers. *Avian Conservation and Ecology* 7(1):6.
<http://dx.doi.org/10.5751/ACE-00519-070106>
- Gillihan, S. W., N. Drilling, and R. Y. Conrey. 2012. *Pocket Guide to Birds of Nebraska*. Rocky Mountain Bird Observatory, Brighton, Colorado.
- Conrey, R.Y. 2010. Breeding success, prey use, and mark-resight estimation of burrowing owls nesting on black-tailed prairie dog towns: plague affects a non-susceptible raptor. Ph.D. Dissertation, Colorado State University, Fort Collins, Colorado.

- Conrey, R.Y. 2009. Summary of CDOW burrowing owl data collected in 2007. Colorado Division of Wildlife Technical Report. Colorado Division of Wildlife, Fort Collins, Colorado, 24pp.
- Conrey, R.Y and L.S. Mills. 2003. Highways as potential barriers to movement and genetic exchange in small mammals. FHWA/MT-02-013/8152, Final Report. Montana Department of Transportation, Missoula, Montana.
- Conrey, R.Y. 2002. Do highways influence population connectivity in small mammals? M.S. Thesis, University of Montana, Missoula, Montana.
- Conrey, R.Y. and L.S. Mills. 2002. Do highways fragment small mammal populations? Pages 448-457 in International Conference on Ecology and Transportation 2001 Proceedings, Gary Evink, Editor. September 2001, Keystone, Colorado.
- Conrey, R. Y., S. K. Skagen, and A. Panjabi. *Under revision*. Heat and precipitation extremes depress nest survival in shortgrass prairie birds. Revising for Ibis.

SELECTED PROFESSIONAL PRESENTATIONS

- Conrey, R. Y., D. W. Tripp, E. N. Youngberg, and A. O. Panjabi. 2014. Avian response to plague management on black-tailed and Gunnison's prairie dog colonies. Joint meeting of the American Ornithologists' Union, Cooper Ornithological Society, and Society of Canadian Ornithologists, Estes Park, Colorado (oral).
- Conrey, R. Y. and D. W. Tripp. 2014. Prairie birds, prairie dogs, and the Black Death. IGNITE Biodiversity Series (Colorado State University sponsored), Fort Collins, Colorado (oral).
- Conrey, R. Y., J. Jorgensen, B. Bly, T. VerCauteren, L. Snyder, and J. Blakesley. 2011. Mountain Plovers and private landowners: lessons learned over time. Nebraska Natural Legacy Project Annual Conference, Grand Island, Nebraska (oral).
- Conrey, R. Y., S. K. Skagen, and V. J. Dreitz. 2011. Precipitation and temperature influence nest survival of shortgrass prairie birds. Combined meeting of Association of Field Ornithologists, Cooper Ornithological Society, and Wilson Ornithological Society, Kearney, Nebraska (oral).
- Conrey, R. Y., M. F. Antolin, and L. T. Savage. 2010. Rainfall and introduced plague influence breeding success in a non-susceptible dryland species, the burrowing owl. Raptor Research Foundation Annual Conference, Fort Collins, Colorado (oral).
- Conrey, R. Y., B. McClintock, and M. F. Antolin. 2009. Estimating productivity for burrowing owls influenced by plague: mark-resight vs. observational methods. The Wildlife Society Annual Conference, Monterey, California (oral).
- Conrey, R. Y., M. Christ, J. Dugan, M. Rauh, S. Streich, and M. F. Antolin. 2009. Effects of plague and precipitation on burrowing owl diet and breeding success. Meeting of the American Ornithologists' Union, Philadelphia, Pennsylvania (oral).
- Conrey, R. Y. and M. F. Antolin. 2009. Plague and rainfall affect breeding burrowing owls in Colorado. Ecological Society of America Annual Meeting, Albuquerque, New Mexico (oral).
- Conrey, R. Y. and M. F. Antolin. 2006. Abundance and nest success in burrowing owl populations that are influenced by prairie dogs and plague. Fourth North American Ornithological Conference, Veracruz, Mexico (poster).
- Conrey, R. Y. and M. F. Antolin. 2006. Burrowing owls on the Pawnee National Grassland, Colorado: effects of prairie dog – plague dynamics on population status. Third International Burrowing Owl Symposium, Veracruz, Mexico (oral).
- Conrey, R. Y. and L. S. Mills. 2002. Do highways fragment small mammal populations in the Northern Rockies? An example from western Montana. The Wildlife Society Annual Conference, Bismarck, North Dakota (oral).
- Conrey, R. Y. and L. S. Mills. 2002. Highways as agents of population fragmentation. Society for Conservation Biology Annual Meeting, Canterbury, U.K. (oral).

Conrey, R. Y. and L. S. Mills. 2001. Do highways fragment small mammal populations? International Conference on Ecology and Transportation, Keystone, Colorado (oral).

PROFESSIONAL AND COMMUNITY INVOLVEMENT

- > 30 presentations and booths at scientific conferences and for birding groups, classes (K-12 and college), and landowner groups
- Christmas Bird Count (5 years)
- Mentoring of undergraduate researchers
- Membership in the Wildlife Society and Cooper Ornithological Society
- Co-chair, Front Range Student Ecology Symposium (2005)
- Peer-review of manuscripts