

Kelly J. Pearce
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EDUCATION

- 2013- **Ph.D. Candidate, University of Maryland Center for Environmental Sciences**
Marine, Estuarine, and Environmental Sciences
Co-Advisors: Dr. Thomas Serfass and Dr. Cathlyn Stylinski
AOS: Ecology and Environmental Science
Working Dissertation: The influence of the river otter (*Lontra canadensis*) on aquatic conservation in the Greater Yellowstone Ecosystem: A human-dimensions approach on evaluating conservation flagships
- 2010-2012 **M.S., Frostburg State University**
Applied Ecology and Conservation Biology, Advisor: Dr. Thomas Serfass
Thesis: River otter (*Lontra canadensis*) visitation at fish-rearing facilities in Pennsylvania
- 2005-2009 **B.S., Juniata College**
Wildlife Conservation with a concentration in Education, *cum laude*

TEACHING/PROFESSIONAL RESEARCH EXPERIENCE

- 2017- **Faculty (Non-tenure track)**, Frostburg State University, Department of Biology and Natural Resources
Courses taught: *Wildlife and Society: The Science of Human Dimensions* (Graduate Seminar), *Scientific Investigation and Communication*, *Biology*, and *Biology Lab*
- 2015- **Co-Principal Investigator**, Frostburg State University/Maryland Department of Natural Resources Natural Heritage Program “A survey for eastern spotted skunk in western Maryland and a review of its distribution in the central Appalachians”
- 2016-2018 **Research Associate**, Frostburg State University “Identifying and targeting intervention strategies for Allegheny woodrat recovery”
- 2013-2017 **Field Technician**, University of Maryland Center for Environmental Science, Appalachian Lab
“Spring emergence and fall swarming bat surveys at abandoned railroad tunnels and caves in Western Maryland” and “Summer bat acoustic surveys in western Maryland”
- 2013-2016 **Adjunct Instructor**, Frostburg State University, Department of Biology and Natural Resources
Courses taught: *The Role of Social Sciences in Conservation and Wildlife Management* (Graduate Seminar), *Biology* and *Biology Lab*
- 2015/2016 **Science Educator**, Yellowstone Forever Institute
Designed and co-lead a summer adult learning course, *Life Aquatic: River otters in Yellowstone*
- 2013-2014 **Graduate Teaching Assistant**, University of Maryland, College Park
Courses taught: *Exploring Sustainability: Environment, Technology, Economy*
- May-June 2013 **Field Technician**, Frostburg State University, Department of Biology and Natural Resources
“Bridge surveys for beavers and river otters in North Dakota”
- June-Aug 2013 **Science Instructor**, Frostburg State University, Upward Bound Program
Designed and implemented a summer course for low-income high school students: “Behavioral response in Tree Swallows during presence of two different predators”
- Jan-May 2013 **Biology Course Administrator**, Frostburg State University

Redesigned the structure of the *Introductory Non-majors Human Biology and the Environment* course, including creating a standardized syllabus, PowerPoint presentations, inquiry-based laboratory exercises and weekly learning objectives

2011-2012 **Graduate Teaching Assistant**, Frostburg State University,
Courses taught: *Biology, and Human Biology and the Environment*

June-Aug 2012 **Science Instructor**, Potomac State Upward Bound
Courses taught: *Biology, Environmental Science, Human Anatomy, and Chemistry*

2012/2013 **Science Educator/Interpreter**, Ohio State Park: Park Venture Outdoor Festival

May-Aug 2010 **Environmental Educator Summer Intern**, Shavers Creek Environmental Center

RESEARCH

Co-Principal Investigator, Frostburg State University and West Virginia Department of Natural Resources, 2018-
Habitat selection and home range dynamics of the eastern spotted skunk (*Spilogale putorius*) in West Virginia

- Organized camera-trapping and live-trapping efforts
- Collected day and night time radiolocations
- Used ArcGIS to map home-range and den locations
- Supervised a Masters student, and managed team of undergraduate students

Co-Principal Investigator, Frostburg State University/Maryland Department of Natural Resources Natural Heritage Program, 2015-

A survey for eastern spotted skunk in western Maryland and a review of its distribution in the central Appalachians

- Developed and conducted camera-trap efforts to determine presence of spotted skunks
- Used Maximum Entropy Models (MaxEnt) in ArcGIS to model probability of occurrence and habitat suitability models in Maryland
- Organized and analyzed camera trap data
- Conducted social surveys of fur trappers, sportsmen group members
- Created written reports that included an analysis of results and management recommendations

Research Associate, Frostburg State University, 2016-2018

Identifying and targeting intervention strategies for Allegheny woodrat (*Neotoma magister*) recovery

- Assisted with mark-recapture efforts of Allegheny woodrats
- Managed a team of students to assist with data collection
- Prepared spatially explicit population models in R statistical software
- Developed, conducted, and supervised a team to deploy field cameras at multiple sites
- Organized and analyzed camera trap data for activity patterns and behavioral responses
- Used ArcGIS to identify areas of potential habitat
- Prepared quarterly reports for granting agency

Ph.D. Research, University of Maryland Center for Environmental Sciences, Appalachian Laboratory, 2013-

Working Dissertation: **The influence of the river otter (*Lontra canadensis*) on aquatic conservation in the Greater Yellowstone Ecosystem: A human-dimensions approach on evaluating conservation flagships**

- Conducted camera-trap surveys at river otter latrines to understand activity patterns and habitat selection of river otters on the Snake River
- Developed a “probability of observation” model based on activity patterns and landscape characteristics
- Assessed food habits of river otters on Snake River in Grand Teton National Park
- Developed distribution models based on presence-only data
- Developed and conducted place-based questionnaires to determine attitudes of aquatic recreationists towards river otters and other wildlife in the Greater Yellowstone Ecosystem, including Yellowstone and Grand Teton National Parks
- Assessed the influence of the river otter on the formation of pro-conservation behavioral intentions

- Evaluated how various socio-demographic factors influence people's attitudes towards the river otter
M.S. Thesis, Frostburg State University, 2010-2012

River otter (*Lontra canadensis*) impact at fish-rearing facilities in Pennsylvania

- Developed and conducted phone and mail questionnaires of owners and managers of fish-rearing facilities in PA to determine otter visiting rates at fish-rearing facilities
- Investigated economic impact of river otter depredation at fish-rearing facilities
- Evaluated ecological and anthropogenic factors useful for predicting and mediating conflict

PROFESSIONAL PRESENTATIONS

Pearce, K.J., and Serfass, T.L. 2017 *Identifying biological characteristic that support the use of the river otter (*Lontra canadensis*) as a flagship species*, at the 6th International Pathways Conference, Integrating Human Dimensions into Fish and Wildlife Management, Estes Park, Colorado, 17th-20th September 2017

Jefferson, K. **Pearce, K.J.** Serfass, T.L., Feller, D.J., Hotopp, A.M. and Brosi. S.L. *Comparison of detection patterns of Allegheny woodrats (*Neotoma magister*) at existing colonies using live traps and remote cameras*, poster, at the 5th Annual CLAS Undergraduate Research Symposium (Frostburg State University) 5th May 2017

Boyd, C.M., Johnstone, J.B., Ashcraft, E.R., **Pearce, K.J.** and Serfass, T.L. *Comparing the diet of the river otter (*Lontra canadensis*) between Wyoming and Pennsylvania through scat analysis*, poster, at the 5th Annual CLAS Undergraduate Research Symposium (Frostburg State University) 5th May 2017

Pearce, K.J., Feller, D.J., and Serfass, T.L. *Population estimates of the Allegheny Woodrat (*Neotoma magister*) in Maryland based on long-term capture-recapture data*, at the 73rd Annual Northeast Fish and Wildlife Conference (Norfolk, VA), 9th-11th April 2017

Hotopp, A.M, **Pearce, K.J.** Serfass, T.L., and Feller, D.J., Brosi, S.L. *Evaluating interactions between Allegheny woodrats (*Neotoma magister*) and raccoons (*Procyon lotor*) in western Maryland using remote cameras*, at the 73rd Annual Northeast Fish and Wildlife Conference (Norfolk, VA), 9th-11th April 2017

Duda, E., Brosi, S.L., Dayton, A.J., Gonzales, B.G., **Pearce, K.J.**, and Serfass, T.L. *Twenty-five years of Allegheny woodrat population and oak-mast surveys across western Maryland*, poster, at the 73rd Annual Northeast Fish and Wildlife Conference (Norfolk, VA), 9th-11th April 2017

Pearce, K.J., Serfass, T.L., McCann, J.M, and Feller, D. *A survey for eastern spotted skunk in western Maryland*, presentation, at the 27th Annual Colloquium on the Conservation of Mammals in the Southeastern U.S. (Asheville, NC, 16th-17th February 2017

Pearce, K.J., Serfass, T.L., and Morgan, R.P. II. *Assessing the potential of the river otter (*Lontra canadensis*) to serve as an aquatic flagship for the Greater Yellowstone Ecosystem: A human-dimensions approach for promoting aquatic conservation*, poster, at the MEES Colloquium (College Park, MD), 7th-8th October 2016

Pearce, K.J., Serfass, T.L., and Morgan, R.P. II. *Assessing the potential of the river otter (*Lontra canadensis*) to serve as an aquatic flagship for the Greater Yellowstone Ecosystem: A human-dimensions approach for promoting aquatic conservation*, poster, at the Biennial Greater Yellowstone Ecosystem Conference (Grand Teton National Park), 4th-6th October 2016

Serfass, T.L. and **Pearce, K.J.** *North American river otters in the Greater Yellowstone Ecosystem, USA and spotted-necked otters in Rubondo Island National Park, Tanzania: A contrast in human-dimensions challenges for developing an aquatic flagship*, presentation, at the Biennial Greater Yellowstone Ecosystem Conference (Grand Teton National Park), 4th-6th October 2016.

Pearce, K.J. Serfass, T.L., and Morgan, R.P. II. *Assessing the potential of the river otter (*Lontra canadensis*) to serve as an aquatic flagship for the Greater Yellowstone Ecosystem: a human-dimensions approach for promoting aquatic conservation*, at the 13th International Otter Congress 2016: "Otters & People," Singapore Zoological Gardens, Singapore, 3rd-8th July 2016

Pearce, K.J., Serfass, T.L., and Morgan, R.P. II. *The influence of angler attitudes towards the river otter (Lontra Canadensis) on its ability to serve as an aquatic flagship species* at the Northeast Association of Fish and Wildlife Agency Conference (Annapolis, MD), 3rd-5th April 2016

Pearce, K.J., Serfass, T.L., McCann, J., Feller, D.J. *A survey for eastern spotted skunks (Spilogale putorius) in western Maryland*, poster, at the Northeast Association of Fish and Wildlife Agency Conference (Annapolis, MD), 3rd-5th April 2016

Pearce, K.J., Serfass, T.L., and Morgan, R.P. II. *Influence of the river otter (Lontra canadensis) on formation of pro-conservation intentions in the Greater Yellowstone Ecosystem* at the MEES Colloquium (Annapolis, MD) 30th-31st October 2015

Pearce, K.J., Serfass, T.L., McCann, J.M., Feller, D.J., and G.G. Turner. *A survey for eastern spotted skunks (Spilogale putorius) in western Maryland and a review of its distribution in the central Appalachians* at the Northeast Fish and Wildlife Conference (Newport, RI), 19th-21st April 2015

Pearce, K.J., Serfass, T.L., Stevens, S.S. *Influence of physical and landscape characteristics of fish-rearing facilities on river otter visitation in Pennsylvania* at The Wildlife Society National Conference (Pittsburgh, PA) 26th-30th October 2014

Hassler, K.N., **Pearce, K.J.**, Stevens, S.S., Serfass, T.L. *Survey methods in human dimensions of wildlife: comparing electronic tablets to traditional paper surveys* at The Wildlife Society National Conference (Pittsburgh, PA) 26th-30th October 2014

Pearce, K.J., Bohrman, J., Stevens, S.S., Serfass, T.L. *Influence of stakeholder identification on attitudes towards beaver control methods in North Dakota* at the Pathways: Integrating Human Dimensions into Fisheries and Wildlife Management (Estes Park, CO) 5th-9th October 2014

Ashcraft, K.J., Serfass, T.L., Stevens, S.S. *Do reintroduced river otters present a problem for fish-rearing facilities in Pennsylvania? Ecological and anthropogenic factors useful for predicting and mediating conflict* at the International Symposium on Society and Resource Management (Estes Park, CO) 4th-8th June 2013

Ashcraft, K.J., Serfass, T.L., Stevens, S.S. *River otter (Lontra canadensis) impact at fish-rearing facilities in Pennsylvania* at the 68th annual Northeast Fish and Wildlife Conference (Charleston, WV) 15th-17th April 2012

Ashcraft, K.J., Serfass, T.L., Stevens, S.S. *River otter (Lontra canadensis) visitation at fish-rearing facilities in Pennsylvania* at Pathways to Success Conference: Integrating Human Dimensions in Fish and Wildlife (Breckenridge, CO) 24th-27th September 2012

Ashcraft, K.J., Serfass, T.L., Stevens, S.S. *River otter (Lontra canadensis) visitation at fish-rearing facilities in Pennsylvania* (a poster) at Fall Meeting Maryland/Delaware Chapter of The Wildlife Society, 21 September 2012

Ashcraft, K.J., Ramakrishnan, U., Day, M., Krause, J. *Using Prescribed Burns to Improve Wildlife Habitat in Oak Forests* at the Pennsylvania meeting of The Wildlife Society (State College, PA) 15 March 2009

Ashcraft, K.J., Ramakrishnan, U., Day, M., Krause, J. *Using Prescribed Burns to Improve Wildlife Habitat in Oak Forests* at the 65th annual Northeast Fish and Wildlife Conference (Lancaster, PA) 26 April 2009

Publications

2018

Hassler, K.H., **Pearce, K.J.**, and Serfass, T.L. *On-site survey administration in human dimensions of wildlife: Comparing paper surveys to electronic tablets*. International Journal of Social Research Methodology xx-xx.

Pearce, K.J., Serfass, T.L., Styliniski, C. *Influence of the river otter (Lontra Canadensis) on the formation of pro-conservation intentions in the Greater Yellowstone Ecosystem*. Environment and Behavior, *in review*.

Pearce, K.J., Feller, D.J., Serfass, T.L. *Population estimates of the Allegheny woodrat (Neotoma magister) in Maryland based on long-term capture-recapture data*, *in progress*.

2017

Bricker, E.A., Serfass T.L., Ammer, F.K., Hanley, Z.L., **Pearce, K.J.**, and Stevens, S.S. Conservation status of the North American river otter (*Lontra canadensis*) in the United States and Canada: Management practices and public perceptions of the species in xx-xx E. D. Linh San, J.J. Sato, J.L. Belant and M.J. Somers, Editors, Small Carnivores: Evolution, ecology, behavior and conservation, *in press*.

Pearce, K.J., Serfass, T.L., Stevens, S.S., and Ashcraft, S.A. Applying social and ecological approaches to evaluate factors influencing river otter (*Lontra canadensis*) visitation to fish-rearing facilities in Pennsylvania. *European Journal of Wildlife Research* 63(2) 1-8.

Serfass, T.L., Wright, L., **Pearce, K.J.**, Duplax, N. Animal welfare issues pertaining to the trapping of otters for research and fur *in* A. Butterworth, Editor, *Marine Mammal Welfare*, Springer.

2015

Pearce, K.J. and Serfass, T.L. Assessing the potential of the river otter (*Lontra canadensis*) to promote aquatic conservation in the Greater Yellowstone Ecosystem: A unique approach for developing a long-term aquatic flagship. University of Wyoming National Park Service Research Center Annual Report. Vol. 36.

RESEARCH GRANTS AND AWARDS

2017

River otter (*Lontra canadensis*) latrines and remote cameras: A novel survey approach for detecting rare carnivore species in Grand Teton National Park—\$5000; Columbus Zoo Grant (with Tom Serfass)

2016

Biennial Greater Yellowstone Ecosystem Student Scholarship Award—\$250; GYE conference, Wyoming

“A survey for eastern spotted skunk in western Maryland and a review of its distribution in the central Appalachians”—\$35,000; Maryland Department of Natural Resources, Natural Heritage Program (with Tom Serfass)

Reid Evan Menzer Summer Research Fellowship—\$5000; University of Maryland

International Conference Student Support Award —\$140; University of Maryland

Jacob K. Goldhaber Travel Award—\$600; University of Maryland

2015

“A survey for eastern spotted skunk in western Maryland and a review of its distribution in the central Appalachians”—\$30,000; Maryland Department of Natural Resources, Natural Heritage Program (with Tom Serfass)

Outstanding Wildlife Student of the Year—Maryland/Delaware Chapter of The Wildlife Society

Jacob K. Goldhaber Travel Grant—\$500, University of Maryland

2013-2014

College of Computer, Mathematical and Natural Science, Dean’s Fellowship—\$5,000, University of Maryland

Outstanding Graduate Student in Applied Ecology and Conservation Biology, Frostburg State University

Student Scholarship recipient—\$500; ISSRM conference, Estes Park, CO

2012

Best Graduate student poster at Fall Meeting Maryland/Delaware Chapter of The Wildlife Society

GRADUATE M.S. COMMITTEES

- 2018- Kendyl Hassler, The use of radio-telemetry to determine habitat and den sites of the eastern spotted skunk in West Virginia, Frostburg State University, Department of Biology
- 2016- Alice Hotopp, Influence of reintroduction history on the genetic structure of river otter populations in Pennsylvania, Frostburg State University, Department of Biology
- 2012-2014 Karen Zusi, Habitat-use analysis and survey development for the neotropical river otter (*Lontra longicaudis*) in Costa Rica, Frostburg State University, Department of Biology

UNDERGRADUATE MENTORING

- 2018 Jason Shaeffer (Evaluating river otter latrines on the Youghiogheny River, Pennsylvania), Sam Groat (Small mammal trapping), Josiah Freese and Morgan Stum (Using camera traps to evaluate activity patterns of river otter at latrines), Amanda Miller (Analyzing camera trap images to evaluate relative abundance of Allegheny woodrats)
- 2016 Emily Ashcraft, Michelle Knotts, Jackson Johnstone, Roslynn Powell (Diet analysis of river otters from the Snake River, Grand Teton National Park). Nick Triantis (Using remote cameras to evaluate presence of spotted skunks in Maryland). Kamren Jefferson (Comparing the efficacy of live-trapping and camera-trapping for detecting Allegheny woodrats in western Maryland)
- 2015 Kamren Jefferson, Seth Manion, Patrick O'Brian (Camera-trapping for small mammals in western Maryland)
- 2014-2015 Kendyl Hassler (Conducting social surveys of river-rafting participants on the Snake River, Grand Teton National Park)

PROFESSIONAL MEMBERSHIPS

Graduate Student Council, University of Maryland Center for Environmental Science, 2015-
International Association for Society and Natural Resources, 2013-
International Union of Conservation of Nature (IUCN), Species Survival Commission (SSC) 2012-
International Union of Conservation of Nature (IUCN), River Otter Specialist Group, 2012-
Society of Conservation Biology 2014-
The Wildlife Society, 2011-2016