

Marketa Zimova

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EDUCATION

2014-2019	Ph.D. Wildlife Biology	University of Montana, Missoula, MT
2010-2013	M.S. Fish and Wildlife Biology	University of Montana, Missoula, MT
2006-2009	B.S. Biology	Charles University, Prague, Czech Rep.

APPOINTMENTS

2023-Present	Assistant Professor	Department of Biological Sciences, Ohio University, Athens, OH
2021-2023	Assistant Professor	Department of Biology, Appalachian State University, Boone, NC
2019-2021	Postdoctoral Fellow	Institute for Global Change Biology, University of Michigan, Ann Arbor, MI

PUBLICATIONS

†denotes equal contribution, *denotes undergraduate student, ‡denotes graduate student advisee

- In Revision Shamon H., (and 195 others including **M. Zimova**). SNAPSHOT USA 2021: A third coordinated national camera trap survey of the United States – initial trends.
- In Revision Diggins C., A. Cheeseman, C. Lorenzo, **M. Zimova**, H. Lanier, J. Guerrero, J. Root, and J. Lenocho. Current and emerging threats to North American lagomorphs.
- 2023 22. Sirén A., **M. Zimova**, C. S. Sutherland, J. Kilborn, R. Cliché, L. Prout, L. S. Mills, T. L. Morelli. A Great Escape: The role of climate, resource availability, and density-dependent dynamics on an iconic herbivore along its trailing edge. **Ecography** e06633.
- 2023 21. **Zimova M.**, B. C. Weeks[†], D. E. Willard, S. T. Giery, V. Jirinec, R. Burner, B. M. Winger[†]. Body size predicts the rate of contemporary morphological change in birds. **Proceedings of the National Academy of Sciences of the United States of America** 120(20), e2206971120.
- 2022 20. Weeks, B. C., M. Klemz, H. Wada, R. Darling, T. Dias[†], B. K. O'Brien, M. Zhang, and **M. Zimova**. Temperature, size, and developmental plasticity in birds. **Biology Letters** 18(12), 20220357.
- 2022 19. **Zimova M.**[†], D. Moberg[‡], L. S. Mills, A. J. Dietz, and A. Angerbjörn. Color molt phenology and camouflage mismatch in polymorphic populations of Arctic foxes. **Biology Letters** 18(11), 20220334.
- 2022 18. Kumar, A. V., **M. Zimova**, T. E. Martin, L. S. Mills. Contrasting seasonal effects of climate change influence density in a cold-adapted species. **Global Change Biology** 28, 6228– 6238.
- 2022 17. Kays R., (and 152 others including **M. Zimova**). SNAPSHOT USA 2020: A second coordinated national camera trap survey of the United States during the COVID-19 pandemic. **Ecology** 103(10): e3775.

- 2022 16. Evans, A., **M. Zimova**, S. T. Giery, H. Golden, A. Pastore*, C. Nadeau, and M. C. Urban. An eco-evolutionary perspective on the Humpty-Dumpty effect and community restoration. **Oikos** e08978.
- 2021 15. Miranda I., I. Giska, L. Farelo, J. Pimenta, **M. Zimova**, J. Bryk, L. Dalén, L. S. Mills, K. Zub, J. Melo-Ferreira. Museomics dissects the genetic basis for adaptive seasonal colouration in the least weasel. **Molecular Biology and Evolution** msab177.
- 2021 14. **Zimova M.**, D. E. Willard, B. M. Winger[†], and B. C. Weeks[†]. Widespread shifts in bird migration phenology are decoupled from parallel shifts in morphology. **Journal of Animal Ecology** 90, 2348–2361.
- 2021 13. Cove M., (and 152 others including **M. Zimova**). SNAPSHOT USA 2019: the first coordinated national camera trap survey of the United States. **Ecology** 102(6), e03353.
- 2021 12. Giery S. T., **M. Zimova**, D. Drake, M. Urban. Balancing selection and drift in a polymorphic salamander metapopulation. **Biology Letters** 17(4): rsbl.2020.0901.
- 2020 11. **Zimova M.**, S. T. Giery, S. Newey, J. J. Nowak, M. Spencer, and L. S. Mills. Lack of phenological shift leads to increased camouflage mismatch in mountain hares. **Proceedings of the Royal Society B: Biological Sciences**. 287: 20201786.
- 2020 10. Kumar, A. V., **M. Zimova**, J. R. Sparks, and L. S. Mills. Snow-mediated plasticity in phenology does not prevent camouflage mismatch. **Oecologia** 194, 301–310.
- 2020 9. **Zimova M.**, L. Barnard*, B. M. Davis, A. V. Kumar, D. J. R. Lafferty, and L. S. Mills. Using remote cameras to measure seasonal molt phenology. **Ecosphere** 11(4): e03084.
- 2020 8. Weeks B. C., D. E. Willard, **M. Zimova**, A. A. Ellis, M. L. Witynski, M. Hennen and B. M. Winger. Shared morphological consequences of global warming in North American migratory birds. **Ecology Letters** 23(2): 316-325.
- 2020 7. **Zimova M.**, A. P. K. Sirén, J. J. Nowak, A. M. Bryan, J. S. Ivan, T. L. Morelli, S. L. Suhrer*, J. Whittington and L. S. Mills. Local climate determines vulnerability to camouflage mismatch in snowshoe hares. **Global Ecology and Biogeography** 29(3):503-5015.
- 2019 6. Lafferty[†] D. J. R., **M. Zimova**[†], L. Clontz*, K. Hackländer, and L. S. Mills. Noninvasive measures of physiological stress are confounded by exposure. **Scientific Reports** 9:19170.
- 2018 5. **Zimova, M.**, K. Hackländer, J. M. Good, J. Melo-Ferreira, P. C. Alves and L. S. Mills. Function and underlying mechanisms of seasonal colour moulting in mammals and birds: What keeps them changing in a warming world? **Biological Reviews** 93(3): 1478-1498.
- 2018 4. Mills[†], L. S., E. V. Bragina[†], A. V. Kumar, **M. Zimova**, D. J. R. Lafferty, J. Feltner, B. M. Davis, K. Hackländer, P. C. Alves, J. M. Good, J. Melo-Ferreira, A. Dietz, A. V. Abramov, N. Lopatina, and K. Fay*. Winter color polymorphisms identify global hot spots for evolutionary rescue from climate change. **Science** 359:1033–1036.
- 2016 3. **Zimova, M.**, L. S. Mills, and J. J. Nowak. High fitness costs of climate change-induced camouflage mismatch. **Ecology Letters**: 10.1111/ele.12568.
- 2014 2. **Zimova, M.**, L. S. Mills, P. M. Lukacs, and M. S. Mitchell. Snowshoe hares display limited phenotypic plasticity to mismatch in seasonal camouflage. **Proceedings of the Royal Society B: Biological Sciences** 281(1782): 20140029.

- 2013 1. Mills, L. S., **M. Zimova**, J. Oyler, S. Running, J. T. Abatzoglou, and P. M. Lukacs. Camouflage mismatch in seasonal coat color due to decreased snow duration. **Proceedings of the National Academy of Sciences of the United States of America** 110(18): 7360-7365.

GRANTS & AWARDS

- Pending **U.S. Geological Survey National Climate Adaptation Science Center.** Assessment of Adaptive Capacity for Assisted Migration of Wildlife in the Northeastern U.S. and Beyond. Role: Co-PI with L. Gigliotti, A. Siren, E. Boyd. Amount: \$408,774.
- Pending North Carolina Wildlife Resources Commission. Distribution, abundance, and diet of two woodrat species in a zone of contact in western North Carolina. Role: Co-PI with M. Cove. Amount: \$188,000.
- 2023 **NSF: BoCP.** Collaborative Research: Functional biodiversity on a changing planet through the lens of seasonal camouflage. Role: PI. Amount: \$1,581,500. *Not funded.*
- 2023 Oak Ridge Associated Universities, Ralph E. Powe Award. Climate change effects on mammals of the Appalachian sky islands. Role: PI. Amount: \$9,800. *Not funded.*
- 2022 Appalachian State University, University Research Council Grant. Mammalian communities of the Appalachian sky islands. Role: PI. Amount: \$5,000.
- 2022 Appalachian State University, Graduate Research Assistant Mentoring Program (GRAM) Fellowship. Role: Academic advisor. Amount: \$28,000.
- 2022 Appalachian State University, Faculty Excellence Grant. Climate change responses in sky islands mammals. Role: PI. Amount: \$2,000.
- 2022 **George Mercer Award, Ecological Society of America.** For Weeks, Willard, Zimova et al. 2020. Shared morphological consequences of global warming in North American migratory birds. *Ecology Letters*. Amount: \$1,000.
- 2019 Evolutionary Demography Society, Conference Travel Grant. Amount: \$2,000.
- 2019 National Wildlife Federation, Conference Travel Grant. Amount: \$1,000.
- 2019 EMBO Post-doctoral Fellowship. Predicting evolutionary adaptation in wild populations. Role: PI. Amount: \$104,100. *Not funded.*
- 2018 Experiment (previously *Microriza*), Publicly funded. Role: PI. Amount: \$4,520.
- 2019 NSF: UNVEIL, Graduate Research Fellowship. Amount: \$30,000.
- 2017 United States Geological Survey, NE CASC, Global Change Fellowship.
- 2017 Royal Society Newton International Fellowship. Predicting evolutionary potential in a critical phenotype subject to climate-induced selection. Role: PI. Amount: \$76,000 *Not funded.*
- 2016 NCSU, Nicholson Short-term Exchange Award. Role: PI. Amount: Seasonal color molts and camouflage mismatch in Arctic fox in Sweden. Role: PI. Amount: \$10,300.
- 2015 The Explorers Club, The Exploration Fund Grant. Will color molting hares keep pace with climate change? Role: PI. Amount: \$1,500.
- 2015 NCSU, Zobel Endowment for International Studies. Adaption in seasonal color molts might rescue important forest species from climate change. Role: PI. Amount: \$1,400.
- 2015 The World Lagomorph Society, Conference Travel Grant. Amount: \$500.
- 2014 **United States Geological Survey**, Southeast Climate Adaptation Science Center, Global Change Fellowship. Amount: \$23,000.

2014 NCSU, Laarman International Travel Award. Climate change adaptation in Scottish mountain hares. Role: PI. Amount: \$2,500.

TEACHING & MENTORING EXPERIENCE

2024 Conservation Biology BIOS 4810, Ohio University, Athens, OH. Instructor. *In Prep.*
2023- Graduate Student Research, Ohio University, Athens, OH. Supervisor.
2023- Undergraduate Honors Thesis, Appalachian State University, Boone, NC. Supervisor
2022- Graduate Student Research, Appalachian State University, Boone, NC. Supervisor.
2022-2023 **Comparative Vertebrate Zoology BIO 3314**, Appalachian State University, Boone, NC. Instructor.
2021-2023 **Ecology BIO 3302**, Appalachian State University, Boone, NC. Laboratory Instructor.
2021-2023 Undergraduate Independent Research BIO 3500, Appalachian State University, Boone, NC. Supervisor.
2018-2022 Undergraduate Honors Thesis, University of Montana, Missoula, MT. Co-supervisor.
2017-2019 Undergraduate Research Practicum, University of Massachusetts, Amherst, MA. Co-supervisor.
2016-2017 MS Student Thesis, Stockholm University, Stockholm, Sweden. Co-supervisor.
2013-2014 Undergraduate Honors Thesis, University of Montana, Missoula, MT. Co-supervisor.
2013 Introductory Multicultural Summer Undergraduate Research Experience (IM-SURE), University of Montana, Missoula, MT. Supervisor.
2012 Genetics and Evolution BIO 220, University of Montana, Missoula, MT. Teaching Assistant.
2012 Conservation of Wildlife Populations BIO 470, University of Montana, Missoula, MT. Teaching Assistant.
2010-2014 Research and Education Assistance Program (REU), University of Montana, Missoula, MT. Supervisor.

INVITED TALKS & LECTURES

2023 Duke University, Durham, NC. *University Program in Ecology*. Invited speaker.
2023 Ohio University, Athens, OH. *Dept of Biology*. Invited speaker.
2023 University of North Carolina, Chapel Hill, NC. *Dept of Biology*. Invited speaker.
2022 University of Illinois, Urbana-Champaign, IL. *Dept of Natural Resources & Environmental Sciences*. Invited speaker.
2022 University of Tennessee, Knoxville, TN. *Dept of Ecology & Evolutionary Biology*. Invited speaker.
2022 University of North Carolina, Chapel Hill, NC. *Dept of Biology*. Invited speaker.
2022 Appalachian State University, Boone, NC. *BIO 2300 Biological Careers*. Guest lecturer.
2022 University of Dayton, Dayton, OH. *Dept of Biology*. Invited speaker.
2022 Miami University, Oxford, OH. *Dept of Biological Sciences*. Invited speaker.
2021 University of Wisconsin—Eau Claire. *Dept of Biology*. Invited speaker.
2021 NC Museum of Natural Sciences, Raleigh, NC. *Mammal Biology Unit*. Invited speaker.
2020 University of Wisconsin, Madison, WI. *Dept of Forest and Wildlife Ecology*. Invited speaker.

- 2020 University of Michigan, Ann Arbor, MI. *School for Environment and Sustainability*. Invited speaker.
- 2019 University of Michigan, Ann Arbor, MI. *Dept of Ecology & Evolutionary Biology*. Invited speaker.
- 2018 University of Connecticut, Storrs, CT. *BIO 1108 Principles of Biology*. Guest lecturer.
- 2017 University of Massachusetts, Amherst, MA. *ECO 691 Ecological Impacts of Climate Change*. Guest lecturer.
- 2016 North Highland College, Thurso, Scotland. *Environmental Research Institute*. Invited speaker.
- 2015 United States Geological Survey, *Climate Science Webinar*. Invited speaker.
- 2014 Stockholm University, Stockholm, Sweden. *Dept of Biology*. Invited speaker.
- 2014 University of Montana, Missoula, MT. *WBIO 470 Population Ecology*. Guest lecturer.
- 2014 University of Montana, Missoula, MT. *WBIO 450 Wildlife Conservation*. Guest lecturer.
- 2013 Charles University, Prague, Czech Republic. *Dept of Ecology*. Invited speaker.
- 2012 The Bureau of Land Management, Missoula, MT. *Forest Ecology Seminar*. Invited speaker.
- 2012 Research Centre in Biodiversity and Genetic Resources CIBIO-InBIO, Porto, Portugal. Invited speaker.

CONFERENCE PRESENTATIONS

- 2019 American Fisheries & The Wildlife Society Joint Annual Meeting, Reno, Nevada. **Invited symposium speaker.**
- 2018 14th Annual Early Career Scientists Symposium, University of Michigan, Ann Arbor, MI. **Invited speaker.**
- 2018 Evolutionary Genomics of Adaptation, Flathead Lake BioStation, MT.
- 2018 Graduate Student Research Symposium, University of Connecticut, Storrs, CT.
- 2016 World Lagomorph Society Conference, Turlock, CA.
- 2015 7th European Congress of Mammalogy, Stockholm, Sweden.
- 2014 North America Congress for Conservation Biology, Missoula, MT.
- 2014 Evolution International Meeting, Raleigh, NC.
- 2014 Zoology Graduate Student Research Symposium, North Carolina State University, Raleigh, NC. **Best oral presentation.**
- 2013 International Congress for Conservation Biology, Baltimore, MD.
- 2013 The Wildlife Society MT Chapter Annual Conference, Whitefish, MT.

PROFESSIONAL DEVELOPMENT

- 2022 Comprehensive Grant Development and Grant Submission Training. Appalachian State University, Boone, NC. Invited Participant.
- 2022 **Inclusive Teaching: Supporting All Students in the College Classroom.** Columbia University, online. Participant.
- 2022 **Course Accessibility Workshop.** Appalachian State University, Boone, NC. Participant.
- 2020 **Understanding Diversity and Inclusion Course.** Purdue University, online. Participant.

- 2019 Postdoctoral Course on College STEM Teaching. University of Michigan, Ann Arbor, MI. Participant.
- 2019 Continental Network of Camera-Traps Workshop. The Wildlife Society Annual Meeting, Reno, NV. Co-organizer.
- 2018 Actionable Science Co-Production Climate Workshop. Hubbard Brook Research Station, Lincoln, NH. Invited participant.
- 2014 Structured Decision Making Workshop. National Conservation Training Center (USFWS), Shepardstown, WV. Invited participant.

PROFESSIONAL SERVICE

- 2023- Ohio Center for Ecology and Evolutionary Studies (OCEES), Ohio University. Committee Member.
 - 2023- Wildlife Club, Department of Biological Sciences, Ohio University. Faculty Advisor.
 - 2022-2023 Appalachian Advocates, Office of Diversity and Inclusion, Appalachian State University. Faculty Mentor.
 - 2022-2023 Biology Honors Committee. Appalachian State University. Committee Member.
 - 2022-2023 Biology Seminar Committee. Appalachian State University. Seminar Coordinator
 - 2022- North American Lagomorph Working Group. Steering Committee Member.
 - 2021- Southern Appalachian Spruce Restoration Initiative. Committee Member.
 - 2021-2023 Appalachian State University Zoological Collections Committee. Committee Member.
- Journal Reviewer: Bioscience, Condor, Conservation Biology, Ecology, Ecology and Evolution, Ecosphere, Food Webs, Journal of Applied Ecology, Journal of Animal Ecology, Journal of Mammalogy, Mammal Review, Mammalian Biology, Oecologia, Polar Biology.

MEDIA & PRESS COVERAGE

New York Times, Washington Post, The Guardian, BBC, National Geographic, The Atlantic, Wall Street Journal, NPR, Newsweek, Science, The Weather Channel, The Voice of America, Conservation Magazine, High Country News, Discover Magazine, Environmental Health News, The Wildlife Society, two popular science books and one textbook.