

Marketa Zimova

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EDUCATION

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

APPOINTMENTS

2021-Present	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 **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.
- In 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.
- In Diggins C., A. Cheeseman, C. Lorenzo, **M. Zimova**, H. Lanier, J. Guerrero, J. Root, and J. Leno. Current and emerging threats to North American lagomorphs.
- 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.

TEACHING & MENTORING EXPERIENCE

- 2022- Graduate Student Research, Appalachian State University, Boone, NC. Supervisor.
2022- **Comparative Vertebrate Zoology BIO 3314**, Appalachian State University, Boone, NC. Instructor.
2021- **Ecology BIO 3302**, Appalachian State University, Boone, NC. Laboratory Instructor.
2021- 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.

GRANTS & AWARDS

- 2022 North Carolina Wildlife Resources Commission. *\$188,000 Pending*
2022 Oak Ridge Associated Universities, Ralph E. Powe Award. *\$9,800 Pending*
2022 Appalachian State University, University Research Council Grant. \$5,000
2022 Appalachian State University, Summer Stipend for Writing a Grant. \$3,500
2022 Appalachian State University, Faculty Excellence Grant. \$2,000
2022 **George Mercer Award, Ecological Society of America.** \$1,000.
2019 Evolutionary Demography Society, Conference Travel Grant. \$2,000.
2019 National Wildlife Federation, Conference Travel Grant. \$1,000.
2019 EMBO Post-doctoral Fellowship. *\$104,100. Not funded.*
2018 Experiment (previously Microryza), Publicly funded. \$4,520.
2019 **UNVEIL (NSF), Graduate Research Fellowship.** \$30,000.
2017 United States Geological Survey, NE CASC, Global Change Fellowship.
2017 Royal Society Newton International Fellowship. *\$76,000 Not funded.*
2016 North Carolina State University, Nicholson Short-term Exchange Award. \$10,300.
2016 National Geographic Society/Waite Grants Program. *\$13,300 Not funded.*
2015 The Explorers Club, The Exploration Fund Grant. \$1,500.
2015 North Carolina State University, Zobel Endowment for International Studies. \$1,400.

- 2015 The World Lagomorph Society, Conference Travel Grant. \$500.
 2014 **United States Geological Survey**, SE CASC, Global Change Fellowship. \$23,000.
 2014 North Carolina State University, Laarman International Travel Award. \$2,500.

INVITED TALKS & LECTURES

- 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 Group*. 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

- 2022- Appalachian Advocates, Office of Diversity and Inclusion at Appalachian State University. Faculty Mentor.
- 2022- Departmental Honors Committee. Appalachian State University. Committee Member.
- 2022- Departmental Seminar Committee. Appalachian State University. Committee Member
- 2022- North American Lagomorph Working Group. Steering Committee Member.
- 2021- Southern Appalachian Spruce Restoration Initiative. Committee Member.
- 2021- Zoological Collections Committee. Appalachian State University. Committee Member.
- Journal Reviewer: Bioscience, Condor, Conservation Biology, 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, The 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 books and one textbook.