

# Elizabeth A. Flaherty

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## Education

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Ph.D.        **Zoology and Physiology**, University of Wyoming, 2008  
M.S.        **Biology**, Southeast Missouri State University, 2002  
B.S.        **Wildlife and Fisheries Biology and Management**, University of Wyoming, 2000

## Appointments

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2013-present    Assistant Professor of Wildlife Ecology and Habitat Management, Department of Forestry and Natural Resources, Purdue University, IN.  
2014-present    Adjunct Assistant Professor, Department of Zoology and Physiology, University of Wyoming, WY.  
2011-2013       Assistant Academic Professional Lecturer, Life Sciences Program, Environment and Natural Resources Program, Department of Zoology and Physiology, University of Wyoming, WY.  
2011-2013       Science Content Expert, Math and Science Partnership Grant, University of Wyoming and Converse County School District (WY), P.I. Jennifer Forrester.  
2009-2010       Postdoctoral Research Associate, Department of Zoology and Physiology, University of Wyoming, WY.  
2008-2009       Coordinator for NSF GK-1 Program, UW Science Posse: Enhancing Science Awareness and Understanding in Wyoming.  
2006-2009       Instructor, Chemistry and Wildlife Biology Research courses, Upward Bound Summer Research Program, University of Wyoming, WY.

## Honors and Awards

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2016            Purdue University College of Agriculture - Richard L. Kohls Early Career Award  
2016            Purdue College of Agriculture Nominee for the USDA early career National Award for Excellent in College and University Teaching in the Food and Agricultural Sciences Program  
2015            Teaching for Tomorrow, Purdue University  
2015            Bravo Award, College of Agriculture, Purdue University  
2013            T.S. Harris Award for Service to the Department of Zoology and Physiology, University of Wyoming  
2013            Promoting Intellectual Engagement (PIE) Award, University of Wyoming  
2012            University of Wyoming's James C. Hurst Each Student – A Person Award  
2000            Wyoming Student Chapter of the Wildlife Society's Jack Sinn Memorial Award

## Publications

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*\*denotes graduate student mentored in some capacity by E. Flaherty*

*# denotes undergraduate student*

### Wildlife/Ecological Research Publications

Abercombie, S.A. #, J.L. Berl\*, and R.K. Swihart. *In review*. Seasonal foraging by mice enhances loss of weed seeds from crop-field edges. *Northeastern Naturalist*.  
Berl, J.L.\* , M.M. Voorhees#, J.W. Wu#, **E.A. Flaherty**, and R.K. Swihart. *In review*. Collection of blood from wild-caught mice (*Peromyscus* spp.) via submandibular venipuncture. *Wildlife Society Bulletin*.

- Eckrich, C.A. \*, S. Albeke, **E.A. Flaherty**, R.T. Bowyer, and M. Ben-David. *In review*. rKIN: kernel-based method for estimating isotopic niche size and overlap. *Methods in Ecology and Evolution*.
- Eckrich, C.A. \*, **E.A. Flaherty**, and M. Ben-David. *In review*. Functional and numerical responses of shrews to competitive exclusion vary with mice density. *Ecology*.
- Flaherty, E.A.**, J. Janick, and A. Tucker. *In review*. Animals of the Voynich Codex. *Journal of Natural History*.
- Trapp, S.E. \*, and **E.A. Flaherty**. *In review*. Using noninvasive hair collection from a novel single-capture hair snare to address wildlife management questions. *Wildlife Society Bulletin*.
- Trapp, S.E. \*, **E.A. Flaherty**, P.A. Zollner, C.C. Day, and W.P. Smith. *In review*. Simulating impacts of timber harvest upon dispersal of the endemic Prince of Wales northern flying squirrel (*Glaucomys sabrinus griseifrons*). *Landscape Ecology*.
- Eisinger, J. #, J.S. Scheibe, and **E.A. Flaherty**. 2016. Novel *Glaucomys volans* vocalizations in Indiana and evidence of geographic variation in high frequency communication. *Journal of Mammalogy*. *Early online access*.
- Quakenbush, H. #, L. D'Acunto, **E.A. Flaherty**, and P.A. Zollner. 2016. Testing the efficacy of an acoustic lure on bat mist-netting success in North American central hardwood forests. *Journal of Mammalogy*. *Early online access*.
- Flaherty, E.A.**, M. Ben-David, and J.N. Pauli. 2014. A comparison of locomotor performance and cost of transport between the semi-arboreal Pacific marten and semi-aquatic mustelids. *Canadian Journal of Zoology* 92:259-266.
- Flaherty, E.A.**, A.G. Noakes #, and M. Ben-David. 2014. Success of saphenous venipuncture for field collection of blood from small mammals. *Wildlife Society Bulletin* 38:428-432.
- Eckrich, C. \*, **E.A. Flaherty**, and M. Ben-David. 2013. Estimating leaf area index in Southeast Alaska: a comparison of two techniques. *PLoS ONE* 8:e77642. doi:10.1371/journal.pone.0077642.
- Ben-David, M. and **E.A. Flaherty**. 2012. Theoretical and analytical advances in mammalian isotopic ecology: an introduction. *Journal of Mammalogy* 93:309-311.
- Ben-David, M. and **E.A. Flaherty**. 2012. Stable isotopes in mammalian research – a beginner's guide. *Journal of Mammalogy* 93:312-328.
- Flaherty, E.A.**, M. Ben-David, and W.P. Smith. 2010. Quadrupedal locomotion performance in two species of squirrels: predicting energy savings of gliding. *Journal of Comparative Physiology B: Biochemical, Systems, and Environmental Physiology* 180:1067-1078.
- Flaherty, E.A.** and M. Ben-David. 2010. Overlap and partitioning of the ecological and isotopic niches. *Oikos* 119:1409-1416.
- Flaherty, E.A.**, M. Ben-David, and W.P. Smith, 2010. Diet and food availability of the endemic Prince of Wales northern flying squirrel (*Glaucomys sabrinus griseifrons*): implications for dispersal across a managed landscape. *Journal of Mammalogy* 91:79-91.
- Flaherty, E.A.**, W.P. Smith, S.P. Pyare, and M. Ben-David. 2008. Experimental trials of the northern flying squirrel (*Glaucomys sabrinus*) traversing managed rainforest landscapes: perceptual range and fine-scale movements. *Canadian Journal of Zoology* 86:1050-1058.
- Flaherty, E.A.**, J. Scheibe, and R. Goldingay. 2008. Locomotor performance and cost of transport in the squirrel glider (*Petaurus norfolcensis*) and the sugar glider (*Petaurus breviceps*). *Australian Mammalogy* 30:25-35.
- Flaherty, E.A.**, S.A. Dubay, J. Bradley, J. Marzluff, and G.D. Hayward. 2000. The northern flying squirrel (*Glaucomys sabrinus*) as a potential predator of marbled murrelet (*Brachyramphus marmoratus*) eggs. *Northwest Science* 74: 335-339.

#### Education Publications

- Walker, S.M. \*, **E. A. Flaherty**, J.H. Forrester, and M. Ben-David. *In review*. Practical wildlife training within course-based undergraduate research experiences (CURE). *Wildlife Society Bulletin*.
- Gleichsner, A. \* and **E.A. Flaherty**. 2016. Mini cases in choosing appropriate statistical tests to analyze ecological datasets based on hypotheses and data. National Center for Case Study Teaching in Science. [http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case\\_id=864&id=864](http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=864&id=864)

- Flaherty, E.A.**, C. A. Eckrich\*, and M. Ben-David. 2016. Mystery of the missing martens. National Center for Case Study Teaching in Science.  
[http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case\\_id=862&id=862](http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=862&id=862)
- Flaherty, E.A.**, C. A. Eckrich\*, and M. Ben-David. 2016. Seeing the forest for the trees: managing for multiple use in National Forests. National Center for Case Study Teaching in Science.  
[http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case\\_id=841&id=841](http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=841&id=841)
- Flaherty, E.A.**, C. A. Eckrich\*, and M. Ben-David. 2016. Managers stumped searching for common ground on the Big Thorne Timber Sale: a debate case. National Sciences Education. *Early online access*.
- Jordan, C., **E.A. Flaherty**, and J.F. Prather. 2014. A curious mission: an analysis of Martian molecules. National Center for Case Study Teaching in Science.  
[http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case\\_id=720&id=720](http://sciencecases.lib.buffalo.edu/cs/collection/detail.asp?case_id=720&id=720)
- Jordan, C., A.M. Seliga, and **E.A. Flaherty**. 2014. GTA boot camp: a training program to prepare first-time graduate student teaching assistants. Tested Studies for Laboratory Teaching: Proceedings of the 35<sup>th</sup> Annual Conference of the Association for Biology Laboratory Education (ABLE).
- Flaherty, E.A.** 2014. Animal Biology Lab Manual. 2<sup>nd</sup> Edition. Hayden-McNeil Publishing.
- Flaherty, E.A.** 2013. Animal Biology Lab Manual. Hayden-McNeil Publishing.
- Hotchkiss, E., **E. Flaherty**, A. Krist, and C. Martinez del Rio. 2012. Lab Manual for Animal Biology, 5<sup>th</sup> Edition. Fountainhead Press, Inc.

#### Manuscripts in Progress

- Berl, J.L.\* , K.M. Verble<sup>#</sup>, **E.A. Flaherty**, and R.K. Swihart. *In prep.* Field discrimination of prairie deer mice (*Peromyscus maniculatus bairdii*) and white-footed mice (*Peromyscus leucopus noveboracensis*) using morphological characteristics. Prairie Naturalist.
- Flaherty, E.A.** *In prep.* Locomotor performance and cost of transport in the striped skunk. Journal of Comparative Physiology B: Biochemical, Systems, and Environmental Physiology.
- Flaherty, E.A.**, and J.N. Pauli. *In prep.* Energetic cost of carrying a radiocollar in striped skunks. Journal of Wildlife Management.
- Flaherty, E.A.**, C.C. Day P.A. Zollner, and V. Quinn. *In prep.* Preparing undergraduate students to attend a professional conference. Bioscience.
- Mayes, R.K.\* , C. Eckrich\*, **E.A. Flaherty**, and M. Ben-David. *In prep.* Intra-guild predation in disintegrated spatial refugia drives two-prey two-predator cycles in Southeast Alaska. Journal of Animal Ecology.
- Noakes, A.G.<sup>#</sup>, **E.A. Flaherty**, and M. Ben-David. *In prep.* The responses of least chipmunks to the irruption of bark beetles in Southeastern Wyoming. Journal of Wildlife Management.
- Trapp, S.E.\* , W.P. Smith, and **E.A. Flaherty**. Diet and food availability of the Virginia northern flying squirrel (*Glaucomys sabrinus fuscus*): implications for dispersal in a fragmented forest. Journal of Mammalogy.

#### **Presentations**

\* denotes presenter

#### Abstracts

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|------|---|
| 2016 | Berl*, J.L., S.A. Abercrombie, <b>E.A. Flaherty</b> , and R.K. Swihart. Ecology of native mice in Midwestern row-crop agriculture and implications for ecosystem services. Annual Meeting of the American Society of Mammalogists, Minneapolis, MN.       |
| 2016 | Quackenbush, H., L.E. D'Acunto*, <b>E. Flaherty</b> , and P.A. Zollner. Testing the efficacy of an acoustic lure on bat mist netting success in North America. Annual Meeting of the American Society of Mammalogists, Minneapolis, MN.                   |
| 2016 | Abercrombie*, S.A., J.L. Berl, <b>E.A. Flaherty</b> , and R.K. Swihart. Seasonal foraging by forest mice enhances loss of weed seeds from crop field edges. Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.                           |
| 2016 | Berl*, J.L., <b>E.A. Flaherty</b> , and R.K. Swihart. Does intra-population niche partitioning lead to variation in the functional role of individuals within generalist populations? Annual Meeting of the Indiana Academy of Science, Indianapolis, IN. |

- 2016 Meronk\*, S.E., C.C. Day, E.A. Flaherty, and P.A. Zollner. Investigating the impact of invasive Asian carp on the North American river otter diet. Annual Meeting of the Indiana Academy of Science, Indianapolis, IN.
- 2015 Abercrombie\*, S.A., J.L. Berl, **E.A. Flaherty**, R.K. Swihart. Weed seed predation services by white-footed mice (*Peromyscus leucopus*) in row-crop agriculture. Annual meeting of the Wildlife Society, Winnipeg, Manitoba.
- 2015 Berl\*, J.L., **E.A. Flaherty**, and R.K. Swihart. Does intra-population niche partitioning lead to variation in the functional role of individuals with generalist populations. Annual meeting of the Wildlife Society, Winnipeg, Manitoba.
- 2015 Creaser\*, R.J., **E.A. Flaherty**, and M. Ben-David. Application of 2D and 3D photographic technology to estimate body size and condition of polar bears. Annual meeting of the Wildlife Society, Winnipeg, Manitoba.
- 2015 Eisinger\*, J.W., J.S. Scheibe, and **E.A. Flaherty**. An examination of regional variation in southern flying squirrel ultrasonic communication. Annual Meeting of the American Society of Mammalogists, Jacksonville, FL.
- 2015 **Flaherty\***, E., W. Smith, S. Trapp, and P. Zollner. Predicting persistence of northern flying squirrels (*Glaucomys sabrinus*) in a fragmented landscape using field data, laboratory experiments, and spatially explicit modeling. 7<sup>th</sup> International Colloquium on Arboreal Squirrels, Helsinki, Finland.
- 2015 Meronk\*, S.E., C. Day, **E.A. Flaherty**, P.A. Zollner. Investigating the impact of invasive Asian carp on river otter diet and the native fish communities of Indiana. Annual meeting of the Wildlife Society, Winnipeg, Manitoba.
- 2015 Trapp\*, S.E., **E.A. Flaherty**, W.P. Smith, and P.A. Zollner. Modeling dispersal of the endemic northern flying squirrel in the fragmented temperate rainforest of Southeast Alaska. Midwest Fish and Wildlife Conference, Indianapolis, IN.
- 2014 Trapp\*, S.E., **E.A. Flaherty**, W.P. Smith, and P.A. Zollner. Modeling dispersal of the endemic northern flying squirrel in the fragmented temperate rainforest of Southeast Alaska. Annual Meeting of the Wildlife Society. Poster.
- 2014 Eisinger\*, J.W., **E.A. Flaherty**, and S. E. Trapp. Surveys of southern flying squirrel activity following timber harvest in southern Indiana. Purdue University Summer Undergraduate Research Fellowships (SURF), West Lafayette, IN. Poster. Abstract Published. \*\*Received an award for best poster.
- 2014 Eckrich\*, C.A., **E.A. Flaherty**, and M. Ben-David. Anthropogenic disturbance alters the isotopic niche and interspecific interactions of two sympatric small mammals. Ecological Society of America Annual Meeting, Sacramento, CA. Poster.
- 2014 Eckrich\*, C., R. Liu, M. Murphy, **E. Flaherty**, and M. Ben-David. Developing a model for 2 predator – 2 prey cycles in a heterogeneous landscape. Gordon Research Conference, Ventura, CA. Poster.
- 2013 Eckrich\*, C., **E.A. Flaherty**, and M. Ben-David. High spatial variation in the consumer isoscape: is it individual specialization? Front Range Isotope Day 2013, Fort Collins, CO. Poster.
- 2013 **Flaherty\***, E.A., M. Ben-David, and J.N. Pauli. Locomotor performance in the Pacific marten: are semi-arboreal mustelids more efficient runners than semi-aquatic ones? Annual meeting of the American Society of Mammalogists, Philadelphia, PA. Poster.
- 2013 Jordan, C., A.M. Seliga\*, and **E.A. Flaherty\***. GTA boot camp: a training program to prepare first-time graduate student teaching assistants. Association for Biology Laboratory Educators Annual Conference, Calgary, AB. Major Workshop.
- 2012 Eckrich\*, C., **E.A. Flaherty**, and M. Ben-David. Small mammal responses to young-growth thinning on Prince of Wales Island, Alaska. Wildlife Society Annual Conference, Portland, OR. Poster.
- 2011 Eckrich\*, C., **E.A. Flaherty**, and M. Ben-David. Small mammal responses to young-growth thinning on Prince of Wales Island, Alaska. Wyoming Chapter of the Wildlife Society Annual Conference, Jackson, WY. Poster.

- 2011 **Flaherty\***, E.A. and M. Ben-David. Incorporating K-12 and undergraduate education into mammal field research: investigating effects of climate-induced vegetation changes on least chipmunks (*Tamias minimus*) in southeast Wyoming. Annual meeting of the American Society of Mammalogists, Portland, OR. Poster.
- 2011 **Flaherty\***, E.A., M. Ben-David, and C. Eckrich. Small mammal responses to young-growth thinning on Prince of Wales Island, Alaska. Alaska Chapter of the Wildlife Society Annual Conference, Juneau, AK.
- 2010 Noakes\*, A.G., E.A. **Flaherty**, and M. Ben-David. Climate-induced vegetation changes and their effects on small mammals in southeast Wyoming. Wyoming Chapter of the Wildlife Society Annual Conference, Lander, WY. Poster.
- 2010 Noakes\*, A.G., E.A. **Flaherty**, and M. Ben-David. Climate-induced vegetation changes and their effects on small mammals in southeast Wyoming. Wildlife Society Annual Conference, Snowbird, UT. Poster.
- 2009 **Flaherty\***, E.A., M. Ben-David, and W.P. Smith. Diet and availability of the endemic Prince of Wales flying squirrel: implications for dispersal. Annual meeting of the American Society of Mammalogists, Fairbanks, AK.
- 2008 **Flaherty\***, E.A., M. Ben-David, and W.P. Smith. Comparing energetics and cost of transport of *Glaucomys sabrinus* and *Sciurus niger* to evaluate the likelihood of dispersal of gliders in managed forests. Annual meeting of the American Society of Mammalogists, Brookings, SD. Poster.
- 2007 **Flaherty\***, E.A., M. Ben-David, and W.P. Smith. Potential dispersal constraints on northern flying squirrels in the fragmented temperate rainforest of Southeast Alaska. Annual meeting of the American Society of Mammalogists, Albuquerque, NM.
- 2007 **Flaherty\***, E.A., M. Ben-David, and W.P. Smith. Potential dispersal constraints on northern flying squirrels in the fragmented temperate rainforest of Southeast Alaska. Alaska State Chapter of the Wildlife Society, Juneau, AK.
- 2005 **Flaherty\***, E.A., S. Pyare, W.P. Smith, and M. Ben-David. Preliminary estimates of movement capability of *Glaucomys sabrinus griseifrons* in managed landscapes of Southeast Alaska. Annual meeting of the American Society of Mammalogists, Springfield, MO. Poster.
- 2004 **Flaherty\***, E.A., J.S. Scheibe, and R. Goldingay. Locomotor performance and cost of transport in the squirrel glider (*Petaurus norfolcensis*) and the sugar glider (*Petaurus breviceps*). Annual meeting of the American Society of Mammalogists, Arcata, CA. Poster.

#### Invited Seminars

- 2016 *Cost of transport studies of wildlife: animal physiology informs wildlife management and conservation.* Department of Biology, Spring Seminar Series, Indiana University Purdue University Fort Wayne (IPFW), Fort Wayne, IN.
- 2015 *Wildlife responses to forest management.* Department of Biology, Fall Seminar Series, Purdue Calumet, Hammond, IN.
- 2015 *Small mammal and small carnivore responses to timber management in Southeast Alaska: ecological studies to inform management.* Department of Biology, EcoLunch Seminar Series, Purdue University, West Lafayette, IN.
- 2014 *Small mammal and small carnivore responses to timber management in Southeast Alaska: ecological studies to inform management.* Department of Natural Resources and Environmental Science, University of Illinois, Urbana-Champaign, IL.
- 2011 *Northern flying squirrels in the Alaskan rainforest.* USDA Forest Service Rainforest Festival, Petersburg, AK.
- 2010 *Northern flying squirrel dispersal in the fragmented Alaskan rainforest.* Department of Forestry and Natural Resources, Purdue University, West Lafayette, IN.
- 2007 *Flight delay 50-100 years: effects of timber harvest on northern flying squirrel movements in Southeast Alaska.* Zimmerman Honorarium Lecture Series, Casper College, Casper, WY.

- 2006 *Are energetics and diet potential constraints for dispersal of flying squirrels across a fragmented landscape?* Wyoming Student Chapter of the Wildlife Society, University of Wyoming, WY.
- 2006 *Northern flying squirrel dispersal in the fragmented Alaskan rainforest.* Keynote speaker for the National Flying Squirrel Association annual meeting. Houston, TX.

### **Funded and Pending Research Grants and Contracts**

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#### Wildlife Research

- 2016 (pending) USDA NIFA: Biodiversity in Faces and Spaces. Reuben Goforth, Megan Gunn, and **Elizabeth Flaherty**. (\$300,000).
- 2016 (pending) USDA Forest Service – Monongahela National Forest and the Northeast Research Station: Modeling population-level responses of northern flying squirrels to red spruce restoration, forest fragmentation, and climate change in the Allegheny Mountains of West Virginia. **Elizabeth Flaherty** and Patrick Zollner. (\$171,862)
- 2016 (pending) USDA Forest Service – Monongahela National Forest and the Northeast Research Station: Responses of northern flying squirrels to forest fragmentation using DNA and corticosterone. **Elizabeth Flaherty**. (\$294,398).
- 2016 USDA Forest Service Cooperative Agreement Amendment – Northeast Research Station. *Northern flying squirrel population-level responses to forest management and red spruce restoration in the Allegheny Mountains.* Cooperative Agreement. **Elizabeth Flaherty**. (\$10,000).
- 2016 Purdue **AgSEED** - Agricultural Research and Extension leading to Economic Development in Indiana Agriculture and Rural Communities. *Functional role of native mice in Midwestern agroecosystems: unwanted pests or friendly neighbors?* **Elizabeth Flaherty**, Jacob Berl, and Rob Swihart (\$28,379).
- 2015 Indiana Department of Natural Resources. *Wildlife values survey for Indiana mesopredators.* Research Contract. **Elizabeth Flaherty**, Linda Prokopy, and Zoë Glas (\$3500).
- 2015 Polar Bears International. *Analysis of 2D photographs of polar bears.* Research Contract. **Elizabeth Flaherty** and Randy Creaser (\$1400).
- 2015 US Forest Service. *Northern flying squirrel population-level responses to forest management and red spruce restoration in the Allegheny Mountains.* Cooperative Agreement. **Elizabeth Flaherty**. (\$10,000)
- 2015 International Association for Bear Research and Management – Research and Conservation Grant. *Photographic monitoring of the Western Hudson Bay polar bear population.* **Elizabeth Flaherty** and Randy Creaser (\$3150)
- 2012 National Fish and Wildlife Foundation – Alaska Fish and Wildlife Fund. *Thinning of young-growth forest stands may ameliorate competitive interactions between endemic Prince of Wales ermines and introduced American martens.* Merav Ben-David and **Elizabeth Flaherty** (\$20,000)
- 2012 USDA Forest Service Cooperative Agreement (Amendment). *Small mammal responses to pre-commercial thinning research project.* Awarded to Merav Ben-David and **Elizabeth A. Flaherty** (\$71,114)
- 2010 USDA Forest Service Cooperative Agreement. *Small mammal responses to precommercial thinning research project.* Awarded to Merav Ben-David and **Elizabeth A. Flaherty** (\$319,956).
- 2009 Wyoming Governor’s Big Game License Coalition, Wildlife Heritage Foundation of Wyoming. *Predicting least chipmunk (Tamias minimus) responses to landscape-level impacts of climate change and bark beetle irruptions in Wyoming.* Awarded to **Elizabeth A. Flaherty** (\$10,400).
- 2006 Grant-in-Aid of Research, American Society of Mammalogists. *Predicting dispersal rates in fragmented rain forests of Southeast Alaska: implications for the viability of northern flying squirrel (Glaucomys sabrinus) metapopulations in managed landscapes.* Awarded to **Elizabeth A. Flaherty** (\$1000)

2003 USDA Forest Service Cooperative Agreement. *Northern flying squirrel dispersal across managed landscapes*. Awarded to Winston P. Smith, Merav Ben-David, and **Elizabeth A. Flaherty** (\$82,181)

#### In-Kind Research Support

2015-2016 Polar Bear's International. *Support for M.S. student, Randy Creaser, to conduct fieldwork in Churchill, Manitoba*. Funding included \$993 for travel and \$1000 for housing and food each year in 2015 and 2016, \$3000 for the purchase of equipment (\$6986).

2014-2015 Friends of Blackwater. *Support for M.S. student, Stephanie Trapp, to conduct fieldwork in the Monongahela National Forest, WV*. Funding included support for fuel, food, and field supplies (\$2000).

#### Education

2016 Purdue University Study Abroad and International Learning (SAIL) grant – *Cuba: Natural Resources and Environment Winter Break Study Abroad*. **Elizabeth Flaherty** and John Graveel (\$7000).

2016 Purdue University Intercultural Pedagogy Grant - *Cuba: Natural Resources and Environment Winter Break Study Abroad*. **Elizabeth Flaherty** (\$3000).

2016 Ag Alumni Trust Fund. *FNR 498 – Optimize TWS Meeting Attendance*. Funding for Undergraduate Professional Development Project. **Elizabeth Flaherty** and Patrick Zollner (\$2750).

2012 Polar Bear International. *Monitoring polar bear populations using citizen science and informal science education of undergraduate students*. Awarded to Merav Ben-David and **Elizabeth A. Flaherty** (\$2000)

2012 Wyoming Space Grant Consortium. *Mission to Mars: Enhancing critical thinking skills in undergraduate science courses through the use of inquiry-based case studies*. Awarded to **Elizabeth Flaherty**, Carly Jordan, and Jonathan Prather (\$7500).

2012 Wyoming Governor's Big Game License Coalition, Wildlife Heritage Foundation of Wyoming. *Using the effects of bark beetle-derived forest mortality on least chipmunks as an educational tool: an assessment*. Awarded to **Elizabeth A. Flaherty** and Merav Ben-David (\$4000).

2011 University of Wyoming Academic Affairs. *Using assessment of the Wildlife and Fisheries Biology and Management major capstone course to inform curriculum development*. Awarded to **Elizabeth A. Flaherty**, Merav Ben-David, and Carly Jordan (\$1500).

#### Teaching Experience

##### Purdue University (teaching evaluations scores and student numbers in CV addendum)

2013-pres **Instructor** – FNR 34100: Wildlife Habitat Management, 3 credits, fall semester

2014-pres **Instructor** – FNR 34800: Wildlife Investigational Techniques, 3 credits, spring semester

2014-pres **Co-Instructor** – FNR 37050: Forest Habitats and Community Practicum, 2 credits, summer field course (part of 5 week summer field practicum held in the Upper Peninsula of MI)

2014- pres **Co-Instructor** – FNR 49800: Optimizing TWS Meeting Attendance, 1 credit, fall semesters

2015 **Instructor** – FNR 59800: Wildlife Physiology Seminar, 1 credit, spring semester

2015-pres **Instructor** – FNR 49800: Introduction to College/University Teaching/Scientific Teaching, 1-2 crests, spring/fall semester

2016-pres **Co-Instructor** – SA 21255: Cuba: Natural Resources, Farming, and Social Systems (study abroad), spring semester

##### University of Wyoming

2012 **Co-Instructor** – LIFE 2022: Animal Biology, 4 credits, spring semester (~300 students)

2011-2012 **Coordinator** – LIFE 2022: Animal Biology Lab, spring semester

2011-2012 **Coordinator** – LIFE 1002: Discovering Science Lab (non-majors biology course), spring semester

- 2011-2012 **Instructor** – LIFE 1010: General Biology, 4 credits, fall semester (~200 students)
- 2010-2011 **Co-Instructor** – ENR 1200: Environment, 4 credits, fall semester. In 2011, developed and led the week-long field/lab component in Grand Teton National Park.
- 2009 **Co-Instructor** – ZOO 4300: Wildlife Ecology and Management, 5 credits, fall semester
- 2009 **Co-Instructor** – ZOO 4190: Comparative Environmental Physiology Lab, 1 credit, spring semester
- 2007-08, 2012 **Instructor** – ZOO 2450: Principles of Fish and Wildlife Management, 3 credits, spring semester
- 2006-2009 **Instructor** – Upward Bound/TRiO. Wildlife Research and Introduction to Chemistry

### **Students Formally Mentored**

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#### Undergraduate students mentored by E. Flaherty and her graduate students

- Mackensie Carter, Wildlife Undergraduate, 2016-present. Problem-solving in captive striped skunks. Purdue University.
- Lexi Eiler, Wildlife Undergraduate, 2016-present. Linking captive striped skunk behavior to a commercial activity monitor: implications for monitoring activity of captive animals. Purdue University.
- Hunter Johnson, Wildlife Undergraduate, 2016-present. Foraging behavior of prairie deer mice in row-crop agriculture. Purdue University.
- Karly Rushmore, Wildlife Undergraduate, 2016-present. Stereotypical behavior of captive striped skunks. Purdue University.
- Lucas Voorhees, Wildlife Undergraduate, 2016-present. Does provisioning of enrichment activities to captive skunks reduce stress? Purdue University.
- Sarah Abercrombie, Wildlife Undergraduate, 2015-present. Quantifying weed seed predation by small mammals and invertebrates in agricultural fields. Purdue University.
- Sarah Meronk, Wildlife Undergraduate, 2015-present. Investigating the impact of invasive Asian carp on river otters native fish communities in Indiana: evaluating diet using stable isotope analysis. Summer Undergraduate Research Fellowship (SURF) Program. Purdue University.
- Bethany Palm, Wildlife Undergraduate, 2015-present. Food preferences in striped skunks. Purdue University.
- Rachel Steiger, Wildlife Undergraduate, 2015-present. Striped skunk activity levels in response to ambient temperature. Purdue University.
- Kelton Verble, Wildlife Undergraduate, 2015-2016. Using 2D and 3D photographic technology to noninvasively monitor wolves. Purdue University.
- Courtney Loudon, Wildlife Undergraduate, 2016. Using acoustic sampling to evaluate southern flying squirrel responses to forest management on the Hardwood Ecosystem Experiment. Purdue University.
- Matthew Voorhees, Wildlife Undergraduate, 2015-2016. Mandibular venipuncture for field collection of blood from wild mice (*Peromyscus* spp.). Purdue University.
- Jonathan Wu, Wildlife Undergraduate, 2015-2016. Weed seed preferences and C and N isotope tissue-diet discrimination factors of deer mice and white-footed mice. Purdue University.
- Joseph Eisinger, Wildlife Undergraduate, 2014-2015. Using acoustic sampling to evaluate southern flying squirrel responses to forest management on the Hardwood Ecosystem Experiment. Summer Undergraduate Research Fellowship (SURF) Program. Purdue University.
- Jessica Grady, Wildlife Undergraduate, 2014. Evaluating the potential uses of stable isotope analysis of maggots in forensics. Purdue University.
- Andrea Noakes, Wildlife and Fisheries Biology and Management Undergraduate, Summer-Fall 2010. Project: Predicting least chipmunk responses to habitat change following an irruption of mountain pine bark beetles in the Laramie Range of Wyoming. NASA Fellowship Award and EPSCoR Scholarship. University of Wyoming.
- Jeremiah Attebury, Wildlife and Fisheries Biology and Management Undergraduate, Fall 2009. Project: Giving-up density and perceived predation risk of least chipmunks in the Laramie Range of Wyoming. University of Wyoming.



Carisa Stansbury, Wildlife and Fisheries Biology and Management Undergraduate, Spring 2007. Project: Locomotor performance and gait of *Martes caurina*. University of Wyoming.

Emily Averil, Secondary Education Undergraduate, EPSCoR STEP, Summer 2006. Project: Differences in stable isotope signatures of soil invertebrates across a managed Alaskan landscape. University of Wyoming.

#### Graduate students

##### ***Current Graduate Committee Chairmanships:***

- 2016-pres. Brandon Quinby (PhD), Co-advised with Curtis Creighton at Purdue Northwest, Project: Physiology and ecology of burying beetles. Purdue University.
- 2015-pres. Chelsea Clyde-Brockway (PhD), Co-advised with Frank Palladino at IPFW, Project: Sea turtle nutrition and habitat use (project still in development). Purdue University.
- 2014-pres. Jacob Berl (PhD). Co-advised with Robert Swihart. Project: Wildlife responses to agriculture. Purdue University.
- 2014-2016. Randy Creaser (MSNT). Project: Development of a noninvasive method for estimating body size and measuring body characteristics from photographs in free-ranging wildlife using polar bears as the focal species. Purdue University.
- 2014-2016. Stephanie Trapp (MS). Project: Using spatially explicit, individually based modeling to evaluate habitat connectivity and population persistence of the endemic Prince of Wales northern flying squirrel (*Glaucomys sabrinus griseifrons*). Purdue University.
- 2010-2016. Carolyn Eckrich (PhD). Co-advised with Merav Ben-David. Project: Density of small mammals across the managed landscape of Prince of Wales Island, Alaska. Co-advised with Merav Ben-David. University of Wyoming.
- 2012-2013 Sarah Walker (Plan B Thesis). Co-advised with Jennifer Forrester. Project: Effects of involvement in field research on students' science knowledge, career goals, and science attitudes. University of Wyoming.
- 2011-2013. R. Keith Mayes (MS). Co-advised with Merav Ben-David. Project: Use of managed landscapes by mustelids on Prince of Wales Island, Alaska. Co-advised with Merav Ben-David. University of Wyoming.

##### ***Current Graduate Committee Memberships (excluding those chaired):***

- 2015-pres. Laura D'Acunto (PhD), Advisor: P. Zollner, Purdue University.
- 2015-pres. Patrick Ruhl (PhD), Advisor: B. Dunning, Purdue University.
- 2014-pres. Casey Day (PhD), Advisor: P. Zollner, Purdue University.
- 2013-pres. Sarah Stein (PhD), Advisor: T. Höök. Purdue University.
- 2015 Marjorie MacGregor (PhD), Advisor: D. Skinner. University of Wyoming.
- 2013 Kristin Schulte (Plan B thesis), Advisor A. Housel. University of Wyoming.
- 2011 Jarod Waite (Plan B thesis), Advisor: N. Korfanta. University of Wyoming.

#### **Professional Service and Activities**

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Member of the 2017 NACTA annual meeting planning team – Purdue University, College of Agriculture

Member of the INDNR Nongame Mammal Technical Advisory Committee (2015-present)

Indiana Academy of Science

Vice chair of Ecology Section 2015-2016

Chair of Ecology Section 2016-2017

Academic advisor for the Purdue Quality Deer Management Association student club (2014-present)

American Society of Mammalogists:

Elected member of the ASM Board of Directors (2014-2017)

Chair of the Travel and Honoraria Committee (2016-present)

Member of the Education and Graduate Students Committee (2014-present)

Co-chair of the Local Committee for the 2010 annual meetings of the ASM, Laramie, WY

Member of the American Society of Mammalogists Program Committee (2008-2012)

University of Wyoming Science Math Teaching Center Affiliate Faculty (2012-2013)

Member of the Wildlife and Fisheries Biology and Management Major Assessment Team, Zoology and Physiology Department, University of Wyoming (2011-2013)

Chair of the Wildlife and Fisheries Biology and Management Major Assessment Team, Zoology and Physiology Department, University of Wyoming (2011-2012)

Visiting Scientist for the 5<sup>th</sup>-6<sup>th</sup> Grade Field Research class at the University of Wyoming Lab School, Laramie, WY and Dean Morgan Middle School, Casper, WY (2009)

Presenter for Women in Science, University of Wyoming (2008-2009, 2011-2012)

Graduate Student Representative, Berry Biodiversity and Conservation Center Planning Committee (2007-2009)

### **Professional Membership**

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American Society of Mammalogists (2004-present; Life Member)

- Member of the Board of Directors (2015-2017)

The Wildlife Society (2004-present)

- Certified Wildlife Biologist®

Indiana Academy of Science (2015-present)

Indiana Chapter of the Wildlife Society (2014-present)

North American Colleges and Teachers of Agriculture (2013-present)

International Association for Bear Research and Management (2015)

Association of Biology Laboratory Educators (2011-2013)

### **Ad Hoc Reviewer for Scientific Journals**

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Biotropica, Ecography, Ecology, Human –Wildlife Interactions, Integrative and Comparative Biology,

Journal of Ethology, Journal of Mammalogy, Landscape Ecology, Mammalian Biology,

Naturwissenschaften, Oikos, Rapid Communications in Mass Spectrometry, Wildlife Interactions, Ursus

C.V. Addendum - E. Flaherty Course Evaluation Scores from Purdue University

Course Number	Credit Hours	Course Title	Semester 1=Spring 2=Fall 3=Summer	Response/Class Size	University Course Mean Student Ratings <sup>A</sup>	
					Overall Course <sup>B</sup>	Overall Instructor <sup>B</sup>
FNR 34100	3	Wildlife Habitat Management	2/2013	21/39	4.0 ± 0.95	4.0 ± 0.90
FNR 34100	3	Wildlife Habitat Management	2/2014	32/34	4.6 ± 0.82	4.7 ± 0.93
FNR 34100	3	Wildlife Habitat Management	2/2015	26/27	4.9 ± 0.52	4.9 ± 0.32
FNR 34800	3	Wildlife Investigational Techniques	1/2014	17/33	4.3 ± 0.82	4.5 ± 0.92
FNR 34800	3	Wildlife Investigational Techniques	1/2015	29/32	4.9 ± 0.41	4.9 ± 0.34
FNR 34800	3	Wildlife Investigational Techniques	1/2016	38/38	4.8 ± 0.52	4.9 ± 0.39
FNR 37050	1	Forest Habitats and Community Practicum	3/2014	50	N/A	N/A
FNR 37050	1	Forest Habitats and Community Practicum	3/2015	41	N/A	N/A
FNR 37050	1	Forest Habitats and Community Practicum	3/2016	49	N/A	N/A
FNR 49800	1	Optimize TWS (The Wildlife Society) Meeting Attendance	2/2014	3/13	5.0 ± 0.0	4.8 ± 0.47
FNR 49800/59800	1	Introduction to Scientific Teaching	1/2015	5/5	5.0 ± 0.0	5.0 ± 0.0
FNR 49800/59800	2	Introduction to Scientific Teaching	2/2015	5/6	5.0 ± 0.0	5.0 ± 0.0
FNR 49800/59800	2	Introduction to Scientific Teaching	1/2016	5/8	4.9 ± 0.37	4.9 ± 0.37
SA 21255	1	Cuba: Natural Resources, Farming and Social Systems	1/2016	22	N/A	N/A
TOTAL	28 <sup>C</sup>	--	14 <sup>D</sup>	181/235 (77%) <sup>E</sup>	4.74 <sup>F</sup>	4.76 <sup>G</sup>

<sup>A</sup>Course Ratings out of a possible 5 (5=excellent; 1 = very poor) with ± standard deviation;

<sup>B</sup>Not available - courses did not have an official Purdue University student evaluation administered or is taught in the current semester;

<sup>C</sup>Total credits taught as of Summer 2016;

<sup>D</sup>Total courses taught as of Summer 2016;

<sup>E</sup>Total student responses compared to total students taught in courses with evaluations;

<sup>F</sup>Average response to quality of the overall course for all courses;

<sup>G</sup>Average response to quality of the instructor for all courses.