

CURRICULUM VITAE

**LINDSEY SWIERK**

DEPARTMENT OF BIOLOGICAL SCIENCES

BINGHAMTON UNIVERSITY, STATE UNIVERSITY OF NEW YORK, BINGHAMTON, NY, 13902

EMAIL: LINDSEYNS@GMAIL.COM; WEB: WWW.LINDSEYSWIERK.COM

**Education**

- 2009-2013 **PhD** in Ecology, minor in Statistics. Penn State University, University Park, PA.  
*Advisor: Prof. Tracy Langkilde.*
- 2007-2008 **MES** (Master of Environmental Studies) in Environmental Biology. University of Pennsylvania, Philadelphia, PA.  
*Advisors: Prof. Fred Scatena (University of Pennsylvania) and Prof. Stephen Madigosky (Widener University).*
- 2003-2007 **BA**, Biology and Environmental Science. University of Pennsylvania. Philadelphia, PA.  
*Magna Cum Laude, with distinction in Environmental Science.*

**Professional Appointments**

- 2018- **Assistant Research Professor**, Department of Biological Sciences, State University of New York - Binghamton University.
- 2015-2017 **Gaylord Donnelley Postdoctoral Fellow**. School of Forestry and Environmental Studies, Yale University.
- 2014 **Vision & Change Postdoctoral Fellow**. Department of Biology, Penn State University.

**Peer-reviewed publications** (\* indicates undergraduate mentee)

- 22) Fondren, A\*, **L Swierk**, B Putman. *In revision*. Clothing color mediates lizard responses to humans in a tropical forest with different land-use histories. **Biotropica**.
- 21) **Swierk, L**, JFF Boyer\*, J Chang\*, M Petelo\*, S Drobniak. *In revision*. Costs of conspicuousness: dewlap color influences attack rate on *Anolis* models in an experimental test. **Evolutionary Ecology**.
- 20) **Swierk, L** and T Langkilde. 2019. Fitness costs of mating with preferred females in a scramble mating system. **Behavioral Ecology**, doi:10.1093/beheco/arz001.
- 19) Tennessen, JB, SE Parks, **L Swierk**, LK Reinert, WM Holden, LA Rollins-Smith, T Langkilde. 2018. Frogs adapt to physiologically costly traffic noise. **Proceedings of the Royal Society B** 285: 20182194.
- 18) Assis, BA, **L Swierk**, T Langkilde. 2018. Performance, behavior, and offspring morphology may offset reproductive cost of male-typical ornamentation for female lizards. **Journal of Zoology** 306: 235-242.

- 17) Putman, B, K Azure\*, **L Swierk**. 2018. Dewlap size in male water anoles associates with consistent inter-individual variation in boldness. **Current Zoology**, 65: 189-195.
- 16) **Swierk, L** and T Langkilde. 2018. Does repeated human handling of study animals during the mating season affect their offspring? **Journal of Experimental Zoology A** 329: 80-86.
- 15) Owen, DAS, MS Smylie, **L Swierk**. 2018. A new blood sampling method for smaller anurans that preserves critical features of specimens. **Herpetological Review** 49: 34-36.
- 14) Lambert, MR, BE Carlson, MS Smylie, **L Swierk**. 2017. Ontogeny of sexual dichromatism in the explosively breeding wood frog. **Herpetological Conservation and Biology** 12: 447-456.
- 13) Boyer, JFF\* and **L Swierk**. 2017. Rapid body color brightening is associated with exposure to a stressor in an *Anolis* lizard. **Canadian Journal of Zoology** 95: 213-219.  
-Selected as Editor's Choice
- 12) Petelo, M\* and **L Swierk**. 2017. Trait allometries generate super-honesty in *Anolis* dewlaps and may underlie sexual dimorphism. **Integrative Zoology** 12: 97-111.
- 11) Stephenson, BP, N Ihász, DC Byrd, J Swierk, **L Swierk**. 2016. Temperature-dependent colour change as a function of sex and directionality of temperature shift in the eastern fence lizard (*Sceloporus undulatus*). **Biological Journal of the Linnean Society** 120: 396-409.
- 10) **Swierk, L**, JB Tennessen, and T Langkilde. 2015. Sperm depletion may not limit male reproduction in a capital breeder. **Biological Journal of the Linnean Society** 116: 684-690.
- 9) **Swierk, L** and SR Madigosky. 2014. Environmental perceptions and resource use in rural communities of the Peruvian Amazon (Iquitos and vicinity, Maynas Province). **Tropical Conservation Science** 7: 382-402.
- 8) **Swierk, L**, SP Graham and T Langkilde. 2014. The stress of scramble: sex differences in behavior and physiological stress response in a time-constrained mating system. **Behavioral Ecology and Sociobiology** 68: 1761 - 1768.
- 7) **Swierk, L** and T Langkilde. 2013. Bearded ladies: Females suffer fitness consequences when bearing male traits. **Biology Letters** 9: 20130644.
- 6) **Swierk, L** and T Langkilde. 2013. Sizing-up the competition: Factors modulating male display behavior during mate competition. **Ethology** 119: 948 - 959.
- 5) **Swierk, L**, A Myers\*, and T Langkilde. 2013. Male mate preference is influenced by both female behaviour and morphology. **Animal Behaviour** 85: 1451 - 1457.

- 4) Brossman, KH\*, B Carlson, **L Swierk** and T Langkilde. 2013. Aquatic tail size carries over to the terrestrial phase without impairing locomotion in adult eastern red-spotted newts (*Notophthalmus v. viridescens*). **Canadian Journal of Zoology** 91: 7 - 12.
- 3) **Swierk, L**, M Ridgway\* and T Langkilde. 2012. Female lizards discriminate between potential reproductive partners using multiple male traits when territory cues are absent. **Behavioral Ecology and Sociobiology** 66: 1033 -1043.
- 2) **Swierk, L** and T Langkilde. 2009. Micronutrient input into a mangrove ecosystem in Jobos Bay, Puerto Rico, by the exotic green iguana *Iguana iguana*. **Current Zoology** 55(6): 50-53.
- 1) Young, S and **L Swiacki** (former name). 2006. Surveying the forest biodiversity of Evansburg State Park: Plant community classification and species diversity assessment. **International Journal of Botany** 2: 293-299.

*Additional peer-reviewed notes and natural history contributions*

- 9) **Swierk, L**, A Carriere\*, M Delfin\*, A Fondren\*, D Lopera\*, B Putman. *Accepted*. *Anolis aquaticus* (= *Norops aquaticus*) (Water Anole). Egg size and oviposition sites. **Herpetological Review**.
- 8) **Swierk, L**. 2019. *Anolis aquaticus* (= *Norops aquaticus*) (Water Anole): Underwater breathing. **Herpetological Review** 50: 134-135.
- 7) **Swierk, L**. 2019. *Sceloporus malachiticus* (Emerald Swift): Coloration. **Herpetological Review** 50: 145.
- 6) **Swierk, L**. 2019. Ongoing research on the ecology and behavior of *Anolis aquaticus*. In: Stroud, J.T., Geneva, A.J., Losos, J.B. (eds.), **Anolis Newsletter VII**. Washington University, St. Louis MO, <https://doi.org/10.7936/gjg3-h168>.
- 5) **Swierk, L**. 2018. Color Change. In: J Vonk and TK Shackelford (eds.), **Encyclopedia of Animal Cognition and Behavior**, Springer. doi: 10.1007/978-3-319-47829-6\_462-1
- 4) **Swierk, L** and S Drobniak. 2018. *Ameiva festiva* (= *Holcosus festivus*) (Central American Whiptail Lizard): Juvenile coloration. **Herpetological Review** 49: 534-535.
- 3) Cerfaco, LMP, EE Gutiérrez, A Dubois *et al.* (one of 445 co-authors). 2016. Photography-based taxonomy is inadequate, unnecessary, and potentially harmful for biological sciences. **Zootaxa** 4196: 435-445.
- 2) **Swierk, L**. 2015. *Rana sylvatica* (Wood Frog): Clutch size measurement. **Herpetological Review** 46: 544.
- 1) **Swierk, L**. 2012. *Rana sylvatica* (Wood Frog): Larval duration. **Herpetological Bulletin** 119: 39.

*Publications in preparation*

- 6) **Swierk, L** and T Langkilde. A missing piece of the puzzle regarding size-assortative mating in scramble-breeding amphibians: Adaptive male preferences due to size-based fertilization.
- 5) Guo, KC\* and **L Swierk**. Can a cool tropical forest lizard take the heat?: The effect of temperature and microhabitat on locomotor performance in *Anolis aquaticus*.
- 4) Rosier, RL, **L Swierk**, and T Langkilde. Do bigger lizards have it all? Investigation of an energetic tradeoff between growth and reproductive status.
- 3) **Swierk, L** and T Langkilde. Same-sex mating behaviors provide fitness advantages in a scramble breeding system.
- 2) Morgan, A\* and **L Swierk**. Hiding in plain sight: Rapid color change permits disruptive camouflage in *Anolis aquaticus*.
- 1) **Swierk, L** and T Langkilde. Operational sex ratio alters male mating tactics and affects female fitness in a rapidly fluctuating reproductive environment.

**Invited talks\*** (\*not including 24 additional contributed presentations)

“Rapid responses to natural and anthropogenic change: A herpetological perspective,”  
Celebration of Scholarship Lecture Series, Penn State (Wilkes-Barre), Wilkes-Barre, PA.  
April, 2019.

“Rapid responses to natural and anthropogenic change: A herpetological perspective,”  
Binghamton University, Binghamton, NY. March, 2018.

“Using flexible tactics to cope with challenges during a time-constrained breeding season,” Yale Peabody Museum of Natural History, New Haven, CT. May, 2016.

“Mixed signals?: The function of a sexual trait in *Sceloporus undulatus* communication,”  
Organization for Tropical Studies, Las Cruces Biological Station, Costa Rica. July, 2015.

“Picky boys and bearded ladies: using behavior to cope with reproductive constraints” University of Massachusetts, Amherst, MA. February, 2015.

**Honors and Awards**

2019 **Faculty/Staff “Of the Month” Campus Winner**, National Residence Hall Honorary (NRHH) Award, in recognition of institutional faculty who have made a contribution to the student community both in and out of the classroom.

2014 **Alumni Association Dissertation Award** in recognition of outstanding achievement in scholarship and professional accomplishment. The Graduate School, Penn State.

- 2013      **Intercollege Graduate Student Outreach Achievement Award** in recognition of outstanding achievements in bringing scholarship to the community to benefit society. The Graduate School, Penn State.
- Graduate Student Service Award** to recognize the graduate student who has best combined high academic achievement with leadership in University and other public activities. Union and Student Activities, Penn State.
- Conference Travel Award** (2010 - 2013). Biology Department, Penn State University.
- 2012      **Frank A. Andersen Award** given annually on a competitive basis for conference travel. Ecology Graduate Program, Penn State.
- 2008      **Braddock Award**, an incentive fellowship awarded to outstanding applicants to the graduate program. Penn State University.
- Fund for Excellence in Graduate Recruitment Award**, an incentive fellowship awarded to outstanding applicants to the graduate program. Penn State.

### Research Grants and Fellowships

- 2016      **Sophie Danforth Conservation Biology Fund**. Roger Williams Park Zoo/Rhode Island Zoological Society. \$1,000.
- Scientific Product Grant**. Wildlife Acoustics, Inc. \$3,047
- 2015      **Gaylord Donnelley Environmental Fellowship**. Yale Institute for Biospheric Studies. \$104,000.
- American Postdoctoral Fellowship**. American Association of University Women (declined). \$30,000.
- Darwin Fellowship – Finalist**. University of Massachusetts, Amherst.
- President’s and Chancellor’s Postdoctoral Fellowship – Finalist**. University of California, Berkeley.
- 2014      **Vision & Change Fellows Program**. Biology Department, Penn State University. \$42,000.
- 2010-2013      **Graduate Research Fellowship**. The National Science Foundation. \$120,500. International Travel Allowance awarded in 2011. \$1,000
- 2012      **Ernst Mayr Fellowship**, awarded to the highest-ranking pre-doctoral research proposal. Smithsonian Tropical Research Institute (declined). \$2,000
- 2011      **Gaige Award**. American Society of Ichthyologists and Herpetologists. \$500
- 2010      **Student Research Award**. Animal Behavior Society. \$600

- Grant-in-Herpetology.** Society for the Study of Amphibians and Reptiles. \$500
- 2009 **University Graduate Fellowship**, awarded to scholastically outstanding prospective students. Penn State University. \$38,000
- 2008 **MES Capstone Research Award.** University of Pennsylvania. \$1,800
- 2007 **The Greg and Susan Walker Endowed Research Award.** University of Pennsylvania. \$800
- 2006 **Research Experience for Undergraduates.** The National Science Foundation. \$2,000

### Teaching Experience

- 2019 **Organization for Tropical Studies & Auburn University at Montgomery**, *Invited Professor*: Tropical Biology.
- 2018 - **Binghamton University**, *Instructor of Record*: Animal Behavior, Ecology
- 2008-2014 **Penn State University**  
*Instructor of Record*: Animal Behavior  
*Guest Lecturer*: General Ecology  
*Teaching Assistant*: Biology: Basic Concepts and Biodiversity
- 2007-2008 **University of Pennsylvania**, *Teaching Assistant*: Introductory Biology I, Introductory Biology II, Introduction to Environmental Analysis, Environmental Case Studies

### Professional Service:

#### *Invited Journal Peer Review:*

Animal Behaviour, Animal Biology, Behavioral Ecology and Sociobiology, Biological Journal of the Linnean Society, Comparative Biochemistry and Physiology, Copeia, Current Zoology, Ethology, Functional Ecology, Herpetologica, Herpetological Conservation and Biology, Integrative and Comparative Biology, Journal of Natural History, Journal of Zoology, Nature Education, Physiological and Biochemical Zoology, Physiology & Behavior, The Herpetological Journal, Tropical Conservation Science

#### *Granting Bodies Peer Review:*

National Science Foundation (Evolutionary Processes Cluster, Population and Community Ecology)

### Media coverage of research:

*Online:* Science Magazine, National Geographic, Scientific American, New Scientist, Los Angeles Times, DW Science (Germany), The Guardian Express, Gizmodo (2), Christian Science Monitor, Science News, IFL Science (2), Mirror, Asahi (Japan), Sapere

Scienza (Italy), The Scientist, LiveScience, California Academy of Sciences, Pittsburgh Post-Gazette, Reptiles Magazine, Science Daily, The Sun, Futurity, FrogLife, News-O-Matic

*Podcasts/Radio:* Squamates, Herpetological Highlights, WNBF News Radio 1290

*Print Magazines:* *BBC Wildlife Magazine, National Geographic Kids, Scholastic Classroom Magazine, Science & Vie Découvertes* (France)

### **Student Advising and Mentorship**

#### *MS Student:*

Alexandra Martin (2019 - )

#### *Thesis Committee Member:*

Rebecca Pearce (2018 - )

Elias Miller (2019 - )

Grascen Shidemantle (2019 - )

*Undergraduate Research Assistants, Interns, and Independent Study Students (dates indicate time spent in lab, field, or registered; mentorship is often ongoing):*

Maxwell Meadow<sup>§</sup> (2019), Katie Bradbury<sup>§</sup> (2019), Jaedyn Lalonde<sup>§‡</sup> (2019), Kelly Sisson<sup>§</sup> (2018-9), Joanne Fu (2018-9), Maegan Delfin<sup>\*†‡</sup> (2018), Diana Lopera<sup>\*†‡</sup> (2018), Austin Carriere<sup>\*†‡</sup> (co-mentored, 2018), Andrea Fondren<sup>\*†‡</sup> (co-mentored, 2018), Kimberly Guo<sup>\*§‡</sup> (2016-7), Amber Morgan<sup>\*†‡</sup> (2016-7), Jennet Chang<sup>\*†‡</sup> (2016), Jane Boyer<sup>\*†‡</sup> (2015), Maria Petelo<sup>\*†‡</sup> (2015), Jett Peng<sup>§‡</sup> (2012-4), Tyler Jacobs<sup>§‡</sup> (2012-4), Courtney Norjen<sup>§†‡</sup> (2012-4), Cecilia Zemanek (2013-4), Jason Langshaw (2013), Jennie Williams (2013), Jill Newman (2012), Abigail Myers<sup>\*†‡</sup> (2010-2), Matt Ridgway<sup>\*†‡</sup> (2010-2), Maria Urtecho (2011), Erica Green (2011), Kelly Brossman Malloy<sup>\*†‡</sup> (co-mentored, 2010-1), Erik Schlaich (2010)

\* one or more peer-reviewed manuscript(s) published or in preparation

† one or more presentation(s) at regional/national conference(s)

‡ one or more presentation(s) at university-level conference(s)

§ student-authored grant funded by a university/department/scientific organization

‖ NSF Research Experience for Undergraduate student

#### *Supervision of Undergraduate Teaching Experiences:*

Roni Friedman (S2019), Wyatt Parker (S2019), Jaedyn Lalonde (S2019), Katie Bradbury (starting F2019), Haley Norton (starting F2019), Nadia Shevchenko (starting F2019), Kelly Crane (starting F2019), Jessica Knight (starting F2019), Snehal Patel (starting F2019)

#### *Selected Formal Mentorship:*

2015-present Research Mentor, Native American and Pacific Islander Research Experience (NAPIRE) program in Costa Rica, Louis Stokes Alliance for Minority Participation, National Science Foundation.

2014 - 2017 Mentor, Society of Conservation Biology (SCB) Africa Section Communications/Mentoring Programme.

- 2011 - 2013 Co-founder and advisor, Undergraduate Research Skills Seminar Series (~10 students/year). Langkilde Laboratory, Penn State University.
- 2008 - 2013 Founder and advisor, Higher Education Mentoring (mentoring organization for inner-city high-school students, ~30 mentoring pairs/year), University Park, PA & Bronx, NY.

*Selected Scientific Outreach (2019 only):*

Featured Scientist at STEM Career Day Friday, Johnson City Middle School, Johnson City, NY

Judge, Research Days Poster Session, Binghamton University, Binghamton, NY

Biochemistry Faculty Mixer, Binghamton University, Binghamton, NY