

## **JAVAN M. BAUDER, Ph.D.**

Assistant Unit Leader  
Arizona Cooperative Fish and Wildlife Research Unit  
United States Geological Survey  
University of Arizona, Tucson, Arizona  
[jbauder@arizona.edu](mailto:jbauder@arizona.edu)

### **EDUCATION**

**Postdoctoral Scholar**, Pennsylvania Cooperative Fish and Wildlife Research Unit, The Pennsylvania State University, University Park, Pennsylvania. 2021.

*Population genetic structure of white-tailed deer in Ohio*

Advisors: Dr. W. David Walter

**Postdoctoral Research Associate**, Illinois Natural History Survey, Prairie Research Institute, University of Illinois Champaign-Urbana. 2018-2021.

*Rigorous estimation methods for adaptive management and decision support*

Advisors: Dr. Kirk Stodola, Dr. Thomas Benson, and Dr. Maximilian Allen

**Ph.D., Environmental Conservation, University of Massachusetts**, Amherst, Massachusetts. 2012-2018.

Dissertation: *Population Viability and Connectivity of the Federally Threatened Eastern Indigo Snake (*Drymarchon couperi*) in Central Peninsular Florida.*

Advisor: Dr. Kevin McGarigal

**M.S., Biology. Idaho State University**, Pocatello, Idaho. 2007-2010.

Thesis: *Movements and Habitat Selection of Prairie Rattlesnakes (*Crotalus v. viridis*) Across a Mountainous Landscape in a Designated Wilderness Area.*

Advisor: Dr. Charles R. Peterson.

**B.S., Wildlife Resources, Minor in Biology. University of Idaho**, Moscow, Idaho. 2003-2007.  
Graduated Summa Cum Laude

### **PUBLICATIONS**

**Peer-Reviewed Articles** (*postdoctoral researcher, undergraduate student, graduate student*):

**Cappello, C.D.**, K.V. Jacobson, J.T. Driscoll, K.M. McCarty, and **J.M. Bauder**. Accepted.

Evaluating the effects of nest management on a recovering raptor using integrated population modeling. *Ecosphere*. (IP-154963) (BOA Approved January 31, 2024)

**Teal, C.N.**, D.J. Schill, **J.M. Bauder**, S.B. Fogelson, K. Fitzsimmons, W. Stewart, M. Culver, and S.A. Bonar. 2023. The effects of estradiol-17 $\beta$  on the sex reversal, survival, and growth of Red Shiner and its use in the development of YY individuals. *North American Journal of Aquaculture* 86:110-129. <https://doi.org/10.1002/naaq.10314> (IP-155076)

Chandler, H.C., D. Steen, J. Blue, J.E. Bogan, M.R. Bolt, T. Brady, D.R. Breining, J. Buening, M. Elliott, J. Godwin, C. Guyer, R.L. Hill, M. Hoffman, N.L. Hyslop, C.L. Jenkins, C. Lechowicz, M. Moore, R.A. Moulis, S. Piccolomini, R. Redmond, F.H. Snow, B.S. Stegenga, D.J. Stevenson, J. Stiles, S. Stiles, M. Wallace, J. Waters, M. Wines, and **J.M. Bauder**. 2023. Evaluating growth rates of captive, wild, and reintroduced populations of the imperiled eastern indigo snake (*Drymarchon couperi*). *Herpetologica* 79:220-230. <https://doi.org/10.1655/Herpetologica-D-22-00041> (IP-146664) (BOA Approved June 29, 2023)

Bolt, M.R., **J.M. Bauder**, C.L. Jenkins, B.B. Rothermel, and D.R. Breining. 2023. Eastern indigo snake shelter site selection in Peninsular Florida and implications for habitat conservation. *Herpetological Conservation and Biology* 18:362-373. [https://www.herpconbio.org/Volume\\_18/Issue\\_2/Bolt\\_etal\\_2023.pdf](https://www.herpconbio.org/Volume_18/Issue_2/Bolt_etal_2023.pdf) (IP-139825)

Jenney, C.J., **J.M. Bauder**, and S.A. Bonar. 2023. Native fish abundance and habitat selection changes in the presence of nonnative piscivores. *Ecology of Freshwater Fish* 33:e12742. <https://doi.org/10.1111/eff.12742> (IP-152854)

Allen, M.L., L.M. Elbroch, **J.M. Bauder**, and H.U. Wittmer. 2023. Food caching by a solitary carnivore reveals importance of intermediate-sized prey. *Journal of Mammalogy* 104:457-465. <https://doi.org/10.1093/jmammal/gyad013> (IP-137851)

Teal, C.N., D.K. Coykendall, M.R. Campbell, T.A. Delomas, D.L. Eardley, J.A. Erwin, D.J. Schill, **J.M. Bauder**, S.A. Bonar, and M. Culver. 2023. The development of genetic sex identification markers and evidence of a male heterogametic sex determination system in Red Shiner. *North American Journal of Aquaculture* 85:74-86. <https://doi.org/10.1002/naaq.10274> (IP-144022)

**Bauder, J.M.**, K.W. Stodola, T.J. Benson, C.A. Miller, and M.L. Allen. 2023. Modeling 18 years of community science data reveals extensive bobcat recolonization in Illinois, USA. *Landscape Ecology* 38:597-611. <https://doi.org/10.1007/s10980-022-01567-w>. (pre-USGS employment)

Teal, C.N., D.J. Schill, S.B. Fogelson, C.M. Roberts, K. Fitzsimmons, **J.M. Bauder**, W. Stewart, and S.A. Bonar. 2023. The effects of estradiol-17 $\beta$  on the survival, growth, and sex reversal of green sunfish *Lepomis cyanellus*. *Aquaculture* 562: 738853. <https://doi.org/10.1016/j.aquaculture.2022.738853> (IP-137238)

Hayes Hursh, S., **J.M. Bauder**, M. Fidino, and D. Drake. 2022. An urban cast of characters: landscape use and cover influencing mammal occupancy in an American midwestern city. *Landscape and Urban Planning* 229:104582. <https://doi.org/10.1016/j.landurbplan.2022.104582> (pre-USGS employment)

**Bauder, J.M.**, M.L. Allen, A.A. Ahlers, T.J. Benson, C.A. Miller, and K.W. Stodola. 2022. Long-term data reveal equivocal evidence for intraguild suppression among sympatric canids. *Biodiversity and Conservation* 31:2965-2979. <https://doi.org/10.1007/s10531-022-02465-y> (pre-USGS employment)

- Castellon, T.D., A.C. Deyle, A.L. Farmer, **J.M. Bauder**, E.A. Roznik, and S.A. Johnson. 2022. Effects of translocation on gopher frog survival and movement. *Herpetologica* 78:161-168. <https://doi.org/10.1655/Herpetologica-D-20-00061> (pre-USGS employment)
- Bauder, J.M.**, H.C. Chandler, M. Elmore, and C.L. Jenkins. 2022. Using habitat suitability models and resistance kernels to estimate empirical habitat-based conservation units for an imperiled species. *Landscape Ecology* 37:2519-2533. <https://doi.org/10.1007/s10980-022-01510-z> (IP-137585)
- Chandler, H.C., C.L. Jenkins, and **J.M. Bauder**. 2022. Accounting for geographic variation in habitat associations during habitat suitability and connectivity modeling: A case study with the imperiled eastern indigo snake. *Ecological Applications* e2504. <https://doi.org/10.1002/eap.2504> (pre-USGS employment)
- Bauder, J.M.**, N.M. Roberts, D. Ruid, B. Kohn, and M.L. Allen. 2021. Lower survival of nuisance American black bears (*Ursus americanus*) is not due to translocation. *Animal Conservation* 24:820-831. <https://doi.org/10.1111/acv.12684> (pre-USGS employment)
- Bauder, J.M.**, C. Anderson, H.L. Gibbs, M. Tonkovich, and D.W. Walter. 2021. Landscape features fail to explain spatial genetic structure in white-tailed deer in Ohio, USA. *Journal of Wildlife Management* 85:1669-1684. <https://doi.org/10.1002/jwmg.22120>. (IP-128673)
- Bauder, J.M.**, M.L. Allen, T.J. Benson, C.A. Miller, and K.W. Stodola. 2021. An approach for using multiple indices for monitoring long-term trends of mesopredators at broad spatial scales. *Biodiversity and Conservation* 30:3529-3547. <https://doi.org/10.1007/s10531-021-02259-8> (pre-USGS employment)
- Allen, M.L., A. Cervantes, A. Avrin, L. Whipple, M.J. Farmer, and **J.M. Bauder**. 2021. A review of grey fox ecology highlights the limitations of current knowledge for conservation. *Journal of Threatened Taxa* 13:19079-19092. <https://doi.org/10.11609/jott.7102.13.8.19079-19092>. (pre-USGS employment)
- Bauder, J.M.**, W.E. Peterman, S.F. Spear, C.L. Jenkins., A.R. Whiteley, and K. McGarigal. 2021. Multi-scale assessment of functional connectivity: Landscape genetics of eastern indigo snakes in an anthropogenically fragmented landscape central Florida. *Molecular Ecology* 30:3422-3438. <https://doi.org/10.1111/mec.15979>. (pre-USGS employment)
- Bauder, J.M.**, A. Cervantes, A. Avrin, L. Whipple, M.J. Farmer, C.A. Miller, T.J. Benson, K.W. Stodola, and M.L. Allen. 2021. Mismatching spatial scales limits the utility of citizen science data for estimating wildlife-habitat relationships. *Ecological Research* 36:97-96. <https://doi.org/10.1111/1440-1703.12173>. Wiley top cited article in 2020-2021. (pre-USGS employment)
- Clifford, B.J., **J.M. Bauder**, and M.N. Marchand. 2020. Tree removal at basking sites improves thermal habitat quality for an imperiled timber rattlesnake population at the northern edge of its range. *Northeastern Naturalist* 27:746-762. <https://www.eaglehill.us/NENAonline/articles/NENA-27-4/21-Clifford.shtml>. (pre-USGS employment)

- Bauder, J.M.**, K.W. Stodola, T.J. Benson, C.A. Miller, and M.L. Allen. 2020. Raccoon pelt price and trapper harvest relationships are temporally inconsistent. *Journal of Wildlife Management* 84:1601-1610. <https://doi.org/10.1002/jwmg.21928> (pre-USGS employment)
- Bauder, J.M.**, M.L. Allen, A.A. Ahlers, T.J. Benson, C.A. Miller, and K.W. Stodola. 2020. Identifying and controlling for variation in canid harvest data. *Journal of Wildlife Management* 84:1234-1245. <https://doi.org/10.1002/jwmg.21919> (pre-USGS employment)
- Bauder, J.M.**, N.M. Roberts, D. Ruid, B. Kohn, and M.L. Allen. 2020. Nuisance black bear translocation indicates increased effectiveness by translocation distance and landscape context. *Wildlife Research* 47:426-435. <https://www.publish.csiro.au/wr/WR19161> Editor's choice for July 2020 issue. (pre-USGS employment)
- Zeller, K.A., D.W. Wattles, **J.M. Bauder**, and S. DeStefano. 2020. Forecasting seasonal connectivity in a developing landscape. *Land* 9:233. <https://doi.org/10.3390/land9070233> (pre-USGS employment)
- Bauder, J.M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, and K. McGarigal. 2020. Movement barriers, habitat heterogeneity or both? Testing hypothesized effects of landscape features on home range sizes in eastern indigo snakes. *Journal of Zoology* 311:204-216. <https://doi.org/10.1111/jzo.12777> (pre-USGS employment)
- Allen, M.L., N.M. Roberts, and **J.M. Bauder**. 2020. Catch-per-unit-effort metrics and their value as indices for wildlife abundance. *PLoS One* 15:e0233444. <https://doi.org/10.1371/journal.pone.0233444> (pre-USGS employment)
- Folt, B., **J. Bauder**, S. Spear, D. Stevenson, M. Hoffman, J. Oaks, D. Steen, C. Jenkins, and C. Guyer. 2019. Taxonomic and conservation implications of population genetic admixture, mitochondrial discordance, and male-biased dispersal of a large endangered snake, *Drymarchon couperi*. *PLoS One* 14:e0214439. <https://doi.org/10.1371/journal.pone.0214439> (pre-USGS employment)
- Bauder, J.M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, and K. McGarigal. 2018. Multi-level, multi-scale habitat selection by a wide-ranging federally threatened snake. *Landscape Ecology* 33:743-763. <https://doi.org/10.1007/s10980-018-0631-2> (pre-USGS employment)
- Castellón, T.D., B.B. Rothermel, and **J.M. Bauder**. 2018. Seasonal movement patterns of gopher tortoises occupying scrub and mesic flatwoods habitats in south-central Florida. *Herpetologica* 74:8-21. <https://doi.org/10.1655/Herpetologica-D-17-00030.1> (pre-USGS employment)
- Bauder, J.M.**, D.J. Stevenson, C. Sutherland, and C.L. Jenkins. 2017. Occupancy of potential overwintering habitat on protected lands by two imperiled snake species in the Coastal Plain of the southeastern United States. *Journal of Herpetology* 51:73-88. <https://doi.org/10.1670/15-064> (pre-USGS employment)

**Bauder, J.M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, and K. McGarigal. 2016. Seasonal variation in eastern indigo snake (*Drymarchon couperi*) movement patterns and space use in peninsular Florida at multiple temporal scales. *Herpetologica* 72:214-226. <https://doi.org/10.1655/Herpetologica-D-15-00039.1> (pre-USGS employment)

**Bauder, J. M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, and K. McGarigal. 2016. The influence of sex and season on conspecific spatial overlap in a large, actively-foraging colubrid snake. *PLoS One* 11:e0160033. <https://doi.org/10.1371/journal.pone.0160033> (pre-USGS employment)

**Bauder, J.M.**, H. Akenson, and C.R. Peterson. 2015. Movement patterns of prairie rattlesnakes (*Crotalus v. viridis*) across a mountainous landscape in a designated wilderness area. *Journal of Herpetology* 49:377-387. <https://doi.org/10.1670/13-153> (pre-USGS employment)

**Bauder, J.M.**, J.N. Macey, K.M. Stohlgren, A. Day, F. Snow, A. Safer, R. Redmond, J.M. Waters, M. Wallace, Sr., and D.J. Stevenson. 2015. Factors influencing the display of multiple defensive behaviors in eastern indigo snakes (*Drymarchon couperi*). *Herpetological Conservation and Biology* 10:559-571. [http://www.herpconbio.org/Volume\\_10/Issue\\_2/Bauder\\_et al\\_2015.pdf](http://www.herpconbio.org/Volume_10/Issue_2/Bauder_et al_2015.pdf) (pre-USGS employment)

**Bauder, J.M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, and K. McGarigal. 2015. The role of the bandwidth matrix in influencing kernel home range estimates for snakes using VHF telemetry data. *Wildlife Research* 42:437-453. <https://doi.org/10.1071/WR14233> (pre-USGS employment)

**Bauder, J.M.**, C. Castellano, J.B. Jensen, and C.L. Jenkins. 2014. Comparison of movements, body weight, and habitat selection between translocated and resident gopher tortoises. *Journal of Wildlife Management* 78:1444-1455. <https://doi.org/10.1002/jwmg.790> (pre-USGS employment)

**Bauder, J.M.**, and P. Barnhart. 2014. Factors affecting the accuracy and precision of triangulated radio telemetry locations of eastern indigo snakes (*Drymarchon couperi*). *Herpetological Review* 45:590-597. <https://ssarherps.org/herpetological-review-pdfs/> (pre-USGS employment)

Enge, K.M., D.J. Stevenson, M.J. Elliott, and **J.M. Bauder**. 2013. The Historical and current distribution of the eastern indigo snake (*Drymarchon couperi*). *Herpetological Conservation and Biology* 8:288-307. [http://www.herpconbio.org/Volume\\_8/Issue\\_2/Enge\\_et al\\_2013.pdf](http://www.herpconbio.org/Volume_8/Issue_2/Enge_et al_2013.pdf) (pre-USGS employment)

**Currently Submitted Manuscripts:**

**Grinder, R.M.**, C.R. Peterson, and E.O. Garton, and **J.M. Bauder**. Amphibian use of recently created wetlands in the Palouse Region of Northern Idaho. Revised manuscript resubmitted to *Herpetological Conservation and Biology* on December 27, 2023. (IP-149800) (BOA Approved February 1, 2024)

Cappello, C.D., K.V. Jacobson, J.T. Driscoll, K.M. McCarty, and **J.M. Bauder**. Nest parasites reduce reproductive success of bald eagles (*Haliaeetus leucocephalus*) in Arizona. Submitted to *Journal of Raptor Research* on June 22, 2023. (IP-154965).

Manuscripts in Preparation (full-text available upon request):

**Bauder, J.M.**, and C.R. Peterson. Evidence of conspecific avoidance during seasonal migrations of a communally denning prairie rattlesnakes. Preparing for submission to *Journal of Zoology*.

**Morandini, M., J.M. Bauder**, and J.L. Koprowski. Post-translocation movements and the importance of conspecific distribution to settlement site selection in a territorial species. *Dissertation chapter to be submitted during 2023*.

Peer-Reviewed Book Chapters:

**Bauder, J.M.**, H. Akenson, and C.R. Peterson. 2017. Factors influencing the movement patterns of prairie rattlesnakes (*Crotalus v. viridis*) across a mountainous landscape in a designated wilderness area. Pages 154-167 in M.J. Dreslik, W.K. Hayes, S.J. Beaupre, and S.P. Mackessy, editors. *Biology of the Rattlesnakes Vol. II*. ECO Herpetological Publishing and Distribution, Rodeo, New Mexico, USA. **(pre-USGS employment)**

Jenkins, C.L., **J.M. Bauder**, and C.R. Peterson. 2017. Population level consequences of microgeographic variation in Great Basin rattlesnake reproduction and survival. Pages 143-153 in M.J. Dreslik, W.K. Hayes, S.J. Beaupre, and S.P. Mackessy, editors. *Biology of the Rattlesnakes Vol. II*. ECO Herpetological Publishing and Distribution, Rodeo, New Mexico, USA. **(pre-USGS employment)**

## GRANTS

Secured:

“Evaluating impacts of the U.S.A.-Mexico border wall on mammal communities of the Sonoran Desert”

- **J.M. Bauder** (Co-PI) and J. Alston. National Park Service, 2023. \$180,000

“Population ecology of introduced bullfrogs in southeast Arizona”

- **J.M. Bauder**. Arizona Game and Fish Department, 2023. \$80,000.

“Understanding drought effects on Gambel’s quail”

- **J.M. Bauder**. Arizona Game and Fish Department, 2023. \$135,000.

“Analysis of Bald Eagle Demographic and Movement Data”

- **J.M. Bauder**. Arizona Game and Fish Department, 2022, \$68,500.
- **J.M. Bauder**. Arizona Game and Fish Department, 2022, \$64,000.

“Monitoring and recovering native amphibians through control of non-native American bullfrogs in southeast Arizona”

- **J.M. Bauder**. Bureau of Land Management, 2023, \$75,000
- **J.M. Bauder**. Bureau of Land Management, 2023, \$45,000
- **J.M. Bauder**. U.S. Forest Service, 2023, \$60,000
- **J.M. Bauder**. Arizona Game and Fish Department, 2022–2023, \$30,000.
- **J.M. Bauder**. Bureau of Land Management, 2023, \$41,000
- **J.M. Bauder**. U.S. Forest Service, 2022, \$78,370

“Northern Mexican Gartersnake Demographics and Movement Ecology”

- **J.M. Bauder** (Co-PI) and M. Goode. Arizona Game and Fish Department, 2022, \$24,000.
- **J.M. Bauder** (Co-PI) and M. Goode. Arizona Game and Fish Department, 2023, \$55,000.
- **J.M. Bauder** (Co-PI) and M. Goode. Arizona Game and Fish Department, 2024, \$55,000.

“Population Ecology of the Federally Threatened Narrow-Headed Gartersnake in New Mexico”

- **J.M. Bauder.** U.S. Fish and Wildlife Service, 2022, \$45,784
- **J.M. Bauder.** U.S. Fish and Wildlife Service, 2021, \$127,940

“Eastern Indigo Snake Population Monitoring and Presence Surveys in Northeastern Florida”

- T. Castellon, D. Steen, and **J.M. Bauder.** U.S. Fish and Wildlife Service, 2022, \$49,945

“Rigorous Estimation Methods for Adaptive Management and Decision Support”

- Stodola, K.W., M.L. Allen, **J.M. Bauder,** and T.J. Benson. Illinois Department of Natural Resources and U.S. Fish and Wildlife Service, 2020, \$85,000

“Creating an Empirical Species Distribution and Connectivity Model for Eastern Indigo Snakes in Georgia and Florida”

- **Bauder, J.M.,** The Orianne Society, 2020, \$10,513

“Effects of Forest Management on an Imperiled Timber Rattlesnake Population at the Northern Edge of its Range”

- **Bauder, J.M.,** New Hampshire Fish and Game Department, 2019, \$995

“Evaluating Survival and Spatial Ecology of Timber Rattlesnakes in New Hampshire”

- **Bauder, J.M.,** New Hampshire Fish and Game Department, 2018, \$975

“The Landscape Genetics of Eastern Indigo Snakes (*Drymarchon couperi*) in Central Florida: Examining the Effects of Landscape Composition and Fragmentation on Population Structure and Connectivity”

- **Bauder, J.M.,** Society for the Study of Amphibians and Reptiles, 2014, \$500
- **Bauder, J.M.,** Herpetologists’ League, 2014, \$1,000
- **Bauder, J.M.,** The Explorers Club, 2014, \$500

“The Effects of Habitat Fragmentation on Eastern Indigo Snake (*Drymarchon couperi*) Spatial Ecology in Central and Southern Peninsular Florida:”

- **Bauder, J.M.** and C.L. Jenkins. United States Fish and Wildlife Service, 2012-2014, \$45,000
- **Bauder, J.M.** and C.L. Jenkins. United States Fish and Wildlife Service, 2011-2013, \$35,000
- **Bauder, J.M.** and C.L. Jenkins. United States Fish and Wildlife Service, 2010-2011, \$50,000

“A Comparison of Home Range Size, Habitat Use, and Body Condition between Translocated and Resident Gopher Tortoises (*Gopherus polyphemus*) at the Orianne Indigo Snake Preserve and Yuchi Wildlife Management Area, Georgia:”

- Castellano, C.M., D.J. Stevenson, **J.M. Bauder,** J. Jensen, and C.L. Jenkins. Georgia Department of Natural Resources, 2012-2013, \$10,650.

“Monitoring Eastern Indigo Snake (*Drymarchon couperi*) Occupancy in the Lower Altamaha River Drainage:”

- **Bauder, J.M.,** D.J. Stevenson, and C.L. Jenkins. Riverbanks Zoo and Garden, Conservation Support Fund, 2012, \$1,059
- **Bauder, J.M.,** D.J. Stevenson, and C.L. Jenkins. Riverbanks Zoo and Garden, Conservation Support Fund, 2011, \$5,027
- **Bauder, J.M.,** D.J. Stevenson, and C.L. Jenkins. Georgia Department of Natural Resources, 2011-2013, \$30,000
- **Bauder, J.M.,** D.J. Stevenson, and C.L. Jenkins. Georgia Department of Natural Resources, 2010-2011, \$15,000

- **Bauder, J.M.**, D.J. Stevenson, and C.L. Jenkins. Riverbanks Zoo and Garden, Conservation Support Fund, 2010, \$1,000

“Gopher Tortoise Monitoring on The Orianna Indigo Snake Preserve:”

- Stevenson, D.J., H.L. Hall, **J.M. Bauder**, and C.L. Jenkins. Savannah Presbytery M. K. Pentecost Ecology Fund Grant, 2010, \$5,000.

“Movement and Habitat Selection of Prairie Rattlesnakes in a Mountainous Landscape in Central Idaho:”

- **Bauder, J.M.** National Geographic Society, Young Explorers Grant, 2008, \$5,000
- **Bauder, J.M.**, and C.R. Peterson. The DeVlieg Foundation and Idaho State University, DeVlieg-Taylor Ranch Graduate Research Assistantship, 2007-2009, \$37,000
- **Bauder, J.M.** Sigma Xi Scientific Research Society, Sigma Xi Grant-In-Aid, 2007, \$1,000
- **Bauder, J.M.** University of Idaho, Dissemination Grant, 2006, \$750
- **Bauder, J.M.** College of Natural Resources, University of Idaho, DeVlieg Undergraduate Research Scholarship, 2006, \$5,000
- **Bauder, J.M.** College of Natural Resources, University of Idaho, Berklund Undergraduate Research Grant, 2006, \$2,000
- **Bauder, J.M.** American Museum of Natural History, Theodore Roosevelt Memorial Grant, 2005, \$1,968
- **Bauder, J.M.** The Explorers Club, Youth Activity Fund Grant, 2005, \$975
- **Bauder, J.M.** Dept. of Fish and Wildlife Resources, University of Idaho, Fund For Excellence Award, 2005, \$1,000

“Amphibian Use and Colonization of Anthropogenic Wetlands” and “Genetic Comparison of Coastal and Idaho Populations of Rough-skinned Newt:”

- **Bauder, J.M.** College of Natural Resources, University of Idaho, Berklund Undergraduate Research Grant, 2004, \$1,700

**Unpublished Reports (available upon request):**

Chandler, H.C. and **J.M. Bauder**. 2020. A range-wide habitat suitability and connectivity model for eastern indigo snakes (*Drymarchon couperi*). Final report to the U.S. Fish and Wildlife Service.

**Bauder, J.M.**, A.G. Stengle, M. Jones, M. Marchand, D. Blodgett, B. Hess, B. Clifford, and C.L. Jenkins. 2018. Population demographics, monitoring, and population genetics of timber rattlesnakes in New England. Final report submitted to the Wildlife Management Institute.

**Bauder, J.M.** and C.L. Jenkins. 2015. Studying the effects of non-natural landscapes on eastern indigo snake (*Drymarchon couperi*) ecology in central and southern peninsular Florida: A final report submitted to the U. S. Fish and Wildlife Service. Submitted to the U.S. Fish and Wildlife Service office in Jackson, Mississippi.

Spear, S., **J.M. Bauder**, D. Blodgett, C.L. Jenkins, and K.V. Briggs. 2013. The ecology of timber rattlesnakes (*Crotalus horridus*) in Vermont: Final report submitted to the Vermont Department of Fish and Wildlife. Submitted to the Vermont Department of Fish and Wildlife, Rutland, Vermont.

**Bauder, J.M.**, C.L. Jenkins, and D.J. Stevenson. 2013. Factors influencing occupancy and detection rates of eastern indigo snakes (*Drymarchon couperi*) in the Altamaha River Drainage of Southeast Georgia. Report to the Georgia Department of Natural Resources, Nongame Conservation Section, Social Circle, Georgia.

**Bauder, J.M.**, C.L. Jenkins, and D.J. Stevenson. 2013. A comparison of home range size, habitat selection, and body weight between translocated and resident gopher tortoises (*Gopherus polyphemus*) at the Orianne Indigo Snake Preserve and Yuchi Wildlife Management Area, Georgia: a final report to the Georgia Department of Natural Resources. Report to the Georgia Department of Natural Resources, Nongame Conservation Section, Social Circle, Georgia.

## TEACHING EXPERIENCE

### Courses:

- **Wildlife Landscape Ecology (WFSC 596b, 2 credits)**, *Instructor of Record*, Fall 2023 – Developed and taught a graduate-level course illustrating and discussing concepts from landscape ecology including the role of scale in ecological analyses, measuring and understanding landscape metrics, landscape definitions, spatial statistics, modeling landscape disturbance and succession dynamics, landscape genetics, connectivity, and spatially structured populations. Led weekly discussions, assigned weekly short-answer take-home assignments, and wrote and delivered take-home final exam.
- **Wildlife Habitat Analyses (WFSC 595c, 2 credits)**, *Co-Instructor of Record*, Fall 2022 – Co-taught a graduate-level course illustrating and discussing concepts underlying definitions of habitat, the behavior process of habitat selection, habitat quality, and theoretical models of habitat selection. Lead instructor for modules introducing contemporary approaches to modeling wildlife habitat associations. Developed modules on study designs and data types, the role of scale in wildlife habitat selection, and resource and step selection functions.
- **Graduate Student Seminar Series (RNR 696A, 1 credit)**, *Co-Instructor of Record*, Fall 2022 – Co-coordinator for School of Natural Resources and the Environment weekly seminar series. Identified, invited, and hosted speakers. Developed weekly 25 minute discussions with 22 enrolled graduate students on giving professional presentations including topics such as proper formatting for presentations, slide layout, figures, text size and font, colors, and delivery.
- **Climate Change Adaptation (RNR 440/540)**, *Guest Lecturer*, Fall 2022 & 2023 – Developed and delivered a 25-minute lecture on the relevance of wildlife population genetics for understanding the effects of climate change on wildlife populations and discussed the implications of genetics for managing wildlife under changing climates.
- **Natural Resources Management Practices (RNR 384)**, *Guest Lecturer*, Spring 2022, Spring 2023, & Fall 2023 – Developed and delivered a 75-minute lecture on the history, concepts, and tools of wildlife management. Recorded lecture on Panapto and uploaded to class D2L site. Developed an in-class group activity where students were given a hypothetical landscape and wildlife management options and asked to work together to develop a wildlife management plan while remaining with a set budget.
- **Snakes of Idaho (BIOL 1199)**, *Guest Lecturer*, Fall 2021 – Delivered a 50 minute lecture on the spatial and habitat ecology of Prairie Rattlesnakes in central Idaho.
- **Statistical Methods in Ecology (NRES 593)**, *Guest Lecturer*, Fall 2020 – Delivered a 70 minute lecture on multivariate statistical methods. Developed and delivered two 30-minute presentations introducing R (installing packages, importing and exporting data, basic coding) and plotting in R using base plotting functions and ggplot2.

- **Advanced Quantitative Techniques for Ecology and Conservation (NRES 595)**, *Guest Lecturer*, Fall 2019 – Developed and delivered three guest lectures with a graded assignment on fitting mark-recapture models using RMark and occupancy and abundance models using unmarked. Delivered a guest lecture on maximum likelihood, information-theoretic criteria, and model selection.
- **Quantitative Sciences Group**, *Group Member and Teaching Assistant*, Dept. of Environmental Conservation, Spring 2017 – Participated in weekly consultations with graduate students to assist in study design and data analysis and interpretation. Developed tutorials with R Markdown on model averaging and multi-model inference and accounting for residual spatial autocorrelation (available upon request).
- **Analysis of Environmental Data (ECO 634)**, *Teaching Assistant*, Fall 2015 & 2016 – Assisted with weekly R-based labs and graded lecture and lab take-home assignments and the critical review of a scientific paper assignment.
- **Applied Biostatistics (ECO 697)**, *Primary Lab Instructor*, Spring 2016 – Developed and taught weekly R-based labs and assignments illustrating the use of general and generalized linear models including t-tests, analyses of variance, and linear, logistic, Poisson, and zero-inflated regression models. Graded lab assignments. Developed and delivered two 30-minute lectures on collinearity and multi-model inference.

**Postdoctoral Researchers Mentored:**

- Dr. Caroline Cappello, August 2022 to June 2024

**Graduate Students Mentored:**

- Emma Sudbeck, MS student, expected defense date: December 2025
- Alexis Rickert, MS student, expected defense date: December 2025
- Travis Roderick, MS student, expected defense date: December 2024
- Deandra Jones (co-advised), PhD student, expected defense date May 2026

**Undergraduate Students Mentored:**

- Ramine Mohebbi, Dorris Duke Scholar, expected graduation May 2026

**Graduate Student Committees:**

- Raymon Owino (Ph.D.), *Committee Member*, Fall 2023 to present – University of Arizona
- Margaret Mercer (M.S.), *Committee Member*, Fall 2023 to present – University of Arizona
- Tyler Christensen (Ph.D.), *Committee Member*, Spring 2023 to present – Rutgers University
- Christopher Jenney (Ph.D.), *Committee Member*, Spring 2021 to present – University of Arizona
- Kaitlyn Gahl (M.S.), *Committee Member*, Spring 2021 through Fall 2023 – University of Arizona
- Miguel Garcia (Ph.D.), *Committee Member*, Fall 2021 through Fall 2023 – University of Arizona

**Member of School of Environment and Natural Resources (University of Arizona) Graduate Student Advisory Meetings**

2023-2024 (3); 2022-2023 (2)

### **Other Graduate Student Mentoring:**

- Henry Deese (Ph.D.), Spring 2024 – University of Arizona. Serving as mentor during an 8-week rotation as part of the Ecology and Evolutionary Biology program at the University of Arizona.
- Marina Morandini (Ph.D.), Fall 2021 to Summer 2022 – University of Arizona. Providing additional analytical support while completing dissertation. Future co-author on third dissertation chapter.
- Rollie Grinder (Ph.D.), Spring 2022 – University of Arizona. Serving as mentor during an 8-week rotation as part of the Ecology and Evolutionary Biology program at the University of Arizona.
- Quantitative Support\*: Alexandra Burnett (PhD, University of Arizona, Spring 2024), Ryan Almedia (MS, University of Arizona, Fall 2023), Pablo Rocha (MS, University of Arizona, Spring 2023)

*\*Includes in-person, virtual, or email support to graduate students in the form of guidance of study design, data organization, analyses, or interpretation.*

### **Workshops:**

- **Radio Telemetry and Home Range Analyses**, Two Parts. 2011. Southeast Chapter of Partners in Amphibian and Reptile Conservation Annual Meeting, Lake Tiak O'Khata, Mississippi.
- **Eastern Indigo Snake Training Workshop**. 2010. Herpetology Laboratory, Archbold Biological Station, Lake Placid, Florida.

## **PRESENTATIONS**

### **Invited:**

**Bauder, J.M.** 2024. Individual-Based Approaches for Landscape-Scale Conservation: Examples from the Federally Threatened Eastern Indigo Snake. Departmental Seminar, Science and Mathematics Seminar for the School of Applied Sciences and Arts, Arizona State University, Phoenix.

**Bauder, J.M.** and C.R. Peterson. 2023. Does the presence of conspecifics influence the seasonal migrations of communally denning prairie rattlesnakes (*Crotalus viridis*)? Snake Ecology Symposium, Joint Meeting of the Washington Wildlife Society, Northwest Partners in Amphibian and Reptile Conservation, and Society for Northwestern Vertebrate Biology, Olympia, Washington. (IP-149052)

**Bauder, J.M.** 2021. A Tour of Wildlife Projects Across Diverse Landscapes. University of Arizona Fish and Wildlife Society Bi-Weekly Meeting, University of Arizona, Tucson.

**Bauder, J.M.** 2021. Individual-Based Approaches for Landscape-Scale Conservation: Examples from the Federally Threatened Eastern Indigo Snake. Departmental Seminar, Department of Ecology, Evolution, and Natural Resources, Rutgers University, New Brunswick, New Jersey.

**Bauder, J.M.** 2020. Modeling Species-Landscape Relationships to Inform Collaborative Conservation. Research Seminar for the Arizona Cooperative Fish and Wildlife Research Unit, University of Arizona, Tucson.

**Bauder, J.M.** 2019. Over The Hills and Far Away: A Tour of Snake Ecology Across Diverse Landscapes. University of Illinois Student Chapter of the Wildlife Society Monthly Meeting, University of Illinois, Urbana/Champaign.

**Bauder, J.M.**, M.L. Allen, T.J. Benson, C.A. Miller, and K.W. Stodola. 2019. Comparing Harvest- and Count-Based Indices Across Furbearer Species Reveals Contrasting Trends and Different Values for Monitoring Abundance. TWS Symposium: Innovative Approaches for Furbearer Research. 2019 Joint Conference of the American Fisheries Society and The Wildlife Society, Reno, Nevada.

**Bauder, J.M.** 2019. Individual-Based Approaches for Landscape-Scale Conservation: Examples from the Federally Threatened Eastern Indigo Snake. Departmental Seminar, Department of Natural Resources and Environmental Sciences, University of Illinois, Urbana/Champaign.

**Contributed** (*postdoctoral researcher, undergraduate student, graduate student*):

**Mohebbi, R., T. Roderick, M. Bogan, and J. Bauder.** 2024. How do trap contents impact the capture rates of narrow-headed and western terrestrial gartersnakes at Canyon Creek, AZ? *Poster*, Joint Annual Meeting of the Arizona-New Mexico Chapter of the American Fisheries Society and the Arizona and New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona. **(IP-160891)**

**Bauder, J.M.**, M.J. Ryan, A. Pawlicki, and M. Goode. 2024. Population ecology and survival of northern Mexican gartersnakes in the San Rafael Valley of southeast Arizona. Joint Annual Meeting of the Arizona-New Mexico Chapter of the American Fisheries Society and the Arizona and New Mexico Chapters of The Wildlife Society, Flagstaff, Arizona. **(IP-160892)**

**Cappello, C.D.**, K.V. Jacobson, J.T. Driscoll, K.M. McCarty, and **J.M. Bauder.** 2023. Evaluating the effects of nest management on a recovering raptor population using an integrated population model. 2023 Annual Conference of The Wildlife Society, Louisville, Kentucky. **(IP-154384)**

**Bauder, J.M.**, M.L. Allen, A.A. Ahlers, T.J. Benson, C.A. Miller, and K.W. Stodola. 2023. Evaluating potential consequences of observation error when inferring interspecific interactions from long-term monitoring data. 2023 Annual Conference of The Wildlife Society, Louisville, Kentucky, U.S.A. **(IP-153263)**

**Cappello, C.D.**, K.V. Jacobson, J.T. Driscoll, K.M. McCarty, and **J.M. Bauder.** 2023. Nest parasites reduce reproductive success in a recovering raptor population. 2023 Raptor Research Foundation Annual Meeting, Albuquerque, New Mexico. **(IP-154385)**

**Cappello, C.D.**, K.V. Jacobson, J.T. Driscoll, K.M. McCarty, and **J.M. Bauder.** 2023. Evaluating the effects of nest management on a recovering raptor population using an integrated population model. 2023 Raptor Research Foundation Annual Meeting, Albuquerque, New Mexico. **(IP-154387)**

Brawn, J., T.J. Benson, and **J.M. Bauder.** 2023. Does density dependence regulate populations of tropical birds? Joint Meeting of the American Ornithological Society (AOS) and the Society of Canadian Ornithologists-Societes des ornithologistes du Canada (SCO-SOC), London, Ontario, Canada. **(IP-152249)**

Garcia, M.A.G., M. Bogan, and **J.M. Bauder**. 2023. Predicting habitat suitability and connectivity for Sonoran pronghorn in the Pinacate Biosphere Reserve, Sonora, Mexico. 13<sup>th</sup> International Mammalogical Congress, a Joint Meeting of the International Federation of Mammalogists and the American Society of Mammalogists, Anchorage, Alaska. (IP-152218)

Goode, M., A. Pawlicki, **J.M. Bauder**, and R. Hanscom. 2023. Long-term research on species-, population-, and community-level effects of urbanization on snakes and lizards. 2023 Joint Meeting of Ichthyologists and Herpetologists, Norfolk, Virginia. (IP-156703)

**Bauder, J.M.**, M.J. Goode, and M.J. Ryan. 2023. A novel application of external GPS transmitters on the federally threatened northern Mexican gartersnake. Joint Annual Meeting of the Arizona-New Mexico Chapter of the American Fisheries Society and the Arizona and New Mexico Chapters of The Wildlife Society, Farmington, New Mexico. (IP-149311)

Schafer, J.N., W.L. Heuring, T.R. Harris, R.A. Allard, M.J. Ryan, T. Roderick, **J. Bauder**, and D. Wood. 2023. Developing a breeding and reintroduction program for the threatened narrow-headed gartersnake. Joint Annual Meeting of the Arizona-New Mexico Chapter of the American Fisheries Society and the Arizona and New Mexico Chapters of The Wildlife Society, Farmington, New Mexico. (IP-149312)

**Bauder, J.M.**, H.C. Chandler, M.R. Bolt, J.E. Hines, N.L. Hyslop, M.L. Legare, M. Mazerolle, B.B. Rothermel, B.S. Stegenga, D.J. Stevenson, and C.L. Jenkins. 2022. Effects of anthropogenic development, body size, and sex on range-wide eastern indigo snake survival. 2022 Annual Conference of The Wildlife Society, Spokane, Washington. (IP-140832)

**Bauder, J.M.**, Stodola, K.W., T.J. Benson, C.A. Miller, and M.L. Allen. 2022. Modeling eighteen years of community science data reveals extensive recolonization of bobcats in Illinois, USA. American Society of Mammalogists Annual Meeting, Tucson, Arizona. (IP-139935)

Castellon, T.D., A.C. Deyle, A.L. Farmer, **J.M. Bauder**, E.A. Roznik, and S.A. Johnson. 2022. Effects of experimental translocation on gopher frog (*Lithobates capito*) survival and movement. Wildlife Translocation in Florida Symposium, Florida Chapter of the Wildlife Society Meeting, Virtual.

Chandler, H.C., **J.M. Bauder**, M. Elmore, and C.L. Jenkins. 2022. Delineating Conservation Units for the Imperiled Eastern Indigo Snake (*Drymarchon couperi*). 2022 Southeastern Partners in Amphibian and Reptile Conservation Annual Meeting, Virtual. (IP-138750)

**Bauder, J.M.**, N.M. Roberts, D. Ruid, B. Kohn, and M.L. Allen. 2021. Effects of Translocation on Survival of Nuisance American Black Bears. 2021 Annual Conference of The Wildlife Society, Virtual.

Chandler, H.C., **J.M. Bauder**, and C.L. Jenkins. 2022. A Range-Wide Habitat and Connectivity Model for the Federally Threatened Eastern Indigo Snake (*Drymarchon couperi*). 2022 Joint Meeting of Ichthyologists and Herpetologists, Phoenix, Arizona.

- Bauder, J.M.**, K.W. Stodola, T.J. Benson, C.A. Miller, and M.L. Allen. 2021. Modeling Bobcat Recolonization of Illinois Using 18 Years of Archery Hunter Observations. 2021 Annual Conference of Illinois Chapter of The Wildlife Society.
- Bauder, J.M.**, K.W. Stodola, T.J. Benson, C.A. Miller, and M.L. Allen. 2020. Multi-Scale Occupancy Models of Archery Hunter Observations Demonstrates Forest-Associated Colonization of Bobcats in Illinois. 2020 Annual Conference of The Wildlife Society.
- Bauder, J.M.**, M.L. Allen, T.J. Benson, C.A. Miller, and K.W. Stodola. 2020. Comparing Harvest- and Count-Based Indices Across Mesopredator Species Reveals Contrasting Trends and Different Values for Monitoring Abundance. 2020 Midwest Fish and Wildlife Conference, Springfield, Illinois.
- Bauder, J.M.**, N.M. Roberts, D. Ruid, B. Kohn, and M.L. Allen. 2019. Effectiveness of Translocation for Nuisance American Black Bears Varies by Sex and Age and Is Dependent on Distance and Habitat. 2019 Joint Conference of the American Fisheries Society and The Wildlife Society, Reno, Nevada.
- Bauder, J.M.**, M.A. Allen, T.J. Benson, C.A. Miller, and K.W. Stodola. 2019. Trapper Harvest Trends for Three Canid Species in Illinois. 2019 Southeast/Midwest Joint Furbearer Meeting, Enid, Oklahoma.
- Bauder, J.M.**, K.W. Stodola, T.J. Benson, C.A. Miller, and M.A. Allen. 2019. Understanding Trends in Furbearer Populations Using Multiple Data Sources. 55<sup>th</sup> Annual Meeting, Illinois Chapter of The Wildlife Society, Springfield, Illinois.
- Bauder, J.M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, and K. McGarigal. 2016. Multi-level, Multi-scale Habitat Selection by the Federally Threatened Eastern Indigo Snake (*Drymarchon couperi*) in Peninsular Florida. Annual Meeting of the U.S. International Association for Landscape Ecology, Asheville, North Carolina.
- Bauder, J.M.**, D.R. Breininger, M.R. Bolt, M.L. Legare, C.L. Jenkins, B.B. Rothermel, and K. McGarigal. 2016. Using the Utilization Distribution to Create a Multi-Scale Home Range Selection Function. Annual Meeting of the U.S. International Association for Landscape Ecology, Asheville, North Carolina.
- Bauder, J.M.**, D.J. Stevenson, and C.L. Jenkins. 2013. Using Occupancy Rates of Potential Overwintering Habitat to Monitor Eastern Indigo Snakes (*Drymarchon couperi*) in Southern Georgia. Joint Meetings of Ichthyologists and Herpetologists, Albuquerque, New Mexico.
- Bauder, J.M.**, and Z. Forsburg. 2012. The Impacts of Human-Modified Landscapes on Eastern Indigo Snakes: Preliminary Results and Future Goals. Lake Wales Ridge Working Group Meeting, January 2012, Winter Haven, Florida.
- Bauder, J.M.**, H. Akenson, and C.R. Peterson. 2011. Does the Presence of Conspesifics Influence the Seasonal Migrations of Communally Denning Rattlesnakes? Biology of the Rattlesnakes 2011, Tucson, Arizona.

- Bauder, J.M.**, H. Akenson, C.R. Peterson, and C.L. Jenkins. 2010. Using Time Series Segmentation to Identify Patterns in Snake Movements and Space Use. Southwest Partners in Amphibian and Reptile Conservation Annual Meeting, Ft. Collins, Colorado.
- Bauder, J.M.**, H. Akenson, and C.R. Peterson. 2009. Over the Hills and Far Away: Prairie Rattlesnake Movements Across a Mountainous Landscape in a Wilderness Area. Joint Meetings of Ichthyologists and Herpetologists, Portland, Oregon.
- Bauder, J.M.**, H. Akenson, and C.R. Peterson. 2009. Over the Hills and Far Away: Characterizing Prairie Rattlesnake Movements Across a Mountainous Landscape in a Wilderness Area. Fifth Snake Ecology Group Meeting, Donnelly, Idaho.
- Bauder, J.M.**, E.O. Garton, and C.R. Peterson. 2008. Amphibian Colonization of Anthropogenic Wetlands in the Palouse Bioregion of Northern Idaho. Society for Northwestern Vertebrate Biology Annual Meeting, Missoula, Montana.
- Bauder, J.M.** and C.R. Peterson. 2007. Movement of Prairie Rattlesnakes in a Mountainous Landscape in Central Idaho. Idaho Chapter of The Wildlife Society Annual Meeting, Boise, Idaho.

## **WORKSHOPS/TRAINING COURSES ATTENDED**

- Using NETICA to create Bayesian networks for ecological applications. 2019. Illinois Natural History Survey, University of Illinois Urbana-Champaign.
- Hierarchical Statistical Modeling with NIMBLE. 2019 Joint Conference of the American Fisheries Society and The Wildlife Society, Reno, Nevada.
- R For Landscape Ecologists. Workshop at the U.S. International Association for Landscape Ecology. 2012. Newport, Rhode Island.
- Intermediate Level Program MARK Workshop. 2011. Fort Collins, Colorado.
- Campbell Scientific, Inc. CR1000/Loggernet Training Course. 2009. Logan, Utah.

## **SOFTWARE EXPERIENCE**

Advanced knowledge of R, R Studio, and diverse packages used for landscape and population genetics (adegenet, pegas, hierfstat, ResistanceGA), spatial analyses (raster, sp, maptools, rgdal), wildlife movement and habitat selection (ks, smoothie, adehabitatHR), multi-level modeling (unmarked, RMark, lme4, nlme, glmmTMB, brms), and model optimization (bbml, optim). Proficient knowledge of fitting Bayesian models (including state-space and occupancy models) using JAGS and the R packages R2jags and jagsUI. Introductory knowledge of NIMBLE. Experienced using genetic clustering (STRUCTURE and GENELAND) and parentage (COLONY) software. Advanced knowledge of ArcGIS 10.x, Microsoft Word, Excel, and Power Point. Experienced with using MARK and PRESENCE. Working knowledge of VORTEX. Introductory knowledge of NETICA.

## **FELLOWSHIPS, and AWARDS**

### **Fellowships:**

- Department of Environmental Conservation Graduate Fellowship, 2016-2017, \$9,500

### **Awards:**

- Honorable Mention in graduate student presentation for the Society for the Study of Amphibians and Reptiles' Seibert Award for Ecology, 2009, Joint Meetings of Ichthyologists and Herpetologists, Portland, Oregon.
- Outstanding Senior in Wildlife Resources, 2007, Department of Fish and Wildlife Resources, University of Idaho
- First Prize for Student Presentation, 2005, Wildlife Society Western Student Conclave, Lubbock, Texas.

## **WORK EXPERIENCE**

**Assistant Unit Leader:** Arizona Cooperative Fish and Wildlife Research Unit, University of Arizona, 104 Biological Sciences East Building, Tucson, Arizona (April 2021 to present). Developing and implementing research programs on terrestrial wildlife in Arizona to assist and inform wildlife management and conservation efforts. Provided technical assistance to state cooperators. Served on graduate student committees within the School of Environment and Natural Resources (SNRE) at the University of Arizona. Member of the Large Mammal Ecologist faculty search committee at SNRE.

**Postdoctoral Scholar:** Pennsylvania Cooperative Fish and Wildlife Research Unit, The Pennsylvania State University, 117 Forest Resources Building, University Park, Pennsylvania (February-April 2021). Conducted analyses to describe and quantify non-spatial and spatial genetic structure in White-Tailed Deer across Ohio using microsatellite data to inform the spread of chronic wasting disease. Modeled landscape genetic relationships between White-Tailed Deer gene flow and landscape features across Ohio using the REISTANCEGA R package. Trimmed, edited, and aligned White-Tailed Deer mitochondrial DNA sequences using GENEIOUS, estimated mtDNA haplotype frequencies, and conducted spatial analyses of haplotype frequencies. Assisted in developing a sampling design for further landscape genetic analyses of White-Tailed Deer in Ohio.

**Postdoctoral Research Associate:** Illinois Natural History Survey, 1816 South Oak St., MC 652, Champaign, Illinois (October 2018-January 2021). Conducted analyses of fur-bearer species collected by the Illinois Department of Natural Resources (IDNR) to estimate state-wide and regional trends in distribution and abundance. Used Bayesian state-space models to estimate trends in abundance indices of six furbearer species and evaluate the effects of Coyote on Red Fox and Gray Fox abundance. Developed a Bayesian multi-scale spatial dynamic occupancy model to model Bobcat recolonization across Illinois and estimate effects of landcover on population dynamics. Evaluated effects of translocation on mitigating human-Black Bear conflicts and estimated cause-specific mortality for translocation nuisance Black Bear using multi-state mark-recapture models. Developed a range-wide habitat and connectivity model for the federally threatened Eastern Indigo Snake. Prepared and delivered guest lectures in graduate-level statistics courses and co-led lab weekly meetings. Prepared quarterly and annual progress reports for IDNR and presented at state, regional, and national conferences. Co-wrote a popular article on raccoon trapping in Illinois for Outdoor Illinois.

**Independent Researcher:** (September 2018-present). Conducted additional survival and spatial analyses of Timber Rattlesnakes in New England. Survival analyses were conducted in R using

RMark. Evaluated impacts of timber management on the thermal environment of potential basking sites and submitted a manuscript describing the results.

**Independent Researcher:** The Orianne Society, 11 Old Fruit Stand Lane, Tiger, Georgia (June 2017-January 2018). Conducted population analyses of Timber Rattlesnakes for the New England state wildlife agencies and assisted in the design of a standardized quantitative population monitoring protocol. Used capture-recapture and count data models to estimate survival and abundance in R using the unmarked and RMARK packages. Conducted population viability analyses using the program VORTEX. Ran simulation experiments to identify optimal sampling designs for estimating and monitoring timber rattlesnake abundance using hierarchical models including single-season occupancy models, N-mixture abundance models, abundance models with temporary emigration, and multi-season Dail-Madsen abundance models. Wrote two-thirds of the final report, supervised the writing of one-third of the report, and acted as senior editor for the submitted report.

**Assistant Conservation Scientist.** The Orianne Society, 11 Old Fruit Stand Lane, Tiger, Georgia (March 2012-August 2013; *as Research Ecologist from May 2009-March 2012*). Designed and implemented projects studying the thermal ecology of Eastern Indigo Snakes, the spatial ecology and effects of habitat fragmentation on Eastern Indigo Snakes, the effects of translocation on Gopher Tortoises, and an Eastern Indigo Snake and Eastern Diamondback Rattlesnake occupancy monitoring program. Supervised budgets for the Conservation Science Program. Hired and supervised five full-time field technicians on multiple projects. Wrote and reviewed grant proposals and prepared annual reports. Assisted with study design, data analysis, and report preparation of studies examining Timber Rattlesnake spatial and population ecology, Western Rattlesnake population ecology, Eastern Diamondback Rattlesnake habitat ecology, and Gopher Tortoise population monitoring.

**Red List Focal Point.** IUCN Species Survival Commission (September 2010-August 2012). Reviewed and coordinated species assessment for all species of vipers. Assisted with preparation of the global Viper Conservation Action Plan.

## **PROFESIONAL ACTIVITY**

### **Affiliations & Membership:**

- The Wildlife Society (2019-present)
- IUCN Species Survival Commission Viper Specialist Group (2009-2013)

### **Journal Reviewer:**

Herpetologica (2024, 2023), Journal of Mammalogy (2023, 2022), Animal Biotelemetry (2023), Evolutionary Applications (2023), Endangered Species Research (2023), Wildlife Research (2023), Herpetological Conservation and Biology (2023, 2020, 2016), Landscape Ecology (2023 [2], 2021 & 2019), Conservation Biology (2023), Global Ecology and Conservation (2023), PLoS One (2022 & 2021), Biological Conservation (2022), Biological Journal of the Linnean Society (2022), Southeastern Naturalist (2022), Ecography (2022), Ecology and Evolution (2022), Ecosphere (2022), Journal of Wildlife Management (2022, 2017), PeerJ (2022), Wildlife Biology (2021 & 2019), Canadian Journal of Zoology (2021), Molecular Ecology Resources (2021), Animal Conservation (2021), Animals (2021), Scientific Reports (2020), Canadian Wildlife Biology and Management (2020), Chelonian Conservation and Biology (2020), American Midland Naturalist (2020), Herpetology Journal (2020), Molecular Ecology (2019), Journal of the Arkansas Academy of Science (2019), Methods in Ecology and Evolution (2018), Copeia (2016), Herpetology Notes (2016)

**U.S. Geological Survey FSP Reviewer: 2022 (1), 2023 (3)**

**U.S. Geological Survey Software Release Reviewer: 2023 (1)**

**U.S. Geological Survey FSP Review Panel Member (2022)**

**Member, Search Committee for Large Mammal Faculty, University of Arizona (2022)**