

# J. ALEX BAECHER



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## EDUCATION

**MAY 2024 (expected)**

**INTERDISCIPLINARY ECOLOGY, PHD** | UNIVERSITY OF FLORIDA (USA)

**DECEMBER 2017**

**BIOLOGICAL SCIENCES, MSc** | EASTERN KENTUCKY UNIVERSITY (USA)

**MAY 2014**

**BIOLOGICAL SCIENCES, BSc** | UNIVERSITY OF ARKANSAS (USA)

## EXPERIENCE

**AUGUST 2019 – ...**

**GRADUATE ASSISTANT** | UNIVERSITY OF FLORIDA

- **Teaching:** Instructor of record for Environmental Science Laboratory (EVS 3000L)
- **Research:** Predicting the effects of climate and land use change on invasive and priority native reptiles and amphibians in the southeastern USA

**JANUARY 2018 – JULY 2019**

**CONSERVATION AND RESEARCH TECHNICIAN** | MEMPHIS ZOOLOGICAL SOCIETY

- **Research:** Modeled the efficacy of various sperm collection and cryopreservation protocols to develop better amphibian reproductive technologies
- **Herpetoculture:** Managed animal care for repatriation project for endangered dusky gopher frogs and Louisiana pine snakes using captive rearing

**MAY – AUGUST 2017**

**NSF REU RESEARCH COORDINATOR** | EASTERN KENTUCKY UNIVERSITY

- **Teaching:** Coordinated study design, data collection, analysis, and manuscript development for seven students

**MAY 2015 – AUGUST 2017**

**GRADUATE ASSISTANT** | EASTERN KENTUCKY UNIVERSITY

- **Teaching:** 2 – 3 sections per week Human Anatomy Lab
- **Research:** Investigated the population dynamics of woodland salamanders in old growth Appalachian Forest
- **Service:** Herpetocultural manager of live outreach animals, including venomous reptiles; led specimen preparation, accessioning, and digitization

**JANUARY 2014 – MARCH 2015**

**RESEARCH ASSISTANT** | UNIVERSITY OF ARKANSAS

- **Research:** Managed field and laboratory data collection for projects investigating the effects of ecological disturbances and restoration on herpetofauna

**AUGUST 2012 – JANUARY 2014**

**RESEARCH TECHNICIAN** | UNIVERSITY OF ARKANSAS

- **Research:** Assisted in research projects, including field and laboratory data collection, database management and analysis, and community outreach

## INVITED PEER REVIEWER

### JOURNAL (QTY REVIEWED/REQUESTED):

BIOLOGICAL CONSERVATION (1); ECOGRAPHY (1); ECOLOGY AND EVOLUTION (4/5); HERPETOLOGICAL CON. BIO. (3/5); HERPETOLOGICAL REVIEW (4/5); HYDROBIOLOGIA (1); JOURNAL OF NATURAL AREAS (2); OEOLOGIA (0/1); SCIENTIFIC REPORTS (1); WILDLIFE SOCIETY BULLETIN (2)

## AWARDS

### AMOUNT | ORGANIZATION | AWARD NAME:

\$4,000	University of Florida	Robin E Nadeau Graduate Research Award (2019)
\$195,000	University of Florida	Graduate School Preeminence Award (2019)
\$500	SSAR	Grant-in-Aid of Herpetological Research (2016)
\$500	Eastern Kentucky University	Dept. of Biological Sciences Travel Stipend (2016)
\$500	Eastern Kentucky University	Division of Natural Areas Research Grant (2016)
\$1,100	Kentucky Academy of Science	Marcia Athey Research Grant (2016)
\$700 x2	Society for Freshwater Science	Instars Fellowship (2013 & 2014)
\$5,000 x2	University of Arkansas	NSF REU Fellowship (2012 & 2013)

## PUBLICATIONS

- Evans, L, [JA Baecher](#), BR Scheffers. *In review*. Invasion risk posed by the pet trade (*PNAS*)
- D Klings, [JA Baecher](#), [...], BR Scheffers. *Submitted*. Proximal microclimate: moving beyond spatiotemporal scale to improve predicted biological responses (*Ecology Letters*)
- Lawlor, JA, [...], [JA Baecher](#), [...], J Sunday. *Submitted*. Mechanisms, detections, and impacts of species redistributions under climate change (*Nature Reviews Earth and Environment*)
- [JA Baecher](#), [...], BR Scheffers. *In prep*. A framework for modeling connectivity of populations incorporating propagule pressure: a case study with invasive Burmese pythons (*Ecography*)
- [JA Baecher](#), [...], BR Scheffers. **2023**. Experimental evaluation of how invasions and climate change interact to alter the vertical assembly of an amphibian community. *Journal of Animal Ecology* [HTML](#) | [Altmetric](#)
- Basham, EW, [JA Baecher](#), D Klings, BR Scheffers. **2022**. Vertical stratification patterns of tropical forest vertebrates: A meta-analysis. *Biological Reviews* [HTML](#)
- Basham, EW, [...], [JA Baecher](#), BR Scheffers. **2022**. Large, old trees define the vertical, horizontal, and seasonal distributions of a poison frog. *Oecologia* [HTML](#)
- Swartwout, M, PN Vogrinc, [JA Baecher](#), [...], JD Willson. **2020**. Prey Size and Growth Rate do not Influence Trophic Morphology of Juvenile Water Snakes (*Nerodia sipedon*). *Herpetologica* [HTML](#)
- [Baecher, JA](#), E Jones, SC Richter. **2020**. Tail bifurcation in two species of *Desmognathus* salamander (Caudata: Plethodontidae) in southeastern Kentucky, USA. *Herpetological Bulletin* [HTML](#)
- Hinkson, KM, [JA Baecher](#), S Poo. **2019**. Cryopreservation and hormonal induction of spermic urine in the smooth-sided toad (*Rhaebo guttatus*). *Cryobiology* [HTML](#)
- [Baecher, JA](#), SC Richter. **2018**. Environmental gradients in an old-growth Appalachian Forest predict fine-scale distribution, co-occurrence, and abundance of woodland salamanders. *Ecology and Evolution* [HTML](#)
- [Baecher, JA](#), JD Willson, [...], CS Kross. **2018**. Herpetofaunal Communities in Restored and Unrestored Remnant Tallgrass Prairie and Associated Wetlands in Northwest Arkansas, USA. *Wetlands* [HTML](#)
- [Baecher, JA](#), [...], JD Willson. **2014**. *Lithobates areolatus* (Predation). *Herpetological Reviews* [HTML](#)

## PRESENTATIONS

### **Selected (only external symposia): †talk ‡poster**

- †JA Baecher, D Klinges, L Evans, BR Scheffers. **2023. *Species On The Move*. Bonita Springs, FL (USA)**
- †BR Scheffers, JA Baecher, E Basham. **2023. *Species On The Move*. Bonita Springs, FL (USA)**
- †L Evans, JA Baecher, BR Scheffers. **2023. *Species On The Move*. Bonita Springs, FL (USA)**
- †D Klinges, [...], JA Baecher, [...], BR Scheffers. **2023. *Species On The Move*. Bonita Springs, FL (USA)**
- ‡L Evans, BR Scheffers, JA Baecher. **2022. *North American Invasive Species Mgmt Association*. Ft. Myers, FL (USA)**
- †D Klinges, JA Baecher, [...], BR Scheffers. **2022. *Microclimate Ecology and Biogeography*. Antwerp, Belgium**
- †JA Baecher, BR Scheffers. **2022. *Centre for the Synthesis and Analysis of Biodiversity*. Montpellier, France**
- †JA Baecher, L Evans, [...], BR Scheffers. **2022. *Southeastern RISCC network Webinar*. Virtual**
- †E Khazan, [...], JA Baecher. **2022. *Association for Tropical Biology and Conservation*. Cartagena, Columbia**
- †JA Baecher, L Evans, [...], BR Scheffers. **2022. *International Association of Landscape Ecology*. Virtual**
- †L Evans, BR Scheffers, JA Baecher. **2022. *Collaborative to Combat the Illegal Trade in Turtles*. Virtual**
- †Basham, EW, JA Baecher, [...], BR Scheffers. **2021. *International Canopy Science Conference*. Virtual**
- †Basham, EW, JA Baecher, [...], BR Scheffers. **2021. *Ecological Society of America*. Virtual**
- †Jones, E, JA Baecher, [...], SC Richter. **2019. *Association of Southeastern Biologists*. Memphis, TN (USA)**
- †Hinkson, KM, JA Baecher, S Poo. **2019. *Association of Southeastern Biologists*. Memphis, TN (USA)**
- †Baecher, JA, SB Reichling. **2018. *USFWS WORKING GROUP Meeting*. Shreveport, LA (USA)**
- ‡Jones, E, JA Baecher, [...], SC Richter. **2018. *Kentucky Academy of Science*. Bowling Green, KY (USA)**
- †Gross, BA, Z Patton, JA Baecher, [...]. **2018. *25<sup>th</sup> Crocodile Specialist Group*. Sante Fe, Argentina**
- †Baecher, JA, SC Richter. **2018. *Joint Meeting of Ichth's and Herp's*. Rochester, NY (USA)**
- †Grap, P, S Harrel, [...], JA Baecher. **2018. *Association of Southeastern Biologists*. Myrtle Beach, SC (USA)**
- †Peters, J, J Koslow, JA Baecher. **2018. *Association of Southeastern Biologists*. Myrtle Beach, SC (USA)**
- †Baecher, JA, SC Richter. **2017. *Center for Ecology, Evolution and Behavior*. Lexington, KY (USA)**
- †Grap, P, S Harrel, [...], JA Baecher. **2017. *Southeastern Fisheries Council Annual Meeting*. Chattanooga, TN (USA)**
- ‡Baecher, JA, SC Richter. **2017. *SE Partners in Amphibian & Reptile Conservation*. Little Rock, AR (USA)**
- ‡Swartwout, M, P Vogrinc, JA Baecher, [...]. **2016. *Joint Meeting of Ichth's and Herp's*. New Orleans, LA (USA)**
- †Baecher, JA, P Vongrinc, JD Willson. **2016. *Joint Meeting of Ichth's and Herp's*. New Orleans, LA (USA)**
- ‡Baecher, JA, DR Leasure, [...], DD Magoulick. **2014. *Joint Meeting of Aquatic Sciences*. Portland, OR (USA)**
- ‡Baecher, JA, DR Leasure, [...], DD Magoulick. **2013. *American Fisheries Society*. Little Rock, AR (USA)**
- ‡Baecher, JA, J Ortega, SJ Beaupré. **2013. *Society for Freshwater Science*. Jacksonville, FL (USA)**

### **HOSTED WORKSHOPS:**

- Fletcher, R, [...], JA Baecher. **2023. Application of connectivity modeling to identify and predict movement and range redistribution. *Species On The Move*. Bonita Springs, FL (USA)**
- Baecher, JA, L Evans, BR Scheffers. **2022. Expert elicitation of key invasive species habitat requirements, prevalence, and life history attributes using an Interactive Shiny App. *Austin Carey Forest*. Gainesville, FL (USA)**
- Fletcher, R, JA Baecher, [...], Thomas Smith. **2021. Expanding the scope of connectivity modeling with Markov chains: perspectives and applications in R. *International Association of Landscape Ecology*. Virtual**

### **GUEST LECTURES:**

- JA Baecher. **2021. Achieving connectivity under rapid change. *Ecology of Climate Change*. Gainesville, FL (USA)**
- JA Baecher. **2020. Restoration ecology of grassland herpetofauna. *Amphibians of the Southeast*. Gainesville, FL (USA)**
- JA Baecher. **2020. Amphibian diversity and natural history. *Amphibians of the Southeast*. Gainesville, FL (USA)**
- JA Baecher. **2020. Threats to salamander diversity. *Amphibians of the Southeast*. Gainesville, FL (USA)**

## MENTORSHIP

### EASTERN KENTUCKY UNIVERSITY:

NATHAN MCGREGOR  
ASHLEY ALBINO

EMILY JONES  
ALEX GIBSON

MYESHA JAMES  
KELLEY HOEFER

### RHODES COLLEGE:

BILL HAUGE

MADELINE ESTES

### UNIVERSITY OF FLORIDA:

SIERRA SCAUZILLO

## PROFESSIONAL REFERENCES

**BRETT R SCHEFFERS, PHD** | ASSOCIATE PROFESSOR, WILDLIFE ECOLOGY AND  
CONSERVATION, UNIVERSITY OF FLORIDA

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