

# J. ALEX BAECHER



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## EDUCATION

*MAY 2024 expected*

**INTERDISCIPLINARY ECOLOGY, PHD** | UNIVERSITY OF FLORIDA

*DECEMBER 2017*

**BIOLOGICAL SCIENCES, MS** | EASTERN KENTUCKY UNIVERSITY

*MAY 2014*

**BIOLOGICAL SCIENCES, BS** | UNIVERSITY OF ARKANSAS

## EXPERIENCE

*AUGUST 2019 – ...*

**GRADUATE ASSISTANT** | UNIVERSITY OF FLORIDA

- **Teaching:** Instructor of record for Environmental Science Laboratory EVS 3000L
- **Research:** Leveraging large datasets and complex dynamic modeling to explore the effects of climate and land use change on invasive and priority native vertebrates in the southeastern USA

*JANUARY 2018 – JULY 2019*

**CONSERVATION AND RESEARCH TECHNICIAN** | MEMPHIS ZOO

- **Research:** Investigated 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 using unmarked occupancy and abundance models
- **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

## FUNDING

AMOUNT	ORGANIZATION	AWARD NAME	YEAR
\$4,000	University of Florida	Robin Nadeau Graduate Research Award	2019
\$195k	University of Florida	Graduate School Preeminence Award	2019
\$500	Soc. Study Ampib. and Rep.	Grant-in-Aid of Herpetological Research	2016
\$500	Eastern Kentucky University	Dept. Biological Sciences Travel Stipend	2016
\$500	Eastern Kentucky University	Div. Natural Areas Research Grant	2016
\$1,100	Eastern Kentucky University	Marcia Athey Research Grant	2016
\$700	Society for Freshwater Science	Instars Fellowship	2013-'14
\$5,000	University of Arkansas	NSF REU Fellowship	2012-'13

## PUBLICATIONS

### FORTHCOMING:

- 6) JA Baecher. Submitted. The environmental filtering paradigm and non-filtering community assembly processes. *Journal of Biogeography*
- 5) JA Baecher, [...], BR Scheffers. In review. Simulating what limits the spread of a high-profile invasive predator. *Ecography*
- 4) Comte, L, [...], JA Baecher, [...]. In review. Making traits useful again? A research agenda to understand species on the move. *Global Change Biology*
- 3) Evans, L, JA Baecher, BR Scheffers. In revision. Invasion risk posed by the pet trade. *Frontiers in Ecology and the Environment*
- 2) D Klimes, JA Baecher, [...], BR Scheffers. In revision. Proximal microclimate: moving beyond spatiotemporal scale to improve predicted biological responses. *Ecology Letters*
- 1) Lawlor, JA, [...], JA Baecher, [...], J Sunday. In press. Mechanisms, detections, and impacts of species redistributions under climate change. *Nature Reviews Earth and Environment*

### PUBLISHED:

- 9) 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](#) | [Research highlight](#) by Nature Climate Change | [Press coverage](#) by Florida Today, USGS
- 8) Basham, EW, JA Baecher, D Klimes, BR Scheffers. 2022. Vertical stratification patterns of tropical forest vertebrates: A meta-analysis. *Biological Reviews* [HTML](#)
- 7) Basham, EW, [...], JA Baecher, BR Scheffers. 2022. Large, old trees define the vertical, horizontal, and seasonal distributions of a poison frog. *Oecologia* [HTML](#)
- 6) Swartwout, M, PN Vegrinc, JA Baecher, [...], JD Willson. 2020. Prey Size and Growth Rate do not Influence Trophic Morphology of Juvenile Water Snakes *Nerodia sipedon*. *Herpetologica* [HTML](#)
- 5) Baecher, JA, E Jones, SC Richter. 2020. Tail bifurcation in two species of *Desmognathus* salamander Caudata: Plethodontidae in southeastern Kentucky, USA. *Herpetological Bulletin* [HTML](#)
- 4) Hinkson, KM, JA Baecher, S Poo. 2019. Cryopreservation and hormonal induction of spermic urine in the smooth-sided toad *Rhaebo guttatus*. *Cryobiology* [HTML](#)
- 3) 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](#)
- 2) 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](#)
- 1) Baecher, JA, [...], JD Willson. 2014. *Lithobates areolatus* Predation. *Herpetological Reviews* [HTML](#)

## PRESENTATIONS

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

- 30) †JA Baecher, D Kluges, L Evans, BR Scheffers. 2023. **Species On The Move**. Ft. Myers, FL
- 29) †BR Scheffers, JA Baecher, E Basham. 2023. **Species On The Move**. Ft. Myers, FL
- 28) †L Evans, JA Baecher, BR Scheffers. 2023. **Species On The Move**. Ft. Myers, FL
- 27) †D Kluges, [...], JA Baecher, [...], BR Scheffers. 2023. **Species On The Move**. Ft. Myers, FL
- 26) †L Evans, BR Scheffers, JA Baecher. 2022. **Invasive Species Mgmt Association**. Ft. Myers, FL
- 25) †D Kluges, JA Baecher, [...], BR Scheffers. 2022. **Microclimate Ecol. Biogeog.** Antwerp, Belgium
- 24) †JA Baecher, BR Scheffers. 2022. **Cent. Synthesis Analysis of Biodiversity**. Montpellier, France
- 23) †JA Baecher, L Evans, [...], BR Scheffers. 2022. **Southeastern RISC network**. Virtual
- 22) †E Khazan, [...], JA Baecher. 2022. **Assoc. for Tropical Biol. and Conserv.** Cartagena, Columbia
- 21) †JA Baecher, L Evans, [...], BR Scheffers. 2022. **Internat. Assoc. of Landscape Ecology**. Virtual
- 20) †L Evans, BR Scheffers, JA Baecher. 2022. **Collab. Combat the Illegal Trade in Turtles**. Virtual
- 19) †Basham, EW, JA Baecher, [...], BR Scheffers. 2021. **Internat. Canopy Science Conference**. Virtual
- 18) †Basham, EW, JA Baecher, [...], BR Scheffers. 2021. **Ecological Society of America**. Virtual
- 17) †Basham, EW, JA Baecher, [...], BR Scheffers. 2021. **European Meet. Students Evol. Biol.** Virtual
- 16) †Jones, E, JA Baecher, [...], SC Richter. 2019. **Assoc. of Southeastern Biologists**. Memphis, TN
- 15) †Hinkson, KM, JA Baecher, S Poo. 2019. **Association of Southeastern Biologists**. Memphis, TN
- 14) †Baecher, JA, SB Reichling. 2018. **USFWS Working Group Meeting**. Shreveport, LA
- 13) †Jones, E, JA Baecher, [...], SC Richter. 2018. **Kentucky Academy of Science**. Bowling Green, KY
- 12) †Gross, BA, Z Patton, JA Baecher, [...]. 2018. **25<sup>th</sup> Crocodile Specialist Group**. Sante Fe, Argentina
- 11) †Baecher, JA, SC Richter. 2018. **Joint Meeting of Ichth's and Herp's**. Rochester, NY
- 10) †Grap, P, S Harrel, [...], JA Baecher. 2018. **Assoc. of Southeastern Biologists**. Myrtle Beach, SC
- 9) †Peters, J, J Koslow, JA Baecher. 2018. **Assoc. of Southeastern Biologists**. Myrtle Beach, SC
- 8) †Baecher, JA, SC Richter. 2017. **Center for Ecology, Evolution and Behavior**. Lexington, KY
- 7) †Grap, P, S Harrel, [...], JA Baecher. 2017. **Southeastern Fisheries Council**. Chattanooga, TN
- 6) †Baecher, JA, SC Richter. 2017. **SE Partners in Amphibian & Reptile Conserv.** Little Rock, AR
- 5) †Swartwout, M, P Vogrinc, JA Baecher, [...]. 2016. **Ichth's and Herp's**. New Orleans, LA
- 4) †Baecher, JA, P Vogrinc, JD Willson. 2016. **Ichth's and Herp's**. New Orleans, LA USA
- 3) †Baecher, JA, DR Leasure, [...], DD Magoulick. 2014. **Jt. Meeting Aquatic Sciences**. Portland, OR
- 2) †Baecher, JA, DR Leasure, [...], DD Magoulick. 2013. **American Fisheries Society**. Little Rock, AR
- 1) †Baecher, JA, J Ortega, SJ Beaupré. 2013. **Society for Freshwater Science**. Jacksonville, FL

### **HOSTED WORKSHOPS:**

- 3) 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
- 2) 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
- 1) 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 AT UNIVERSITY OF FLORIDA:**

- 4) JA Baecher. 2021. Achieving connectivity under rapid change. **Ecology of Climate Change**
- 3) JA Baecher. 2020. Restoration ecology of grassland herpetofauna. **Amphibians of the Southeast**
- 2) JA Baecher. 2020. Amphibian diversity and natural history. **Amphibians of the Southeast**
- 1) JA Baecher. 2020. Threats to salamander diversity. **Amphibians of the Southeast**

## INVITED PEER REVIEWER

### **JOURNAL (REVIEWED/REQUESTED):**

**BIOL. CONSERV.** (1/1); **CONSERV. SCI. AND PRACT.** (1/1); **ECOGRAPHY** (1/1); **ECOL. & EVOL.** (4/5); **HERP. CON. BIO.** (3/5); **HERP. REV.** (4/5); **HYDROBIOLOGIA** (1/1); **NAT. AREAS J.** (2/2); **OECOLOGIA** (1/2); **SCI. REP.** (1/1); **WILDL. SOC. BULL.** (2/2)

## 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**

**NOAH BOWEN**

## PROFESSIONAL REFERENCES

### **BRETT R SCHEFFERS, PHD** | UNIVERSITY OF FLORIDA

**ASSOCIATE PROFESSOR:** *Wildlife Ecology and Conservation*

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### **ROBERT GURALNICK, PHD** | UNIVERSITY OF FLORIDA

**CURATOR OF BIODIVERSITY INFORMATICS:** *Florida Museum of Natural History*

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