

J. ALEX BAECHER



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EDUCATION

AUGUST 2024

INTERDISCIPLINARY ECOLOGY, PHD | UNIVERSITY OF FLORIDA

Thesis: *Influence of Global Change on Species' Behavior, Movement, and Ranges* [PDF](#)

Advisor: Brett R Scheffers

DECEMBER 2017

BIOLOGICAL SCIENCES, MS | EASTERN KENTUCKY UNIVERSITY

Thesis: *Environmental gradients in old-growth Appalachian forest predict habitat use, fine-scale distribution, co-occurrence, and density of woodland salamanders* [PDF](#)

Advisor: Stephen C Richter

MAY 2014

BIOLOGICAL SCIENCES, BS | UNIVERSITY OF ARKANSAS

Thesis: *Impact of Anthropogenic Land Use and Hydrologic Disturbance on Crayfish* [PDF](#)

Advisor: Daniel D Magoulick

EXPERIENCE

AUGUST 2024 – ...

POSTDOCTORAL RESEARCH ASSOCIATE | UNIVERSITY OF FLORIDA

AUGUST 2019 – 2024

DOCTORAL PREEMINENCE RESEARCH FELLOW | UNIVERSITY OF FLORIDA

JANUARY 2018 – JULY 2019

CONSERVATION AND RESEARCH TECHNICIAN | MEMPHIS ZOO

MAY – AUGUST 2017

NSF REU RESEARCH COORDINATOR | EASTERN KENTUCKY UNIVERSITY

MAY 2015 – AUGUST 2017

GRADUATE TEACHING ASSISTANT | EASTERN KENTUCKY UNIVERSITY

AUGUST 2012 – MARCH 2015

UNDERGRADUATE RESEARCH ASSISTANT | UNIVERSITY OF ARKANSAS

FUNDING

AMOUNT	ORGANIZATION	AWARD NAME	YEAR
\$4,000	UF	Robin Nadeau Graduate Research Award	2019
\$195k	UF	Doctoral Preeminence Fellowship Award	2019
\$500	SSAR	Grant-in-Aid of Herpetological Research	2016
\$500	EKU	Dep. Biological Sciences Travel Stipend	2016
\$500	EKU	Div. Natural Areas Research Grant	2016
\$1,100	EKU	Marcia Athey Research Grant	2016
\$700 (x2)	SFS	Instars Fellowship	2013 – '14
\$5,000 (x2)	NSF	Research Experience for Undergraduates	2012 – '13

PUBLICATIONS

^{\$}MENTEE CO-AUTHOR [†]NATURAL HISTORY NOTE

- ...) **Baecher, JA**, DH Klinges, LJ Evans, BR Scheffers. *In prep.* Informing species' range shifts with global connectivity.
- ...) Evans, LJ, **JA Baecher**, J Cullen, C Romagosa, BR Scheffers. *In prep.* An expert elicitation tool for mapping the prevalence and habitat suitability of invasive species.
- ...) **Baecher, JA**, D Klinges, LJ Evans, C Romagosa, R Fletcher, BR Scheffers. *In review.* Isolating what limits the spread of an invasive predator. **Journal of Applied Ecology** [CODE](#) [PREPRINT](#)
- ...) Evans, LJ, **JA Baecher**, BR Scheffers. *In revision.* Invasion risk posed by the pet trade. **Frontiers in Ecology and the Environment**
- 13) **Baecher, JA**. 2024. The environmental filtering paradigm and non-filtering community assembly processes. **Journal of Biogeography** 51(7):31–8 [HTML](#) [PDF](#)
- 12) DH Klinges, **JA Baecher**, JJ Lembrechts, IMD Maclean, J Lenoir, C Greiser, M Ashcroft, LJ Evans, MR Kearney, J Aalto, IC Barrio, P De Frenne, J Guillemot, K Hylander, T Jucker, M Kopecký, M Luoto, M Macek, I Nijs, J Urban, L van den Brink, P Vangansbeke, J Von Oppen, J Wild, J Boike, R Canessa, M Nosetto, A Rubtsov, J Sallo-Bravo, BR Scheffers. 2024. Proximal microclimate: moving beyond spatiotemporal scale to improve predicted biological responses. **Global Ecology and Biogeography** 33(7):e1–16 [HTML](#) [PDF](#) [CODE](#)
- 11) Comte, L, R Bertrand, S Diamond, LT Lancaster, ML Pinsky, BR Scheffers, **JA Baecher**, RMWJ Bandara, I-Ching Chen, JA Lawlor, NA Moore, BF Oliveira, J Murienne, J Rolland, MA Rubenstein, J Sunday, LM Thompson, F Villalobos, SR Weiskopf, J Lenoir. 2024. Bringing traits back in the equation: A roadmap to understand species redistribution. **Global Change Biology** 30:e17271 [HTML](#) [PDF](#)
- 10) Lawlor, JA, L Comte, G Grenouillet, J Lenoir, **JA Baecher**, RMWJ Bandara, R Bertrand, I-Ching Chen, SE Diamond, LT Lancaster, NA Moore, J Murienne, BF Oliveira, GT Pecl, ML Pinsky, J Rolland, M Rubenstein, BR Scheffers, LM Thompson, B van Amerom, F Villalobos, SR Weiskopf, J Sunday. 2024. Mechanisms, detections, and impacts of species redistributions under climate change. **Nature Reviews Earth & Environment** 5:351–368 [HTML](#) [PDF](#)
- 9) **Baecher, JA**, SA Johnson, EA Roznik, 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** 92(4):875–888 [HTML](#) [PDF](#) [CODE](#) | [Press:](#) [Nature Climate Change](#) [Florida Today](#) [USGS](#)

- 8) Basham, EW, [JA Baecher](#), DH Klimes, BR Scheffers. **2022**. *Vertical stratification patterns of tropical forest vertebrates: A meta-analysis*. **Biological Reviews** 98(1):99–114
[HTML](#) [PDF](#) [CODE](#)
- 7) Basham, EW, M González-Pinzón, A Romero-Marcucci, N Carl, [JA Baecher](#), BR Scheffers. **2022**. *Large, old trees define the vertical, horizontal, and seasonal distributions of a poison frog*. **Oecologia** 199:257–269 [HTML](#) [PDF](#) [CODE](#)
- 6) Swartwout, M, PN Vegrinc, [JA Baecher](#), CS Kross, JD Willson. **2020**. *Prey Size and Growth Rate do not Influence Trophic Morphology of Juvenile Water Snakes Nerodia sipedon*. **Herpetologica** 76(1):53–60 [HTML](#) [PDF](#)
- 5)[†] [Baecher, JA](#), [§]E Jones, SC Richter. **2020**. *Tail bifurcation in two species of Desmognathus salamander Caudata: Plethodontidae in southeastern Kentucky, USA*. **Herpetological Bulletin** 150:29–30 [HTML](#) [PDF](#)
- 4) Hinkson, KM, [JA Baecher](#), S Poo. **2019**. *Cryopreservation and hormonal induction of spermic urine in the smooth-sided toad Rhaebo guttatus*. **Cryobiology** 89:109 – 111 [HTML](#) [PDF](#) | [Press](#): [The Commercial Appeal](#) [USA Today](#)
- 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** 8(24):12940–12952 [HTML](#) [PDF](#) [CODE](#)
- 2) [Baecher, JA](#), PH Vegrinc, JC Guzy, CS Kross, JD Willson. **2017**. *Herpetofaunal Communities in Restored and Unrestored Remnant Tallgrass Prairie and Associated Wetlands in Northwest Arkansas*. **Wetlands** 38:157–168 [HTML](#) [PDF](#)
- 1)[†] [Baecher, JA](#), PH Vegrinc, JC Guzy, JC Neal, JD Willson. **2014**. *Lithobates areolatus, Predation*. **Herpetological Review** 45(4):681–682 [PDF](#)

PRESENTATIONS

SELECTED ONLY EXTERNAL SYMPOSIA: [†]TALK [‡]POSTER [§]MENTEE

- 32) [†][Baecher, JA](#), L Evans, ... BR Scheffers. 2024. UF ISRI. Gainesville, FL [SLIDES](#)
- 31) [†]Evans, L, [JA Baecher](#), ... BR Scheffers. 2024. UF ISRI. Gainesville, FL
- 30) [†][Baecher, JA](#), D Klimes, ... BR Scheffers. 2023. Species On The Move. Ft Myers, FL [SLIDES](#)
- 29) [†]Scheffers, BR, [JA Baecher](#), E Basham. 2023. Species On The Move. Ft. Myers, FL
- 28) [†]Evans, L, [JA Baecher](#), BR Scheffers. 2023. Species On The Move. Ft. Myers, FL
- 27) [†]Klimes, DH ... [JA Baecher](#), ... BR Scheffers. 2023. Species On The Move. Ft. Myers, FL
- 26) [‡]Evans, L, BR Scheffers, [JA Baecher](#). 2022. Invasive Species Mgmt Association. Ft. Myers, FL
- 25) [†]Klimes, DH, [JA Baecher](#), ... BR Scheffers. 2022. Microclimate Ecol. Biogeog. Antwerp, Belgium
- 24) [†][Baecher, JA](#), BR Scheffers. 2022. BIOSHIFTS. Montpellier, France [SLIDES](#)
- 23) [†][Baecher, JA](#), L Evans, ... BR Scheffers. 2022. SERISCC network. Virtual [SLIDES](#) [VIDEO](#)
- 22) [†]Khazan, E ... [JA Baecher](#). 2022. Assoc. for Tropical Biol. and Conserv. Cartagena, Columbia
- 21) [†][Baecher, JA](#), ... BR Scheffers. 2022. Int. Assoc. Landscape Ecol. Virtual [SLIDES](#) [VIDEO](#)
- 20) [†]Evans, L, 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. Assoc. 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. 25th 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. Jt. Meeting Ichth's and Herp's. *New Orleans, LA*
- 4) †[Baecher, JA](#), P Vongrinc, JD Willson. 2016. Jt. Meeting Ichth's and Herp's. *New Orleans, LA*
- 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, RJ, [JA Baecher](#), M Iezzi, A Marx. 2023. Application of connectivity modeling to identify and predict movement and range redistribution. Species On The Move. *Bonita Springs, FL* [SLIDES](#)
- 2) [Baecher, JA](#), L Evans, BR Scheffers. 2022. Expert elicitation of key invasive species habitat requirements, prevalence, and life history attributes. Austin Carey Forest. *Gainesville, FL* [SLIDES](#)
- 1) Fletcher, RJ, [JA Baecher](#), M Iezzi, A Marx. 2021. Expanding the scope of connectivity modeling with Markov chains: perspectives and applications in R. International Association of Landscape Ecologists–North America. *Virtual* [VIDEO](#)

GUEST LECTURES AT UNIVERSITY OF FLORIDA:

- 4) [Baecher, JA](#). 2021. Achieving landscape connectivity under rapid global change. *Ecology of Climate Change* [SLIDES](#)
- 3) [Baecher, JA](#). 2020. Restoration ecology of grasslands and associated herpetofauna. *Amphibians of the Southeast* [SLIDES](#)
- 2) [Baecher, JA](#). 2020. 2-part series on salamander diversity and conservation in the Southeastern USA. *Amphibians of the Southeast* [SLIDES](#)
- 1) [Baecher, JA](#). 2020. Amphibian diversity. *Amphibians of the Southeast* [SLIDES](#)

PEER REVIEW

JOURNAL (REVIEWED/REQUESTED):

[BIOLOGICAL CONSERVATION](#) (1/1); [CONSERVATION SCIENCE AND PRACTICE](#) (1/2); [ECOGRAPHY](#). (1/1); [ECOLOGY & EVOLUTION](#) (4/5); [HERPETOLOGICAL CONSERVATION BIOLOGY](#) (3/5); [HERPETOLOGICAL REVIEW](#) (4/5); [HYDROBIOLOGY](#) (1/1); [NATUARL AREAS JOURNAL](#) (2/2); [OECOLOGIA](#) (1/2); [SCIENTIFIC REPORTS](#) (1/1); [WILDLIFE SOCIETY BULLETIN](#) (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

NON-FUNDED PROPOSALS

AMOUNT	GRANT DESCRIPTION	DECISION	YEAR
\$235k	NSF: Postdoctoral Research Fellowship – Biology	"Highly meritorious"	2023
\$25k	The Wilderness Society: Gloria Barron Fellowship	Declined	2021
\$3,500	AmMusNatHist: Teddy Roosevelt Memorial Grant	Declined	2020
\$4,000	FCSal: Daniel M. Digiacomo Grant	Declined	2020
\$60k	Walt Disney Company: Disney Conservation Fund	Inquiry declined	2019
\$10k	NPS: James T. Tanner Memorial Fellowship	Inquiry declined	2019

VOLUNTEER AND OUTREACH ACTIVITIES

ACTIVITY EVENT (EST. # OF ATTENDEES)	YEAR	CONT'D	
Outreach UARK Sooi RSO Fair, AR (~300)	2013	Hike leader Maywoods Teach. Lab, KY (~100)	2015
Outreach UARK Razorbash, AR (~100)	2013	Outreach Floracliff Nature Sanct., KY (~35)	2015
Outreach Holt Middle School (~30)	2013	Outreach Model Elementary School, KY (~15)	2015
Cleanup Lake Fayetteville Watershed (~30)	2013	Outreach ECU Career Fair, KY (~150)	2016
Outreach Mt. Kessler Bioblitz, AR (~15)	2013	Hike leader Lilley Cornett Woods, KY (~20)	2016
Clean up Scull Creek, AR (~30)	2013	Outreach Water Quality Assessment, KY (~30)	2016
Science Judge NWA Sci. Eng. Fair (~50)	2013	Hike leader Lilley Cornett Woods, KY (~20)	2016
Hike leader Mt. Kessler Bioblitz, AR (~15)	2014	Outreach Rhodes College, TN (~25)	2017
Hike leader Ozark Nat. Sci. Center, AR (~30)	2014	Outreach Memphis Zoo, TN (~5)	2017
Outreach UARK Wildlife Society, AR (~40)	2014	Outreach Memphis Zoo, TN (~100)	2017
Hike leader Mt. Kessler Bioblitz, AR (~15)	2014	Outreach Memphis Zoo, TN (~200)	2018
Hike leader Woolsey Wet Prairie, AR (~10)	2014	Outreach Memphis Zoo, TN (~30)	2018
Hike leader Floracliff Nature Sanct., KY (~20)	2015	Outreach Memphis Zoo, TN (~15)	2019

PROFESSIONAL REFERENCES

BRETT R SCHEFFERS, Ph.D. | UNIVERSITY OF FLORIDA

ASSOCIATE PROFESSOR, *Department of Wildlife Ecology and Conservation*

☎: 352-846-0570

✉: brett.scheffers@ufl.edu

🌐: WEBSITE

ROBERT GURALNICK, Ph.D. | UNIVERSITY OF FLORIDA

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

☎: 352-273-1980

✉: rguralnick@flmnh.ufl.edu

🌐: WEBSITE

STEPHEN C RICHTER, Ph.D. | EASTERN KENTUCKY UNIVERSITY

PROFESSOR, *Department of Biological Sciences*

EXECUTIVE DIRECTOR, *Institute of Agriculture, Natural Resources, and the Environment*

☎: 859-622-8688

✉: stephen.richter@eku.edu

🌐: WEBSITE

JOHN D ("JD") WILLSON, Ph.D. | UNIVERSITY OF ARKANSAS

ASSOCIATE PROFESSOR, *Department of Biological Sciences*

☎: 479-575-2647

✉: jwillson@uark.edu

🌐: WEBSITE