

Jennifer Krauel

- Education** 2014 PhD, Ecology and Evolutionary Biology, University of Tennessee, Knoxville
2009 Master of Science, Ecology and Systematics, San Francisco State University
1982 BS Computer Information Systems, California State Polytechnic University, Pomona
- Academic Appointments** Adjunct Assistant Professor
Department of Biology and Microbiology, College of Natural Sciences
South Dakota State University, Brookings 2020-present
- Research Specialist III
University of Tennessee, Knoxville 2016-present
- Postdoctoral research fellow
University of Southern Illinois, Carbondale, 2015
Landscape-scale automated telemetry of regional migrant bats
- Graduate Teaching Assistant
University of Tennessee, Knoxville 2009-2013
Teaching experience: Introductory Biology 102 (lab) & 130 (lab & lecture), Ecology
- Research** BatScan Radar
Cornell University, Swiss Ornithological Institute research project, 2018, Seguin, TX
Adapting and validating BirdScan ornithological radar for bat movement analysis
- Postdoctoral research fellow
University of Southern Illinois, Carbondale, 2015
Landscape-scale automated telemetry of migratory bats
Project plan and implementation, partnerships with federal, state, and local government agencies and private landowners, data analysis and publication
- Monitoring Pest Insect Migration with a Vertical-Looking Entomological Radar
USDA ARS, Rothamsted Research project, 2015-2018 Seguin, TX
High altitude bat echolocation sampling to complement VLR data analysis. Software development for data analysis based on NEXRAD weather radar archives
- Dissertation research: Bat and Insect Migration, 2010-2013, Uvalde, TX.
Study of mechanisms driving fall migration of Brazilian free-tailed bats and Noctuid moths in south Texas, including bat foraging activity at high altitudes. Partially funded by Bat Conservation International
- Bat Inventory Survey, Presidio of San Francisco, California, June 2008-July 2009
Led acoustic monitoring survey of various habitats in the Presidio to construct species list and determine habitat associations. Funded by the Presidio Trust.
- Master's thesis: Foraging Ecology of Bats in San Francisco
Led acoustic monitoring survey of 20 different natural areas throughout the city to identify factors contributing to species richness and relative foraging activity. Partially funded by the City of San Francisco Natural Areas Program, Department of Recreation & Parks.
- Caribbean bat inventory work, St. Lucia & Montserrat, 2008, 2010
Mist netting and radio tracking several bat species on two islands to evaluate the population structure of threatened species following natural disasters.

- Leadership** Symposium leader: Igniting the Future of Insect Migration Research, 2017 Entomological Society of America meeting, Denver, Colorado
Effective Conservation Leadership course, Smithsonian-Mason School of Conservation, 2013
Board of Directors, San Francisco Bay Bird Observatory, Milpitas, California (Nonprofit)
- President, 2005-2008; Vice-president, 2004-2005
- Responsible for science direction, board governance and recruitment, strategic planning, and development.
- Awards** National Geographic Society Explorer grant, 2019, NGS-58300T-19
Premier presentation, Entomological Society of America annual meeting, 2015
BCI Student Research Scholarship, 2011, 2012, 2013
UTK Grantwriting Bootcamp 2011
Scholarship, Training and Research in Ecology and Evolution Graduate Fellowship Program (NSF S-STEM Program) 2008
Scholarship, Bat Conservation International Acoustic Monitoring Workshop, 2008
First Place, Student Paper Competition, TWS Western Section, 2007
Finalist, CSU Student Research Competition, 2007
California Pre-Doctoral Program, 2006-2007, Honorable mention
College of Science & Engineering Community Service Scholarship, 2006
Scholarship, TWS California & Nevada bat ecology seminar, October 2005
Rotary Foundation Educational Award, 1980-81, Université de Droit, D'Économie et des Sciences, Aix-en-Provence, France
- Publications** Bauer S, Shamoun-Baranes J, Nilsson C, Farnsworth A, Kelly J, Reynolds DR, Dokter AM, Krauel J, Petterson LB, Horton KG, Chapman JW (2019) The grand challenges of migration ecology that radar aeroecology can help answer. *Ecography* (5):861-875.
Krauel JJ, Ratcliffe JM, Westbrook J, McCracken G (2018) Brazilian free-tailed bats (*Tadarida brasiliensis*) adjust foraging behaviour in response to migratory moths. *Canadian Journal of Zoology* 96 (6):513-520.
Krauel JJ, Brown VA, Westbrook JK, McCracken GF (2018) Predator-prey interaction reveals local effects of high-altitude insect migration. *Oecologia* 186 (1):49-58.
McCracken GF, Bernard RF, Gamba-Rios M, Wolfe R, Krauel JJ, Jones DN, Russell AL, Brown VA (2018) Rapid range expansion of the Brazilian free-tailed bat in the southeastern United States, 2008–2016. *Journal of Mammalogy* 9 (2):312–320.
Frick WF, Krauel JJ, Broadfoot KR, Kelly JF, Chilson PB (2018) The Lofty Lives of Aerial Consumers: Linking Population Ecology and Aeroecology. In: Chilson PB, Frick WF, Kelly JF, Liechti F (eds) *Aeroecology*. Springer International Publishing AG, Switzerland.
Krauel JJ, McGuire LP, Boyles JG (2018) Testing traditional assumptions about regional migration in bats. *Mammal Research* 63 (2): 115-123.
Krauel JJ, LeBuhn G (2016) Patterns of bat distribution and foraging activity in a highly urbanized temperate environment. *PLoS One* 11 (12)
Krauel, J.J., Westbrook, J.K. & McCracken, G.F. (2015) Weather-driven dynamics in a dual-migrant system: moths and bats. *Journal of Animal Ecology* 84:604-614
Krauel, J.J. & McCracken G.F. (2013) Recent Trends in Bat Migration Research. In: *Bat Evolution, Ecology, and Conservation* (Adams, R. & S. Pedersen, eds). Springer Science, NY, NY.
Pruitt, J.N., & Krauel, J.J. (2010) The adaptive value of gluttony: predators mediate the life history trade-offs of satiation threshold. *Journal of Evolutionary Biology* 23:2104-2111

- Affiliations** Ecological Society of America, North American Society on Bat Research, Entomological Society of America
- Invited Presentations**
- 2019 Guest lectures on insectivore bat diet for SDSU Mammalogy and Wildlife Nutrition and Disease classes
 - 2018 Ecological Society of America meeting, paper: Predator-Prey Interaction in the Atmosphere, in special section Macro-Aeroecology: Characterizing Animal Ecology and Behavior in the Atmosphere from Local to Continental Scales
 - 2017 South Dakota State University Life Science seminar, Aeroecology and high-altitude insect migration.
 - 2015 Entomological Society of America, paper: A bat's perspective on the autumn movements of migratory noctuid moths (Premier presentation) in symposium Ecology and management of migratory moth pests: uniting disciplines to provide solutions
 - 2012 Guest lecture on Ecology and Management of Texas Bats, Department of Wildlife Management, Southwest Texas Junior College
 - 2012 Guest lecture on Behavioral Genetics for Biology 130 class, University of Tennessee
 - 2009 - 2012 Bat Ecology & Management, lecture and demonstration, Mammalogy course, University of Tennessee
 - 2010 Foraging ecology of bats in San Francisco – San Francisco Natural Areas Program
- Presentations**
- 2019 International Radar Aeroecology Conference (Zhengzhou, China), paper: Radar aeroecology validation. Session chair: Applications of Radar Biology
 - 2019 Gordon Conference on Movement Ecology, poster: Illuminating aerial foraging behavior with radar
 - 2019 North American Symposium for Bat Research (NASBR), paper: Patterns in high altitude bat movement over Texas revealed by radar. Session co-chair.
 - 2017 Entomological Society of America, paper: Using predator-prey interaction to study high altitude insect migration
 - 2017 NASBR, paper: Bat Diet Reveals Richness in Pest Consumption and High Altitude Insect Migration
 - 2017 International Bat Echolocation Symposium, paper: High Altitude Echolocation
 - 2017 Gordon Conference on Movement Ecology, poster: Predator diet reveals movements of migratory moths
 - 2016 NASBR, paper: Regional-scale movements of migratory bats
 - 2014 North American Congress for Conservation Biology, paper: Crossing borders in the dark: integrating conservation of migratory bats and birds in North America, in symposium Full Life Cycle Conservation for High Priority Migratory Birds in the Western Hemisphere
 - 2014 Society for Integrative & Comparative Biology, paper: Migratory predators adjust foraging behavior in response to migratory prey
 - 2013 UTK EUREKA Undergraduate competition, poster with Devin Jones: Fall Migration of Corn and Rice Strains of Spodoptera frugiperda (Lepidoptera: Noctuidae) in Southwest Texas (1st prize)
 - 2013 3rd International Symposium on Bat Research, paper: Ecosystem Services & Migratory Bats
 - 2012 NASBR, paper: The moveable feast: Linking bat and insect migration
 - 2011 NASBR, paper: Eating What's in Season: Linking Bat and Insect Migratory Behavior

**Presentations,
cont.**

2009 NASBR, paper: Foraging Ecology of Bats in San Francisco, California
2008 NASBR, poster: San Francisco's Other Dining Scene: Foraging Ecology of Urban Bats
2007 The Wildlife Society, paper, IBRC, poster: Influence of waterproof casings on
Pettersson D240X acoustic bat monitoring performance.

Service

Communication and interpretation of research to general public through blog and web site,
www.krauel.com, and Twitter, @batgrrl.
2019 McCrory Gardens Third Thursday presentation, Insect migration: More than Monarchs.
2018 Osher Lifelong Learning Institute course, Insect migration: More than Monarchs.
2016 Science at the Pub, Brookings SD: Aeroecology: Life in the air
2011 Ijams Nature Center Bioblitz, Knoxville, TN. Netting and acoustic bat inventories on
nature preserve, combined with public presentations on bat research.
2010, 2012 Wildflower Pilgrimage, Great Smoky Mountains National Park, TN. Bat
echolocation talk & demonstration.
2009 Boo at the Zoo, Knoxville, TN. Outreach about bats to children and adults at Halloween
program.
2000 Smart Women/Smart Money conference, San Francisco, CA. Led workshop on
development of philanthropic giving plans.