

Annika Keeley

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[LinkedIn](#), [Google Scholar](#)

Education

PhD in Forest Science, Northern Arizona University, August 2015

Dissertation Title: Comparing estimates of landscape resistance to animal movement.

MS in Wildlife Biology, Southwest Texas State University, December 1998

Thesis Title: The mating system of Mexican free-tailed bats (*Tadarida brasiliensis*).

BS in Zoology and Botany, Brandon University, Manitoba, May 1996

Work Experience

Conservation Science Director, Center for Large Landscape Conservation, Bozeman, Montana, USA, September 2021 – present

- Provide connectivity science leadership to projects around the world
- Conduct spatial planning of ecological networks for conservation
- Advise on connectivity projects and programs across the organization and partner organizations
- Conduct connectivity-relevant research

Consultant, World Bank, April-December 2022

- Organized knowledge exchange events
- Assembled resource library
- Prepared lessons learned document

Senior Environmental Scientist, Delta Stewardship Council, Sacramento, California, USA, November 2018 – September 2021

- Led ecosystem component of Sacramento-San Joaquin climate change vulnerability assessment
- Promoted synthesis and communication of best available science by organizing workshops and symposia, and communicated technical information to agency, stakeholder and academic representatives, and the general public in form of staff reports, scientific reports, and peer-reviewed articles
- Assisted in the application of adaptive management and best available science
- Planned, organized, and led monthly interagency meetings

Postdoctoral Scholar, University of California, Berkeley, California, USA, July 2016 – September 2018

- Conducted systematic reviews for California's 4th Climate Change Assessment: (1) analysis of methods used to integrate connectivity and climate science, and (2) adaptation barriers and opportunities related to corridor planning and practice
- Co-authored the 2nd edition of Corridor Ecology - Linking Landscapes for Biodiversity Conservation and Climate Adaptation (Island Press)
- Co-authored IUCN Guidelines for Conserving Connectivity through Ecological Networks and Corridors

Instructor

- Leadership in Science and Inquiry (online course), Miami University, Ohio, Spring 2016
- Introduction to Biology, Coconino Community College, AZ, Spring 2016
- Conservation Biology, Northern Arizona University, Springs 2013, 2014, 2016
- Wildlife Management for Forestry Majors, Northern Arizona University, Fall 2011

- Wildlife Ecology for Forestry Majors, Northern Arizona University, Fall 2010

Bat Biologist, Texas Parks & Wildlife, Austin, TX, 1999 – 2001

- Developed Bat State Conservation Plan in coordination with agency biologists
- Assisted landowners with bat colony management
- Developed educational packages for use in state parks and schools
- Edited book on Texas bats

Peer-reviewed Publications

- Keeley, A. T. H.**, Faselt, J., Oppler, G., Penrod, K., Beier, P., Bignoli, D.J., Butynski, M., Gregory, A., Parker, M., and Riley, S. 2025. Monitoring ecological corridors for nature and people. *Conservation Science and Practice*. [In review](#).
- Grantham, H., Adams, V., and The IUCN WCPA Taskforce on Spatial Planning. (2024). An overview of Participatory, Integrated, and Biodiversity-Inclusive Spatial Planning and Target 1 under the Convention on Biological Diversity Kunming-Montreal Global Biodiversity Framework, IUCN WCPA Issues Paper Series No. 4, Gland, Switzerland: IUCN.
- Plowright, R. K., Ahmed, A. N., Coulson, T., Crowther, T. W., Ejotre, I., Faust, C. L., ... & **Keeley, A. T. H.** (2024). Ecological countermeasures to prevent pathogen spillover and subsequent pandemics. *Nature Communications*, 15(1), 2577.
- Faselt, J., **Keeley, A.**, Laur, A., and Oppler, G. 2024. Technical Guidance on Systematic Conservation Planning with Connectivity. Center for Large Landscape Conservation and Convention on the Conservation of Migratory Species of Wild Animals. Bozeman, USA and Bonn, Germany.
- Keeley, A. T. H.**, Beier, P., Belote, R. T., Clark, M., Clevenger, A. P., Creech, T. G., ... & Zeller, K. A. (2024). Comment on Functional landscape connectivity for a select few: Linkages do not consistently predict wildlife movement or occupancy. *Autum R. Iverson, David Waetjen, Fraser Shilling. Landscape and Urban Planning*, 253, 105217.
- Creech, T. G., Brennan, A., Faselt, J., Stabach, J. A., & **Keeley, A. T. H.** (2024). Validating Connectivity Models: A Synthesis. *Current Landscape Ecology Reports*, 1-15.
- Cosmoiu, D., Danciu, A., Meyer, H., Breuer, A., **Keeley, A.**, Danzinger, F., and Grillmayer, R. 2022. Recommendations towards standardization for ecological corridors D.T3.2.2 of the SaveGREEN project, Danube Transnational Programme, DTP3-314-2.3
- Theobald, D., **Keeley, A.T.H.**, Laur, A., and Tabor, G. 2022. A simple and practical measure of the connectivity of protected area networks: the ProNet metric. *Conservation Science and Practice*, p.e12823.
- Merenlender, A.M., **Keeley, A.T.H.**, and Hilty, J.A. 2022. Ecological corridors for which species? *Therya*, 13: 45-55.
- Keeley, A.T.H.**, Fremier, A.K., Goertler, P.A.L., Huber, P.R., Sturrock, A.M., Bashevkin, S.M., Barbaree, B.A., Grenier, J.L., Dilts, T.E., Gogol-Prokurate, M., Colombano, D., Bush, E.E., Laws, A., Gallo, J.A., Kondolf, M., Stahl, A.T. 2022. Governing ecological connectivity in cross-scale dependent systems. *BioScience* 72: 372-386.
- Keeley, A.T.H.**, Bush, E. and Chapple, D. 2022. Helping nature in the San Francisco Estuary cope with climate change. *Frontiers for Young Minds*. 10:569350. doi: 10.3389/frym.2022.569350
- Keeley, B.W. and **Keeley, A.T.H.** 2021. Acoustic wave response to groove arrays in model ears. *PloS one*, 16(11), p.e0260020.
- Choe, H., **Keeley, A.T.H.**, Cameron, D.R., Gogol-Prokurat, M., Hannah, L., Roehrdanz, P.R., Schloss, C.A. and Thorne, J.H., 2021. The influence of model frameworks in spatial planning of regional climate-adaptive connectivity for conservation planning. *Landscape and Urban Planning* 214, p.104169.

- Delta Stewardship Council. 2021. [Delta Adapts](#): Creating a Climate Resilient Future. Sacramento-San Joaquin Delta Climate Change Vulnerability Assessment.
- Keeley, A.T.H.**, Beier, P., Jenness, J.S. 2021. Connectivity metrics for conservation planning and monitoring. *Biological Conservation* 255, p.109008
- Hilty, J., Worboys, G.L., **Keeley, A.**, Woodley, S., Lausche, B., Locke, H., Carr, M., Pulsford, I., Pittock, J., White, J.W. and Theobald, D.M., 2020. Guidelines for conserving connectivity through ecological networks and corridors. IUCN, International Union for Conservation of Nature.
- Keeley, A.T.H.**, Beier, P., Creech, T., Jones, K., Jongman, R.H., Stonecipher, G. and Tabor, G.M., 2019. Thirty years of connectivity conservation planning: An assessment of factors influencing plan implementation. *Environmental Research Letters*, 14(10), p.103001.
- Cooper, O., **Keeley, A.** and Merenlender, A., 2019. Curriculum gaps for adult climate literacy. *Conservation Science and Practice*, 1(10), p.e102.
- Hilty, J.A., **A.T.H. Keeley**, W.Z. Lidicker Jr., and A.M. Merenlender. 2019. Corridor ecology: Linking landscapes for biodiversity conservation and climate adaptation. Island Press.
- Keeley A.T.H.**, G. Basson, D.R. Cameron, N.E. Heller, P.R. Huber, C.A. Schloss, J.H. Thorne, A.M. Merenlender. 2018. Making habitat connectivity a reality. *Conservation Biology*, 32(6), pp.1221-1232.
- Keeley A.T.H.**, D.D. Ackerly, D.R. Cameron, N.E. Heller, P.R. Huber, C.A. Schloss, J.H. Thorne, Merenlender. 2018. New concepts, models, and assessments of climate-wise connectivity. *Environmental Research Letters* 13:073002.
- Keeley B.W., **A.T.H. Keeley**, P. Houlahan. 2018. Ridge number in bat ears is related to both guild membership and ear length. *PloS One* 13:e0200255.
- Keeley, A.T.H.**, P. Beier, B.W. Keeley, and M.E. Fagan. 2017. Habitat suitability is a poor proxy for landscape connectivity during dispersal and mating movements. *Landscape and Urban Planning* 161: 90–102
- Keeley, A.T.H.**, P. Beier, and J. Gagnon. 2016. Estimating landscape resistance from habitat suitability. *Landscape Ecology* 31: 2151-2162.
- Blair, C., D.E. Weigel, M. Balazik, **A.T.H. Keeley**, F.M. Walker, N. Balkenhol, E. Landguth, S. Cushman, M. Murphy, and L. Waits. 2012. Detecting recent barriers in landscape genetics: a comparison of individual-based methods. *Molecular Ecology Resources* 19: 4179-4191
- Keeley, B.W., and **A.T.H. Keeley**. 2012. Using a specialized blowgun dart to obtain genetic samples from mammals. *Wildlife Society Bulletin*. doi: 10.1002/wsb.120
- Wymore A.S., **A.T.H. Keeley**, K.M. Yturalde, M.L. Schroer, C.R. Propper, and T.G. Whitham. 2011. Genes to ecosystems: exploring the frontiers of ecology with one of the smallest biological units. *New Phytologist* 191: 19-36.
- Keeley, A.T.H.**, and B.W. Keeley. 2004. The mating system of *Tadarida brasiliensis* (Chiroptera: Molossidae) in a large highway bridge colony. *Journal of Mammalogy* 85(1):113-119.
- Warkentin, K.J., **A.T.H. Keeley**, and J.F. Hare. 2001. Repetitive calls of juvenile Richardson's ground squirrels (*Spermophilus richardsonii*) communicate response urgency. *Canadian Journal of Zoology-Revue Canadienne de Zoologie* 79(4): 569-573.

Memberships

- IUCN World Commission on Protected Areas - Connectivity Conservation Specialist Group
- Society for Conservation Biology
- Society for Ecological Restoration
- Board of Directors: LinkageMapper.org
- Board of Directors: Friends of the Fiscalini Ranch Preserve