Casey A. Pennock

Curriculum Vitae (February 2024)

PERSONAL INFORMATION

Address: 1314 Kinnear Road, 230 Research Center Aquatic Ecology Laboratory Department of Evolution, Ecology, and Organismal Biology The Ohio State University Columbus, Ohio 43212

Email: <u>pennock.17@osu.edu</u> Office phone: 614-292-5644 Websites: <u>www.ael.osu.edu</u>; http://u.osu.edu/pennocklab/

EDUCATION

Ph.D. Biology, Kansas State University, 2019M.S. Biology, Kansas State University, 2016B.S. Wildlife, Fisheries, and Conservation Biology, Kansas State University, 2014A.S. Natural Resource Management, Hutchinson Community College, 2010

RESEARCH/WORK EXPERIENCE

Assistant Professor, Department of Evolution, Ecology, and Organismal Biology, The Ohio State University, 2023-Present

- Adjunct Assistant Professor, Department of Watershed Sciences, Utah State University, 2023-Present
- Research Assistant Professor, Department of Watershed Sciences, Utah State University, 2022-2023

Research Scientist, Department of Watershed Sciences, Utah State University, 2021-2022 Postdoctoral Research Associate, Department of Watershed Sciences, Utah State University,

2020-2021

Postdoctoral Research Associate, Division of Biology, Kansas State University, 2019-2020 Graduate Teaching Assistant, Division of Biology, Kansas State University, 2019 Graduate Research Assistant, Division of Biology, Kansas State University, 2018-2019 Graduate Teaching Assistant, Division of Biology, Kansas State University, 2017-2018 Research Assistant, Division of Biology, Kansas State University, 2017 Graduate Research Assistant, Division of Biology, Kansas State University, 2017 Graduate Research Assistant, Division of Biology, Kansas State University, 2015-2016 Undergraduate Research Assistant, Division of Biology, Kansas State University, 2014-2015 Undergraduate Research Technician, Kansas Cooperative Fish and Wildlife Research Unit, Kansas State University, 2012-2014

Stream Ecologist Technician, Kansas Department of Wildlife, Parks, and Tourism, 2010-2013

MILITARY SERVICE

Kansas Army National Guard, Highest Rank Earned: Staff Sergeant, 2008-2017 U.S. Army, Combined Joint Task Force-Horn of Africa, 2011-2012

PEER-REVIEWED PUBLICATIONS

Google Scholar Citation Statistics: h-index = 13; i10-index = 16 (as of February 4, 2024) **Google Scholar:** https://scholar.google.com/citations?user=TMbg9q4AAAAJ&hl=en (^undergraduate; ⁺graduate student' *postdoctoral researcher)

In press or published (n = 36)

- Kelley, K.[^], E. I. Gilbert, S. L. Durst, M. C. McKinstry, C. A. Pennock, P. D. MacKinnon, and N. R. Franssen. 2023. If you build it, will they pass? A systematic evaluation of fish passage efficiency for three large-bodied warm-water fishes. *Canadian Journal* of Fisheries and Aquatic Sciences 80:1631-1643.
- Pennock, C. A., B. Albrecht, R. J. Rogers, and M. C. McKinstry. 2023. Can spatial and temporal differences in fish assemblage structure inform conservation of an endangered species in a large western reservoir? *Transactions of the American Fisheries Society* 152:475-489.
- Bogaard, M. R.⁺, K. B. Gido, M. C. McKinstry, and C. A. Pennock. 2023. Water temperature predicts Razorback Sucker *Xyrauchen texanus* spawning migrations. *Environmental Biology of Fishes* 106:1503-1517.
- Pennock, C. A., G. P. Thiede, and P. Budy. 2023. Density-dependent processes and population dynamics of native sculpin in a mountain river. *Ecology of Freshwater Fish* 32:593-605.
- 5. Gido, K. B., S. C. Hedden, L. A. Bruckerhoff, C. A. Pennock, C. K. Hedden, G. W. Hopper, E. A. Renner, E. R. Johnson, and B. Postlethwait. 2023. Removing a perched culvert facilitates dispersal of fishes in an intermittent prairie stream. *Freshwater Science* 42:33-43.
- 6. Pennock, C. A., L. A. Bruckerhoff, K. B. Gido, A. L. Barkalow, M. J. Breen, P. Budy, W. W. Macfarlane, and D. L. Propst. 2022. Failure to achieve recommended environmental flows coincides with declining fish populations: long-term trends in a regulated and unregulated river. *Freshwater Biology* 67:1631-1643.
- Pennock, C. A., P. Budy, and W. W. Macfarlane. 2022. Effective conservation of desert riverscapes requires protection and rehabilitation of in-stream flows with rehabilitation approaches tailored to water availability. *Frontiers in Environmental Science* (invited) 10:870488.
- Dean, E⁺. M., A. R. Cooper, L. Wang, W. M. Daniel, S. David, C. Ernzen, K. B. Gido, E. Hale, T. J. Haxton, W. Kelso, N. Leonard, C. Lido, J. Margraf, M. Porter, C. Pennock, D. Propst, J. Ross, M. D. Staudinger, G. Whelan, and D. M. Infante. 2022. The North American freshwater migratory fish database (NAFMFD): Characterizing

the migratory life histories of freshwater fishes of Canada, the United States and Mexico. *Journal of Biogeography* 49:1193-1203.

- Hedden, S. C., K. B. Gido, C. K. Hedden, C. A. Pennock, B. R. Duran, B. A. Hines, E. I. Gilbert, M. C. McKinstry, S. L. Durst, and N. R. Franssen. 2022. Determining resource intake of a nonnative fish highlights potential predatory and competitive interactions. *Biological Invasions* 24:2351-2364.
- Pennock, C. A., W. C. Saunders, and P. Budy. 2022. High densities of conspecifics buffer native fish from negative interactions with an ecologically similar invasive. *Biological Invasions* 24:1283-1297.
- 11. **Pennock, C. A.**, P. Budy, W. W. Macfarlane, M. J. Breen, J. Jimenez, and J. C. Schmidt. 2022. Native fish need a natural flow regime. *Fisheries* 47:118-123.
- 12. Budy, P., C. A. Pennock, A. E. Giblin, D. White, C. Luecke, and G. W. Kling. 2022. Understanding the indirect effects of climate change via disturbance on pristine arctic lakes; delayed, multi-trophic level response and recovery to a ten-year, low-level fertilization experiment. *Limnology and Oceanography* 67:S224-S241.
- Zhang, Q., J. Jin, P. Budy, S. E. Null, X. Wang, and C. A. Pennock. 2021. Predicting thermal responses of an arctic lake to whole-lake warming manipulation. *Geophysical Research Letters* 48:e2021GL092680.
- 14. Bruckerhoff, L. A., C. A. Pennock, and K. B. Gido. 2021. Do fine-scale experiments underestimate predator consumption rates? *Journal of Animal Ecology* 90:2391-2403.
- 15. Hedden, S. C., K. B. Gido, C. K. Hedden⁺, C. A. Pennock, E. I. Gilbert, M. K. McKinstry, S. L. Durst, and N. R. Franssen. 2021. Quantifying consumption of native fishes by nonnative Channel Catfish in a desert river. *North American Journal of Fisheries Management* 41:S82-S94.
- 16. Pennock, C. A., Z. Ahrens⁺, M. C. McKinstry, P. Budy, and K. B. Gido. 2021. Trophic niches of native and nonnative fishes along a river-reservoir continuum. *Scientific Reports* 11:12140.
- 17. **Pennock, C. A.** and K. B. Gido. 2021. Spatial and temporal dynamics of fish assemblages in a desert reservoir over 38 years. *Hydrobiologia* 848:1231-1248.
- Pennock, C. A., P. Budy, C. Atkinson, and N. Barrett⁺. 2021. Effects of increased temperature on arctic slimy sculpin *Cottus cognatus* is mediated by food availability: Implications for climate change. *Freshwater Biology* 66:549-561.
- 19. Pennock, C. A., B. A. Hines, D. S. Elverud, T. A. Francis, M. C. McKinstry, B. J. Schleicher, and K. B. Gido. 2021. Reservoir fish assemblage structure across an aquatic ecotone: Can river-reservoir interfaces provide conservation and management opportunities? *Fisheries Management and Ecology* 28:1-13.
- Pennock, C. A., M. C. McKinstry, and K. B. Gido. 2020. Razorback Sucker exhibit multiple movement strategies across a river-reservoir habitat complex. *Transactions* of the American Fisheries Society 149:620-634.

- 21. Pennock, C. A., M. C. McKinstry, C. N. Cathcart, K. B. Gido, T. A. Francis, B. A. Hines, P. D. MacKinnon, S. C. Hedden, E. I. Gilbert, C. A. Cheek, D. W. Speas, K. Creighton, D. S. Elverud, and B. J. Schleicher. 2020. Movement ecology of imperiled fish in a novel ecosystem: river-reservoir movements by razorback sucker and translocations to aid conservation. *Aquatic Conservation: Marine and Freshwater Ecosystems* 30:1540-1551.
- 22. Pennock, C. A., and L. A. Bruckerhoff. 2020. Qualitative observations of successful spawning by two species of small-bodied minnows following PIT tagging. *Western North American Naturalist* 80:253-256.
- 23. Hopper, G. W., K. B. Gido, C. A. Pennock, S. C. Hedden, B. D. Frenette, N. Barts, C. K. Hedden, and L. A. Bruckerhoff. 2020. Nowhere to swim: interspecific responses of prairie stream fishes in isolated pools during severe drought. *Aquatic Sciences* 82:42(2020).
- 24. Hopper, G. W., K. B. Gido, C. A. Pennock, S. C. Hedden, J. P. Guinnip, M. A. Fisher, C. M. Tobler, C. K. Hedden, and L. A. Bruckerhoff. 2020. Biomass loss and change in species dominance shift stream community excretion stoichiometry during severe drought. *Freshwater Biology* 65:403-416.
- Perkin, J. S., T. A. Starks, C. A. Pennock, K. B. Gido, G. W. Hopper, and S. C. Hedden.
 2019. Extreme drought causes recruitment failure in a fragmented Great Plains riverscape. *Ecohydrology* 12: e2120.
- 26. Pennock, C. A., M. A. Farrington, and K. B. Gido. 2019. Feeding ecology of early life stage Razorback Sucker relative to other sucker species in the San Juan River, Utah. *Transactions of the American Fisheries Society* 148:938-951.
- Dodds, W. K., L. Bruckerhoff, D. Batzer, A. Schechner, C. Pennock, E. Renner, F. Tromboni, K. Bigham, and S. Grieger. 2019. The freshwater biome gradient framework: predicting macroscale properties based on climate. *Ecosphere* 10:e02786.
- Cathcart, C. N., C. A. Pennock, C. A. Cheek, M. C. McKinstry, P. D. MacKinnon, M. M. Conner, and K. B. Gido. 2018. Waterfall formation at a dynamic desert river delta isolates endangered fishes. *River Research and Applications* 34:948-956.
- 29. Pennock, C. A., S. L. Durst, B. R. Duran, B. A. Hines, C. N. Cathcart, J. E. Davis, B. J. Schleicher, and N. R. Franssen. 2018. Predicted and observed responses of a nonnative Channel Catfish Ictalurus punctatus population following managed removal to aid the recovery of endangered fishes. North American Journal of Fisheries Management 38:565-578.
- Pennock, C. A., C. N. Cathcart, S. C. Hedden, R. E. Weber[^], and K. B. Gido. 2018. Fine-scale movement and habitat use of a prairie stream fish assemblage. *Oecologia* 186:831-842.
- Pennock, C. A., D. Bender, J. Hofmeier, J. A. Mounts, R. Waters, V. D. Weaver, and K. B. Gido. 2018. Can fishways mitigate fragmentation effects on Great Plains fish communities? *Canadian Journal of Fisheries and Aquatic Sciences* 75:121-130.

- 32. Pennock, C. A., K. B. Gido, J. S. Perkin, V. D. Weaver, S. R. Davenport, and J. M. Caldwell. 2017. Collapsing range of an endemic Great Plains minnow, Peppered Chub Macrhybopsis tetranema. *American Midland Naturalist* 177:57-68.
- 33. **Pennock, C. A.** 2017. Beautification of Great Plains rivers: a perspective on the use and appreciation of aquatic resources. *Fisheries* 42:83-87.
- Pennock, C. A. and K. B. Gido. 2017. Density-dependence of herbivorous Central Stoneroller Campostoma anomalum in stream mesocosms. *Ecology of Freshwater Fish* 26:313-321.
- Pennock, C. A. 2017. Effects of PIT tags on Red Shiner Cyprinella lutrensis and Sand Shiner Notropis stramineus. *Transactions of the Kansas Academy of Science* 120:87-93.
- 36. Pennock, C. A., B. D. Frenette, M. J. Waters[^], and K. B. Gido. 2016. Survival of and tag retention in Southern Redbelly Dace Chrosomus erythrogaster injected with two sizes of PIT tags. North American Journal of Fisheries Management 36:1386-1394 DOI: 10.1080/02755947.2016.1227403

In review/revision

- C. A. Pennock, B. D. Healy, M. R. Bogaard⁺, M. C. McKinstry, K. B. Gido, C. Nathan Cathcart, P. D. MacKinnon, and B. Hines. Translocation in a fragmented river leads to demographic benefits for an imperiled fish assemblage. *In review at Ecosphere*.
- 2. Bogaard, M. R.⁺, K. B. Gido, M. C. McKinstry, C. A. Pennock, A. Barkalow, S. M. Bonjour, J. Bowman, K. C. Creighton, B. A. Hines, and B. J. Schleicher. Capture-translocation restores spawning migration connectivity of Razorback Sucker *Xyrauchen texanus* in the fragmented San Juan River. *In review at Transaction of the American Fisheries Society*.
- 3. B. J. Miller⁺, M. C. McKinstry, P. Budy, and C. A. Pennock. Wood you believe it? Experimental nonnative wood addition enhances instream habitat for native dryland fishes. *In review at Canadian Journal of Fisheries and Aquatic Sciences*.
- 4. C. A. Pennock, D. W. Speas, G. P. Thiede, and C. Michaud. Evaluation of post-stocking re-encounters of an endangered fish using a large, multi-agency database to inform recovery. *In review at Endangered Species Research*.

In prep (draft available)

- Budy, P., C. A. Pennock, S. Messenger⁺, H. Pehrson[^], E. Adler[^], G. P. Thiede, N. R. Christman⁺, B. C. Crump, A. E. Giblin, and G. W. Kling. Rapid recovery of an arctic lake ecosystem from a pulse disturbance caused by thermokarst failure. *In prep for Oecologia*.
- 2. Duskey, E. P.*, L. A. Bruckerhoff, and **C. A. Pennock**. Density dependent population regulation in stream fishes. *In prep for Nature Ecology and Evolution*.

- 3. Chavez, M. J.⁺, P. Budy, C. A. Pennock, T. P. Archdeacon, and P. D. MacKinnon. Movement patterns of a small-bodied minnow suggest nomadism in a fragmented, sand-bed river. *In prep for Movement Ecology*.
- 4. Miller, B. J.⁺, M. C. McKinstry, W. W. Macfarlane, S. Basset, P. Budy, and C. A. Pennock. Habitat simplification and loss from channel narrowing and nonnative vegetation encroachment in three arid-land rivers. *In prep for River Research and Applications*.
- 5. Friesen, B., P. Budy, and C. A. Pennock. One tough passage: nonnative fish entrainment survivability at a major western dam. *In prep for Canadian Journal of Fisheries and Aquatic Sciences*.

NON-REFEREED PUBLICATIONS

- Pennock, C. A., P. Budy, S. A. Bonar, T. E. Dowling, K. B. Gido, E. I. Gilbert, B. R. Kesner, C. P. Paukert, M. C. Quist, J. Stahli, T. F. Turner, and D. L. Ward. 2022. Assessment of potential augmentation and management strategies for Razorback Sucker *Xyrauchen texanus* in Lake Mead and Grand Canyon: A Science Panel Summary. UTCFWRU 2022(3):1-31.
- Pennock, C. A., W. W. Macfarlane, P. Budy, J. Jimenez, and J. Goodell. 2022. Conservation, restoration, and monitoring plan for the lower White River, Utah. UTCFWRU 2022(1):1-78.

OTHER PRODUCTS

- 1. Carson, C. C. and **C. A. Pennock**. 2018. Unsustainable use of the High Plains Aquifer: Farming and fish communities left high and dry. *National Center for Case Study Teaching in Science*.
- 2. C. A. Pennock. 2017. Fishways, fragmentation, and imperiled Great Plains fishes. *The Canadian Science Publishing Blog.*
- 3. Fanshier, T.[^], C. A. Pennock, and J. Mounts. 2016. Finding a way for fish, people, and rivers. *Kansas Department of Wildlife, Parks and Tourism Magazine.*

PRESENTATIONS

([^]undergraduate; ⁺graduate student' *postdoctoral researcher)

- Friesen, B.⁺, P. Budy, and C. A. Pennock. 2024. Characterizing the distribution of nonnative fishes in the Lake Powell forebay and identifying drivers of entrainment risk through Glen Canyon Dam. Upper Colorado River Basin Researcher's Meeting, Grand Junction, CO (Oral presentation).
- Pennock, C. A. 2023. Endangered species conservation amid widespread habitat loss, invasive species, and megadrought. Department of Biological Sciences, University of Cincinnati (Invited Seminar).

- 3. Friesen, B.⁺, P. Budy, and C. A. Pennock. 2023. Characterizing the fish assemblage in the Lake Powell forebay and identifying the potential for nonnative fish escapement into the lower Colorado River. Western Division of the American Fisheries Society, Boise, ID (Oral presentation).
- 4. Miller, B.+, C. A. Pennock, and P. Budy. 2023. Wood you believe it? Experimental nonnative wood addition enhances in-stream habitat for native desert fishes. Western Division of the American Fisheries Society, Boise, ID (Oral presentation).
- 5. Miller, B.+, C. A. Pennock, and P. Budy. 2023. Wood you believe it? Experimental nonnative wood addition enhances in-stream habitat for native desert fishes. Upper Colorado River Basin Researcher's Meeting, Grand Junction, CO (Oral presentation).
- 6. **Pennock, C. A.** 2023. Imbalances between human water use and maintenance of riverscape processes. The Ohio State University, Columbus, OH (Invited seminar).
- Friesen, B.⁺, P. Budy, and C. A. Pennock. 2022. Characterizing the fish assemblage in a reservoir forebay and identifying the potential for nonnative fish escapement into a desert river. Annual Meeting of the Desert Fishes Council, St. George, UT (Oral presentation).
- Miller, B.+, C. A. Pennock, and P. Budy. 2023. Wood you believe it? Experimental nonnative wood addition enhances in-stream habitat for native desert fishes. Annual Meeting of the Desert Fishes Council, St. George, UT (Oral presentation).
- 9. Pennock, C. A., L. A. Bruckerhoff, K. B. Gido, A. L. Barkalow, M. J. Breen, P. Budy, W. W. Macfarlane, and D. L. Propst. 2022. Failure to achieve recommended environmental flows coincides with declining fish populations: long-term trends in a regulated and unregulated river. Joint Aquatic Sciences Meeting, Grand Rapids, MI (Oral presentation).
- Pennock, C. A. 2022. Can water use and fish conservation be balanced? Introduction to Watershed Sciences (~30 students), Utah State University, Logan (Guest lecture).
- 11. **Pennock, C. A.** 2022. Can water use and fish conservation be balanced? Pittsburg State University, Pittsburg, KS (Invited seminar).
- 12. Adler, E.[^], C. A. Pennock, G. P. Thiede, and P. Budy. 2022. Will fish prey densities be affected by thermokarst failures in arctic lakes? NSF Arctic LTER Annual Meeting, (Oral presentation, virtual).
- 13. Miller, B. J.⁺, C. A. Pennock, and P. Budy. 2022. Testing the efficacy of non-native wood addition to enhance in-stream habitat for native desert fishes. Utah Chapter of the American Fisheries Society, Ogden, Utah (Oral presentation).
- 14. Pennock, C. A., W. Macfarlane, P. Budy, J. Jimenez, and J. Goodell. 2022. Effective conservation and restoration of desert riverscapes must include conservation of instream flows: What can we learn from the White River? Riversedge West's 20th Annual Conference (Oral presentation, virtual).
- 15. **Pennock, C. A.**, W. Macfarlane, P. Budy, J. Jimenez, and J. Goodell. 2022. Effective conservation and restoration of desert riverscapes must include conservation of in-

stream flows: What can we learn from the White River? Annual Upper Colorado River Basin Researcher's Meeting, Virtual (Oral presentation).

- 16. Pennock, C. A. 2021. The importance of natural flows for conservation and restoration of riverscapes. Invited Seminar, Utah Division of Wildlife Resources & Utah State University Brown Bag Seminar, Salt Lake City, Utah (Invited seminar).
- 17. Pehrson, H.*, C. A. Pennock, G. P. Thiede, and P. Budy. 2021. Effects of thermokarst failure on fish feeding ecology and diet composition in a pair of arctic lakes. Western Division of the American Fisheries Society (Oral presentation, virtual).
- Pennock, C. A. 2020. Fish conservation in novel ecosystems: Mitigating multiple stressors on fish communities. Department of Biological Sciences, University of Alabama (Invited seminar).
- Pennock, C. A., P. MacKinnon, G. P. Thiede, and P. Budy. 2020. Quantifying effects of climate change on lake ecosystems in arctic Alaska: a whole lake experiment. Arctic LTER Annual Meeting, Woods Hole, MA (Poster).
- 20. Pennock, C. A., K. B. Gido, and M. C. McKinstry. 2020. Seasonal movements of Razorback Sucker in the San Juan River-Lake Powell inflow. Annual Researchers Meeting of the Upper Colorado River Endangered Fish Recovery Program and the San Juan River Basin Recovery Implementation Program, Durango, CO (Oral presentation).
- 21. Pennock, C. A., M. C. McKinstry, C. N. Cathcart, K. B. Gido, T. A. Francis, B. A. Hines, P. D. MacKinnon, S. C. Hedden, E. I. Gilbert, C. A. Cheek, D. W. Speas, K. Creighton, D. S. Elverud, and B. J. Schleicher. 2020. Razorback Sucker movements in novel ecosystems: River-reservoir exchanges and experimental translocations. Colorado River Aquatic Biologists (CRAB) meeting, Laughlin, NV (Oral presentation).
- 22. **Pennock, C. A.** 2019. Movement, habitat use, and early life history of fishes in novel river-reservoir complexes. Ichthyology (~25 students), Kansas State University (Guest lecture).
- 23. Pennock, C. A., M. C. McKinstry, C. N. Cathcart, K. B. Gido, T. A. Francis, B. A. Hines, P. D. MacKinnon, S. C. Hedden, E. I. Gilbert, C. A. Cheek, D. W. Speas, K. Creighton, D. S. Elverud, and B. J. Schleicher. 2019. Razorback Sucker movements in novel ecosystems: River-reservoir exchanges and experimental translocations. Joint Meeting of The Wildlife Society and American Fisheries Society, Reno, NV (Oral presentation).
- 24. Pennock, C. A., M. C. McKinstry, C. N. Cathcart, K. B. Gido, T. A. Francis, B. A. Hines, P. D. MacKinnon, S. C. Hedden, E. I. Gilbert, C. A. Cheek, D. W. Speas, K. Creighton, D. S. Elverud, and B. J. Schleicher. 2019. Razorback Sucker movements in novel ecosystems: River-reservoir exchanges and experimental translocations. Annual Meeting of the Society for Freshwater Science, Salt Lake City, UT (Oral presentation).

- 25. **Pennock, C. A.** 2019. River-reservoir inflows and fish conservation. Freshwater Ecology (~25 students), Kansas State University (Guest lecture).
- 26. Pennock, C. A., M. A. Farrington, and K. B. Gido. 2018. Feeding ecology of cooccurring early life stage suckers in a regulated river. 50th Annual Meeting of the Desert Fishes Council, Death Valley, CA (Oral presentation).
- 27. Pennock, C. A., S. L. Durst, B. R. Duran, B. A. Hines, C. N. Cathcart, J. E. Davis, B. J. Schleicher, and N. R. Franssen. 2018. Predicted and observed responses of a nonnative Channel Catfish *Ictalurus punctatus* population following managed removal to aid the recovery of endangered fishes. 148th Annual Meeting of the American Fisheries Society, Atlantic City, NJ (Oral presentation).
- 28. Pennock, C. A., M. C. McKinstry, and K. B. Gido. 2018. A barrier to recovery? Razorback sucker in the San Juan River-Lake Powell inflow. Upper Colorado River Researchers Meeting (Oral presentation).
- 29. Pennock, C. A., D. Bender, J. Hofmeier, J. A. Mounts, R. Waters, V. D. Weaver, and K. B. Gido. 2017. Can fishways mitigate fragmentation effects on Great Plains fish communities? Kansas Natural Resources Conference, Wichita (Oral presentation)
- 30. Fanshier, T.[^], C. A. Pennock, and K. B. Gido 2017. Fish passage on the Arkansas River: assessing fish use of and movement through the Lincoln Street Fishway in Wichita, KS. Kansas Natural Resources Conference, Wichita (Poster)
- 31. Pennock, C. A., R. Waters, J. Mounts, J. Hofmeier, D. Bender, and K. B. Gido. 2016. Effects of a new fishway on discontinuity of the Arkansas River fish community. Annual Meeting of the American Fisheries Society, Kansas City, MO. (International)
- 32. Pennock, C. A., K. B. Gido, J. S. Perkin, and V. D. Weaver. 2016. Range-wide collapse of an endemic Great Plains minnow: the loss of a relict population of Peppered Chub. KS-NE Joint AFS Meeting, Manhattan, Kansas (Oral presentation)
- 33. Pennock, C. A., R. Waters, J. Mounts, J. Hofmeier, D. Bender, and K. B. Gido. 2016. Effects of a new fishway on discontinuity of the Arkansas River fish community. KS-NE Joint AFS Meeting, Manhattan, Kansas (Poster)
- 34. Waters, M. J.[^], C. A. Pennock, K. B. Gido. 2016. Sunfish diet composition in the Lincoln Street Fishway and associated main channel of the Arkansas River. KS-NE Joint AFS Meeting, Manhattan, Kansas (Poster)
- 35. Pennock, C. A., B. D. Frenette, M. J. Waters*, and K. B. Gido 2016. Assessment of survival and tag retention of Southern Redbelly Dace *Chrosomus erythrogaster* tagged with passive integrated transponder (PIT) tags. KS-NE Joint AFS Meeting, Manhattan, Kansas (Poster)
- 36. **Pennock, C. A.** 2015. Career preparation in the field of Fish Ecology: Past experience and insight. Ichthyology (~25 students), Kansas State University (Guest lecture).
- 37. **Pennock, C. A.** and K. B. Gido. 2015. Density-dependence of herbivorous fish in stream mesocosms. Society for Freshwater Science, Milwaukee, WI (Oral presentation)

- 38. Pennock, C. A. and K. B. Gido. 2015. Density-dependence of herbivorous fish in stream mesocosms. Rivers and Streams Technical Committee Meeting, North-Central Division AFS, Milan, Illinois (Oral presentation)
- 39. **Pennock, C. A.** and K. B. Gido. 2015. Density-dependence of a prairie stream herbivore. Kansas Natural Resource Conference, Wichita, KS. (Oral presentation)
- 40. **Pennock, C. A.** 2014. Native cyprinid abundance in relation to distance from three Kansas reservoirs. Kansas Natural Resource Conference, Wichita, (Poster)

GRANTS

Ongoing	
2021-2025	U.S. Geological Survey: Estimating ecosystem production across gradients of river alteration in the Colorado River basin; could contemporary productivity be a limiting factor for native fishes? (\$235,018) PI
2022-2024	U.S. Fish and Wildlife Service and U.S. Bureau of Reclamation: Literature review and data synthesis to inform nonnative fish management in the San Juan River (Phase 1). (\$126,034) PI
2022-2024	Utah Watershed Restoration Initiative: Lower White River Conservation, Restoration, and Monitoring (\$273,716) Co-PI
Completed	
2021-2023	San Juan River Basin Recovery Implementation Program (U.S. Fish and Wildlife Service) and U. S. Bureau of Reclamation: Using non-native vegetation to enhance in-stream habitat for native fishes (\$250,000) PI
2021-2023	U.S. Bureau of Reclamation: Characterizing the fish assemblage of the Lake Powell forebay and identifying the potential for non-native fish escapement and entrainment into Glen Canyon Dam (\$250,000) Co-PI
2021-2022	U.S. Bureau of Reclamation: Science panel for assessment of stocking Razorback Sucker in Grand Canyon. (\$55,000) Co-PI
2020-2022	National Science Foundation, Artic Long-Term Ecological Research, Collaborative Grant: An exploration of the direct and indirect effects of climatic warming on arctic lake ecosystems (\$29,212) Senior Personnel
2019-2022	San Juan River Basin Recovery Implementation Program (U.S. Fish and Wildlife Service) and U. S. Bureau of Reclamation: Facilitated fish passage for enhancing populations of endangered fishes in the San Juan River (\$625,558) Co-PI

GRADUATE STUDENTS

Current Utah State University:

Benjamin Miller (M.S. expected 2024; current position: Fish Biologist, Grand Canyon Research and Monitoring Center, U.S. Geological Survey)Barrett Friesen (M.S. expected 2024)Chloe Lyles (M.S. expected 2025)

Ohio State University: Justin Furby (M.S. expected 2025)

UNDERGRADUATE STUDENTS

(*Poster, *Presentation)

Utah State University:

Emily Adler⁺ (2021-2022), Hunter Pehrson⁺ (2021), Daison Weedop^{*}(2020-2021)

TEACHING

Instructor of Record:

Graduate Fish Ecology (WATS 6230/7230), Utah State University (Spring 2021) Guest Lecturer: Introduction to Watershed Sciences, Utah State University (Fall 2022) Ichthyology, Kansas State University (Spring 2019) Freshwater Ecology, Kansas State University (Spring 2019) Ichthyology, Kansas State University (Spring 2015)

Guest Laboratory Instructor:

Fish Ecology, Wichita State University, Field Ecology Class (Summer 2015-2018) Stream Ecology, Kansas Department of Wildlife, Parks and Tourism Aquatic Education (2010, 2012, 2013)

Teaching assistant:

Principles of Biology (BIOL 198), Kansas State University (Fall 2017, 2018) Fish Ecology (BIOL 682), Kansas State University (Spring 2016) Ichthyology (BIOL 542), Kansas State University (Fall 2015, Fall 2019) Ecology Lab (BIOL 632), Kansas State University (Spring 2015)

AWARDS & HONORS

2019 Kansas State University College of Arts and Sciences Travel Award (\$800)
2019 Kansas State University Graduate School Travel Award (\$400)
2019 Western Division of the American Fisheries Society, Student Travel Scholarship (\$500)
2018 Robert J. Robel Graduate Student Award in Wildlife Biology and Ecology (\$1000)
2018 Introduced Fish Section, American Fisheries Society, Student Travel Scholarship (\$500)
2018 Kansas State University College of Arts and Sciences Travel Award (\$800)

2018 Kansas State University Graduate School Travel Award (\$400)

2018 John E. Skinner Memorial Travel Grant Honorable Mention, American Fisheries Society (\$250)

2018 Desert Fishes Council Student Travel Scholarship (\$200)

2017 Best Student Paper Award, Kansas Chapter of the American Fisheries Society (co-

authors: David Bender, Jordan Hofmeier, Jessica Mounts, Ryan Waters, Vaughn Weaver, and Keith Gido)

2016 John E. Skinner Memorial Travel Grant Honorable Mention, American Fisheries Society (\$180)

2016 Otto Tiemeier-Frank Cross Graduate Student Scholarship, Kansas Chapter of the American Fisheries Society (\$300)

2015 Best Student Paper Award, Kansas Chapter of the American Fisheries Society (coauthor: Keith Gido)

2014 President's Honor Roll (Spring, Kansas State University)

2013 Klaassen Award, Kansas Chapter of the American Fisheries Society (\$300)

2013 Undergraduate Student Travel Grant, Education Section, American Fisheries Society (\$500)

2013 Enloe Undergraduate Scholarship in Wildlife Conservation, Division of Biology, Kansas State University (\$1500)

2012 Duffy Student Travel Grant, Kansas Chapter of the American Fisheries Society (\$450)

PROFESSIONAL SOCIETY MEMBERSHIPS

American Fisheries Society Society for Freshwater Science

REVIEWER AND EVALUATION SERVICE

2024, National Science Foundation, Graduate Research Fellowship Program reviewer (*ad hoc*) 2023-present, Review Editor, *Frontiers in Freshwater Science*

Manuscript review for journals Journal of Animal Ecology Behavioral Ecology Limnology and Oceanography Letters Freshwater Biology Hydrobiologia Ecological Engineering Royal Society Open Science PLOS ONE Scientific Reports Frontiers in Environmental Science Frontiers in Freshwater Science Urban Ecosystems Canadian Journal of Fisheries and Aquatic Sciences Aquatic Conservation: Marine and Freshwater Ecosystems Transactions of the American Fisheries Society Ecology of Freshwater Fish North American Journal of Fisheries Management Journal of Fish Biology Environmental Biology of Fishes Neotropical Ichthyology The American Midland Naturalist

Proposal review for granting agencies: U.S. Bureau of Reclamation

DEPARTMENTAL SERVICE

EEOB Graduate Admissions Committee (2023-present) EEOB Junior Faculty Committee (2023-present) Biology Graduate Student Association, Seminar Committee, Kansas State University (2017-2018) Vice President, Biology Graduate Student Association, Kansas State University (2015-2016)

Graduate Student Rep., Division of Biology Graduate Student Recruitment Committee, Kansas State University (2015-2016)

PROFESSIONAL SOCIETY SERVICE

Best Paper Committee, *North American Journal of Fisheries Management* (2022, 2023) President, Kansas State Student Sub-Unit of the American Fisheries Society (2013-2014) Student Rep., Fundraising Committee, Kansas Chapter of the American Fisheries Society (2012-2015)