Bryan M. Maitland, Ph.D.

Research Fish Biologist

Curriculum Vitae

September 2025

Rocky Mountain Research Station,
 USDA Forest Service, Boise, ID, USA

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in bryanmaitland

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Employment

2024-	Research Fish Biologist, Rocky Mountain Research Station, USDA Forest Service	
2023-2024	Research Associate, Dept. of Civil and Environmental Engineering, University of Wisconsin-Madison	
2022-2023	EPA Postdoctoral Fellow, Center for Limnology, University of Wisconsin-Madison	
2020-2022	Water Resources Postdoctoral Fellow, WI Water Resrouces Institute, University of Wisconsin-Madison	

Education

Ph.D.	2020	Ecology	University of Wyoming
M.Sc.	2015	Conservation Biology	University of Alberta
B.S.	2011	Conservation Biology cum luade	SUNY: College of Environmental Science and Forestry

Awards and honours

2024	Outstanding Service Award, USDA FS Rocky Mountain Research Station
2021	Best Professional Presentation Award, Wisconsin Chapter American Fisheries Society
2019	Dean's Graduate Scholar Award, College of Arts and Sciences University of Wyoming
2018	Eugene Maughan Graduate Award, Western Division American Fisheries Society
2018	Hank Gardner Graduate Award, Department of Zoology and Physiology University of Wyoming
2017	Clemens-Rigler Award, Canadian Aquatic Resources Section American Fisheries Society
2017	Board of Visitors Award, College of Arts and Sciences University of Wyoming
2017	William Trachtenberg Scholarship, Sustainable Fisheries Foundation
2017	Vern Bressler Fisheries Award, Department of Zoology and Physiology University of Wyoming
2015	Excellence in Fisheries Award, Canadian Aquatic Resources Section American Fisheries Society
2015	Clemens-Rigler Award, Canadian Aquatic Resources Section American Fisheries Society

Research

- My current research focuses on the ecology, management, and conservation of freshwater fishes, with a particular emphasis on coldwater fishes in the Rocky Mountains, Pacific Northwest, and Great Lakes regions.
- ➤ Since 2015 I have authored 24 papers in peer-reviewed journals on fisheries and conservation (pages 2-3).
- ➤ On Google Scholar my h-index is 12 with total citations of 590 (as at 26 September 2025).
- ➤ I have coauthored 1 R package as a result of my research with a total of 1204 downloads (page 3).
- ➤ Since 2011 I have given or co-authored 41 presentations on my research (pages 6-7).

Grants

➤ I have acquired \$108,073 in research grants since 2015.

Pending	Sparks, Maitland. "Bull Trout movement using PIT tag arrays in the Boise Basin". Funding	\$16,620
renaing	from USFWS	ψ10,020
2024	Maitland. "Chinook salmon life history and otolith microchemistry". Funding from USDA Forest Service RMRS	\$28,000
2020	Maitland, Rahel. "Accessable underwater landscapes for non-STEM audiences". Funding from UW Biodiversity Institute	\$19,866
2020	Maitland. "Food web responces to tiger muskie biocontrol in Wyoming". Funding from CO-WY AFS	\$1,000
2020	Maitland. "Non-lethal methods for stable isotope analysis in fishes". Funding from NANFA	\$1,000
2019	Maitland. "Diet specialization along stream gradients". Funding from UW Zoology	\$22,000
2019	Maitland. "Validating fin-tissue for stable isotope studies in fishes". Funding from CO-WY AFS	\$1,000
2018	Maitland. "Assimilation and discrimination of C and N in prairie stream fishes". Funding from UW Biodiversity Institute	\$6,000
2017	Maitland. "Isotopic niches and fish biodiversity in Rocky Mountain streams". Funding from UW Biodiversity Institute	\$4,000
2015	Maitland, Rahel. "Factors that influence the diversity of fish assemblages in Wyoming". Funding from UW Biodiversity Institute	\$25,207

Publications (chronological within subgroups)

Theses

- 1. **Maitland,** B. M. (2015). Stream Crossings in the Western Boreal Forest: Assessing Impacts and Prioritizing Restoration for Native Freshwater Fishes [Master's thesis]. University of Alberta.
- 2. **Maitland**, B. M. (2020). *Isotopic Ecology of Aquatic Communities Along the Rocky Mountains Great Plains Ecotone* [PhD thesis]. University of Wyoming.

Refereed research papers

- 1. O'Malley, B. P., & Maitland, B. M. (2014). Observations on the freshwater zooplankton of Dominica, West Indies, including records from the former Matthieu landslide-dam lake. *Pan-American Journal of Aquatic Sciences*, *9*(3), 228–333.
- 2. **Maitland,** B. M., Cooke, S. J., & Poesch, M. (2015). Finding the Path to a Successful Graduate and Research Career: Advice for Early Career Researchers. *Fisheries*, 40(8), 399–403. https://doi.org/10.1080/03632415.2015.1065253
- 3. **Maitland,** B. M., Poesch, M., Anderson, A. E., & Pandit, S. N. (2016). Industrial road crossings drive changes in community structure and instream habitat for freshwater fishes in the boreal forest. *Freshwater Biology*, 61, 1–18.
- 4. **Maitland,** B. M., Poesch, M., & Anderson, A. E. (2016). Prioritising culvert removals to restore habitat for at-risk salmonids in the boreal forest. *Fisheries Management and Ecology*, *23*(6), 489–502. https://doi.org/10.1111/fme.
- 5. Pandit, S. N., **Maitland**, B. M., Pandit, L. K., Poesch, M. S., & Enders, E. C. (2017). Climate change risks, extinction debt, and conservation implications for a threatened freshwater fish: Carmine shiner (Notropis percobromus). *Science of the Total Environment*, 598, 1–11. https://doi.org/10.1016/j.scitotenv.2017.03.228
- 6. Craig, L. S., Olden, J. D., Arthington, A. H., Entrekin, S., Hawkins, C. P., Kelly, J. J., Kennedy, T. A., **Maitland,** B. M., Rosi, E. J., Roy, A. H., Strayer, D. L., Tank, J. L., West, A. O., & Wooten, M. S. (2017). Meeting the challenge of interacting threats in freshwater ecosystems: A call to scientists and managers. *Elementa: Science of the Anthropocene*, 5(72), 1–15. https://doi.org/10.1525/elementa.256
- 7. Walker, R. H., **Maitland**, B. M., LaSharr, T. N., Rosing, M. N., & Ben-David, M. (2018). Fate of juvenile salmonids stranded in off-channel pools: Implications for nutrient transfers. *Aquatic Sciences*, 80(1), 10. https://doi.org/10.1007/s00027-017-0562-z
- 8. **Maitland,** B. M., O'Malley, B. P., & Stewart, D. J. (2019). Subsurface water piping transports plankton and prevents meromixis in a deep volcanic crater lake (Dominica, West Indies). *Hydrobiologia*, 839(1), 119–130. https://doi.org/10.1007/s10750-019-04000-7
- 9. Hickerson, B. T., **Maitland**, B. M., & Walters, A. W. (2019). Effects of multiple nonnative fish on an imperiled cyprinid, Hornyhead Chub Nocomis biguttatus. *Transactions of the American Fisheries Society*, 148(6), 1132–1145. https://doi.org/10.1002/tafs.10203
- 10. Alston, J. M., **Maitland,** B. M., Brito, B. T., Esmaeili, S., Ford, A. T., Hays, B., Jesmer, B. R., Molina, F. J., & Goheen, J. R. (2019). Reciprocity in restoration ecology: When might large carnivore reintroduction restore ecosystems? *Biological Conservation*, 234, 82–89. https://doi.org/10.1016/j.biocon.2019.03.021
- 11. Kirk, M. A., **Maitland**, B. M., & Rahel, F. J. (2020). Spatial scale, reservoirs and nonnative species influence the homogenization and differentiation of Great Plains Rocky Mountain fish faunas. *Hydrobiologia*, 847, 1–15. https://doi.org/10.1007/s10750-019-04129-5
- 12. Voter, C. B., Guerrero-Bolaño, F. J., Latzka, A. W., & Hauxwell, J. A. (2021). Adaptable university-agency early-career fellowship program creates a win-win-win for wisconsin's waters. *Journal of Contemporary Water Research and Education*, 174, 140–155.
- 13. **Maitland**, B. M., Rio, C. M. del, & Rahel, F. J. (2021). Effect of temperature on ¹³C and ¹³C incorporation rates and discrimination factors in two North American fishes. *Canadian Journal of Fisheries and Aquatic Sciences*, 78(12), 1833–1840. https://doi.org/10.1139/cjfas-2021-0057
- 14. **Maitland**, B. M., & Rahel, F. J. (2021). Nonlethal fin sampling of North American freshwater fishes for food web studies using stable isotopes. *North American Journal of Fisheries Management*, 41(2), 410–420. https://doi.org/10.1002/nafm.10539
- 15. Medinski, N. A., **Maitland,** B. M., Jardine, T. D., Drake, D. A. R., & Poesch, M. S. (2022). A catastrophic coal mine spill in the Athabasca River watershed induces isotopic niche shifts in stream biota including an endangered rainbow trout ecotype. *Canadian Journal of Fisheries and Aquatic Sciences*, 1–14. https://doi.org/10.1139/cjfas-2021-0112
- 16. **Maitland,** B. M., & Latzka, A. W. (2022). Shifting climate conditions affect recruitment in Midwestern stream trout, but depend on seasonal and spatial context. *Ecosphere*, 13(12), e4308. https://doi.org/10.1002/ecs2.4308
- 17. Lapides, D. A., **Maitland**, B. M., Zipper, S. C., Latzka, A. W., Pruitt, A., & Greve, R. (2022). Advancing environmental flows approaches to streamflow depletion management. *Journal of Hydrology*, 607, 127447. https://doi.org/10.1016/j.jhydrol.2022.127447

- 18. Kirk, M. A., **Maitland**, B. M., Hickerson, B. T., Walters, A. W., & Rahel, F. J. (2022). Climatic drivers and ecological impacts of a rapid range expansion by non-native smallmouth bass. *Biological Invasions*, 24, 1311–1326. https://doi.org/10.1007/s10530-021-02724-z
- 19. Feiner, Z. S., Shultz, A. D., Sass, G. G., Trudeau, A., Mitro, M. G., Dassow, C. J., Latzka, A. W., Isermann, D. A., **Maitland**, B. M., Homola, J. J., Embke, H. S., & Preul, M. (2022). Resist-accept-direct (RAD) considerations for climate change adaptation in fisheries: The Wisconsin experience. *Fisheries Management and Ecology*, *29*(4), 346–363. https://doi.org/10.1111/fme.12549
- 20. Ward, N. K., Lynch, A. J., Beever, E. A., Booker, J., Bouska, K. L., Embke, H., Houser, J. N., Kocik, J. F., Kocik, J., Lawrence, D. J., Lemon, M. G., Limpinsel, D., Magee, M. R., Maitland, B. M., McKenna, O., Meier, A., Morton, J. M., Muehlbauer, J. D., Newman, R., ... Wilkening, J. L. (2023). Reimagining large river management using the Resist–Accept–Direct (RAD) framework in the Upper Mississippi River. *Ecological Processes*, 12(1), 48. https://doi.org/10.1186/s13717-023-00460-x
- 21. **Maitland**, B. M., & Rahel, F. J. (2023). Aquatic food web expansion and trophic redundancy along the Rocky Mountain—Great Plaines ecotone. *Ecology*, 104(7), e4103. https://doi.org/10.1002/ecy.4103
- 22. **Maitland**, B. M., Bootsma, H. A., Bronte, C. R., Bunnell, D. B., Feiner, Z. S., Fenske, K. H., Fetzer, W. W., Foley, C. J., Gerig, B. S., Happel, A., Höök, T. O., Keppeler, F. W., Kornis, M. S., Lepak, R. F., McNaught, A. S., Roth, B. M., Turschak, B. A., Hoffman, J. C., & Jensen, O. P. (2024). Testing food web theory in a large lake: The role of body size in habitat coupling in Lake Michigan. *Ecology*, 105(10), e4413. https://doi.org/10.1002/ecy.4413
- 23. Barrus, N. T., **Maitland,** B. M., & Rahel, F. J. (2024). Assessing a standardized method to identify optimal baselines for trophic position estimation in stable isotope studies of stream ecosystems. *Hydrobiologia*, 851, 4673–4691. https://doi.org/10.1007/s10750-024-05618-y
- 24. Sparks, M. M., **Maitland,** B. M., Felts, E., Swartz, A., & Frater, P. (2025). hatchR: A toolset to predict when fish hatch and emerge. *Fisheries*. https://doi.org/10.1093/fshmag/vuaf078

Technical Reports

- 1. Roseman, E. F., Riley, S. C., Farha, S. A., **Maitland**, B. M., Tucker, T. R., Provo, S. A., & McLean, M. W. (2013). *Status and Trends of the Lake Huron Offshore Demersal Fish Community*, 1976-2012. USGS Great Lakes Science Center.
- 2. Mitro, M., Feiner, Z. S., Latzka, A. W., Embke, H. S., Homola, J. J., Isermann, D. A., **Maitland,** B. M., Sass, G. G., Shaw, S., Shultz, A. D., Tsyehaye, I., & Vander Zanden, J. (2021). *Wisconsin Initiative on Climate Change Impacts: Fisheries Working Group Report*. Nelson Institute for Environmental Studies, University of Wisconsin-Madison.
- 3. **Maitland**, B. M., & Loheide, S. P. (2025). Pumped storage hydropower in California: Environmental effects and opportunities for co-benefits. University of Wisconsin-Madison.

Pre-prints and in-review

- 1. Sparks, M. M., Leavell, B. C., & **Maitland**, B. M. (2025). A generalizable tool for predicting developmental phenology for wild poikilotherms. In *Ecological Applications*.
- 2. Keppeler, F. W., Giarrizzo, T., Montaña, C. G., Adite, A., Akın, Ş., Angelini, R., **Maitland,** B. M., Arantes, C. C., Benedito, E., Bokhutlo, T., El-Sabaawi, R., Garcia, A., Gonzalez-Bergonzoni, I., Hoeinghaus, D., Hoffman, J., Jensen, O. P., Jeppesen, E., Kopf, R. K., Layman, C. A., ... Winemiller, K. O. (2025). What determines trophic niche breadth? A global analysis of freshwater fishes using isospaces. bioRxiv. https://doi.org/10.1101/2025.05.27.656387

Unpublished working papers

- 1. Thurow, R., **Maitland**, B. M., Sparks, M.M, Isaak, D., & Buffington, J. (2025). *Habitat heterogeneity and phenotypic diversity: The influence of stream attributes on timing of Chinook Salmon spawning*. https://github.com/morgan-sparks/mfsr_phenology
- 2. **Maitland,** B. M., Walker, R. H., Kirking, C., Compton, R., Gale, S., Rahel, F. J., & Cook, C. (2025). Food web response to tiger muskellunge biocontrol in a Western US reservoir.
- 3. **Maitland**, B. M., & Loheide, S. P. (2025). Pumped storage hydropower in the renewable energy transition: Environmental co-benefits and opportunities in California and beyond.
- 4. Kleve, L., Daly, A., **Maitland**, B. M., Rosinski, C., & Fetzer, W. (2025). *Stable isotope trophic discrimination factors of hatchery fish-eye lenses and other tissues*.
- 5. Hall, C. A. S., **Maitland**, B. M., & Woodwell, G. M. (2025). Spatial and seasonal patterns of standing crop, productivity, and diversity of fishes in Flax Pond, a Long Island tidal pond.

Software

1. **Maitland,** B. M., Sparks, M. M., Felts, E., Swartz, A., & Frater, P. N. (2025). *hatchR: Predict Fish Hatch and Emergence Timing*. https://github.com/bmait101/hatchR

Specialized Skills and Certifications

Field Skills

Fish Sampling Electrofishing, netting, seining, trawling, angling

Aquatic Ecology Water quality sampling, invertebrate sampling, aquatic vegetation sampling, habitat assessment

Identification Fish (freshwater and marine), amphibians, reptiles, aquatic invertebrates, aquatic plants

Operations Piloting and trailering small vessels, rafting, helicopters experience, orienteering

Other Light machinery operation, small power equipment repair, minor electrical repair, handiwork

Lab Skills

Fisheries Fish aging (scales, otoliths), fish dissection, fish tissue processing

Aquatic Ecology Water quality analysis (nutrients, chlorophyll a, turbidity), invertebrate processing, aquatic vegetation

Stable Isotopes Sample preparation, ligh (C, N, O, S) and heavy (Sr) stable isotope analysis

Molecular DNA extraction, PCR, qPCR

Computer Skills

Operating Systems Linux, MacOS, Windows
Programming Languages R, Python, BASH, JavaScript

Markup Languages Markdown, RMarkdown, CSS, HTML, LaTeX

Data Interchange Formats CSV, JSON, XML

Other Languages YAML Version Control Git

Text Editors RStudio, SQL Server Management Studio, Visual Studio, Visual Studio Code

Microsoft Office Excel, Outlook, OneNote, PowerPoint, Word

Analytical Skills

Statistical Analysis Generalized linear models, mixed effects models, Bayesian statistics, multivariate statistics

Data Visualization ggplot2, base R graphics, leaflet, plotly

Data Management Data wrangling and cleaning, data management with SQL

Spatial Analysis R, QGIS, ArcGIS, Google Earth Engine

Package Development R package development, documentation, testing, and maintenance

Leadership Development

2021 Equity and Inclusion Workshop EQT By Design via WI Sea Grant 2008 Leave No Trace Master Educator Center for Outdoor Ethics, NOLS

Certifications

2025 Wilderness First Aid Wilderness Medicine Institude

2025 Advanced CPR and First Aid American Red Cross
 2014 Defensive Driving USDA Forest Service
 2018 Avalanche Safety Level 1 National Ski Patrol
 2013 Electrofishing Safety University of Alberta

2013 MOCC Federal Motor Boat Operator US Department of the Interior

Additional Academic Training

2008 Environmental Ethics
 2008 Group Leadership Techniques
 2008 Wilderness Skills Practicum, Backpacking
 2007 Wilderness Skills Practicum, River Travel
 2008 Credits
 2009 University of Utah
 2007 University of Utah
 2007 University of Utah
 2007 University of Utah

Society and Professional Service

Ad-hoc reviewer

- \blacktriangleright I have served as an ad-hoc reviewer for 49 manuscripts from 15 journals since 2016 (\sim 5.4 per year).
- ➤ 2025, Lake Champlain Fisheries Research Program, full proposal review
- ➤ 2023, NSF, Division of Environmental Biology, CAREER, full proposal review

Society memberships

2010-	American Fisheries Society
2010-	Society for Conservation Biology
2010-2016	International Association of Great Lakes Research
2015-	Ecological Society of America
2016-	Society for Freshwater Science
2016-2019	Association for the Science of Limnology and Oceanography
2019-	Galápagos Conservancy

Society leadership

2015-	Member, Freshwater Working Group, Society for Conservation Biology
2016-2017	President, UWyo Student Chapter, American Fisheries Society
2016-2018	Excom Member, CO-WY State Chapter, American Fisheries Society
2020-2022	Member, Trout Species Team, Wisconsin Department of Natural Resources
2021-2022	Member, Fisheries Working Group, Wisconsin Initiative on Climate Change Impacts

Conference organization

2024	Program co-chair, Science to Restore and Manage Wildland Aquatic Habitats and Watersheds, AGU Fall Meeting
2023	Workshop leader, Programming with R, Wisconsin Chapter American Fisheries Society Annual Meeting
2022	Workshop leader, Programming with R, Wisconsin Chapter American Fisheries Society Annual Meeting

2016 Program co-chair, Western Division American Fisheries Society Student Colloquium

University involvement and service

Invited talks and presentations

- ➤ Freshwater science for tomorrow: advancing fish ecology, conservation, and management. Wildlife Biology Program, University of Montana, Missoula, Feb 2025
- ➤ Freshwater science in a changing world: fisheries research for conservation & management. School of Freshwater Science, UW-Milwaukee, Milwaukee, Dec 2023
- ➤ Fish and Freshwater in a Changing World: Science for Management and Conservation. Rocky Mountain Research Station, US Forest Service, Boise, Apr 2023
- ➤ Coldwater Fish in a Changing World: Actionable Ecology for Management and Policy. Department of Ecology, Montana State University, Bozeman, Mar 2022
- ➤ Exploring isotopic niches in Rocky Mountain Great Plains stream fish. Dept. of Zoology & Physiology, University of Wyoming, Laramie, May 2017

Committees, Groups, and Councils

2022-2024	Field Operation Facilitation and Boat Committee, Center for Limnology, UW-Madison
2019-2020	Faculty Search Committee, Department of Zoology and Physiology, University of Wyoming
2016-2020	Social Media Coordinator, Program in Ecology, University of Wyoming
2016-2017	Graduate Council, student representative, University of Wyoming
2016-2017	President, Program in Ecology, University of Wyoming

Teaching

2020	Instructor, Ichthyology	University of Wyoming
2016-2019	Lab Instructor, Ichthyology	University of Wyoming
2015	Lab Instructor, Fisheries Management	University of Wyoming
2013-2014	Lab Instructor, Fisheries Management	University of Alberta

Mentoring

➤ I have mentored 10 undergraduate students as research assistants in lab and field settings at the University of Wyoming and University of Wisconsin-Madison.

Public Service and Outreach

Public Lectures

- ➤ Climate change, extreme weather, and stream trout in Wisconsin. Trout Unlimited, Madison, WY, Mar 2022
- > Stream culverts and fish: the good, the bad, and the ugly. Pinedale Science Café, Pinedale, WY, Aug 2017
- ➤ Culverts as culprits: how road crossings affect fish. Laramie Science Café, Laramie, WY, Jun 2016

Selected Media

➤ Milwaukee Journal Sentinel, Jan 2023. "Climate change is making Wisconsin trout more vulnerable to floods and heat". (Also covered in separate stories on WPR Public Radio)

- ➤ Water Blogged, Dec 2022. "A Tale of Two Fishes: Study Maps the Future of Trout Populations in Wisconsin"
- ➤ UW-Madison News, Dec 2022. "Study maps uneasy future of Wisconsin trout populations"
- ➤ The Tributary, Nov 2017. "Stuck in a rut in Anaconda? Crash a cutthroat spawning party!"

Service

2022-2023	Food service volunteer	Ronald McDonald House, Madison, WI
2016-2020	Science outreach and stream ecology field trips	Laramie High School, Laramie, WY
2016-2019	Group leader, Wyoming Bio-Blitz	Biodiversity Institute, University of Wyoming
2016-2018	Big Brother	Big Brothers Big Sisters of Wyoming
2017-2018	Habitat restoration projects	Girl Scouts of America
2016-2017	Science judge	Wyoming State Science Fair

Presentations (chronological)

Invited

- 1. **Maitland,** B. M., Voter, C. B., Guerrero-Bolaño, F. J., Latzka, A. W., & Hauxwell, J. A. (2021). *Tackling Wisconsin's water challenges through UW Water Science-Policy Fellowships and agency partnerships* [Paper]. Wisconsin Water Week, Virtual.
- 2. **Maitland**, B. M. (2024). Testing food web theory in a large lake: The role of body size in habitat coupling in Lake Michigan [Paper]. ASLO Annual Meeting, Madison, WI.

Offered

- 1. Discenza, J. D., O'Malley, B. P., **Maitland**, B. M., & Fernando, D. (2011). *Analyzing the genetic variation in American Hart's tongue fern* [Poster]. SUNY: ESF Spotlight on Student's Research, Syracuse, NY.
- 2. **Maitland,** B. M., Farha, S. A., Darnton, R. W., Smith, K. R., & Riley, S. C. (2012). 2012 Avian botulism environmental sampling in Sleeping Bear Dunes National Lakeshore [Paper]. Workshop on GLRI Project no. 73 and 91 USGS/NPS Meeting, Empire, MI.
- 3. **Maitland,** B. M., Poesch, M. S., & Anderson, A. E. (2014). *Stream crossing impacts on freshwater fish and instream habitat in Alberta* [Paper]. Canadian Conference for Freshwater Fisheries Research, Yellowknife, NWT.
- 4. **Maitland**, B. M., Poesch, M. S., & Anderson, A. E. (2014). Stream crossing assessment procedures as a tool for mitigating impacts on freshwater fish [Poster]. Columbia Mountain Institute of Applied Ecology's Resource Roads Conference, Nelson, BC.
- 5. **Maitland,** B. M., O'Malley, B. P., O'Brien, T. P., Armenio, P. M., Watson, N. M., & Roseman, E. F. (2014). *Zooplankton community dynamics in a northern Lake Huron embayment: The influence of water temperature and larval fish abundance* [Paper]. IAGLR Annual Meeting, Hamilton, ON.
- 6. **Maitland**, B. M., Poesch, M. S., & Anderson, A. E. (2014). *Stream crossing impacts on freshwater fishes: Implications for management* [Poster]. Forest Industry Lecture Series, Edmonton, AB.
- 7. Hirschfield, F., Anderson, A. E., **Maitland,** B. M., Wagner, M., Zaichkowsky, M., & Mottishaw, C. (2014). *Integrating science and management to improve sustainability of forested watersheds in Northwestern Canada* [Poster]. SAF National Convention, Salt Lake City, UT.
- 8. Daniels, S. E., Fitzpatrick, T. A., & **Maitland**, B. M. (2015). *Idiosyncratic resource use by Laramie raccoons: Are trash pandas, trash pandas?* [Poster]. Stable Isotope Ecology Symposium, Laramie, WY.
- 9. **Maitland,** B. M., Poesch, M. S., & Anderson, A. E. (2016). *Culverts in forested watersheds: Impacts and restoration methods for native freshwater fishes* [Paper]. Colorado/Wyoming Chapter AFS Annual Meeting, Laramie, WY.
- 10. Annear, A. A., **Maitland**, B. M., & Rahel, F. J. (2016). *Stable isotope quantification of resource use by crayfish in the Laramie River to inform lotic food web analyses* [Poster]. Colorado/Wyoming Chapter AFS Annual Meeting, Laramie, WY.
- 11. **Maitland,** B. M., Poesch, M. S., & Anderson, A. E. (2016). *Culverts in forested watersheds: Impacts and restoration methods for native freshwater fishes* [Paper]. SFS Annual Meeting, Sacramento, CA.
- 12. **Maitland,** B. M., Walker, R. H., LaSharr, T. N., Rosin, M., & Ben-David, M. (2017). The fate of juvenile salmonids stranded in flood ponds: Implications for nutrient transfers [Paper]. Utah and Colorado/Wyoming Chapter AFS Joint Meeting, Grand Junction, CO.
- 13. **Maitland**, B. M., Walker, R. H., LaSharr, T. N., Rosin, M., & Ben-David, M. (2017). *Juvenile salmonids stranded in flood ponds of Alaska* [Paper]. Program in Ecology Symposium, Laramie, WY.
- 14. **Maitland,** B. M., & Rahel, F. J. (2017). *Isotopic niches and the longitudinal gradient in Rocky Mountain-Great Plains streams* [Paper]. SFS Annual Meeting, Raleigh, NC.
- 15. **Maitland**, B. M., & Rahel, F. J. (2018). *Niche partitioning in fish assemblages along longitudinal stream gradient* [Poster]. Canadian Conference for Freshwater Fisheries Research, Edmonton, AB.
- 16. **Maitland**, B. M., & Rahel, F. J. (2019). *Stream food web expansion in response to changing environmental conditions* [Paper]. Joint Meeting of the Wildlife and American Fisheries Society, Reno, NV.

- 17. Barrus, N. T., **Maitland**, B. M., & Rahel, F. J. (2019). *Identification of an ideal baseline organism for stream food web studies* [Paper]. Joint Meeting of the Wildlife and American Fisheries Society, Reno, NV.
- 18. **Maitland,** B. M., Fetzer, W. W., Collins, S. M., & Rahel, F. J. (2020). *Non-lethal approaches for obtaining stable isotope data for diet studies of North American fishes* [Paper]. Colorado/Wyoming Chapter AFS Annual Meeting, Laramie, WY.
- 19. **Maitland**, B. M., Latzka, A. W., Frater, P., & Mitro, M. G. (2021). *Long-term trout trends in Wisconsin and the role of hydrologic change* [Paper]. Wisconsin Chapter AFS Annual Meeting, Virtual.
- 20. Lapides, D. A., **Maitland**, B. M., & Pruitt, A. H. (2021). Assessing approaches to quantify hydrological alteration on Wisconsin's streams [Paper]. Wisconsin Section AWRA Annual Meeting, Virtual.
- 21. **Maitland**, B. M., Latzka, A. W., Frater, P., & Mitro, M. G. (2021). *Untangling the effects of hydrologic change on trout in Wisconsin streams* [Paper]. Wisconsin Water Week, Virtual.
- 22. **Maitland**, B. M., & Latzka, A. W. (2021). Long-term trends of Midwestern stream trout populations in a changing climate, and the effects of seasonal weather [Paper]. AFS Annual Meeting, Baltimore, MD.
- 23. **Maitland**, B. M., & Latzka, A. W. (2022). Shifting climate conditions affect recruitment in Midwestern stream trout but depend on seasonal and spatial context [Paper]. Joint Aquatic Sciences Meeting, Grand Rapids, MI.
- 24. Ward, N. K., Lynch, A. J., Beever, E. A., Bouska, K. L., Embke, H. S., Kocik, J. F., Limpinsel, D., Magee, M. R., Maitland, B. M., Morton, J. M., Mueller, J. M., Oliver, D. C., Rantala, H. M., Sass, G. G., Schultz, A., Thompson, L. M., & Wilkening, J. L. (2022). Using the Resist-Accept-Direct (RAD) Framework to Reimagine Large River Management [Paper]. AFS Annual Meeting, Spokane, WA.
- 25. Sass, G. G., Beard, D., Broda, S., Carpenter, S. R., Chipps, S. R., Cichosz, T. A., Dassow, C. J., Elwer, B., Embke, H. S., Feiner, Z. S., Gaeta, J. W., Hansen, G. J. A., Hansen, J., Hennessy, J., Homola, J. J., Isermann, D. A., Jones, S., Latzka, A. W., Lynch, A. J., ... Zebro, L. (2023). *Depensatory recruitment in Wisconsin walleye: Mechanisms and management* [Paper]. Wisconsin DNR Office of Applied Science Webinar Series, Virtual.
- 26. **Maitland,** B. M., Jensen, O. P., Hoffman, J. C., Keppeler, F. W., Bunnell, D. B., McNaught, A. S., & Gerig, B. S. (2023). Body size, trophic position, and energy coupling in Lake Michigan [Paper]. Wisconsin Chapter AFS Annual Meeting, Stevens Point, WI.
- 27. **Maitland,** B. M., Jensen, O. P., Hoffman, J. C., & Keppeler, F. W. (2023). Testing food web theory in large lakes: The role of body size in habitat coupling in Lake Michigan [Paper]. AFS Annual Meeting, Grand Rapids, MI.
- 28. Walker, R. H., & **Maitland**, B. M. (2024). The cicadian rhythm: Preparation for evaluating the availability, use, and consequences of periodical cicadas to stream fishes [Paper]. Iowa Chapter AFS Annual Meeting, Iowa City, IA.
- 29. **Maitland**, B. M., & Latzka, A. W. (2024). Shifting climate conditions affect recruitment in Midwestern trout, but depend on seasonal and spatial context [Paper]. Washington, British Colombia, and Idaho Chapters AFS Joint Meeting, Spokane, WA.
- 30. Hauxwell, J. A., Voter, C. B., Guerrero-Bolaño, F. J., Latzka, A. W., & **Maitland**, B. M. (2024). *Adaptable university-agency early-career fellowship program creates win-win-win for Wisconsin's Waters* [Paper]. IAGLR Annual Conference, Milwaukee, WI.
- 31. Walker, R. H., Keisser, D., **Maitland,** B. M., & Hunt, D. (2024). Quantifying the availability, use, and consequences of periodical cicadas in stream food webs [Paper]. Southeastern Fisheries Council Annual Meeting, Little Rock, AR.
- 32. Keisser, D., **Maitland**, B. M., & Walker, R. H. (2024). *Quantifying rare allochthonous insect pulses: How many periodical cicadas enter streams?* [Paper]. Southeastern Fisheries Council Annual Meeting, Little Rock, AR.
- 33. Davis, T., Wright, L., Keisser, D., **Maitland**, B. M., & Walker, R. H. (2024). *That's a mouthful: Periodical cicadas, fish body size, and feeding ecology* [Poster]. Southeastern Fisheries Council Annual Meeting, Little Rock, AR.
- 34. **Maitland,** B. M., Sparks, M. M., Felts, E., Swartz, A., & Frater, P. (2025). *hatchR: A toolset for predicting when fish hatch and emerge* [Paper]. Idaho Chapter AFS Annual Meeting, Boise, ID.
- 35. **Maitland**, B. M., Sparks, M. M., Felts, E., Swartz, A., & Frater, P. (2025). *hatchR:* A toolset for predicting when fish hatch and emerge [Poster]. Western Division AFS Annual Meeting, Westminster, CO.
- 36. **Maitland**, B. M., Sparks, M. M., Felts, E., Swartz, A., & Frater, P. (2025). hatchR: A toolset for predicting when fish hatch and emerge [Poster]. AFS Annual Meeting, San Antonio, TX.
- 37. Kirk, M. A., & Maitland, B. M. (2025). Trophic overlap between invasive round gobies and native benthic darters in a stream biodiversity hotspot [Paper]. AFS Annual Meeting, San Antonio, TX.
- 38. Sparks, M. M., Leavell, B. C., & **Maitland**, B. M. (2025). A generalizable tool for predicting developmental phenology for freshwater poikilotherms [Paper]. SFS Pacific Northwest Chapter Annual Meeting, Boise, ID.
- 39. Ferone, G. S., **Maitland**, B. M., Issak, D. J., & Caudill, C. C. (2025). Applying spatial stream networks and species distribution models to two decades of idaho DEQ BURP stream benthic macroinvertebrate samples [Paper]. SFS Pacific Northwest Chapter Annual Meeting, Boise, ID.