

**BRENDA M. PRACHEIL**

Aquatic Ecologist

Environmental Sciences Division

Oak Ridge National Laboratory

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**EDUCATION**

**PhD 2010** University of Nebraska; Natural Resources & Applied Ecology

Dissertation: Multiscale Perspectives on Paddlefish Populations: Implications for Conservation and Management; Advisor: M.A. Pegg

**MS 2006** Michigan State University; Zoology & Ecology, Evolutionary Biology, & Behavior

Thesis: Parasite Population and Community Dynamics of Juvenile Bluegill and Largemouth Bass from Three Lakes II and Gull Lake, Michigan; Advisor: P.M. Muzzall

**BS & BA 2001** University of Nebraska; Biological Sciences & Philosophy

Honors Thesis: Susceptibility of Northern Pike to *Leptorhynchoides thecatus* Infections; Advisors: B.B. Nickol & J.J. Janovy

**PROFESSIONAL EXPERIENCE**

2014-present	Aquatic Ecologist, Environmental Sciences Division, Oak Ridge National Laboratory
2013	Postdoctoral Research Associate, School of Natural Resources, University of Nebraska-Lincoln
2011-2013	Postdoctoral Research Associate, Center for Limnology, University of Wisconsin-Madison
2006-2010	Research Assistant, School of Natural Resources, UNL
2003-2006	Teaching Assistant, Department of Zoology, MSU
2002	Fisheries Technician I, Missouri River Program, Nebraska Game and Parks Commission
2000-2001	Laboratory Technician, School of Biological Sciences, UNL

## **PEER-REVIEWED PUBLICATIONS**

\*Student author

41. M. Gunn\*, Z. Moran\*, B.M. Pracheil, P.J. Allen. *In review*. Development of trace element and strontium isotope water chemistry baseline data for the Pearl River Watershed.
40. B.M. Pracheil, M.S. Bevelhimer, C.R. DeRolph, E. Fluet-Chouinard\*, D. Mathur, P. Heisey. *In revision*. Predictors of fish injury and survival during hydropower turbine entrainment at dams.
39. D. Mathur., P.G. Heisey, S. Adams, J. Phipps, J.M. Rinehart, C. Hoffman, R. Bleistine, B.M. Pracheil, K. Long, T. Sullivan. *In revision*. Hydropower turbine passage survival of American Shad with a comparison to other fishes.
38. R.S. Wood\*, A.M. Fortner, K. Gillies-Rector, B.C. Chakoumakos, M. Frontzek, I.N. Ivanov, L.C. Kah, B.P. Kennedy, B.M. Pracheil. *In revision*. Quantitative mineralogic assessment of Chinook salmon otolith pairs.
37. B.M. Pracheil, R.A. McManamay, E.S. Parish, S.L. Curd, B.T. Smith, C.R. DeRolph, A.M. Witt, S. Ames, M.B. Day, W. Graf, D. Infante, D.L. McCoskey, K. Rugani, C. Vezina, T. Welch, A. West. *In press*. A checklist of river function indicators for hydropower ecological assessment. **Science of the Total Environment**.
36. M.W. Archer, B.M. Pracheil, A.E. Otto\*, M.A. Pegg. 2019. Fish community response to in-channel woody debris. **Journal of Freshwater Ecology**
35. B.C. Chakoumakos, B.M. Pracheil, R.S. Wood\*, A.R. Loeppky\*, W.G. Anderson, R. Koenigs, R. Bruch. 2019. Texture analysis of polycrystalline vaterite sphereulites from lake sturgeon otoliths. **Scientific Reports**
34. A.R. Loeppky\*, B.C. Chakoumakos, B.M. Pracheil, W.G. Anderson. 2019. Otoliths of juvenile lake sturgeon, *Acipenser fulvescens*, contain aragonite and vaterite calcium carbonate polymorphs. **Journal of Fish Biology**
33. B.M. Pracheil, R.S. George\*, B.C. Chakoumakos. 2019. Significance of otolith calcium carbonate crystal structure diversity to microchemistry studies. **Reviews in Fish Biology and Fisheries**
32. M.S. Bevelhimer, B.M. Pracheil, A.M. Fortner, R. Saylor\*, K.L. Deck\*. 2019. Mortality and injury assessment for three species of fish exposed to simulated turbine blade strike. **Canadian Journal of Fisheries and Aquatic Sciences**
31. E.S. Parish, B.M. Pracheil, R.A. McManamay, S.L. Curd, C.R. DeRolph, B.T. Smith. 2019. Review of environmental metrics used across multiple sectors and geographies to evaluate the effects of hydropower development. **Applied Energy**

30. B.M. Pracheil, J.D. Lyons, E.J. Hamann, P.H. Short, P.B. McIntyre. 2019. Lifelong population connectivity between large rivers and their tributaries: a case study of shovelnose sturgeon from the Mississippi and Wisconsin rivers. **Ecology of Freshwater Fish**. <https://doi.org/10.1111/eff.12423>
29. D. Mathur, P.G. Heisey, D.D. Royer, E.J. White, A. Slowick, R.A. Bleistine, K.A. Long, T.J. Sullivan, B.M. Pracheil. 2018. Entrainment of juvenile and adult American Shad at a pumped storage facility. **North American Journal of Fisheries Management**. <https://doi.org/10.1080/02755947.2017.1394937>
28. R.A. McManamay, N.A. Griffiths, C.R. DeRolph, B.M. Pracheil. 2018. A synopsis of global mapping of freshwater habitats and biodiversity: implications for conservation. Pure and Applied Biogeography. ISBN 978-953-51-5222-4. InTech Open Publishers.
27. J.J. Hoover, P. Bailey, S.R. Januchowski-Hartley, J. Lyons, B.M. Pracheil, and S. Zigler. 2018. Anthropogenic obstructions to paddlefish movement and migration. **Proceedings of the 2017 Paddlefish Symposium**. J. Schooley and D. Scarnecchia eds.
26. B.M. Pracheil, B.C. Chakoumakos, M. Feygenson, R. Koenings, R. Bruch. 2017. Sturgeon sagittal otoliths are comprised of vaterite and calcite calcium carbonate polymorphs. **Journal of Fish Biology** DOI: 10.1111/jfb.13085.
25. B.C. Chakoumakos, B.M. Pracheil, R.P. Koenigs, R.M. Bruch, M. Feygenson. 2016. Empirically testing vaterite structural models using neutron diffraction and thermal analysis. **Scientific Reports** 6.
24. J.D. Lyons, D. Walchak, J. Hagland, P. Kanehl, B.M. Pracheil. 2016. Reproductive ecology of shovelnose sturgeon (*Scaphirhynchus platyrhynchus*), blue sucker (*Cycleptus elongatus*), and associated species in the Lower Wisconsin River, USA. **Journal of Applied Ichthyology** 32: 1003-1015.
23. B.M. Pracheil, M.S. Bevelhimer, G.F. Cada, C.R. DeRolph, and R.A. McManamay. 2016. A traits-based approach for prioritizing species for monitoring and surrogacy selection. **Endangered Species Research**. 31: 243-258.
22. L.R. Bock, G.W. Whitedge, B.M. Pracheil, and P. Bailey. 2016. Relationships between water and paddlefish *Polyodon spathula* dentary elemental and stable isotopic signatures: potential application for reconstructing environmental history. **Journal of Fish Biology** DOI: 10.1111/jfb.13047.
21. B.M. Pracheil, T.J. Mathews, M.S. Bevelhimer, M.J. Peterson, M.S. Greeley, Jr., A.M. Fortner, and C.A. Murphy. 2016. Relating Fish Health and Reproductive Metrics to Metal Bioaccumulation at the Tennessee Valley Authority Kingston Coal Ash Spill Site. **Ecotoxicology** 25:1136-1149.

20. S.R. Januchowski-Hartley, L.A. Holtz, S. Martinuzzi, P.B. McIntyre, V.C. Radeloff, B.M. Pracheil. 2016. Future land use threats to intrinsically vulnerable freshwater fishes in the coterminous United States. **Diversity and Distributions** 22: 663-671.
19. H.I. Jager, M. Parsley, J.J. Cech, Jr., R.L. McLaughlin, P.S. Forsythe, R.S. Elliott, and B.M. Pracheil. 2016. Reconnecting fragmented sturgeon populations in North American rivers. **Fisheries** 41:140-148.
18. B.M. Pracheil, C.R. DeRolph, M.P. Schramm, and M.S. Bevelhimer. 2016. A fish-eye view of riverine hydropower systems: the current understanding of the biological response to turbine passage. **Reviews in Fish Biology and Fisheries** 2016:1-15.
17. McIntyre P.B., C. Reidy Liermann, E. Childress, E.J. Hamann, J.D. Hogan, S.R. Januchowski-Hartley, A.A. Koning, T.M. Neeson, D.L. Oele, and B.M. Pracheil. 2015. Conservation of migratory fishes in freshwater ecosystems. In Closs G, Krkosek M, & Olden JD: **Conservation of Freshwater Fishes**. 324p.
16. S.V. Amaral, M.S. Bevelhimer, G.F. Cada, D. Giza, P. Jacobson, B.J. McMahon and B.M. Pracheil. 2015. Evaluation of behavior and survival of fish exposed to an axial-flow hydrokinetic turbine. **North American Journal of Fisheries Management** 35: 97-113.
15. R.B. Gagne, J.D. Hogan, M.J. Blum, B.M. Pracheil, P.B. McIntyre, E.F. Hain, J.F. Gilliam. 2015. Spread of an introduced parasite among populations of an endemic Hawaiian stream fish. **Freshwater Biology**. 60: 311-322.  
- **Featured on journal cover**
14. B.M. Pracheil, G.E. Mestl, and M.A. Pegg. 2015. Movement through dams facilitates population connectivity in a large river. **River Research and Applications** 31: 517-525.
13. B.C. Neely, B.M. Pracheil, and S.T. Lynott. 2014. Hydrologic variables predict harvest in a recreational paddlefish fishery. **Fisheries Management and Ecology** 32: 259-263.
12. B.M. Pracheil, J.D. Hogan, J. Lyons, and P.B. McIntyre. 2014. Conservation and management applications of hard part microchemistry for freshwater fishes **Fisheries**. 39: 451-465.  
- **Featured on journal cover**
11. S. Martinuzzi, S.R. Januchowski-Hartley, B.M. Pracheil, P.B. McIntyre, A.J. Plantinga, D.J. Lewis, and V. Radeloff. 2014. Threats and opportunities for freshwater conservation under future land use change scenarios in the United States. **Global Change Biology** 20: 113-124.
10. B.M. Pracheil, P.B. McIntyre, and J.D. Lyons. 2013. Enhancing conservation of large-river biodiversity by accounting for tributaries. **Frontiers in Ecology and the Environment** 11: 124-128.

9. B.M. Pracheil, L.A. Powell, M.A. Pegg, and G.E. Mestl. 2012. Swimways: protecting paddlefish through movement-centered management. **Fisheries** 37: 449-457.  
- **Featured on journal cover**
8. D.R. Martin, B.M. Pracheil, J. DeBoer, K.L. Pope, and G. Wilde. 2012. Using internet technology to reveal patterns of angler behavior. **Fisheries** 37: 458-463.
7. B.M. Pracheil, D.D. Snow, and M.A. Pegg. 2010. Distribution of selenium, mercury, and methylmercury in surficial Missouri River sediments. **Bulletin of Environmental Contamination and Toxicology** 84: 331-335.
6. B.M. Pracheil and P.M. Muzzall. 2010. Population dynamics of larval trematodes in juvenile bluegills from Three Lakes II, Michigan and potential of overwinter parasite induced host mortality. **Transactions of the American Fisheries Society** 139: 652-659.
5. M.A. Pegg, J.H. Chick, and B.M. Pracheil. 2009. The influence of non-native species on paddlefish. Pages 185-202 in C. Paukert and G. Scholten editors. Paddlefish management, propagation, and conservation in the 21st century: building from 20 years of research and management. American Fisheries Society, Symposium 66, Bethesda, Maryland.
4. B.M. Pracheil, M.A. Pegg, and G.E. Mestl. 2009. Tributaries influence recruitment of fish in large rivers. **Ecology of Freshwater Fish** 18:603-609.
3. B.M. Pracheil and P.M. Muzzall. 2009. Chronology and development of juvenile bluegill parasite communities. **Journal of Parasitology** 95: 838-845.
2. P.M. Muzzall and B.M. Pracheil. 2007. Parasites of tadpole madtom, *Noturus gyrinus* (Mitchill, 1817) (Ictaluridae), from Silver Creek, Michigan, U.S.A. with a checklist of North American parasites of tadpole madtom. **Comparative Parasitology** 74:154-159.
1. B.M. Pracheil, G.E. Mestl, and P.M. Muzzall. 2005. Metazoan parasites of young-of-the-year paddlefish from Lewis and Clark Lake, Nebraska, U.S.A. **Comparative Parasitology** 72:227-229.

### **PROFESSIONAL ACTIVITIES AND SERVICE**

- |              |  |
|--------------|--|
| 2019         | Past-President, American Fisheries Society, Tennessee Chapter                |
| 2019-present | Technical Committee, Low Impact Hydropower Institute                         |
| 2018         | Science and Technology in Society Forum Future Leaders Program, Kyoto, Japan |
| 2018-present | Publication Oversight Committee, American Fisheries Society Publications     |
| 2018         | President, American Fisheries Society, Tennessee Chapter                     |

- 2017-present Associate Editor, *Methods in Ecology and Evolution*
- 2017-present Oak Ridge National Laboratory Research and Development Initiative Seed Money Committee
- 2017 President-elect, American Fisheries Society, Tennessee Chapter
- 2014-2017 Associate Editor, *North American Journal of Fisheries Management*
- 2013-2014 Eastern Tallgrass Prairie and Big Rivers Landscape Cooperative river restoration science advisory group
- 2008-2013 Mississippi Interstate Cooperative Resource Association Paddlefish and Sturgeon Committee technical advisor
- 2007-2010 South Dakota-Nebraska paddlefish working group

**Peer-reviewer for**

- American Fisheries Society Paddlefish Symposium Publication (2006 and 2017)
- American Midland Naturalist
- Aquatic Conservation: Marine and Freshwater Ecosystems
- Behavioral Ecology
- Biological Invasions
- Canadian Journal of Fisheries and Aquatic Sciences
- Current Biology
- Diversity and Distributions
- Ecology
- Environmental Engineering Science
- Estuarine, Coastal and Shelf Science
- Fisheries
- Freshwater Biology
- International Journal of Soil, Sediment and Water
- Journal of Environmental Quality
- Journal of Applied Ecology
- Journal of Applied Ichthyology
- Journal of Fish Biology
- Journal of Fish and Wildlife Management
- Lake and Reservoir Management
- Nature Climate Change
- North American Journal of Fisheries Management
- Parasitology Research
- PloS One
- Proceedings of the Royal Society B
- River Research and Applications
- Science of the Total Environment
- Science

- Transactions of the American Fisheries Society
- National Oceanographic and Atmospheric Administration S-K Act fund competition
- National Science Foundation CAREER grant program
- University of Wisconsin Sea Grant

**STUDENTS AND POST-GRADUATES MENTORED**

- 2019 Diliya Murtazina—University of Tennessee Bredesen Center PhD student  
Project: Spatial distribution of hydropower water quality regulations for hydropower facilities
- 2019 Nicholas Oschman—Post-MS  
Project: Understanding timelines to major decision points in FERC hydropower licensing.
- 2019 Matt Aldrovandi—Post-MS  
Project: Environmental impact study evolution during FERC hydropower licensing.
- 2018 Brooke Redmond—Clemson University Undergraduate  
Project: Microstructure of fish calcified structures
- 2017-2018 R. Seth Wood—University of Tennessee Geology Undergraduate (Mentored with B. Chakoumakos, ORNL)  
Project: Effects of organic compounds on the precipitation and stabilization of vaterite
- 2017 Robert George—Furman University Biology Post-BS Student  
Project: Understanding fish otolith calcium carbonate diversity in a phylogenetic context
- 2017 Hailey Russell—North Carolina State University Chem Engineering Undergrad (Mentored with A. Witt, ORNL)  
Project: Comparing environmental metrics used in FERC hydropower licenses at 5 projects across the CONUS
- 2017 Joshua Benjamin—University of Florida Post-BS Student (Mentored with A. Witt, ORNL)  
Project: Understanding how hydropower development alters the trajectory of river functionality
- 2010 Evy Santiago—University of Nebraska Natural Resources Undergrad  
Project: Using Dual-frequency Identification Sonar (DIDSON) as a Tool for Estimating Paddlefish Abundance in Reservoirs

2005            Ai Shimizaki—Michigan State University Zoology Undergrad  
                         Project: Is Parasite Community Development in Young-of-  
                         Year Largemouth Bass Ontogenetically Mediated?

### **FUNDED GRANTS AND FELLOWSHIPS**

B.M. Pracheil. 2018. Environmental decision support: science-based tools for hydropower stakeholder collaboration. Department of Energy Office of Energy Efficiency and Renewable Energy. (\$700,000).

B.M. Pracheil. 2017. Environmental metrics for hydropower. Department of Energy Office of Energy Efficiency and Renewable Energy. (\$700,000).

B.M. Pracheil and B.C. Chakoumakos. 2016. Merging ecology and materials science to trace environmental energy contamination using biogenic calcium carbonates. ORNL Laboratory Directed Research and Development (LDRD) Seed Fund. (\$189,435).

B.M. Pracheil. 2014-2017. Tennessee Valley Authority Kingston Coal Ash Spill Fish Health Monitoring. Tennessee Valley Authority (\$240,000).

B.M. Pracheil. 2010. University of Nebraska Lincoln Foundation Mildred Thompson Fellowship (\$1,000).

B.M. Pracheil. 2009. University of Nebraska Lincoln College of Agriculture and Natural Resources Agnes E. Nelson Fellowship (\$1,000).

B.M. Pracheil. 2008. University of Nebraska Lincoln Foundation Maude Hammond Fling Fellowship (\$20,000).

Authored with M. A. Pegg and D. D. Snow (co-PI's). 2007. Evaluation of Lewis and Clark Lake Sediments: Mercury and Selenium Sequestration, Release, and Potential Influences on Ancient Fishes. University of Nebraska Agriculture Research Division. (\$10,000).

Authored with M. A. Pegg (PI). 2007. Movement and Habitat Use of Missouri River Paddlefish. Nebraska Environmental Trust. (\$55,050).

### **AWARDS**

B.M. Pracheil. 2019. Oak Ridge National Laboratory Environmental Science Division Stanley L. Auerbach Award for Outstanding Early Career Scientist.

B.M. Pracheil. 2010. North Central Division of the American Fisheries Society travel grant to Midwest Fish and Wildlife Conference (\$400).

B.M. Pracheil. 2010. University of Nebraska Lincoln School of Natural Resources travel grant to Midwest Fish and Wildlife Conference (\$200).



B.M. Pracheil. 2008. University of Nebraska Lincoln School of Natural Resources Meritorious PhD Student Award (\$1,000).

B.M. Pracheil. 2007. University of Nebraska Lincoln Chancellor's Fellowship (\$1,000).

B.M. Pracheil. 2006. University of Nebraska Lincoln Chancellor's Fellowship (\$1,000).

B.M. Pracheil. 2006. Annual Midwest Conference of Parasitologists George LaRue Platform Presentation Award.

B. M. Pracheil. 2004. Department of Zoology Thesis Improvement Grant. Michigan State University. (\$200).

B. M. Pracheil and B. B. Nickol. 2001. Assessment of the role of northern pike, *Esox lucius* as a host for the acanthocephalan parasite *Leptorhynchoides thecatus*. UNL UCARE. (\$2,500).

B. M. Pracheil and B. B. Nickol. 2000. Assessment of the role of northern pike as a host for the acanthocephalan parasite *Leptorhynchoides thecatus*. UNL UCARE. (\$1,500).

### **TEACHING EXPERIENCE**

- |         |   |
|---------|---|
| 2019    | Age and Growth Techniques and Data Analysis. Tennessee Chapter of American Fisheries Society Continuing Education Course.   |
| 2018    | Introduction to R and R graphics for fisheries biologists. Tennessee Chapter of American Fisheries Society Continuing Education Course.   |
| 2013    | Stable isotope and heavy metal microchemistry in fish hard structures, University of Nebraska-Lincoln fisheries management course.  |
| 2013    | Guest lecture "Fish, people, sediment, and water: a case study from the Grand Canyon Adaptive Management Program": Virginia Polytechnic and State University fisheries management course. |
| 2011-13 | Guest lecture fish parasite ecology: U. Wisconsin-Madison Fish Ecology course.  |
| 2010    | Lecturer, School of Natural Resources, UNL Introduction to Agriculture and Natural Resources Recitation.  |
| 2009-10 | Guest lectures telemetry, mark-recapture and conservation implications of stocking. U. Nebraska Fisheries Science course  |
| 2008-09 | Guest lectures fish osmoregulation, buoyancy, and circulation U. Nebraska Ichthyology   |

- 2003-06 Graduate Teaching Assistant, Department of Zoology, MSU  
 General Biology—3 semesters  
 Integrative Studies Biology—2 semesters  
 General Parasitology—3 semesters
- 2001 Teaching Assistant, School of Biological Sciences, UNL  
 General Biology—1 semester (BIOS 101L)  
 General Parasitology—1 semester (BIOS 386L)

### **RESEARCH MEDIA FEATURES**

- 2016 Research on using materials science techniques to understand biological calcium carbonates featured by [Oak Ridge National Lab Blog](#)
- 2016 Research on sturgeon conservation featured on [Oak Ridge National Lab Blog](#)
- 2016 Research on impacts of hydropower on fish featured in [Hakai Magazine](#)
- 2015 Research on parasites and land-use change featured on the [cover of Freshwater Biology](#)
- 2014 Research on otolith microchemistry featured by  
*Fisheries* journal cover photo  
[Oak Ridge National Lab Blog](#)
- 2013 Research on large-river conservation featured by  
[Ecological Society of America Blog](#)  
[University of Wisconsin Center for Limnology Blog](#)  
[University of Wisconsin News](#)  
[Tennessee Aquarium Conservation Institute Blog](#)
- 2012 Research on migratory fish management featured by  
*Fisheries* journal cover photo  
[University of Wisconsin News](#)  
[The Daily Cardinal Science Feature 24 October 2012](#)
- 2010 Research on large-river conservation featured by  
[The Nature Conservancy Blog](#)
- 2010 Nebraska's Paddlefish by Eric Fowler. Nebraskaland Magazine. pp. 36-43.
- 2010 Year of the Walleye by Eric Fowler. Nebraskaland Magazine. pp 40-41.

### **INVITED PRESENTATIONS**

18. B.M. Pracheil. April 2019. Linking Environmental Data Tools and Materials Science for Fish Conservation in Hydropower-Impacted Systems. Michigan State University Department of Fisheries and Wildlife.
17. B.M. Pracheil. October 2016. New tools to answer old questions about sturgeon and paddlefish. Biological Sciences Seminar Series. Michigan Technological University.
16. B.M. Pracheil. February 2016. Managing riverine connectivity for biodiversity conservation. University of Tennessee-Knoxville.
15. B.M. Pracheil. April 2015. Fish, laser beams and the Kingston ash spill: an introduction to fish hard-part microchemistry. Tennessee Technological University Environmental Sciences Spring Colloquium.
14. B.M. Pracheil. January 2015. Conservation and constraint: balancing the needs of people with the needs of fish. Furman University.
13. B.M. Pracheil. December 2014. Fish, laser beams, and the Kingston ash spill, Oak Ridge National Lab, student-selected speaker for visiting high school science students.
12. B.M. Pracheil. May 2013. Managing connectivity to protect riverine biodiversity. Oak Ridge National Laboratory.
11. B.M. Pracheil. April 2013. Managing connectivity to protect large river biodiversity. University of Missouri Department of Fisheries and Wildlife.
10. B.M. Pracheil. February 2013. Managing connectivity to protect freshwater biodiversity. Virginia Polytechnic and State University Department of Fisheries and Wildlife Conservation.
9. B.M. Pracheil, P.B. McIntyre and J.D. Lyons. August 2012. Movements of shovelnose sturgeon in the Mississippi and Wisconsin rivers inferred from otolith microchemistry. Symposium oral presentation. American Fisheries Society Annual Meeting. Minneapolis, MN.
8. B.M. Pracheil and G.E. Mestl. August 2012. Opportunities, challenges, and considerations for large scale stock assessment: lessons learned from the MICRA paddlefish stock assessment. Symposium oral presentation. American Fisheries Society Annual Meeting. Minneapolis, MN.
7. B.M. Pracheil. March 2012. Managing connectivity to protect Great River biodiversity. Seminar: University of Wisconsin Center for Limnology Seminar Series.
6. B.M. Pracheil. March 2012. Managing connectivity to protect Great River biodiversity. Seminar: Wisconsin Department of Natural Resources Bureau of Science Services Seminar Series.

5. B.M. Pracheil. March 2012. Managing connectivity to protect Great River biodiversity. Seminar: Fisheries and Wildlife Graduate Student Organization Seminar Series, Michigan State University.
4. B.M. Pracheil. October 2011. Multi-scale perspectives on managing connectivity in Great River ecosystems. Seminar: United States Geological Survey Upper Midwest Environmental Science Center Seminar Series.
3. B.M. Pracheil, P.B. McIntyre, M.A. Pegg, and J.D. Lyons. September 2011. Defining the riverscape: tributaries as a key to great river fish conservation. Symposium oral presentation. American Fisheries Society Annual Meeting, Seattle, WA.
2. B.M. Pracheil. September 2010. Paddlefish from a multi-scale perspective: Implications for management and conservation. Seminar: University of Wisconsin-Madison Center for Limnology Seminar Series.
1. B. M. Pracheil. April 2009. Potential implications of stocking to the United States paddlefish population. Seminar: UNL School of Natural Resources Ecology Seminar.

### **CONTRIBUTED PRESENTATIONS**

37. B.M. Pracheil, B.C. Chakoumakos, R.S. Wood, A.M. Fortner, A.R. Loeppky, W.G. Anderson. 2018. Characterization and visualization of fish otoliths towards a mechanistic understanding of calcium carbonate polymorph growth and nucleation. Energy landscapes in biomineralization, geochemistry, and materials science: a celebration of Alex Navrotsky's 75th birthday symposium, Goldschmidt Conference, Boston, MA.
36. B.M. Pracheil, A.M. Fortner, R.S. Wood, I. Ivanov, A. Lanzarotti, M. Newville, B.C. Chakoumakos. 2018. Otolith strontium concentrations in vaterite and calcite. Southern Division of the American Fisheries Society Annual Meeting. San Juan, PR.
35. B.M. Pracheil, R.S. George, B.C. Chakoumakos. 2018. Phylogenetic patterns of otolith calcium carbonate crystal structure diversity. American Fisheries Society Tennessee Chapter Annual Meeting, Knoxville, TN.
34. B.M. Pracheil, R.S. George, B.C. Chakoumakos. 2017. Phylogenetic patterns of otolith calcium carbonate crystal structure diversity. American Fisheries Society Annual Meeting, Tampa, FL.
33. B.M. Pracheil, C.R. DeRolph, M.S. Bevelhimer, D. Mathur, P. Heisey, M.P. Schramm. 2017. Sources of injury and mortality during downstream hydropower turbine passage. International Conference on Fish Passage and Ecohydrology, Corvallis, OR.
32. M.S. Bevelhimer, B.M. Pracheil, A.M. Fortner, K.L. Deck. 2017. Simulating turbine blade strike in the laboratory to better assess injury and mortality during turbine passage. International Conference on Fish Passage and Ecohydrology, Corvallis, OR.

31. A.M. Fortner, T.J. Mathews, M.G. Greeley, and B.M. Pracheil. 2017. Reconciling various metrics of fish health following coal ash exposure. American Fisheries Society, Tennessee Chapter Annual Meeting, Knoxville, TN.
30. B.M. Pracheil and B.C. Chakoumakos. 2017. Otoliths: more than just for ageing. American Fisheries Society, Tennessee Chapter Annual Meeting, Knoxville, TN.
29. B.M. Pracheil, C.R. DeRolph, M.P. Schramm, D. Mathur, P. Heisey, and M.S. Bevelhimer. 2017. Sources of Injury and mortality during downstream hydropower turbine passage. American Fisheries Society, Tennessee Chapter Annual Meeting, Knoxville, TN.
28. B.M. Pracheil, T. Mathews, A. Fortner, M.J. Peterson, M. Greeley, M.S. Bevelhimer, and C.A. Murphy. Relating Fish Health and Reproductive Metrics to Metal Bioaccumulation at the Tennessee Valley Authority Kingston Coal Ash Spill Site. American Fisheries Society National Meeting, Portland, OR.
27. B.M. Pracheil, B.C. Chakoumakos, R. Koenings, R. Bruch. Structure and Nanostructure of Sturgeon Otoliths and Implications for Microchemistry Studies. American Fisheries Society National Meeting, Portland, OR.
26. B.M. Pracheil, M.S. Bevelhimer, G.F. Čada, C.R. DeRolph, R.A. McManamay. 2015. A quantitative traits-based approach for choosing and prioritizing study species and surrogate species in altered ecosystems. International Fish Passage Conference, Groningen, The Netherlands.
25. B.M. Pracheil, M.S. Bevelhimer, G.F. Čada, C.R. DeRolph, R.A. McManamay. 2015. A quantitative traits-based approach for choosing and prioritizing study species and surrogate species in altered ecosystems. Southern Division of the American Fisheries Society Annual Meeting, Savannah, GA.
24. B.M. Pracheil, P.B. McIntyre, and J.D. Lyons. Connectivity of large-river networks is important throughout fish life history. American Fisheries Society Annual Meeting. Little Rock, AR.
23. B.M. Pracheil, L.A. Winslow, S.R. Januchowski-Hartley, A. Cooper, D. Infante, and P.B. McIntyre. Movements of a mega-fish across its species range. American Fisheries Society Annual Meeting. Little Rock, AR.
22. B.C. Neely, B.M. Pracheil, and S.T. Lynott. Hydrologic variables predict harvest in a recreational paddlefish fishery. American Fisheries Society Annual Meeting. Little Rock, AR.
21. J.S. Perkin and B.M. Pracheil. Threats and opportunities for fish habitat connectivity conservation in the Missouri River Basin at multiple scales. American Fisheries Society Annual Meeting. Little Rock, AR.

20. S.R. Januchowski-Hartley, B.M. Pracheil, M. Diebel, and P.B. McIntyre. August 2012. Connections and cost: important considerations for effective broad-scale freshwater conservation. American Fisheries Society Annual Meeting. Minneapolis, MN.
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**CURRENT PROFESSIONAL MEMBERSHIPS**

2017-present British Ecological Society

2017-present Geological Society of America

2007-present American Fisheries Society