

Ashley Trudeau

Contact information

Hasler Laboratory of Limnology
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Education

University of Wisconsin-Madison 09/2020-08/2022

PhD, Freshwater and Marine Sciences (Advisor: Olaf Jensen)

Dissertation title: *Incorporating angler behavior into recreational fisheries management*

Rutgers University 09/2018-09/2020

PhD Student, Ecology and Evolution (Advisor: Olaf Jensen)

Humboldt University of Berlin 10/2015-04/2018

M.S., Fish Biology, Fisheries Science, and Aquaculture

Thesis title: *Impact of lake characteristics on foraging niches, size structure, and abundance of Eurasian perch (Perca fluviatilis): a comparative study across German gravel pit lakes*

University of North Carolina at Chapel Hill 08/2007-05/2011

B.S. Biology

Research experience

Postdoctoral research associate 2022-Present

Center for Limnology, University of Wisconsin—Madison

- Developing and testing dynamic allocation policies for shifting commercial stocks in the Mid-Atlantic in collaboration with management agencies.

Graduate research assistant 2018-Present

Center for Limnology, University of Wisconsin—Madison

Department of Marine and Coastal Sciences, Rutgers University

- Designed and implemented a spatially extensive creel survey of 38 lakes in Vilas County and 11 lakes in Dane County, WI as part of NSF and USGS-funded projects investigating social ecological interactions in fishery landscapes.
- Developed and validated a data-limited method for producing estimates of fishing effort at many lakes across a recreational fisheries landscape using on-site and aerial survey data.
- Contributed to New Jersey Sea Grant-funded project using focus group and vessel trip report data to evaluate stakeholder perceptions of and responses to regulations in the NJ recreational bottom fishery.
- Developed a socially-distanced method to evaluate changes in fishing effort associated with the COVID-19 pandemic using vehicle traffic data collected before and during the pandemic.
- Assisted in developing and implementing capacity building workshops with lake organizations across the Midwest teaching resilience thinking and systems-level perspectives on lake management and fish habitat.

- Developed and fielded a discrete choice experiment method to forecast future anglers' responses to tradeoffs in walleye (*Sander vitreus*) and largemouth bass (*Micropterus salmoides*) abundance in Wisconsin.

Master's student research

2015-2018

Thaer-Institute of Agricultural and Horticultural Sciences
Humboldt University of Berlin

- Completed a space-for-time study of differences in ontogenetic niche shifts of Eurasian perch (*Perca fluviatilis*) populations in 12 gravel pit lakes with different habitat characteristics using stable isotope analysis.
- Compared size structures, trophic positions, and resource specialization metrics of perch populations associated with shoreline structure, lake morphometry, and productivity.
- Modeled growth curves of cyprinid populations in lakes supplemented with ground bait to investigate changes in growth associated with angler feeding activity.
- Assisted in aquaponics research testing the efficacy of black soldier fly (*Hermetia illucens*) based feeds in raising African catfish (*Clarius gariepinus*). Analysis included changes in fish growth rate and water quality parameters.

Publications

Zachary Feiner, Aaron Shultz, Greg Sass, **Ashley Trudeau**, Matthew Mitro, Colin Dassow, Alexander Latzka, Bryan Maitland, Jared Homola, Holly Embke, Michael Preul. Resist-Accept-Direct (RAD) considerations for climate change adaptation in fisheries: the Wisconsin Experience. (2022) *Fisheries Management and Ecology*, 29(4), 346-363

Ashley Trudeau, Eleanor Bochenek, Abigail Golden, Michael Melnychuk, Douglas Zemeckis, Olaf Jensen. Lower possession limits and shorter seasons directly reduce for-hire fishing effort in a multispecies marine recreational fishery. (2022) *Canadian Journal of Fisheries and Aquatic Sciences*, 99, 999.

Ashley Trudeau, Colin J. Dassow, Carolyn M. Iwicki, Stuart E. Jones, Greg G. Sass, Christopher T. Solomon, Brett T. van Poorten, Olaf P. Jensen (2021) Estimating fishing effort across the landscape: a spatially extensive approach using models to integrate multiple data sources. *Fisheries Research*, 223, 105768.

Chelsey L. Nieman, Carolyn Iwicki, Abigail J. Lynch, Greg G. Sass, Christopher T. Solomon, **Ashley Trudeau**, Brett van Poorten (2020) Creel surveys for social-ecological systems focused fisheries management. *Reviews in Fisheries Science and Aquaculture*, 1-20.

Christopher T. Solomon, Colin J. Dassow, Carolyn Iwicki, Olaf P. Jensen, Stuart E. Jones, Greg G. Sass, **Ashley Trudeau**, Brett T. van Poorten, and Dane Whittaker (2020) Frontiers in modeling social-ecological dynamics of recreational fisheries: a review and synthesis. *Fish and Fisheries* 21(5), 973-991.

Andrew Carlson, William Taylor, Melissa Cronin, Mitchell Eaton, Lauren Eckert, Mark Kaemingk, Andrea Reid, **Ashley Trudeau** (2020) A social-ecological odyssey in fisheries and wildlife management. *Fisheries*, 45(5), 238-243.

Leander Höhne, Miquel Palmer, Christopher Monk, Sven Matern, Robert Nikolaus, **Ashley Trudeau**, Robert Arlinghaus (2020) Environmental determinants of perch (*Perca fluviatilis*) growth in small artificial lake ecosystems: evaluation of the performance of simple vs. complex ecological predictors. *Ecology of Freshwater Fish*, 29(4), 557-573.

Thomas Mehner, Tobias Rapp, Christopher T Monk, Mara E Beck, **Ashley Trudeau**, Mikko Kiljunen, Sabine Hilt, and Robert Arlinghaus. Feeding Aquatic Ecosystems: Whole-Lake Experimental Addition of Angler's Ground Bait Strongly Affects Omnivorous Fish Despite Low Contribution to Lake Carbon Budget (2019) *Ecosystems*, 22, 346-362.

Manuscripts in review and prep

Ashley Trudeau, Sven Matern, Thomas Mehner, Robert Nikolaus, Robert Arlinghaus. Littoral structure and primary productivity alter the trajectory of ontogenetic niche shifts in Eurasian perch (*Perca fluviatilis*) in small artificial lakes. (*In review*) *Ecology of Freshwater Fish*

Ashley Trudeau, Ben Beardmore, Gretchen Gerrish, Greg Sass, Olaf Jensen. Social fish-tancing in Wisconsin: The effects of the COVID-19 pandemic on statewide license sales and fishing effort in northern inland lakes. (*In review*) *North American Journal of Fisheries Management*

Ingrid van Putten, Olaf Jensen, Mary Mackay, Clara Obregón, John R. Post, Andries Richter, Esther Schuch, Christopher Solomon, **Ashley Trudeau**. (*In prep*). Experiments. In Kevin Pope, Robert Arlinghaus, Len Hunt, Abigail Lynch, Brett van Poorten (Eds.), *Understanding Behaviors of Recreational Fishers: Disciplinary Perspectives for Interdisciplinary Approaches to Management*.

Ashley Trudeau, Ben Beardmore, Olaf Jensen (*In prep*) Predicting Angler Decisions When Facing Walleye Declines in Wisconsin.

Dane Whittaker, Chelsey Nieman, **Ashley Trudeau** (*In prep*) Systems-level perspective on fish habitat: Capacity building workshops with lake organizations across the Midwest.

Talks and Presentations

Ashley Trudeau, Ben Beardmore, Olaf Jensen. "Angler Responses to Tradeoffs in Walleye and Centrarchid Populations" A Fisheries Biologist's Guide to Using Human Dimensions Data Symposium. American Fisheries Society Annual Meeting, 8/2022.

Ashley Trudeau, Ben Beardmore, Olaf Jensen. "Angler Decisions When Facing Species Tradeoffs in Wisconsin" Contributed Topic: Socio-economic Dimensions. Joint Aquatic Sciences Meeting, 5/2022.

Ashley Trudeau, Ben Beardmore, Gretchen Gerrish, Greg Sass, Olaf Jensen. “Success for ‘Social Fishtancing’ on Wisconsin Inland Lakes” COVID-19 Impacts on Fish, Wildlife, and License Sales. Midwest Fish and Wildlife Conference, 2/2022.

Ashley Trudeau, Ben Beardmore, Gretchen Gerrish, Greg Sass, Olaf Jensen. “Changes in demographics and distribution of Wisconsin anglers during the COVID-19 pandemic.” Shifting angler dynamics in relation to the COVID-19 pandemic symposium. American Fisheries Society Annual Meeting, 11/2021.

Ashley Trudeau, Eleanor Bochenek, Abigail Golden, Michael Melnychuck, Douglas Zemeckis, Olaf Jensen. “Shorter seasons reduce for-hire fishing effort in a multispecies marine fishery.” Cooperative research with stakeholders: recent progress and new directions symposium. American Fisheries Society Annual Meeting, 11/2021.

Ashley Trudeau, Douglas Zemeckis, Abigail Golden, Carolyn Iwicki, Eleanor Bochenek, Peter Clarke, Olaf Jensen. “Optimizing management measures for marine recreational fisheries in the US Mid-Atlantic region.” World Fisheries Congress, 9/2021

Ashley Trudeau, Colin Dassow, Carolyn Iwicki, Stuart Jones, Greg Sass, Chris Solomon, Brett van Poorten, Olaf Jensen. “Applying a landscape approach to recreational fishing effort dynamics.” World Recreational Fisheries Conference Online. 6/28/2021

Ashley Trudeau, Ben Beardmore, Gretchen Gerrish, Greg Sass, Olaf Jensen. “Success for Social Fish-tancing on Wisconsin Lakes.” Water@UW-Madison 2021 Spring Symposium. 5/7/2021

Ashley Trudeau, Ben Beardmore, Gretchen Gerrish, Greg Sass, Olaf Jensen. “Changes in demographics and distribution of Wisconsin anglers during the COVID-19 pandemic.” Wisconsin Chapter of the American Fisheries Society Annual Meeting. 2/8/2021

Greg Sass, **Ashley Trudeau**. “Novel research for creel in limited funding climate.” WDNR Fisheries Biologist & Supervisor Meeting. 12/2/2020

Ashley Trudeau, “Applying a landscape approach to recreational fishing effort dynamics.” Trout Lake Seminar. 6/30/2020

Ashley Trudeau, Douglas Zemeckis, Abigail Golden, Carolyn Iwicki, Eleanor Bochenek, Peter Clarke, Olaf Jensen. “Optimizing Management Measures for Marine Recreational Fisheries.” A Fisheries Biologist’s Guide to Using Human Dimensions Data Symposium, American Fisheries Society Virtual Annual Meeting. 09/2020

Ashley Trudeau, Carolyn Iwicki, Olaf Jensen, Greg G. Sass, Christopher Solomon, Brett T. van Poorten. “Quantifying the Allocation of Angling Effort across a Fisheries Landscape.” Fisheries and Wildlife as Coupled Human and Natural Systems Symposium. American Fisheries Society meeting, Reno, NV. 09/30/2019

Ashley Trudeau, Thomas Mehner, Sven Matern, Robert Nikolaus, Miquel Palmer, & Robert Arlinghaus. “Impact of littoral habitat on foraging niches, size structure, and abundance of Eurasian perch (*Perca fluviatilis*): a comparative study across German gravel pit lakes” Habitat Enhancement for Conservation and Management in Marine and Freshwater Fisheries Symposium. American Fisheries Society meeting, Atlantic City, NJ. 08/21/2018

Posters

Ashley Trudeau, Amanda Kerkhove, Zachary Feiner, & Olaf Jensen. Imagining Futures for Wisconsin’s Recreational Fisheries. UW-Madison Day at the Capitol, Graduate Research Showcase. Madison, WI 4/27/2022

Abigail Golden, Carolyn Iwicki, **Ashley Trudeau**, Eleanor Bochenek, Peter Clarke, Douglas Zemeckis, & Olaf Jensen. Mind the Gap: Recreational Fishing Regulations and Angler Participation in New Jersey. New Jersey Sea Grant Commission site review poster session. Sandy Hook, NJ 11/19/2019

Workshops facilitated

Dane Whittaker, Ashley Trudeau. Practical Resilience and Systems Thinking for Long-Term Lake Management Planning. Wisconsin Lakes and Rivers Convention, Stevens Point, WI. 4/6/2022

Awards

2022-John Jefferson Davis Travel Award \$800

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2021-Center for Limnology Summer 2021 Malueg Scholarship Award \$1000

2020-Manasquan River Marlin and Tuna Club George Burlew Scholarship \$1000

2019-Sawtooth Software Academic Grant

2019-EOAS Conference Travel Funding \$500

2019-UNDERC Mentoring Fellowship

2019-Manasquan River Marlin and Tuna Club George Burlew Scholarship \$1000

2018-Manasquan River Marlin and Tuna Club George Burlew Scholarship \$500

2018-Center for Fisheries and Ocean Sustainability Student Conference Travel Award \$545

2017-Association for Agricultural and Horticultural sciences at Humboldt University of Berlin travel grant 400€

Teaching

The Hawbridge School 08/2012-08/2015

- Taught Biology, Chemistry, AP Environmental Science, and 7th and 8th grade general science, with an emphasis on local water resources and outdoor learning.

Hugh M. Cummings High School 08/2011-06/2012

- Taught Earth and Environmental Science. In cooperation with the biology and special education classes, started a school garden that we used to teach fundamentals in soil and water sciences and nutrition.

Mentorship

2019: Mentored two undergraduates as they completed independent research projects in fish ecology at the University of Notre Dame Environmental Research Center.

2021-2022: Assisted a junior graduate student in developing and implementing a winter creel survey of Wisconsin ice fishers to evaluate the effects of technology use on the panfish fishery.

2022: Mentored an undergraduate as he completed his biology program research requirement.

Guest lectures

Rutgers University, Ichthyology 11/22/2019

- Introduction to Fisheries Management

Rutgers Cooperative Extension, 4/5/2022
Introductory Fisheries Science for Stakeholders (IFISSH)

- Current Issues Impacting New Jersey's Marine Fisheries—Recreational Fisheries Management

Professional development

2019-Database Concepts, Design, and Application in Wildlife and Fisheries. Taught by Keith Hurley at AFS & TWS joint meeting

2017-Survivor's Guide to Stable Isotope Ecology. Taught by Brian Hayden, Seth Newsome, Andrew Jackson, and Chris Harrod.

Memberships

American Fisheries Society, Wisconsin chapter member

American Institute of Fishery Research Biologists, student associate

Peer Review

Hydrobiologia (2020), *Ecosystems and People* (2021), *Fisheries Research* (2022)

Academic service

2021-2022 Seminar committee co-chair, UW Madison Center for Limnology

2019-2020 Secretary, Ecology and Evolution Graduate Student Association

2019-2020 Outreach committee chair, Ecology and Evolution Graduate Student Association

2018-2019 Seminar committee co-chair, Ecology and Evolution Graduate Student Association

Outreach

2022-Ice fishing outreach with families attending the Frozen Assets Festival in Madison, WI

2021-Fish biology and lake food webs activity with 7th grade classes at the Edgewood Campus school

2021-Outreach event at Wingra Park with Neighborhood House Community Center summer camp

2021-Outreach event at Center for Limnology with Neighborhood House Community Center summer camp

2021-Skype a Scientist talk with 2nd grade classes at Swasey Central School

2021-Lake food webs activity with 8th grade classes at the Edgewood Campus School
2019-Introducing fish biology to 7th grade students at Nurture thru Nature, an after-school program at New Brunswick Middle School
2019-STEAM night at Parsons Elementary
2011-Constructed online learning module illustrating the research foundations of the Burmeister lab at UNC-Chapel Hill through the HHMI Internship for Future Teachers