

**Dr. Zachary D. Steffensmeier**  
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**Mailing Address**

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**Education**

*Texas A&M University*, 400 Bizzell St, College Station, TX 77843

Ecology and Evolutionary Biology

Doctor of Philosophy, December 2022

Dissertation Title: “Spatial Ecology of Great Plains Fishes”

Committee Members: Joshua S. Perkin (Chair), Shannon K. Brewer, A. Michelle Lawing, Kirk O. Winemiller.

Completed preliminary written and oral examinations February 2021

Academy for Future Faculty Fellow, 2021-2022.

Certificate May 2022. Center for Teaching Excellence.

Topics include learning outcomes and the course development cycle, syllabus design, teaching methodology, and active learning strategies.

*Duquesne University*, 600 Forbes Avenue, Pittsburgh, PA 15282

Environmental Science & Management with Conservation Biology

Master of Science, December 2017

Bachelor of Science, May 2017

**Employment Experience**

The Ohio State University – Lecturer in the School of Environment and Natural Resources, 2022-Present

Texas A&M University – Research and Teaching Assistant, 2018-2022.

Duquesne University – Teaching Assistant, 2016-2017.

American Fisheries Society Policy Intern, Washington D.C., 2016.

Duquesne University – Community Engagement Scholar, Teaching Assistant, 2015-16.

Ohio Department of Natural Resources– Internship Studying Walleye Spawning Mortality using Acoustic Telemetry, GLATOS. Summer 2015.

**Relevant Research Experiences**

*Riverscape Ecology Lab*, Dr. Joshua Perkin, Texas A&M University, Movement of Prairie Chub, 2018-2022

*Genetics of Natural Populations, Evolution, Molecular Ecology of Fishes Lab*, Dr. Brady Porter, Duquesne University, Brook Trout microsatellites, Extensive aquatic sampling techniques including backpack electrofishing, seining, environmental DNA water collection, electrified benthic trawling, surber sampling (aquatic macroinvertebrates). 2015-2017.

*Policy Analyst*, American Fisheries Society, Washington, D.C. Summer 2016.  
*Research Assistant*, Dr. Chris Vandergoot, Fisheries Biology Supervisor, Ohio Department of Natural Resources and Ohio State Stone Lab Research Supervisor, Put-In-Bay, OH. Summer 2015.  
Walleye Movement and Mortality in Lake Erie – Fisheries Management. Analyzed transmitter data and assessed Walleye mortality data. Worked with ODNR to collect receiver data in Western Lake Erie. See associated article:  
<http://ohioseagrant.osu.edu/news/2016/kwg5j/stone-lab-fisheries-research>

### **Journal Publications**

\*denotes undergraduate mentored

5. **Steffensmeier, Zachary D.**, Maeghen Wedgeworth, Lauren Yancy\*, Noah Santee\*, Shannon K. Brewer & Joshua S. Perkin. 2022. “Paradigm versus paradox on the prairie: Testing competing stream fish movement frameworks using an imperiled Great Plains minnow.” *Movement Ecology* <https://doi.org/10.1186/s40462-022-00306-9>
4. Mollenhauer, Robert, Shannon K. Brewer, Joshua S. Perkin, Dusty Swedberg, Maeghen Wedgeworth, & **Zachary D. Steffensmeier**. 2021. “Connectivity and flow regime direct conservation priorities for pelagophil fishes.” *Aquatic Conservation: Marine and Freshwater Ecosystems* <http://doi.org/10.1002/aqc.3631>
3. Santee\*, Noah S., Lauren E. Yancy\*, **Zachary D. Steffensmeier**, Joshua S. Perkin. 2020. “Testing restricted movement of plains killifish (*Fundulus zebrinus*).” *Southwestern Naturalist* <https://doi.org/10.1894/0038-4909-65.3-4.271>
2. Trevelline, B.K., T. Nuttle, N.L. Brouwer, B.D. Hoenig, **Z.D. Steffensmeier**, B.A. Porter, & S.C. Latta. 2017. “Stream acidification and reduced availability of pollution-sensitive aquatic insects alter the diet of a stream-dependent Neotropical migratory songbird.” *PeerJ* 6:35141 <https://doi.org/10.7717/peerj.5141>.
1. Ignasiak, Elizabeth, **Zachary D. Steffensmeier**, Ellen Warfield, Felicia Bratti, & Thomas P. Simon. 2017. “Length-weight relationships, age and growth, and body condition of the spottail shiner (*Notropis hudsonius*) (Clinton 1824) in the western basin of Lake Erie.” *Ohio Journal of Science* <https://doi.org/10.18061/ojs.v117i2.4922>

### **Manuscripts in Press**

- Steffensmeier, Zachary D.**, Maeghen Wedgeworth, Trevor Starks, Anthony Rodger, Erin Nguyen, Shannon K. Brewer, Joshua S. Perkin. “Delineating the Grinnellian Niche of Prairie Chub (*Macrhybopsis australis*) to Improve Conservation.” In press at the *North American Journal of Fisheries Management*.
- Perkin, Joshua S., Patrick M. Kocovsky, **Zachary D. Steffensmeier**, Keith B. Gido. 2022. “Why are larger Silver Chub (*Macrhybopsis storeriana*) further upstream?” In press at the *North American Journal of Fisheries Management*.

### **Undergraduates Mentored**

- Austin Stafford, current position at Texas Parks and Wildlife Department Coast Fisheries Division.
- Lauren Yancy, current research assistant at University of Alaska, Fairbanks.

Noah Santee, current master's student at Texas A&M University.

Lucas Stevens, currently an undergraduate student at Texas A&M University.

Rebecca Mangold, recently graduated and working as a Master's student at Texas A&M.

### **Presentations & Conference Activity**

Participant, Ohio Chapter American Fisheries Society, Westerville, Ohio. January 26-27, 2023.

Fish Identification Workshop, Westerville, Ohio. January 27, 2023.

Presenter, Texas Chapter American Fisheries Society, Hunt, Texas. May 17-19, 2022.

Participant, Transformational Teaching and Learning Conference, College Station, Texas, May 4, 2022.

Organizing Member, 23<sup>rd</sup> Annual Ecological Integration Symposium "The Return of the 'Ologists,'" College Station, Texas, April 7-8, 2022.

Sante, N.S., L.E. Yancy, **Z.D. Steffensmeier**, and J.S. Perkin. 2021. Testing restricted movement of plains killifish (*Fundulus zebrinus*). Texas Chapter of the American Fisheries Society Virtual Meeting. February 2-4, 2021. (Poster presented by undergraduate student)

Tschirhart, C., **Z.D. Steffensmeier**, and J.S. Perkin. 2021. Standard weight analysis of largemouth bass in Texas A&M University's Aquacultural Research and Teaching Facility reservoir. Texas Chapter of the American Fisheries Society Virtual Meeting. February 2-4, 2021. (Poster presented by undergraduate student)

Participant, 21<sup>st</sup> Annual Ecological Integration Symposium "Ecology in the Anthropocene," College Station, Texas, April 2-3, 2020.

Movement of Prairie Chub: A Great Plains Endemic Pelagic-Broadcast Spawner, Presenter, National American Fisheries Society Virtual Meeting, Columbus, Ohio. September 14-25, 2020.

Perkin, J.S., **Z.D. Steffensmeier**, and K. Gido. 2020. Testing the Compensatory Upstream Spawning Paradigm with Silver Chub (*Macrhybopsis storeriana*) in a Great Plains Riverscape. American Fisheries Society Virtual Meeting, Columbus, Ohio. September 14-25, 2020. (Oral presentation by Joshua Perkin)

Movement Ecology of Red River Endemic Prairie Chub, Presenter, Southern Division American Fisheries Society, Little Rock, Arkansas. February 20-23, 2020.

Movement ecology of Red River endemic Prairie Chub, Presenter, Texas Chapter American Fisheries Society, Waco, Texas. January 23-25, 2020.

Participant, 20<sup>th</sup> Annual Ecological Integration Symposium "Celebrating 20 Years of Ecological Integration," College Station, Texas, April 4-5, 2019.

Poster Judge and Conference Participant, "Southern Division American Fisheries Society," Galveston, Texas. January 24-27, 2019.

Participant, "2017 Joint Technical Meeting of the Pennsylvania & West Virginia Chapters of the American Fisheries Society," California, Pennsylvania. February 9, 2017.

Presenter, Duquesne University. "Measuring Spawning Mortality in Western Lake Erie Walleye Populations Using Acoustic Telemetry." Undergraduate Research and Scholarship Symposium. April 6, 2016.

Participant, Keystone Coldwater Conference, Pennsylvania State University, February 26-27, 2016.

Presenter, Stone Lab Research at Lake Erie Ohio State University. "Walleye Spawning Mortality." <https://www.youtube.com/watch?v=E4NrRM451MU> See time from 36:00 to 50:30. July 23<sup>rd</sup>, 2015.

### **Guest Presentations**

- October 2021. Coldwater Fisheries and Index of Biotic Integrity presented to Principles of Fisheries Management (WFSC 410)
- March 2021. Movement Ecology of Fishes presented to the Texas A&M University Student Subunit of the American Fisheries Society
- October 2021. Navigating Graduate School presented to Introduction to Wildlife and Fisheries (WFSC 101).
- October 2020. Navigating Graduate School presented to Introduction to Wildlife and Fisheries (WFSC 101).
- October 2019. Acoustic Telemetry: Walleye Spawning Mortality presented to Principles of Fisheries Management (WFSC 410).

### **Research Grants**

- Sigma Xi “Testing the Restricted Movement Paradigm for Imperiled Prairie Chub (*Macrhybopsis australis*)” April 2019. \$1000
- Ecology and Conservation Biology High Impact Grant “Fish and chips: Applying new microchip technology to advance conservation of imperiled fishes” April 2021. \$1,950

### **Teaching Experience**

- ENR 5280: Stream Ecology, Fall 2022, Instructor of Record
- ENR 4900: Environment and Natural Resources Management Capstone, Fall 2022, Instructor of Record
- Fisheries Management, Fall 2019 and Fall 2020, Teaching Assistant to Dr. Joshua Perkin.
- Stream Field Biology, Duquesne University, Fall 2017, Teaching Assistant to Dr. Brady Porter.
- General Biology Lab with pre-lab lecture, Duquesne University, Fall 2017.
- Terrestrial Field Biology, Duquesne University, Summer 2017, Teaching Assistant to Dr. Kyle Selcer.
- Service Learning Course, Duquesne University, Fall 2015 and Spring 2016, Teaching Assistant to Professor Edward Schroth.

### **Selected Activities**

- Drake Institute's Faculty Foundation, Impact, Transformation (FIT) Program, 2022-2023
- Conference Committee Planner for 23<sup>rd</sup> Annual Texas A&M University Ecological Integration Symposium, College Station, Texas. April 7-8, 2022.
- Texas A&M University Student Subunit of the American Fisheries Society, 2018-2022.
- Center for Environmental Research and Education Undergraduate Organization, Duquesne University, 2013-2017.
- Ecology Club, Duquesne University 2013-2017.
- Stream Team, led by Dr. Edward Schroth, Duquesne University, 2014-2017.
- Summer Scientist Series Member. Columbus, Ohio. 2010.

### **Professional Associations**

- American Fisheries Society (2015-present)
- Ohio Chapter AFS (2023-present)

Texas Chapter AFS (2018-2022)  
Student Subsection of the Education Section (2018-present)  
Texas A&M University Student Subunit of the AFS (2018-2022)  
Pennsylvania Chapter AFS (2015-2017)