

Jade E. Ortiz

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EDUCATION

- 2015-Present PhD Biological Sciences, Idaho State University, Pocatello, ID.
Advisor: Colden V. Baxter. Minor: Biology Education.
Expected completion date: Spring 2021.
- 2015 BS Biological Sciences, Michigan Technological University, Houghton, MI.
Minors: Fish Biology, Environmental Studies. Advisor: Amy M. Marcarelli.

EXPERIENCE

- 2015-Present Research Assistant, Stream Ecology Center, Idaho State University
Project title: Investigating the ecological importance of habitat complexity in river-floodplains.
My current doctoral research investigates the influence of spatial heterogeneity on the emergence of aquatic insects and subsequent consequences for terrestrial predators within a river-floodplain mosaic of southeastern Idaho.
- 2015 Research Technician, Yin & Yang of Nitrogen Project, Michigan Tech
Project title: Yin and yang – is there a balance between nitrogen fixation and denitrification in riverine ecosystems?
Served as main field technician to investigate how the processes of nitrogen fixation and denitrification co-occur across gradients of reactive N concentrations in streams located in northern Michigan and southeast Idaho. Assisted in laboratory analysis and data processing.
- 2014-2015 Summer Undergraduate Research Fellowship, Michigan Tech
Project title: Invasive *Myriophyllum spicatum* and nutrients interact to influence algal assemblages – manuscript in review
Conducted mesocosm experiment to assess impact of multiple stressors on native freshwater algal assemblages. Led field, laboratory, & data analysis.
- 2013-2015 Research Technician, Les Cheneaux Watershed Project, Michigan Tech
Project title: Impact of nutrient loading & Eurasian watermilfoil on phytoplankton communities among channels of the Les Cheneaux Islands, Lake Huron, MI.
Prepared slides, counted, and analyzed phytoplankton community data from locations in the Les Cheneaux Watershed, Lake Huron to assess water quality.
- 2013 Undergraduate Intern, Great Lakes Research Center (GLRC), Michigan Tech

Assisted in a variety of tasks in the GLRC including QA/QC of UGLOS buoys, serving as a deck hand on MTU research vessel RV Agassiz, and operation of remotely operated vehicles (ROVs).

2012-2013 Field & Lab Technician, Aquatic Ecosystem Ecology Laboratory, Michigan Tech
Projects included measurement of nutrient cycling in streams, assessing impacts of culvert restoration on stream function, and investigating the influence of a sediment removal restoration project in the Salmon Trout River on ecosystem function.

PUBLICATIONS

Ortiz, J.E., A. M. Marcarelli, K. J. Juneau, and C. J Huckins. 2019. Invasive *Myriophyllum spicatum* and nutrients interact to influence algal assemblages. *Aquatic Botany* 156: 1-9.

PRESENTATIONS

- 2019 **Ortiz, J.E.** and C.V. Baxter. Asynchrony of insect emergence across a river-floodplain mosaic and consequences for insectivore diversity. Oral presentation, American Fisheries Society & the Wildlife Society Joint Annual Conference, Reno, NV. 1 October 2019.
- 2019 **Ortiz, J.E.** and C.V. Baxter. An investigation of spatial complexity and diversity of terrestrial insectivores in a river-floodplain metacommunity. Oral presentation, Society of Freshwater Science annual meeting, Salt Lake City, UT. 23 May 2019.
- 2019 **Ortiz, J.E.**, C.V. Baxter, and D. L. Lybecker. A social-ecological investigation of riverine habitat complexity: insect emergence, terrestrial insectivores, and public perceptions. Oral presentation, Graduate Research Symposium, Idaho State University. Pocatello, ID. 29 March 2019.
- 2018 **Ortiz, J.E.** and C.V. Baxter. Temporal patterns of insect emergence across a river-floodplain mosaic and implications for terrestrial insectivores. Oral presentation, Annual research update presentation for the Shoshone-Bannock Fish and Wildlife Department, Fort Hall, ID. 13 December 2018.
- 2018 **Ortiz, J.E.** and C.V. Baxter. Temporal patterns of insect emergence across a river-floodplain mosaic and implications for terrestrial insectivores. Oral presentation, Pacific NW chapter of the Society for Freshwater Science annual meeting, Ketchum, ID. 7 November 2018.
- 2018 **Ortiz, J.E.** and C.V. Baxter. A social-ecological investigation of riverine habitat complexity: insect emergence, terrestrial insectivores, and public perceptions. Oral presentation, Society of Freshwater Science annual meeting, Detroit, MI. 24 May 2018.

- 2018 Miller, P.M., **J.E. Ortiz**, C.V. Baxter, and J. Cornell. Investigating the influence of habitat heterogeneity on diversity of terrestrial arthropods in a river-floodplain. Poster presentation, Society of Freshwater Science annual meeting, Detroit, MI. 23 May 2018.
- 2018 Smith, R., R. Lucas, J. Miller, **J.E. Ortiz**, K.G. Rosas, J. Ward, and P.A. Zaidel. Social and institutional barriers to urban stream rehabilitation: insights, challenges, and opportunities. Poster presentation, Society of Freshwater Science annual meeting, Detroit, MI. 23 May 2018.
- 2018 Miller, P.M., **J.E. Ortiz**, C.V. Baxter, and J.M. Starkey. Investigating the influence of habitat heterogeneity on diversity of insectivorous birds in a river-floodplain mosaic. Poster presentation, Idaho Chapter of the Wildlife Society annual meeting, Fort Hall, ID. 6 March 2018.
- 2018 **Ortiz, J.E.** Investigating the ecological importance of habitat complexity in river-floodplains. Doctoral proposal presentation to acquire candidacy. Oral presentation, Department of Biological Sciences, Idaho State University, Pocatello, ID. 22 February 2018.
- 2017 **Ortiz, J.E.**, and C.V. Baxter. An investigation of riverine habitat complexity and insect emergence. Oral presentation, Annual research update presentation for the Shoshone-Bannock Fish and Wildlife Department. 6 December 2017.
- 2017 **Ortiz, J.E.** Revisioning a river: the story of restoring the Portneuf. Oral presentation, National Science Foundation EPSCoR national meeting, Missoula, MT. 7 November 2017. One of three graduate students competitively selected from across the nation to present this Pecha-Kucha style talk at the 2017 national meeting.
- 2017 Miller, P.M., **J.E. Ortiz**, C.V. Baxter, and J.M. Starkey. Investigating the influence of habitat heterogeneity on diversity of insectivorous birds in a river-floodplain mosaic. Poster presentation, Idaho NSF EPSCoR annual meeting, Pocatello, ID. 12 October 2017.
- 2017 Miller, P.M., **J.E. Ortiz**, C.V. Baxter, and J.M. Starkey. Investigating the influence of habitat heterogeneity on diversity of insectivorous birds in a river-floodplain mosaic. Poster presentation, Idaho Conference on Undergraduate Research, Boise, ID. 26 July 2017.
- 2017 Baxter, C. V., D. M. Larson, D. L. Lybecker, M. McBeth, K. Lohse, R. Hale, M. Burnham, K. Marsh, and **J. E. Ortiz**. Match-mismatch: challenge and creativity in developing and applying a social ecological systems science of and for rivers and their communities. Oral presentation, Society of Freshwater Science annual meeting, Raleigh, NC. 8 June 2017.

- 2017 **Ortiz, J.E.** and C.V. Baxter. Synchronicity of insect emergence across a river-floodplain mosaic. Oral presentation, Society of Freshwater Science annual meeting, Raleigh, NC. 5 June 2017.
- 2017 **Ortiz, J.E.**, C.V. Baxter, D.L. Lybecker. A social-ecological investigation of riverine habitat complexity: insect emergence, terrestrial insectivores, & public perceptions. Poster presentation, 4th Symposium on Urbanization and Stream Ecology, Browns Summit, NC. 1 June 2017.
- 2017 **Ortiz, J.E.** and C.V. Baxter. An investigation of spatial complexity in river-floodplains and its effects on insect emergence and terrestrial insectivores. Poster presentation, Idaho State University Graduate Research Symposium, Pocatello, ID. 31 March 2017.
- 2017 **Ortiz, J.E.** and J.C. Paris. Investigating food webs in river-floodplains. Guest lecture, Earth and Environmental Systems seminar (GEOL 4492), Idaho State University, Pocatello, ID. 27 March 2017.
- 2017 **Ortiz, J.E.** and C.V. Baxter. An investigation of spatial complexity in river-floodplains and its effects on insect emergence and terrestrial insectivores. Poster presentation, Joint annual meeting hosted by the Idaho Chapters of the American Fisheries Society and the Wildlife Society, Boise, ID. 2 March 2017.
- 2016 **Ortiz, J.E.**, and C.V. Baxter. An investigation of riverine habitat complexity and insect emergence. Oral presentation, Annual research update presentation for the Shoshone-Bannock Fish and Wildlife Department. 13 December 2016.
- 2016 **Ortiz, J.E.**, C.V. Baxter, D.L. Lybecker. A social-ecological investigation of riverine habitat complexity: insect emergence, terrestrial insectivores, & public perceptions. Poster presentation, Idaho EPSCoR annual meeting, Coeur d'Alene, ID. 20 October 2016. 1st Place Overall Poster Award.
- 2016 **Ortiz, J.E.**, C.V. Baxter, D.L. Lybecker. A social-ecological investigation of riverine habitat complexity: insect emergence, terrestrial insectivores, & public perceptions. Poster presentation, NSF site visit, EPSCoR award IIA-1301792, Moscow, ID. 28 September 2016.
- 2016 **Ortiz, J.E.** and C.V. Baxter. A social-ecological investigation of riverine habitat complexity. Oral presentation, EcoLunch MILES seminar, Idaho State University, Pocatello, ID. 14 September 2016.
- 2016 Eberhard, E.K., A.M. Marcarelli, **J.E. Ortiz**, C.V. Baxter. Do nitrogen fixation and co-occur across a gradient of stream nitrogen concentrations in a western watershed? Poster presentation, Association for the Sciences of Limnology & Oceanography annual meeting, Santa Fe, NM. 5-10 June 2016.

- 2016 **Ortiz, J.E.** and C.V. Baxter. A conceptual model of spatial complexity in river-floodplains and its effects on insect emergence and terrestrial insectivores. Poster presentation, Society of Freshwater Science annual meeting, Sacramento, CA. 21-26 May 2016.
- 2016 **Ortiz, J.E.** A social-ecological investigation of riverine habitat complexity: insect emergence, terrestrial insectivores, & public perceptions. Master's proposal presentation, Department of Biological Sciences, Idaho State University, Pocatello, ID. 28 April 2016.
- 2016 Eberhard, E.K., A.M. Marcarelli, **J.E. Ortiz**, C.V. Baxter. Do nitrogen fixation and co-occur across a gradient of stream nitrogen concentrations in a western watershed? Poster presentation, Center for Water and Society, World Water Day poster session, Michigan Tech, Houghton, MI. 22 March 2016.
- 2016 Eberhard, E.K., A.M. Marcarelli, **J.E. Ortiz**, C.V. Baxter. Do nitrogen fixation and co-occur across a gradient of stream nitrogen concentrations in a western watershed? Poster presentation, Ecosystem Science Center poster session, Michigan Tech, Houghton, MI. 16 March 2016.
- 2016 **Ortiz, J.E.**, A.M. Marcarelli, K.J. Juneau, C.J, Huckins. Invasive *Myriophyllum spicatum* and nutrients interact to influence algal assemblages. Poster presentation, Idaho Chapter of the American Fisheries Society annual meeting, Coeur d'Alene, ID. 8-10 March 2016.
- 2015 **Ortiz, J.E.**, A.M. Marcarelli, K.J. Juneau, C.J, Huckins. Invasive *Myriophyllum spicatum* and nutrients interact to influence algal assemblages. Poster presentation, Society of Freshwater Science annual meeting, Milwaukee, WI. 17-21 May 2015.
- 2015 **Ortiz, J.E.**, A.M. Marcarelli, K.J. Juneau, C.J, Huckins. Invasive *Myriophyllum spicatum* and nutrients interact to influence phytoplankton communities. Poster presentation, World Water Day poster session, Michigan Tech, Houghton, MI. 23 March 2015.
- 2015 **Ortiz, J.E.**, A.M. Marcarelli, K.J. Juneau, C.J, Huckins. Invasive *Myriophyllum spicatum* and nutrients interact to influence phytoplankton communities. Poster presentation, Undergraduate Research Expo, Michigan Tech, Houghton, MI. 20 March 2015.
- 2015 **Ortiz, J.E.**, A.M. Marcarelli, K.J. Juneau, C.J, Huckins. Invasive *Myriophyllum spicatum* and nutrients interact to influence phytoplankton communities. Poster presentation, Ecosystem Science Center poster session, Michigan Tech, Houghton, MI. 19 March 2015.

- 2014 **Ortiz J.E.**, A.M. Marcarelli, G.L. Fahnenstiel, R.A. Smith. Impact of nutrient loading and Eurasian watermilfoil on phytoplankton communities among channels of the Les Cheneaux Islands, Lake Huron. Poster presentation, Joint Aquatic Sciences Meeting, Portland, OR. 18-23 May 2014.
- 2014 **Ortiz J.E.**, A.M. Marcarelli, G.L. Fahnenstiel, R.A. Smith. Impact of nutrient loading and Eurasian watermilfoil on phytoplankton communities among channels of the Les Cheneaux Islands, Lake Huron. Poster presentation, Ecosystem Science Center poster session, Michigan Tech, Houghton, MI. 19 March 2014.
- 2014 **Ortiz J.E.**, A.M. Marcarelli, G.L. Fahnenstiel, R.A. Smith. Impact of nutrient loading and Eurasian watermilfoil on phytoplankton communities among channels of the Les Cheneaux Islands, Lake Huron. Poster presentation, Center for Water & Society, World Water Day poster session, Michigan Tech, Houghton, MI. 26 March 2014.
- 2013 **Ortiz J.E.**, A.M. Marcarelli, C.J Huckins, S. Eggert. Sand accumulation in the Salmon Trout River changes gross primary production and respiration rates by biofilms. Poster presentation, Ecosystem Science Center poster session, Michigan Tech, Houghton, MI. March 2013. 1st Place Poster Award, Undergraduate Division.
- 2013 **Ortiz J.E.**, A.M. Marcarelli, C.J Huckins, S. Eggert. Sand accumulation in the Salmon Trout River changes gross primary production and respiration rates by biofilms. Poster presentation, Center for Water & Society, World Water Day poster session, Michigan Tech, Houghton, MI. March 2013. 3rd Place Overall Poster Award.

PROFESSIONAL DEVELOPMENT

- 2019 Integrating Active Learning into Lecture Courses to Maximize Learning. Workshop facilitated by Dr. Kimberly Tanner. Idaho State University, Pocatello, ID. 22 February 2019.
In this workshop, we learned about and discussed strategies for incorporating active learning into the classroom given several time constraints (e.g., 1 minute, 5 minute, 10 minute, and 20 minute lessons).
- 2018 Comprehensive Bat Acoustics Course, Wildlife Conservation Society of Canada. Vancouver, BC, Canada. 7-11 May 2018.
In this comprehensive, week-long workshop, we learned everything from the basics of bat acoustics to methodologies for programming and deploying acoustic bat detectors. We spent a large portion of the workshop learning how to process acoustic files and analyze bat calls to acquire species-level identification.

- 2018 Diversity Leadership Workshop, STEM Diversity Office, Idaho State University. Pocatello, ID. 14 April 2018.
In this workshop, we discussed many challenges facing minority groups and women in the fields of science, technology, engineering, and mathematics. We learned about ways to combat common barriers such as imposter syndrome and stereotype threat.
- 2018 Wildlife Acoustics Training Course, Wildlife Acoustics and Idaho Fish and Game. Boise, ID. 13 March 2018.
In this short-course, we learned how to use various models of Wildlife Acoustics bat detectors and were introduced to methods in analysis of bat calls to acquire species-level identification.
- 2018 Tribal Sovereignty Workshop, Idaho State University. Pocatello, ID. 9 March 2018.
In this workshop, we learned an overview of the history of tribal sovereignty in the United States and discussed the importance and need for fruitful collaborations between the university and local tribes.

TEACHING EXPERIENCE

- 2018 Supervised Teaching Intern, Freshwater Ecology (BIOL4462), Idaho State
2012-2015 Biology Learning Center Coach, Michigan Tech
2013 Limnology Undergraduate Teaching Assistant (BL4450), Michigan Tech
2012 Botany Undergraduate Teaching Assistant (BL2160), Michigan Tech

LEADERSHIP EXPERIENCE

- 2017-2018 *President*, Biology Graduate Student Association, Idaho State University
2016-2018 *Outreach coordinator*, American Fisheries Society, Portneuf Subunit, Idaho State University
2016-2017 *Treasurer*, Biology Graduate Student Association, Idaho State University
2015-2016 *Treasurer*, American Fisheries Society, Portneuf Subunit, Idaho State University

ACADEMIC SERVICE

- 2017-2018 *Committee member*, ISU College of Science and Engineering (CoSE) dean search – represented the CoSE graduate student body in the search for and hiring of a new dean for the college
2017-2018 *Graduate student representative/liaison* – attended and participated in biweekly faculty meetings to voice graduate student concerns to faculty as well as report important departmental news to the biology graduate student body
2017 *Committee member*, ISU biology departmental space committee – developed protocols for allocating graduate student space

COMMUNITY SERVICE

- 2017 Science fair judge, Grace Lutheran School, Pocatello, Idaho
2017 Science fair judge, Pocatello High School, Pocatello, Idaho
2016 Science fair judge, Grace Lutheran School, Pocatello, Idaho
2015-present Community outreach presenter. Events: March for Science Expo (Apr 2017),
Portneuf Valley Environmental Fair (Apr 2017 & 2018), ISU Museum of Natural
History “Muggle Magic” STEM event (Nov 2016), MILES adventure learning
workshop (Jun 2016), Alameda Middle School STEM night (Apr 2016 & Apr
2017), Idaho State “Communiversality” (Feb 2016)
2015-present Participant, Annual Portneuf River Clean-Up

HONORS

- 2018 2018 Outstanding Graduate Student Award, Department of Biological Sciences,
Idaho State University, \$100 honorarium
2017 Society of Freshwater Sciences Endowment Award recipient, \$1000 scholarship
2015 Society of Freshwater Sciences Undergraduate Travel Award recipient, \$600
scholarship
2014-2015 Michigan Technological University Departmental Scholar, Biological Sciences
2014-2015 Phi Sigma Biological Honors Society
2011-2015 Presidential Excellence Scholarship, Michigan Technological University

PROFESSIONAL AFFILIATIONS

American Fisheries Society
Association for the Sciences of Limnology & Oceanography
Society for Freshwater Science