

We are applying to mentor an early career female researcher to participate in a project entitled *Mapping African Great Lakes fish value chains*. The research project has been developed by the mentoring team in collaboration with LUANAR and the UN FAO (Devin Bartley and Simon Funge-Smith) following the recommendations of a stakeholders' workshop on fish value chains that took place 8-11 October, 2018 in Mangochi and Lilongwe, Malawi. The project combines social science survey research with GIS methods to analyze flows of fish and economic value across space. Surveys with fishers, fish processors and traders, wholesalers, and retailers will gather information on exchanges of fish along the value chain, including data on quantity and type of fish exchanged, input costs, price, net earnings, amount of fish directed to household consumption, gender, property rights, and access to capital and resources. The GPS coordinates of each survey will be marked to allow spatial analysis of the data. The results will illuminate the landscape of fish value chains at a new level of social and economic nuance, which is important for assessing policy interventions and tradeoffs. This project builds on a pilot study on Lake Malawi fish value chains currently underway by Dr. Bennett's postdoctoral research associate, Park Muhonda, in collaboration with Emmanuel Kaunda at LUANAR.

This project contributes to AAP thematic area 1. Agri-food Systems, with strong links to thematic area 6. Health & Nutrition. While agri-food systems often refer to terrestrial food production systems, our project on fish value chains responds to recent calls to conceptualize fisheries as food systems.¹ A food systems perspective on fisheries underscores the importance of fish as a low-cost, micronutrient-dense animal source protein and helps to illuminate the often-hidden contributions of fish to addressing malnutrition, childhood stunting, maternal health outcomes, immune system function, and even non-communicable disease burden.¹

The early career researcher will play an integral role in the project, through data collection, analysis, preparation of at least one peer-reviewed publication, and policy communication and networking activities. Through fieldwork, the researcher will develop and enhance skills in social science data collection and analysis techniques including survey and semi-structured interviews as well as management of field assistants. These fundamental skills will be complemented by innovative approaches to GIS analysis and database management, and spatial data visualization and communication techniques. This technical expertise will be married with the overarching mission of developing skills and experience in communicating for scholarly and policy impact through activities such as preparation of a peer-reviewed publication, working with a graphic designer to develop an impactful policy brief, and participating in relevant workshops and policy fora.

This project is linked with emerging and ongoing policy and research initiatives, which will enhance not only the impact of the research but also support the researcher's professional development. For example, this project is an integral activity of MSU's MoU with the UN FAO on advancing global inland fisheries. In May, WorldFish director Gareth Johnstone and others from the organization will be visiting MSU to develop a potential MoU with MSU, and this project has been identified as a strategic activity within the MoU. Finally, this project is being conducted in collaboration with LUANAR and the NEPAD Fish Node. These integrated engagements will position the researcher to communicate project results in high-level policy arenas and, furthermore, to develop a professional network that will enhance her long-term career aspirations.

¹ Bennett et al. (2018). Contribution of Fisheries to Food and Nutrition Security: Current Knowledge, Policy, and Research. NI Report 1802. Durham, NC: Duke University, <https://nicholasinstitute.duke.edu/publications?topics=34>.

DANA M. INFANTE

Department of Fisheries and Wildlife
1405 South Harrison Road, Suite 318
Manly Miles Building
East Lansing, Michigan 48823
<https://www.msu.edu/~infanted/index.html>

RESEARCH INTERESTS

- Effects of landscape-scale factors (i.e., geology, land cover, climate) on physical and biological features of river systems
- River catchment hydrology and stream channel geomorphology
- Ecological assessment
- Sustainable management of aquatic systems

CURRENT AND PREVIOUS POSITIONS

Interim Associate Chair. Department of Fisheries and Wildlife, Michigan State University, East Lansing, Michigan. January 2018 to present

Appointment is 25% administrative, 50% research, 5% teaching, 15% outreach, 5% leadership

Associate Professor. Department of Fisheries and Wildlife, Michigan State University, East Lansing, Michigan. July 2013 to present. Assistant Professor from January 2007 to July 2013.

Partnership for Ecosystem Research and Management (PERM) Faculty Member, Michigan Department of Natural Resources, Fisheries Division

EDUCATION

Doctor of Philosophy. 2005. Resource Ecology and Management, School of Natural Resources and Environment, University of Michigan, Ann Arbor, Michigan

Master of Science. 2001. Resource Ecology and Management, School of Natural Resources and Environment, University of Michigan. University of Michigan, Ann Arbor, Michigan

Bachelor of Science. 1994. Scientific Writing, College of Literature, Science, and Arts, University of Michigan, Ann Arbor, Michigan

SELECT AWARDS

Professional Development Microgrant, 2018, from Michigan State University College of Agriculture and Natural Resources for Attending the 4th Mississippi-Yangtze River Basins Symposium in Chongqing, China.

Lead21 Class 13 Leadership Training Program, 2017-2018. Supported by Michigan State University College of Agriculture and Natural Resources.

2013 Outstanding Supervisor Award. From Family Resource Center of Michigan State University.

2012 Group Achievement Award for National Fish Habitat Assessment Work. From the American Institute of Fishery Research Biologists.

Eli Lilly Teaching Fellowship. From Michigan State University, 2010-2011 academic year.

Scientific Achievement in Support of Fish Habitat Conservation. From National Fish Habitat Action Plan Board, April 2011.

PEER-REVIEWED PUBLICATIONS FROM 2017 TO PRESENT

Includes book chapters and journal articles

Post-doctoral research associates or graduate students for whom I am primary or co-advisor are underlined

In Review

- Tracy, E. E., J. K. Nohner, **D. M. Infante**, G. E. Whelan, and K. E. Wehrly. In Review. Integrating stakeholder needs into a decision support tool: Assisting lake managers in addressing current and future threats. Lakes and Reservoir Management.
- Pracheil, B. M., R. McManamay, E. S. Parish, S. L. Curd, B. T. Smith, C. R. DeRolph, A. M. Witt, S. Ames, M. B. Day, W. Graf, **D. M. Infante**, D. McCoskey, K. Rugani, C. Vezina, T. Welch, A. West. In Review. A checklist of river function indicators for hydropower ecological assessment. Science of the Total Environment.
- Xiong F., Y. Lu, H. Liu, X. Qu, W. Xia, C. Guo, **D. M. Infante**, L. Wang, and Y. Chen. In Review. Fish communities, water quality, and their relationships in the middle and lower Yangtze River, China. North American Journal of Fisheries Management.
- Martin, B., Y. P. Tsang, R. W. Tingley, H. Clilverd, and **D. M. Infante**. In Review. Characterizing natural barriers to introduced stream fauna: A case study in Hawai'i. streams. In Hughes, R., M., D. M. Infante, L. Wang, K. Chen, and B. Terra, editors. Advances in Understanding Landscape Influences on Freshwater Habitats and Biological Assemblages.
- Ross, J. A., **D. M. Infante**, D. J. Martin, A. Cooper and K. Herreman. In Review. Influences of landscape factors on large wood in streams draining second growth catchments of southeast Alaska. In Hughes, R., M., D. M. Infante, L. Wang, K. Chen, and B. Terra, editors. Advances in Understanding Landscape Influences on Freshwater Habitats and Biological Assemblages.
- Cooper, A. R., **D. M. Infante**, J. A. Ross, W. M. Daniel, K. Herreman, C. C. Estes, and G. E. Whelan. In Review. Contemporary and future landscape-based anthropogenic disturbances to Alaska streams: implications for anadromous fish habitat conservation. In Hughes, R., M., D. M. Infante, L. Wang, K. Chen, and B. Terra, editors. Advances in Understanding Landscape Influences on Freshwater Habitats and Biological Assemblages.
- Thornbrugh, D. J., and **D. M. Infante**. Accepted. Landscape effects on stream fishes: regional responses to human land uses across the eastern United States. In Hughes, R., M., D. M. Infante, L. Wang, K. Chen, and B. Terra, editors. Advances in Understanding Landscape Influences on Freshwater Habitats and Biological Assemblages.
- Tsang, Y. P., R. W. Tingley, J. Hsiao, and **D. M. Infante**. In Review. Identifying high value areas for conservation: Accounting for connections among terrestrial, freshwater, and marine habitats in a tropical island system. Journal for Nature Conservation.
- Tingley, R. W., **D. M. Infante**, W. M. Daniel, A. R. Cooper, G. C. Smith, and K. Herreman. Accepted. Prioritizing Hawaii's stream habitats to conserve native species with changing climate. In D. Dauwalter, T. Birdsong, and G. Garrett, editors. Multispecies and watershed approaches to freshwater fish conservation. American Fisheries Society.
- Carlson, A., W. W. Taylor, and **D. M. Infante**. In Review. Developing precipitation- and groundwater-corrected stream temperature models to improve management of brook charr amid climate change. Hydrobiologia.
- Carlson, A., W. W. Taylor, Z. Basher, D. Beard, and **D. M. Infante**. In Review. Science to action: a decision-support tool for coldwater stream trout management in a changing climate. North American Journal of Fisheries Management.
- Thornbrugh, D., **D. M. Infante**, and Y. P. Tsang. In Review. Regional trends of biodiversity indices: Differences in natural landscape and human land use influences on stream fishes. Journal of Biogeography.

2019

- Cooper, A. R., Y. P. Tsang, **D. M. Infante**, W. M. Daniel, A. J. McKerrow, and D. Wieferrich. Accepted. Protected areas lacking for many common fluvial fishes of the conterminous USA. *Diversity and Distributions*.
- Carlson, A. K., W. W. Taylor, M. T. Kinnison, S. Mažeika, P. Sullivan, M. J. Weber, R. T. Melstrom, P. A. Venturelli, M. R. Wuellner, R. M. Newman, K. J. Hartman, G. B. Zydlewski, D. R. DeVries, S. M. Gray, **D. M. Infante**, M. A. Pegg, and R. M. Harrell. 2019. Perspectives of state fisheries administrators and Agricultural Experiment Station directors on current and future threats to freshwater fisheries in the United States. *Fisheries*. <https://doi.org/10.1002/fsh.10238>
- Ross, J. A., **D. M. Infante**, D. J. Martin, and M. Rey. 2019. Relating natural landscape factors and riparian timber management strategies to stream habitat in southeastern Alaska: Insights for stream and riparian restoration. *North American Journal of Fisheries Management* 39:328-342. DOI: 10.1002/nafm.10270
- Colvin, S. A. R., S. M. P. Sullivan, P. D. Shirey, R. W. Colvin, K. O. Winemiller R. M. Hughes, K. D. Fausch, **D. M. Infante**, J. Olden, K. R. Bestgen, R. J. Danehy, L. Eby. 2019. Headwater streams and wetlands are critical for sustaining fish, fisheries, and ecosystem services. *Fisheries* 44:73-91. <https://doi.org/10.1002/fsh.10229>
- Clilverd, H. M., Y. P. Tsang, **D. M. Infante**, A. J. Lynch, A. M. Strauch. 2019. Long-term streamflow trends in Hawai'i and implications for native stream fauna. *Hydrological Processes*. *Hydrological Processes* 2019:1-21. DOI: 10.1002/hyp.13356

2018

- Stevenson, R. J., T. Tang, and **D. M. Infante**. 2018. Advancing evaluation of bioassessment methods: A reply to Liu and Cao. *Science of the Total Environment* 645:895-500. <https://doi.org/10.1016/j.scitotenv.2018.07.129>
- Tingley, R. W., **D. M. Infante**, R. A. MacKenzie, A. R. Cooper, and Y. P. Tsang. 2018. Identifying natural catchment landscape influences on tropical stream organisms: Classifying stream reaches of the Hawaiian Islands. *Hydrobiologia*. DOI: 10.1007/s10750-018-3726-5
- Daniel, W. M., A. R. Cooper, P. J. Badra, and **D. M. Infante**. 2018. Predicting habitat suitability for eleven imperiled fluvial freshwater mussels. *Hydrobiologia* 809:265-283. DOI: 10.1007/s10750-017-3473-z
- Whelan, G. E., W. M. Daniel, E. Dean, **D. M. Infante**, K. Herreman, and A. Cooper. 2018. Who is doing what to trout: Insights from the National Fish Habitat Assessment. Pages 263-272 in *Wild Trout XII: Science, politics, and wild trout management: Who's driving and where are we going?* West Yellowstone, Montana.

2017

- Carlson, A., K. Hartikainen, **D. M. Infante**, T. D. Beard, A. J. Lynch., and W. W. Taylor. Early view. Comparing stream-specific to generalized temperature models to guide coldwater salmonid management in a changing climate. *Reviews in Fish Biology and Fisheries* 27:443-462. DOI:10.1007/s11160-017-9467-0
- Cooper, A. R., **D. M. Infante**, L. Wang, K. Wehrly, and T. Brenden. 2017. Assessment of dam effects on streams and fish assemblages of the conterminous USA. *Science of the Total Environment* 586:879-889. DOI: 10.1016/j.scitotenv.2017.02.067
- Fetzer, W. W., B. M. Roth, **D. M. Infante**, D. F. Clapp, R. M. Claramunt, D. G. Fielder, J. He, T. J. Newcomb, T. G. Zorn. 2017. Spatial and temporal dynamics of nearshore fish communities in Lake Michigan and Lake Huron. *Journal of Great Lakes Research* 43:319-334. DOI: 10.1016/j.jglr.2016.12.003
- Foley, M. M., F. J. Magilligan, C. E. Torgersen, J. J. Major, C. W. Anderson, P. J. Connolly, D. Wieferrich, P. B. Shafroth, J. E. Evans, **D. M. Infante**, and L. S. Craig. 2017. Landscape context and the biophysical response of rivers to dam removal in the United States. *PLOS One*. DOI: 10.1371/journal.pone.0180107
- Paukert, C. P., A. J. Lynch, T. D. Beard, Y. Chen, S. J. Cooke, M. S. Cooperman, I. Cowx, L. Ibengwe, **D. M. Infante**, B. J. E. Myers, N. P. Hoa, and I. J. Winfield. 2017. Designing a global assessment of climate change on inland fish and fisheries: knowns and needs. *Reviews in Fish Biology and Fisheries* 27:393-409. DOI: 10.1007/s11160-017-9477-y

GRANTS FROM 2016 TO PRESENT

Only includes grants funded or under review; listed by year awarded

2018

- U.S. Geological Survey, National Climate Adaptation Science Center. PENDING. 2019-2024. Co-Hosting the Northeast Climate Adaptation Science Center (NCASC). **\$291,901 (Dana M. Infante, lead)**
- Michigan Department of Natural Resources. PENDING. 2019. Modifications to the High Resolution National Hydrography Dataset: Enhancing Michigan's Water Withdrawal Assessment Tool. **\$146,236 (Dana M. Infante, lead, Jim Milne, and David Lusch).**
- Michigan Department of Natural Resources Fisheries Division. 2018-2019. Support for revision of the State Wildlife Action Plan. **\$79,995 (Dana M. Infante, lead).**

2017

- Michigan Department of Natural Resources Fisheries Division. 2017-2018. Effects of flow reduction on thermal dynamics of streams: improving an important link in Michigan's Water Withdrawal Assessment Tool (WWAT). **\$157,666.** (Dan Hayes and Dana M. Infante).
Aggregating cumulative water withdrawal information for any point in a drainage. **\$37,521 (Dana M. Infante, lead)**
- (Michigan Department of Natural Resources Fisheries Division. 2017-2018. Support for revision of the State Wildlife Action Plan. **\$82,158 (Dana M. Infante, lead).**
- U.S. Geological Survey, Aquatic GAP Analysis Program. 2017-2020. Aquatic GAP Analysis Program: Enhancing data and approaches for conserving the Nation's inland aquatic ecosystems. **\$350,000 (Dana M. Infante, lead).**
- U.S. Fish and Wildlife Service, Eastern Tallgrass Prairie and Big Rivers Landscape Conservation Cooperative. Characterizing the current condition of stream fish habitats throughout the US portion of the Mississippi River Basin based on responses of target fish species to a diverse set of current landscape-scale disturbances. **\$31,998 (Dana M. Infante, lead).**
- Michigan Department of Natural Resources, Fisheries Division. 2017-2022. Great Lakes and inland GIS support and development for Michigan (State Wildlife Action Plan) SWAP implementation. **\$159,101 (Dana M. Infante, lead).**

2016

- Michigan Department of Natural Resources Fisheries Division. 2016-2017. Support for revision of the State Wildlife Action Plan. **\$79,504 (Dana M. Infante, lead).**
- U.S. Fish and Wildlife Service, National Fish Habitat Action Plan. 2013-2018. A national assessment of the status of fish habitat. **\$156,000 year 4 (Dana M. Infante, lead, and William W. Taylor).**
- U.S. Geological Survey, Aquatic GAP Analysis Program. 2016-2017. Aquatic GAP Analysis Program: Enhancing data and approaches of the Nation's inland and coastal aquatic ecosystems. **\$105,071 (Dana M. Infante, lead).**
- Association of Fish and Wildlife Agencies. 2016. Developing a decision support process to aid in conservation of aquatic habitats throughout the main Hawaiian islands. **\$30,000 (Dana M. Infante, lead).**

SELECT PRESENTATIONS FROM 2018 TO PRESENT

Presenting author first. Undergraduates, graduate students and/or post-doctoral research associates for whom I am primary or co-advisor are underlined.

(**) indicates that work has a significant outreach component.

- Infante, D. M.** W. M. Daniel, L. Wang, G. Whelan, A. Cooper, and W. W. Taylor. *Invited*. 2018. Assessing river fish habitats throughout the United States: Outcomes and opportunities for conserving fishes from current and future threats. 4th Mississippi-Yangtze River Basins Symposium, October 15-20, 2018, Chongqing, China.
- Clilverd, H., Y. P. Tsang, A. Lynch, and **D. M. Infante**. *Invited*. 2018. Assessing the impact of declining streamflow on the distribution of native fishes across the Hawaiian Islands. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- **Chen, Y., J. J. Hoover, D. Chapman, J. R. Jackson, K. J. Kilgore, D. Chen, Z Li, Q. Phelps, M. Eggleton, **D. M. Infante**, K. Irons, C. Paukert, E. Rutherford, H. Zhang, D. Parrish, L. Wang. 2018. Moving the Mississippi-Yangtze fisheries network forward: Past, current, and future. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey
- Daniel, W. M., P. Fuller, and **D. M. Infante**. 2018. *Invited*. Are game fishes outside their native range more tolerant of landscape disturbance? 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Daniel, W. M., **D. M. Infante**, K. Herreman, A. R. Cooper, and R. M. Hughes. *Invited*. 2018. Characterizing coal and mineral mines as a regional source of stress to stream fish assemblages. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Dean, E., A. R. Cooper, and **D. M. Infante**. 2018. Freshwater fish species migration life histories: Information to aid in conservation of stream fishes. Poster. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Martin, B., Y. P. Tsang, H. Clilverd, R. W. Tingley, **D. M. Infante**, K. Herreman, and G. R. Higashi. 2018. Characterizing the habitat use and distribution of introduced freshwater species in Hawaii. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Ross, J., **D. M. Infante**, R. M. Hughes, L. Wang, B. de Freitas Terra, and K. Chen. 2018. Advances in understanding landscape influences on freshwater habitats and biological assemblages. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- **Ross, J., **D. M. Infante**, J. Whittier, N. Sievert, W. M. Daniel, and K. Herreman. 2018. Development of a decision support mapper to inform conservation of stream fish habitats throughout the Mississippi River basin. Poster. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Schinegger, R., M. Ublacker, W. M. Daniel, K. Herreman, and **D. M. Infante**. *Invited*. 2018. The impacts of human stressors on riverine fish communities – a cross-continental analysis of European and United States freshwater ecoregions. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- **Whelan, G., E. Dean, W. M. Daniel, K. Herreman, and **D. M. Infante**. *Invited*. 2018. Drilling deep for stream species diversity: Some fishy insights from the National Fish Habitat Assessment. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Xiong, F., Y. Lu, H. Liu, X. Qu, W. Xia, C. Guo, **D. M. Infante**, L. Wang, and Y. Chen. 2018. Landscape stressors, habitat, and fish assemblages in the Yangtze River, China. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Zeni, J., G. Brejao, D. Hoenighaus, L. Casatti, L. Montag, L. Driver, and **D. M. Infante**. *Invited*. 2018. Dynamic landscapes and stream fish ecology in the Neotropics: Lessons from and for temperate systems. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Carlson, A. K., W. W. Taylor, and **D. M. Infante**. 2018. Impact of changes in precipitation and groundwater on brook charr thermal habitat in Michigan streams. 9th International Charr Symposium, June 18-21, Duluth, Minnesota.

- **Infante, D. M.,** and A. R. Cooper. *Invited*. 2018 Conserving stream fishes throughout large regions: Using multiple species distribution models to enhance decision-making. Seminar for the Institute of Hydrobiology and Aquatic Ecosystem Management, University of Natural Resources and Life Sciences, June 6, 2018, Vienna, Austria.
- **Cooper, A. R.,** and **D. M. Infante**. *Invited*. 2018. Quantifying and assessing the effects of fragmentation by dams on streams and fishes of the conterminous USA. Seminar for the Institute of Hydrobiology and Aquatic Ecosystem Management, University of Natural Resources and Life Sciences, June 6, 2018, Vienna, Austria.
- **Hsiao, J., D. M. Infante,** Y. P. Tsang, and A. Lynch. 2018. Characterizing spatial linkages between inland and coastal habitats for improved conservation in Maui, Hawaii. Webinar to NOAA Office of Habitat Conservation – Habitat Protection Division (~10 participants), April 4, 2018.
- **Tracy, E.,** J. Nohner, G. Whelan, **D. M. Infante,** and K. Wehrly. 2018. Evaluating a spatial decision support tool for lake conservation in the Midwest. Annual Meeting of the Michigan Chapter of the American Fisheries Society, Port Huron, Michigan, February 13-14, 2018.

STUDENT ADVISING

Lab currently includes 3 MS students, 1 PhD student, 1 Post-doctoral researcher, and 4 research specialists and technicians.

Doctoral students, primary advisor

- Emily Dean.** Effects of stream network fragmentation on migratory fishes (began September 2016; expected defense Spring 2021)
- Emerging Leaders Program, Great Lakes Leadership Academy 2017
 - Fred Poston Scholarship, 2017
 - James Schramm Scholarship for Graduate Study in Fisheries from the Great Lakes Council Fly Fishers International, 2018
 - Dr. Howard A. Tanner Fisheries Excellence Fellowship, \$2500, 2018-2019, Department of Fisheries and Wildlife
 - Fisheries and Wildlife Graduate Student Organization Travel Grant, \$300, Spring 2019
- Ralph W. Tingley III.** Assessing impacts of climate change on tropical stream ecosystems over multiple spatial scales (began September 2010; defended Spring 2017)
- National Climate Change and Wildlife Science Center Science to Action Fellowship, United States Geological Survey, \$10,000, 2015
 - Fisheries and Wildlife Department Special Recognition Fellowship, 2014
 - Best Student Presentation in a Fish Habitat Section, 145th Annual Meeting of the American Fisheries Society, \$100, August 2015
- Darren J. Thornbrugh.** Regional influence of landscape features and processes on fluvial fish assemblages of the United States (began September 2009; defended Fall 2014)
- Summer Recruitment Fellowship, 2009, College of Agriculture and Natural Resources
 - Bridge Fellowship, 2009-2010, College of Agriculture and Natural Resources
 - Ball Fellowship, \$5000, 2010-2011, Department of Fisheries and Wildlife
 - Red Cedar Fly Fishers Scholarship, \$1000, June 2011
 - Dr. Howard A. Tanner Fisheries Excellence Fellowship, \$2500, 2012-2013, Department of Fisheries and Wildlife
 - Dissertation Completion Fellowship, College of Agriculture and Natural Resources, \$3000, 2014

MS students, primary advisor

Samantha Betances. (began September 2017)

- Academic Achievement Graduate Assistantship (AAGA), Fall 2017-Spring 2018, Michigan State University
- Janice Lee Fenske Excellence in Fisheries Management Fellowship 2018-2019
- John Robertson – Theodore Roosevelt Conservation and Environmental Leadership Fellowship, 2018, \$2500
- Emerging Leaders Program, Great Lakes Leadership Academy 2019
- Robert C. Ball and Betty A. Ball Fisheries and Wildlife Fellowship 2019, \$5000

Erin Tracy. Characterizing resilience of stream fish habitats (began September 2016; expected defense Spring 2019)

- John Robertson – Theodore Roosevelt Conservation and Environmental Leadership Fellowship, 2016-2017, \$2500
- Janice Lee Fenske Excellence in Fisheries Management Fellowship 2017-2018
- Emerging Leaders Program, Great Lakes Leadership Academy 2018
- Fisheries and Wildlife Graduate Student Organization Travel Grant, \$300, Spring 2019
- Ball Fellowship, \$2500, 2019-2020, Department of Fisheries and Wildlife

Linda Ortiz Gonzalez. Influence of agricultural best management practices on Michigan streams (began September 2014; expected defense Spring 2019)

- Michigan Lake and Stream Leaders Institute, 2015
- Michigan State University Graduate School Tuition Fellowship, 2014-2018

Janet Hsiao. Linkages between inland aquatic ecosystems and coastal habitats (began September 2014; expected defense Spring 2017)

- Fisheries and Wildlife Graduate Student Organization Travel Grant, \$150, Spring 2015
- Department of Fisheries and Wildlife Graduate Fellowship, \$375, Spring 2016
- Ball Fellowship, \$5000, 2016-2017, Department of Fisheries and Wildlife
- Selected to participate in Great Lakes Leadership Academy, 2016
- Fred Poston Scholarship, \$1000, 2016

Jacqueline L. Fenner. Developing spatial decision-support tools for Hawaiian ecosystem managers (began September 2010; left program voluntarily in Spring 2012 following change in career focus)

- Academic Achievement Graduate Assistantship (AAGA), Summer 2010-Spring 2011, Michigan State University
- Theodore (Teddy) Roosevelt Conservation and Environmental Leadership Fellowship, Spring 2011
- Selected to participate in Great Lakes Leadership Academy, 2011

Jared A. Ross. Effects of riparian timber harvest on anadromous fish habitat in southeast Alaska streams (began September 2010; defended Fall 2013)

- Research grant from Schrems West Michigan Chapter of Trout Unlimited, \$2000, March 2011

Arthur R. Cooper. Fragmentation by dams: Assessing river connectivity in the conterminous U.S. with focus on the impacts of dams on fish assemblages in Michigan, Wisconsin, and Minnesota (began September 2008; defended Fall 2013)

- Ball Fellowship, \$5000, 2008-2009, Department of Fisheries and Wildlife

Ralph W. Tingley III. A landscape-scale analysis of factors limiting distributions and abundances of Arctic Grayling (*Thymallus arcticus*) in Michigan rivers (began September 2007; defended Spring 2010)

- Ball Fellowship, \$5000, 2007-2008, Department of Fisheries and Wildlife
- Paul H. Young Chapter of Trout Unlimited, \$1000 research grant, April 2008
- Travel grant, \$125, Michigan Chapter of the American Fisheries Society, March 2008
- Travel grant, \$125, Department of Fisheries and Wildlife to attend the North American Benthological Society Meeting, May 2009

- Research grant from Schrems West Michigan Chapter of Trout Unlimited, \$2000, March 2009
- Red Cedar Fly Fishers Scholarship, \$1000, June 2009
- Summer Retention Fellowship, 2009, College of Agriculture and Natural Resources

Post-doctoral research associates, primary advisor

Dr. Hao Yu. Project: Aquatic GAP analysis program: Enhancing a national view of conservation needs of fishes and their habitats. To begin in August 2019.

Dr. Wesley Daniel. Project: A national assessment of the status of fish habitat. May 2012 to May 2017.

Dr. Yin-Phan Tsang. Projects: Managing the Nation's fish habitat at multiple spatial scales in a rapidly changing climate, Aquatic GAP Program: Developing data and approaches to support conservation of aquatic ecosystems across the Nation, A stream temperature inventory network and decision support metadata mapper - Evaluating the resources to understanding climate change effects on streams in New England and the Great Lakes States, and "Developing a decision support process to aid in conservation of aquatic habitats throughout the Main Hawaiian Islands. August 2010 to July 2015.

- 2011 Women Evolving the Biological Sciences Symposia Participant, November 6-9, Durham, North Carolina

Dr. Damon Krueger. Projects: Managing the Nation's fish habitat at multiple spatial scales in a rapidly changing climate and Aquatic GAP Analysis Program: Developing landscape-scale understanding, approaches, and data for managing aquatic biodiversity. March 2010 to April 2014

Dr. Peter Esselman. Project: An initial national assessment of the status of fish habitats. February 2009 to February 2011.

Dr. Dayong Wu. Projects: An initial national assessment of the status of fish habitats and Aquatic GAP analysis program: A search for new paradigms to guide future research. February 2007 to December 2008.

Doctoral students, committee member

Melanie Haslauer, Dr. Stefan Schmutz, primary advisor. University of Natural Resources and Life Sciences, Vienna, Austria.

Joseph Stachelek, Dr. Pat Soranno, primary advisor.

Katelyn King, Dr. Kendra Cheruvellil, primary advisor.

Laura Twardochleb, Dr. Phoebe Zarnetske, primary advisor. How will global warming and predator-prey interactions affect populations of freshwater invertebrates?

Johnathan Hegna, Dr. Kim Scribner, primary advisor.

Betsy Riley, Dr. Heather Treizenberg, primary advisor. Natural resources, community engagement, and policy: using interdisciplinary methodologies to study complex policy questions (defended Spring 2019).

Andrew Carlson, Dr. William W. Taylor, primary advisor. Forecasting stream salmonid growth and survival in a changing climate with implications for resilience-based management (defended Spring 2019).

Amy Schueller, Dr. Daniel Hayes, primary advisor. Evaluation of lake sturgeon rehabilitation strategies using an individual-based model of demographics and genetics (defended Summer 2009).

MS students, committee member

Marlene Ublacker, Dr. Rafaela Schinegger, primary advisor, University of Natural Resources and Life Sciences, Vienna, Austria. Human stressors and their impacts on freshwater fish communities – a cross-continental comparison of European and United States Freshwater Ecoregions.

Marissa (Hammond) Decosta, Dr. William W. Taylor, primary advisor. Assessing the change in Lake Whitefish (*Coregonus clupeaformis*) maturity schedules from 1976-2013 in the upper Great Lakes (defended Spring 2015).

- Kelsey Schlee**, Dr. William W. Taylor, primary advisor. The impact of climate change on brook trout (*Salvelinus fontinalis*) thermal habitat in the United States (defended Fall 2014).
- Kiira Siitari**, Dr. William W. Taylor, primary advisor. A landscape perspective on the distribution and harvest of North American river otters in Michigan in relation to prey availability (defended Summer 2012).
- Kerryann Waco**, Dr. William W. Taylor, primary advisor. Relationship of groundwater extraction to brook trout populations in Twin and Chippewa Creeks, Cedar Township, Osceola County, Michigan (defended Summer 2009).
- Steven Sutton**, Dr. William W. Taylor, primary advisor. Effectiveness of the Michigan Natural Rivers Program (defended Spring 2009).
- Mustafa Mazher**, Dr. Joan Rose, primary advisor. Transport and survival of *Escherichia coli* within soil aggregates (defended Spring 2009).
- Kristine Boley-Morse**, Dr. William W. Taylor, primary advisor. A classification of stream types and regional reference curves for Michigan (defended Spring 2009).

MSU SERVICE (select)

University

- Water Science Curriculum Committee, 2018 to present
- College of Veterinary Medicine Dean Search Committee, 2018
- University Distinguished Fellowship Review Committee, 2018, 2019
- University Jurisdictional Appeal Panel, August 2017
- Multi-Institutional Land Grant Partnership Initiative, 2014 to present

College

- College Advisory Committee Alternate, College of Agriculture and Natural Resources, 2017
- ESPP Interdisciplinary Team Building Initiative Proposal Reviewer, June 2017
- College of Agriculture and Natural Resources Microgrant Proposal Reviews, June 2017

Department

- ad hoc Space Committee, Department of Fisheries and Wildlife 2019
- Relationship Violence and Sexual Misconduct Point of Contact, Department of Fisheries and Wildlife, 2018-present
- Search Committee, Assistant Professor, Fixed Term, Great Lakes Acoustic Telemetry Observation System (GLATOS) Director, committee member and affirmative action advocate, 2018
- Search Committee, Assistant/Associate Professor, Tenure Track, Global Inland Fisheries Ecology and Governance position, committee member and affirmative action advocate, 2015 to 2018
- National Climate Change and Wildlife Science Center Science to Action Fellowship Committee, committee member, 2014-present
- Department Advisory Committee, Department of Fisheries and Wildlife, committee member. 2014 to 2017
- Graduate Committee, Department of Fisheries and Wildlife, committee member. 2012-2013
- Janice Lee Fenske Excellence in Fisheries Management Fellowship Committee, Department of Fisheries and Wildlife, committee chair, 2006-present
- Curriculum Committee, Department of Fisheries and Wildlife, committee member. 2008-2010

EXTERNAL SERVICE (select)

- Environmental Metrics for Hydropower Science Advisory Board Member, in support of Oak Ridge National Laboratories and the U.S. Department of Energy, 2017 to present.
- Invited panelist, "What to expect from your PhD supervisor, and what they should expect from you." Bitesize Bio Webinar, October 29, 2014. <http://bitesizebio.com/webinar/20611/what-to-expect-from-your-phd-supervisor-and-what-they-should-expect-from-you/>
- Invited panelist, Student Colloquium/Mentor Event, "How to get a job in academia," 143rd Annual Meeting of the American Fisheries Society, September 8-12, 2013, Little Rock, Arkansas.

Meeting and session organization

- Symposium co-organizer, Advances in understanding landscape influences on freshwater habitats and biological assemblages. 148th Annual Meeting of the American Fisheries Society, August 19-23, 2018, Atlantic City, New Jersey.
- Symposium co-organizer, Landscape influences on freshwater habitats and biological assemblage. Annual Meeting for the Society for Freshwater Science, May 20-24, 2018. Detroit, Michigan.
- Workshop co-organizer, National Fish Habitat Partnership assessment workshop. 147th Annual Meeting of the American Fisheries Society, August 20, 2017, Tampa, Florida.
- Session co-organizer, What data are needed to ensure freshwater mollusk conservation into the future? 146th Annual Meeting of the American Fisheries Society, August 25, 2016, Kansas City, Missouri.
- Workshop co-organizer, FISHTAIL: A decision support mapper for conserving stream fish habitats of the NECSC region, Northeast Climate Science Center stakeholder webinar (~75 participants), June 9, 2016.
- Workshop co-organizer, Hawaii Stream Conservation Workshop 2016, February 23-25, 2016, Honolulu, Hawaii.
- Workshop co-organizer, FISHTAIL: A decision support mapper for conserving stream fish habitats of the NECSC region, Northeast Climate Science Center stakeholder webinar (~50 participants), May 7, 2014.
- Workshop co-organizer, Regional decision support workshop for identifying vulnerabilities of riverine fish to climate change, Upper Midwest and Great Lakes Landscape Conservation Cooperative, November 2013, Middleton, Wisconsin.
- Workshop co-organizer, Climate change and fish habitat project stakeholder's workshop. American Fisheries Society, 142nd Annual Meeting, August 2012, St. Paul, Minnesota.
- Session co-organizer, Impacts of climate and land use changes on fish and fish habitat in streams and lakes: Special emphasis on strategies for fisheries management and conservation. American Fisheries Society, 142nd Annual Meeting, August 2012, St. Paul, Minnesota.
- Workshop co-organizer, Regional decision support workshop for identifying vulnerabilities of riverine fish to climate change, June 2012, Ann Arbor, Michigan.
- Session co-organizer, Landscapes and fish-habitat relationships: New approaches and applications, American Fisheries Society, 140th Annual Meeting, September 2010, Pittsburgh, Pennsylvania.