Scott Fitzgerald Colborne

Department of Wildlife, Fish, and Conservation Biology, University of California, Davis email: scolbor@gmail.com Phone: (734) 545-3922

Education

2009 – 2013	Ph.D. Biology (Ecology and Evolution) Department of Biology The University of Western Ontario (London, ON Canada) Supervisors: Dr. Bryan Neff & Dr. Fred Longstaffe Thesis title: Foraging ecology, sexual selection, and divergence in sunfish (<i>Lepomis</i> spp.)
2006 – 2008	M.Sc. Zoology Department of Integrative Biology University of Guelph (Guelph, ON Canada) Supervisor: Dr. Beren Robinson Thesis title: Resource-mediated intraspecific competition and adaptive divergence of pumpkinseed sunfish (<i>Lepomis gibbosus</i>)
2002 - 2006	B.Sc. Zoology Department of Biology University of Guelph (Guelph, ON Canada)

Professional Appointments

2020 –	Post-doctoral Fellow Department of Wildlife, Fish, and Conservation Biology, University of California - Davis (Davis, CA USA) Primary Investigators: Dr. Andrew Rypel (UC Davis), Dr. Jonathon Walters (University of Virginia), Dr. Daniel Reuman (University of Kansas)
2019 – 2020	Research Biologist & Instructor Daniel P. Haerther Center for Conservation & Research Shedd Aquarium (Chicago, IL USA) Supervisor: Dr. Karen Murchie
2017 – 2019	Research Associate Michigan State University (East Lansing, MI USA) & US Geological Survey Great Lakes Science Center (Ann Arbor, MI USA) Primary Investigators: Dr. Charles Krueger (Michigan State University) & Dr. Darryl Hondorp (US Geological Survey – Great Lakes Science Center)

2018 –	Adjunct Faculty Great Lakes Institute for Environmental Research University of Windsor (Windsor, ON Canada)
2014 - 2017	Post-Doctoral Fellow & Research Associate Great Lakes Institute for Environmental Research University of Windsor (Windsor, ON Canada) Primary Investigator: Dr. Aaron Fisk

Teaching Experience

2020	Shedd Aquarium & Associated Colleges of the Chicago Area – <i>Freshwater Ecology</i> ; Undergraduate course (3 rd and 4 th year level)
2016	University of Windsor – <i>Ecosystem Health</i> (66-415); Undergraduate course (4 th year level)
2015	University of Windsor - <i>Introduction to Environmental Sciences</i> (66-141); Undergraduate course for non-biology majors (1 st year level)
2014 - 2016	University of Windsor (Course Development and Field Instructor) - Field Methods in Environmental Science (66-380); Undergraduate course (3 rd year level)
2009 – 2013	The University of Western Ontario Teaching Assistant – Taught in senior level undergraduate courses leading laboratory sessions, consulting on independent research projects, and grading for ecology and animal behavior courses.
2006 – 2008	University of Guelph Teaching Assistant – Taught introductory and senior level undergraduate courses leading laboratory sessions, consulting on independent research projects, and grading for general ecology and fish ecology courses.

Peer-Reviewed Publications

* indicates mentored undergraduate or graduate student co-authors

- (26) Wu, Y.*, **Colborne, S.F.,** Charron, M., and Heath, D.D. (*in press*) Development and validation of targeted environmental DNA (eDNA) metabarcoding for early detection of 69 invasive fishes and aquatic invertebrates. *Environmental DNA*.
- (25) Larocque, S.M., Colborne, S.F., Fisk, A.T., and Johnson, T.B. (2022) Improving trophic niche and diet resolution of the salmonid community of Lake Ontario using three stable isotopes and multiple tissues. *Fisheries Research*. 255:106455. doi: 10.1016/j.fishres.2022.106455
- (24) **Colborne, S.F.,** Sheppard, L.W., O'Donnell, D.R., Reuman, D.C., Walter, J.A., Singer, G.P., Kelly, J.T., Thomas, M.J., and Rypel, A.L. (2022) Intraspecific variation in migration timing of green sturgeon in the Sacramento River system. *Ecosphere*. e4139. doi: 10.1002/ecs2.4139

- (23) Matley, J.K., Klinard, N.V., Larocque, S.M., Weinz, A.A.*, and Colborne, S.F. (2022) Space use of juvenile and subadult yellow perch (*Perca flavescens*) in the Detroit River using acoustic telemetry: incorporating variable detection ranges in vegetated areas. *Canadian Journal of Fisheries and Aquatic Sciences*. 79(1): 63-72. doi: 10.1139/cjfas-2020-0425
- (22) **Colborne, S.F.,** Hayden, T.A., Holbrook, C.M., Hondorp, D.W., Krueger, C.C. (2021) Lake sturgeon (*Acipenser fulvescens*) annual survival estimated from acoustic telemetry. *Journal of Great Lakes Research*. 47(6): 1814-1823. doi: 10.1016/j.jglr.2021.08.007
- (21) Futia, M., Colborne, S.F., Fisk, A.T., Gorsky, D., Johnson, T.J., Lantry, B., Lantry, J., and Rinchard, J. (2021) Similarities and differences among three diet analyses provide insight into feeding habits of a freshwater piscivore, *Salvelinus namaycush. Ecological Indicators* 127: 107728. doi: 10.1016/j.ecolind.2021. 107728
- (20) Weinz, A.A.*, Klinard, N.V., Matley, J.K., Fisk, A.T., and **Colborne, S.F.** (2021) Performance of acoustic telemetry in relation to submerged aquatic vegetation in a nearshore freshwater habitat. *Marine and Freshwater Research* 72: 1033-1044. doi: 10.1071/MF20245
- (19) Weinz, A.A.*, Klinard, N.V., J.K. Matley, Fisk, A.T., and Colborne, S.F. (2020) Identification of predation events in wild fish using novel acoustic transmitters. *Animal Biotelemetry* 8(1): 1-14. doi: 10.1186/s40317-020-00215-x
- (18) Nawrocki, B., McLeod, A.M., Colborne, S.F., Hussey, N.E., Del Papa, J., and Fisk, A.T. (2020) Assessing trophic position quantification methods for three piscivorous freshwater fish using stable isotopes and stomach contents. *Journal of Great Lakes Research* 46(3): 578-588. doi: 10.1016/j.jglr.2020.03.017
- (17) Colborne, S.F., Hondorp, D.W., Holbrook, C.M., Lowe, M.R., Boase, J.C., Chiotti, J.A., Wills, T.C., Roseman, E.F., and Krueger, C.C. (2019) Sequence analysis and acoustic tracking individual lake sturgeon identifies multiple patterns of river-lake habitat use. *Ecosphere* 10(12): e02983. doi: 10.1002/ecs2.2983
- (16) Heuvel, C., Haffner, D., Zhao, Y., Colborne, S.F., Despenic, A., and Fisk, A.T. (2019) Influence of body size and season on the feeding ecology of three freshwater fishes with different diets in Lake Erie. *Journal of Great Lakes Research* 45(4): 795-804. doi: 10.1016/j.jglr.2019.05.001
- (15) Colborne, S.F., Maguire, T., Mayer, B., Nightingale, M., Enns, G.E., Fisk, A.T., Drouillard, K.G., Mohamed, M.N., Weisener, C.G., Wellen, C., and Mundle, S.O.C. (2019) Water and sediment as sources of phosphate in aquatic ecosystems: the Detroit River and its role in the Laurentian Great Lakes. *Science of the Total Environment* 647: 1594-1603. doi: 10.1016/j.scitotenv.2018.08.029
- (14) Klinard N.V. *, Fisk, A.T., Kessel S.T., Halfyard, E.A., and Colborne, S.F. (2018) Habitat use and smallscale movement patterns of sympatric sunfish species in a large temperate river. *Canadian Journal of Fisheries and Aquatic Sciences* 75(7): 1059-1069. doi: 10.1139/cjfas-2017-0125
- (13) **Colborne, S.F.**, Fisk, A.T., and Johnson, T.B. (2017) Tissue-specific turnover and diet-tissue discrimination factors of carbon and nitrogen isotopes of a common forage fish held at two temperatures. *Rapid Communications in Mass Spectrometry* 31(7): 1405-1414. doi: 10.1002/rcm.7922

- (12) Jarvis, W.M.C., Comeau, S.M., Colborne, S.F., and Robinson, B.W. (2017) Flexible mate choice may contribute to ecotype assortative mating in pumpkinseed sunfish (*Lepomis gibbosus*). *Journal of Evolutionary Biology* 30(10) 1810-1820. doi: 10.1111/jeb.13127
- (11) Peiman, K.S., Birnie-Gauvin, K., Larsen, M.H., Colborne, S.F., Gilmour, K.M., Aarestrup, K., Willmore, W.G., and Cooke, S.J. (2017) Morphological, physiological and dietary covariation in migratory and resident adult brown trout (*Salmo trutta*). *Journal of Zoology* 123: 79-90. doi: 10.1016/j.zool.2017.07.002
- (10) Halfyard, E.A., Webber, D., del Papa, J., Leadley, T., Kessel, S.T., Colborne, S.F., and Fisk, A.T. (2017) Evaluation of an acoustic telemetry transmitter designed to identify predation events. *Methods in Ecology* and Evolution 8(9): 1063-1071. doi: 10.1111/2041-210X.12726
- (9) Nawrocki, B., **Colborne, S.F.,** Yurkowski, D.J., and Fisk, A.T. (2016) Foraging ecology of Bowfin (*Amia calva*), in the Lake Huron-Erie Corridor of the Laurentian Great Lakes: individual specialists in generalist populations. *Journal of Great Lakes Research* 42(6): 1452-1460. doi: 10.1016/j.jglr.2016.08.002
- (8) Colborne, S.F., Rush, S.A., Paterson, G., Johnson, T.B., Lantry, B.F., and Fisk, A.T. (2016) Estimates of lake trout (*Salvelinus namaycush*) diet in Lake Ontario using two and three isotope mixing models. *Journal of Great Lakes Research* 42(3): 695-702. doi: 10.1016/j.jglr.2016.03.010
- (7) Colborne, S.F., Garner, S.R., Longstaffe, F.J., and Neff, B.D. (2016) Assortative mating but no evidence of genetic divergence in a species characterized by a trophic polymorphism. *Journal of Evolutionary Biology* 29:633-644. doi: 10.1111/jeb.12812
- (6) **Colborne, S.F.**, Clapp, A.D.M.*, Longstaffe, F.J., and Neff, B.D. (2015) Foraging ecology of native pumpkinseed sunfish (*Lepomis gibbosus*) following the invasion of zebra mussels (*Dreissena polymorpha*). *Canadian Journal of Fisheries and Aquatic Sciences* 72(7): 983-990. doi: 10.1139/cjfas-2014-0372
- (5) Berchtold, A.*, Colborne, S.F., Longstaffe, F.J., and Neff, B.D. (2015) Ecomorphological patterns linking morphology and diet across three populations of pumpkinseed sunfish (Lepomis gibbosus). *Canadian Journal of Zoology* 93(4): 289-297. doi: 10.1139/cjz-2014-0236
- (4) Colborne, S.F., Hain, T.J.A, Longstaffe, F.J., and Neff, B.D. (2015) The potential for less invasive inference of resource use: covariation in stable isotope composition between females and their eggs in bluegill. *Transactions of the American Fisheries Society* 144: 283-291. doi: 10.1080/00028487.2014.986337
- (3) **Colborne, S.F.**, Peres-Neto, P.R., Longstaffe, F.J., and Neff, B.D. (2013) Effects of foraging and sexual selection on ecomorphology of a fish with alternative reproductive tactics. *Behavioral Ecology* 24(6): 1339-1347. doi: 10.1093/beheco/art072
- (2) Colborne, S.F., and Robinson, B.W. (2013) Effect of nutritional condition on variation in δ¹³C and δ¹⁵N stable isotope values in pumpkinseed sunfish (*Lepomis gibbosus*) fed different diets. *Environmental Biology of Fishes* 96(4): 543-554. doi: 10.1007/s10641-012-0040-3
- Colborne, S.F., Bellemare, M.C., Peres-Neto, P.R., and Neff, B.D. (2011) Morphological and swim performance variation among reproductive tactics of bluegill sunfish (*Lepomis macrochirus*). *Canadian Journal* of Fisheries and Aquatic Sciences 68(10): 1802-1810. doi: 10.1139/f2011-091

Submitted

- Walter, J.A., Singer, G.P., Reuman, D.C., Colborne, S.F., Sheppard, L.W., O'Donnell, D.R., Coombs, N., Johnston, M., Miller, E.A., Steel, A.E., Kelly, J.T., Fangue, N.A., and Rypel, A.L. Habitat use differences mediate anthropogenic threat exposure in white sturgeon. *Transactions of the American Fisheries Society*.
- Sobchak, P., **Colborne, S.F.,** and Robinson, B.W. Effects of niche diversification on the performance of age-0 pumpkinseed sunfish (*Lepomis gibbosus*) habitat ecotypes. *Evolutionary Ecology*.

Contributed Presentations & Invited Seminars

Includes only presentations with SFC as first or presenting author

- (31) **Colborne, S.F.** (2022) Ecology and conservation of large fish: Sturgeon in the Great Lakes and Sacramento River. *University of Virginia*. Charlottesville, Virginia (Invited Seminar Speaker)
- (30) **Colborne, S.F.** (2022) Using biotelemetry to inform ecology and conservation of sturgeon: Examples from the Great Lakes and Sacramento River. *California State University, Fresno.* Fresno, California (Invited Seminar Speaker)
- (29) **Colborne, S.F.** (2021) Using biotelemetry to inform ecology and conservation of sturgeon: examples from the Great Lakes and Sacramento River. *University of Kansa: Kansas Biological Survey & Center for Ecological Research*. Lawrence, Kansa (Invited Seminar Speaker)
- (28) **Colborne, S.F.**, Hondorp, D.W., Holbrook, C., Hayden, T.A., and Krueger, C.C. (2020) Estimating survival of lake sturgeon in the Huron-Erie Corridor using acoustic tag detections. *Annual Great Lakes Acoustic Telemetry Observation System (GLATOS) Meeting*; Ann Arbor, Michigan (Oral Presentation)
- (27) **Colborne, S.F.**, Hondorp, D.W., and Krueger, C.C. (2019) Sequence analysis of acoustic telemetry data identifies multiple lake sturgeon habitat use patterns in the Laurentian Great Lakes. *International Conference for Fish Telemetry*, Arendal, Norway (Oral Presentation)
- (26) **Colborne, S.F.**, Hondorp, D.W., and Krueger, C.C. (2019) Sequence analysis identifies multiple habitat use patterns by lake sturgeon in the Huron-Erie Corridor. *Annual Great Lakes Acoustic Telemetry Observation System (GLATOS) Meeting*; Ann Arbor, Michigan (Oral Presentation)
- (25) **Colborne, S.F.**, Hondorp, D.W., and Krueger, C.C. (2019) Acoustic telemetry and management of behaviorally diverse lake sturgeon in the Huron-Erie Corridor. 79th Midwest Fish and Wildlife Conference; Cleveland, Ohio (Oral Presentation)
- (24) **Colborne, S.F.**, Hondorp, D.W., and Krueger, C.C. (2018) Habitat use and timing of lake sturgeon (*Acipenser fulvescens*) movement in the Huron-Erie Corridor. *American Fisheries Society (AFS)*; Atlantic City, New Jersey (Oral Presentation)
- (23) **Colborne, S.F.**, Hondorp, D.W., and Krueger, C.C. (2018) Periodicity and timing of lake sturgeon (*Acipenser fulvescens*) movement in the Huron-Erie Corridor. *International Association for Great Lakes Research (LAGLR)*; Toronto, Ontario (Oral Presentation)
- (22) Fisk, A.T., Klinard, N., Kessel, S.T., Halfyard, E.A., and **Colborne, S.F.** (2018) Fish movement in urban rivers: habitat use of bowfin and largemouth bass in the Detroit River. *International Association for Great Lakes Research (LAGLR)*; Toronto, Ontario (Oral Presentation)

- (21) **Colborne, S.F.**, Hondorp, D.W., and Krueger, C.C. (2018) Seasonal habitat use of lake sturgeon in the Huron-Erie Corridor. *Annual Great Lakes Acoustic Telemetry Observation System (GLATOS) Meeting*; Ann Arbor, Michigan (Oral Presentation)
- (20) **Colborne, S.F.**, Klinard, N.V., Kessel, S.T., Halfyard, E.A., and Fisk, A.T. (2017) Fish movement in urbanized ecosystems: using acoustic telemetry to monitor two piscivores in the Detroit River. *International Conference for Fish Telemetry*; Cairns, Australia (Oral Presentation)
- (19) Colborne, S.F., Dao, M., Nightingale, M., Enns, G., Mayer, B., Fisk, A.T., and Mundle, S. (2017) Investigating the distribution and deposition of nutrients in the Detroit River. *International Association for Great Lakes Research (IAGLR)*; Detroit, Michigan (Poster Presentation)
- (18) **Colborne, S.F.**, Halfyard, E.A., Kessel, S.T., Klinard, N., and Fisk, A.T. (2017) Fish movement in urbanized ecosystems: using acoustic telemetry to monitor fish in the Detroit River. *International Association for Great Lakes Research (LAGLR)*; Detroit, Michigan (Oral Presentation)
- (17) **Colborne S.F.**, Kessel S.T., Halfyard E.A., and Fisk A.T. (2017) Fish in the city: habitat use in urban aquatic ecosystems. *Water@Wayne Seminar Series*; Wayne State University; Detroit, Michigan (Invited Seminar Speaker)
- (16) **Colborne S.F.**, Kessel S.T., Halfyard E.A., and Fisk A.T. (2017) Fish movement in urbanized ecosystems: piscivores and forage fish in the Detroit River. *Annual Great Lakes Acoustic Telemetry Observation System (GLATOS) Meeting*; Ann Arbor, Michigan (Oral Presentation)
- (15) **Colborne S.F.**, Kessel S.T., Halfyard E.A., and Fisk A.T. (2016) Using acoustic telemetry to monitor bowfin and largemouth bass in the Detroit River. *International Association for Great Lakes Research (LAGLR)*; Guelph, Ontario (Oral Presentation)
- (14) **Colborne, S.F.**, Klinard, N., Kessel, S.T., Halfyard, E.A., and Fisk, A.T. (2016) Habitat use of predator & prey species in the Detroit River: lessons from year one of a multi-species acoustic array. *Annual Great Lakes Acoustic Telemetry Observation System (GLATOS) Meeting;* Ann Arbor, Michigan (Oral Presentation)
- (13) **Colborne, S.F.**, Swanson, H.K., Lysy, M.K., and Fisk, A.T. (2015) The application of multi-dimensional isotopic data to resource use and niche modelling of aquatic communities. *American Fisheries Society (AFS) Annual Meeting*, Portland, Oregon (Oral Presentation)
- (12) Colborne, S.F., Barkley, A., and Fisk, A.T. (2015) Establishing tissue discrimination values for the use of sulphur isotopes (δ³⁴S) in freshwater systems. *International Association for Great Lakes Research (LAGLR)*; Burlington, Vermont (Oral Presentation)
- (11) **Colborne, S. F.**, Rush, S. A., Johnson, T. B., Paterson, G. and Fisk, A. T. (2015) The addition of sulphur stable isotopes to studies of lake trout foraging in Lake Ontario. *Canadian Conference for Fisheries Research (CCFFR)*; Ottawa, Ontario (Oral Presentation)
- (10) **Colborne, S.F.** (2014) Sympatric speciation: foraging ecology and sexual selection in pumpkinseed sunfish. *Queen's University EEB Seminar*, Department of Biology (Invited Seminar Speaker)
- (9) **Colborne, S.F.** (2014) Foraging ecology, sexual selection, and speciation in sunfish. *Queen's University Biological Station*; Public Seminar (Invited Seminar Speaker)

- (8) **Colborne, S.F.,** Garner, S.R., Longstaffe, F.J., and Neff, B.D. (2014) Assortative mating and divergence in a fish characterized by a trophic polymorphism. *Genomes to Biomes Joint CSEE & CSZ Annual Meeting*; Montreal, Quebec (Oral presentation)
- (7) **Colborne, S.F.,** Longstaffe, F.J., and Neff, B.D. (2013) Beyond Just What You Eat: Foraging ecology, sexual selection and speciation. *Ithaca College Seminar Series, Department of Biology*; Ithaca, New York (Invited Seminar Speaker)
- (6) **Colborne, S.F.,** Longstaffe, F.J., and Neff, B.D. (2013) Assortative mating and sympatric speciation of pumpkinseed sunfish (*Lepomis gibbosus*). Ontario Ecology, Ethology and Evolution Colloquium; London, Ontario (Oral presentation)
- (5) Colborne, S.F., Longstaffe, F.J., and Neff, B.D. (2012) Foraging ecology of native pumpkinseed sunfish (*Lepomis gibbosus*) following the invasion of zebra mussels (*Dreissena polymorpha*). 8th International Conference on Application of Stable Isotope Techniques to Ecological Studies (IsoEcol 2012); Brest, France (Poster presentation)
- (4) **Colborne, S.F.,** Longstaffe, F.J., and Neff, B.D. (2012) Sexual selection meets foraging ecology: alternative reproductive tactics in bluegill sunfish. *First Joint Congress in Evolution*; Ottawa, Ontario (Oral presentation)
- (3) Colborne, S.F., and Robinson, B.W. (2009) The effects of diet and starvation on stable isotope signatures of δ¹³C and δ¹⁵N in pumpkinseed sunfish (*Lepomis gibbosus*). *Canadian Society of Zoologists Annual Meeting*; Scarborough, Ontario (Oral presentation)
- (2) **Colborne, S.F.**, and Robinson, B.W. (2008) Field experimental test of competition between sympatric sunfish ecomorphs. *Canadian Society for Ecology and Evolution Annual Meeting*, Vancouver, British Columbia (Oral presentation)
- (1) **Colborne, S.F.**, and Robinson, B.W. (2008) Field experimental test of competition between sympatric sunfish ecomorphs. *Ontario Ecology and Ethology Colloquium*; Guelph, Ontario (Oral presentation)

Student Mentoring

University of Windsor – Great Lakes Institute for Environmental Research

2017 - 2020	juvenile yellow perch in the Detroit River
2015 - 2021*	Yueyang Wu (MSc student co-supervised w/ Dr. Daniel Heath) – <i>The development and application of targeted metabarcoding for monitoring freshwater and marine AIS</i> *extended time period for MSc includes periods of medical leave
2016	Marguerite Gagnon (Undergraduate thesis student w/ Dr. Aaron Fisk and Dr. Sarah Larocque) – Trophic ecology of Arctic char from Nunavut's largest lake
2016	Grace Enns (Undergraduate thesis student w/ Dr. Aaron Fisk and Dr. Scott Mundle) – Nutrient profiles along the Detroit River: an urbanized Great Lakes connecting channel
2015	Natalie Klinard (Undergraduate thesis student w/ Dr. Aaron Fisk) – Movement and habitat use of two forage fishes in the Detroit River using acoustic telemetry

2015	Matthew Antaya (Undergraduate thesis student w/ Dr. Aaron Fisk) - Small-scale spatial- temporal variation in benthic invertebrate communities \mathfrak{G} stable isotopes($\delta^{13}C$ and $\delta^{15}N$) in the Detroit River	
2015	Stephanie Howes (Undergraduate thesis student w/ Dr. Aaron Fisk) – Comparison of stable isotopes between lethal and non-lethal tissue samples of four freshwater piscivores	
The University of Western Ontario		
2011 – 2012	Adrienne Berchtold (Undergraduate thesis student w/ Dr. Bryan Neff) - Foraging ecomorphology of pumpkinseed sunfish (Lepomis gibbosus): variation of pharyngeal jaw and gill raker structure in relation to diet within and across populations	
2010 - 2011	Adrianna Clapp (Undergraduate thesis student w/ Dr. Bryan Neff) - Adaptations of the native pumpkinseed sunfish to the invasive zebra mussel	

Grants

- UC Davis Center for Watershed Science Synthesis Incubator Projects. Investigators: Jonathan Walter, J.A., **Colborne, S.F.**, Tracy, E., Fangue, N., Kelly, J.T., Yarnell, S., Bellido-Leiva, F., and Börk, K. "Towards an individual-based model of green sturgeon and water management in Central California" (*under review*) Value \$39,977 USD
- Great Lakes Fishery Commission Pilot Project. Investigators: Colborne, S.F., Hondorp, D.W., Murchie, K., Roseman, E., and Fisk, A.T. "Feasibility of using acoustic telemetry to determine spatial use of round goby at artificial spawning reefs built for native fishes" (2020) Value \$19,880 USD (project extended due to covid-19 fieldwork restrictions; start date spring 2022).
- Great Lakes Fishery Commission Pilot Project. Investigators: Hondorp, D.W., Yule, D.L., Hayden, T.A., **Colborne S.F.**, Lowe, M.R., and Gorsky, D. "Feasibility of acoustic telemetry to estimate spawning site fidelity of cisco in western Lake Superior" (2019) Value \$19,898.00 USD.

Honors & Awards

- (6) Dr. John W. Arnold Fellowship Ph.D. Thesis Award, Department of Biology, University of Western Ontario (2014) Value \$1,300 CDN.
- (5) Province of Ontario Graduate Scholarship (2012) Value \$15,000 CDN.
- (4) Dr. Irene Uchida Fellowship in Life Sciences, Faculty of Science, University of Western Ontario (2012) Value \$3,000 CDN.
- (3) Robert and Ruth Lumsden Graduate Award in Science, Department of Biology, University of Western Ontario (2012) Value \$1,000 CDN.
- (2) Queen Elizabeth II Graduate Scholarship in Science and Technology, Province of Ontario (2011) Value \$10,000 CDN.

(1) Graduate Thesis Research Fund Awards, Faculty of Science, University of Western Ontario (2010,2011) Value \$1,250 CDN over two awards.

Professional Development & Public Outreach

2020	Detroit Free Press article, "New trackers are being put on small Great Lakes fish" – Published Aug. 24, 2020
2020	Shedd Aquarium Blog Stories, "Great Lakes Invasive Species: 180 and Counting" – Published Feb. 20, 2020 & "Great Lakes Invasives: Sea Lampreys" – Published Mar. 3, 2020
2020	WTTW Chicago television interview, "New Shedd Scientist Studies Impact of Invasive Species in Lake Michigan" – Aired Jan. 2, 2020
2019	Co-chair session "Use of acoustic telemetry to inform fisheries management across midwestern US and Canada"; 79th Midwest Fish and Wildlife Conference; Cleveland, Ohio
2018 & 2019	Organization of Great Lakes Acoustic Telemetry Observation System (GLATOS) Annual Co-ordination Meeting; Ann Arbor, Michigan
2012 - 2013	Co-chair Ontario Ecology, Ethology, and Evolution Colloquium The University of Western Ontario, London, Ontario
2010 - 2011	Faculty of Science Decanal Review and Selection Committee, Graduate student representative; The University of Western Ontario, London, Ontario
2007 - 2008	Ontario Ecology and Ethology Colloquium, Graduate student organizer University of Guelph, Guelph, Ontario

Professional Organizations and Affiliations

International Association for Great Lakes Research Great Lakes Acoustic Telemetry Observation System American Fisheries Society Canadian Society for Ecology and Evolution