

Dominic Thomas Chaloner
Curriculum Vitae

Contact Information

Department of Biological Sciences
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Education

- Ph.D. Zoology 1995 University College London (University of London), UK
- B.S. (Hons.) Zoology 1991 University College London (University of London), UK

Research and Teaching Interests

Ecology; aquatic biology; ecosystem resource subsidies; Pacific salmon; environmental change; aquatic decomposers; ecological effects of introduced salmonids; contaminant biotransport; science pedagogy; applied intellectual virtue.

Professional Experience

- 2022 – Present *Professor of the Practice*
Dept. of Biological Sciences, University of Notre Dame, Notre Dame, IN, USA
- 2017 – 2022 *Associate Teaching Professor*
Dept. of Biological Sciences, University of Notre Dame, Notre Dame, IN, USA
- 2013 – 2017 *Associate Research Professor*
Dept. of Biological Sciences, University of Notre Dame, Notre Dame, IN, USA
- 2005 – 2013 *Assistant Research Professor*
Dept. of Biological Sciences, University of Notre Dame, Notre Dame, IN, USA
- 2000 – 2004 *Post-Doctoral Research Associate*
Influence of marine nutrients from salmon on stream ecosystems. Dept. of Biological Sciences, University of Notre Dame, Notre Dame, IN, USA Advisor: G.A. Lamberti
- 1997 – 1999 *Post-Doctoral Research Associate*
Invertebrate colonization of Pacific salmon carcasses in southeastern Alaska streams. Dept. of Entomology, Michigan State University, East Lansing, MI, USA *and* Pacific Northwest Research Station (USDA Forest Service), Juneau, AK, USA Advisor: R.W. Merritt
- 1995 – 1996 *Post-Doctoral Research Associate*
Feeding by anopheline mosquito larvae. Dept. of Biology, University College London (University of London), London, UK Advisor: R.S. Wotton

Professional Service

- *Ad hoc reviewer*
Advanced-Diagnostics-and-Therapeutics (Notre Dame), Alaska INBRE, Aquatic Biology, Aquatic Conservation, Aquaculture-Fish-and-Fisheries, Aquatic Ecology, Arctic-Yukon-

Kuskokwim-Sustainable-Salmon-Initiative, American Midland Naturalist, American Naturalist, Aquatic Microbial Ecology, Canadian-Journal-of-Fisheries-and-Aquatic-Science, BMC Ecology, Canadian Journal of Water Quality, Conservation Biology, Ecology, Ecosphere, Ecosystems, Environmental Management, Environmental Pollution, Fisheries, Freshwater Biology, Functional Ecology, Fundamental-and-Applied-Limnology, Hydrobiologia, John Templeton Foundation, Journal of Applied Ecology, Journal of Animal Ecology, Journal of Fish Biology, Journal of the North American Benthological Society/Freshwater Science, Limnology-and-Oceanography, Elsevier, Minnesota Sea Grant, National Park Service (US Department of Interior), National Science Foundation, North American Journal of Fisheries Management, Oxford University Press, Pacific Northwest Research Station - USDA Forest Service, Science of the Total Environment.

- *Mentor*

Supervision, guidance, letters of recommendation, and project development for >100 volunteers, technicians, and students (high school, undergraduate, graduate, and project staff)
Research Academic Credit: David Sena* (Spring 2006-2008), AJ Reisinger* (Spring 2007-2008), Szymon Ryzner (Spring 2009), Marth Dee (Spring 2011), Courtney Currier* (Spring 2011-2013), Robert Ring (Spring 2011-Fall 2011), Pablo Quan (Fall 2011), Ian Trudell (Fall 2011-Fall 2012), Michael Moore (Fall 2012), Sarah Burbank (Fall 2012-Spring 2013), Andrew Wilson (Spring 2013-2014), Lillian McGill* (Spring 2014-2016), Elyssa Schwendy (Spring 2014), David Weber* (Spring-Fall 2014, Fall 2015, Spring 2016), Josephine Chau (Fall 2014-2015), Sean Cullen (Fall 2014-Spring 2017), Nathan Hermann* (Fall 2016-Spring 2019), Mark Hancher (Spring-Fall 2018, Spring 2019), Samuel Mansfield (Fall 2020, Spring 2021), Madeline Czerwicz (Fall 2021), Hannah Enabnit (Spring 2022), Mia Wagner (Spring 2022)
Sustainability Minor Capstone project: Kyle Walker (Summer, Fall 2020, Spring 2021)
McDonald Summer Undergraduate Research Fellowship: AJ Reisinger (Summer 2007)
Teaching Apprenticeship, General Ecology Lecture: Timothy Hoellein and Denise Bruesewitz (Spring 2006), Sarah Roley (Fall 2011)
Advisor, *Scientia*, Journal of Undergraduate Research, College of Science (2008-2017)
ESTEEM thesis project: Fearghal Ryan (Fall 2009, Spring 2010)
Jordan Hall Science Team: Pablo Quan, Robert Ring, Ian Trudell (Summer 2011)
College of Science Summer Undergraduate Research Fellowship: Courtney Currier (2011), Michael Moore (2012), David Weber (2014), Josephine Chau (2015), Nathan Hermann (2018)
Glynn Honors summer mentor: Ian Trudell (2012), Lillian McGill (2014), Sean Cullen (2015)
Introduction to Undergraduate Research: AJ Reisinger (Spring 2006), Young-Rae Kim (Spring 2008), Dan Williams and Pablo Quan (Spring 2011), Sarah Burbank (Spring 2012)
Biological Sciences Honors Program advisor: Courtney Currier (Fall 2012-Spring 2013; recipient of Outstanding Environmental Scientist Senior Award 2013), Nathan Hermann (Spring 2018-2019; recipient of Robert Braco, M.D. Honors Research Senior Award 2019)
Honors Seminar in Biological Sciences (Spring-Fall 2012-2014)
Honors Writing Mentor (Mary Schrek 2014, Zoe Volenec 2015, Amelia Grose 2020)
College of Science Communication Conference: Catherine Flatley (Spring 2012)
Post-doctoral (with Terrence Ehrman, Dept. of Theology): Bharat Ranganathan (Fall 2017)
Olympia Academy/AskND: Matthew Williams and Sean McMahon (Spring-Fall 2017)
Senior Leadership Committee, Dept. of Biological Sciences (Spring 2017-present)
Building Bridges mentor (Katie Cobian, Elexis Ellis, Katiebelle Thompson), Multicultural Student Programs and Services, U. of Notre Dame (2009, 2012, 2021)
Shirley Heinze Land Trust Summer Internship (Hannah Enabnit Summer 2022)

- *Participant and contributor*
 - Early Action Open House, College of Science, Univ. of Notre Dame (Spring 2009-present)
 - Student-faculty dinners, First Year of Studies, University of Notre Dame (2014-2016)
 - Introductory Biol. Digital Res. Develop. Office of Digital Learning, U. of Notre Dame (2016)
 - Environmental Change Initiative, Notre Dame Research, U. of Notre Dame (2015-present)
 - Introductory Biology Sequence Revision-Molecules to Ecosystems Course, Department of Biological Sciences, University of Notre Dame (Fall 2017-present)
 - Academic Explorations, College of Science (Fall 2017-present)
 - Majors Night, First Year Studies (Fall 2017-present)
 - Junior Parents Weekend, College of Science (Spring 2018-present)
 - Sustainability Expo, University of Notre Dame (Spring 2018-present)
 - Science, Technology, and the Good Life Workshop, University of Notre Dame (Spring 2018)
 - Introductory Biology Sequence Revision-Big Questions Course, Dept. of Biological Sciences, University of Notre Dame (Summer-Fall 2019)
 - Intellectual Virtues Institute (competitive application), Long Beach, CA (Summer 2019, 2021)
 - Data Shape Collective, ArtScience work collaborative (2020-present)
 - Member, Advisory Council, Shirley Heinze Land Trust, Valparaiso, IN (Fall 2020-present)
 - POGIL Workshop, remote online (January 2021).
 - Marshall, College of Science Commencement Ceremony, Univ. of Notre Dame (May 2021)
 - Convening on Character in Higher Education (Invited), Wake Forest University, Winston-Salem, NC (December 2021)
 - Moment to See, Courage to Act Proposal - Achieving an Unsurpassed Undergraduate Education: The Initiative for Excellence in Learning, Univ. of Notre Dame (2021-2022)
 - Contributed Abstract Reviewer, Ecological Society of America Annual Meeting (March 2022)
 - First year Advising Training Day, University of Notre Dame, IN (May 2022)
 - Science Activity for River Birch, Good Shepherd Montessori School, South Bend (May 2022)
 - Educational Highlights Video, Dept. of Biological Sci., U. of Notre Dame (April-May 2022)
 - Bioinformatics Faculty Search, Dept. of Biological Sci., U. of Notre Dame (May-June 2022)
 - Graduate student 'Lunch and Learn', Dept. of Biological Sci., U. of Notre Dame (June 2022)
- *Student presentations and posters judge*
 - Juneau High School Science Fair (1999), North American Benthological Society Annual Meeting (2000 – 2009), Society of Freshwater Science (2016), Northern Indiana Science Fair (2000 - 2005), College of Science Undergraduate Research Symposium, University of Notre Dame (2007), International Association of Great Lakes Research Conference (2010).
- *Committees*
 - Jordan Hall Display Cabinets, College of Science, University of Notre Dame (2006, 2019)
 - Undergraduate Research, Dept. of Biological Sciences, Univ. of Notre Dame (2007-present)
 - College of Science Joint Annual Meeting organizing committee (Chair), College of Science, University of Notre Dame (2007-2017)
 - Bernoulli Prize for Undergrad. Stat. Res., Dept. of Economics, U. of Notre Dame (2008, 2009)
 - Joint College of Arts and Letters, Science, and Engineering Da Vinci Undergraduate Research Program Review Panel, College of Science, University of Notre Dame (2010-2017)
 - College of Science Undergraduate Research Travel Grant/Summer Undergraduate Research Fellowship Review Panel, College of Science, University of Notre Dame (2007-2017)
 - The Notre Dame Hub Faculty advisory committee, Center for Undergraduate Scholarly Engagement, University of Notre Dame (2010-2012)
 - University Landscaping Sustainability Committee, University of Notre Dame (2011-2012)

Graduate Committee: Janine Rüegg (2008-2010); Carmella Vizza (2016-2018); Brandon Gerig (2015-2017), Dept. of Biological Sciences, University of Notre Dame
University Committee on Research, Library and Special Professional Faculty Appeals, Office of the Provost, University of Notre Dame (2012-2016)
College Council, College of Science, University of Notre Dame (2013-2016, 2021-present)
Core Curriculum Committee, Office of the Provost, University of Notre Dame (2013-2016)
Faculty Senate, Univ. of Notre Dame, Research Faculty (2015-2017), Secretary (2016-2017)
Campus Life Council, Faculty Representative, University of Notre Dame (2016)
Fulbright Application Evaluation Committee, University of Notre Dame (2019)
Undergraduate Curriculum, Dept. of Biological Sciences, U. of Notre Dame (2019-present)
Core Curriculum Science & Technology Subcommittee, U. of Notre Dame (2020-present)
Health Advisory Subcommittee, Good Shepherd Montessori School, South Bend (Fall 2020)
Jordan Hall Safety Committee, U. of Notre Dame (2020-present)
Senior Advisory Group, Dept of Biological Sciences, U. of Notre Dame (2020-present)
Undergraduate Program Assess., Dept. of Biological Sci., U. of Notre Dame (2021-present)
Chair, Teach. Faculty Search (2 positions), Dept. of Biol. Sci., U. of Notre Dame (2021-2022)
Faculty Advisory Committee (elected, Professors of Practice/Research Faculty), Dept. of Biol. Sci., U. of Notre Dame (2022-present).

Teaching Experience

Instructor

Earth in Crisis - Current Environmental Issues (BIOS 10107; Spring and Fall 2003-2004, Spring 2013-2014) is a 3-credit non-science major's course that considers the most critical environmental issues in the context of important ecological ideas and concepts. The course intent is to inform non-science major students about environmental issues while increasing their awareness of ecological science through classroom teaching and guided discussion of scientific literature, often with the participation of undergraduate teaching assistants.

Molecules to Ecosystems (BIOS 10172; Spring 2019-present) is a 3-credit course for first year and sophomore science students that provides the second semester of the introductory biology sequence. This course addresses fundamental concepts needed to understand and analyze biological systems, enabling students to master the core concepts which underlie current biological understanding. The focus is on core concepts organized around essential themes in biology including the central importance of evolution; the flow of information; the relationships between structure and function; the transformation of energy and matter, and processes of homeostasis apparent in biological systems. Each theme is explored across all levels of biology, from small-scale molecular pathways to large-scale evolutionary processes.

Professional Development for the Environmental Sciences (BIOS 23101; Spring 2020-2022) is a 1-credit course for Environmental Sciences students that is meant to provide students with insights about the career opportunities that exist. Students explore relevant issues and access information that will help guide their career planning, including different sub-disciplines, practical aspects of career planning, be that through graduate or professional school, public service, or private industry, with faculty and alumni.

General Biology Laboratory (BIOS 21202; Spring 2018) is a 1-credit course for sophomores that provides a foundational experience in practical biology, including experimental design, scientific writing, and data analysis and presentation. Topics include a research project studying effects of environmental change on marsh sedge, *Schoenoplectus americanus*.

Introduction to Undergraduate Research (BIOS 29498; Spring 2006, 2008, 2011, 2012) is a 1-credit course that provides undergraduate students with an introduction to scientific research to prepare them to engage in their own research with a faculty mentor.

General Ecology (BIOS 30312; Spring and Fall 2006, 2011) is a 3-credit course for science major's that examines the distribution and abundance of organisms in the natural world. Overall course objectives are to increase awareness about the natural world while contributing to a science education by integrating ecology with other disciplines. Specific course objectives are to enable students to understand key concepts in ecology while developing their critical thinking by discussing the primary literature. The course introduces core principles, classic studies, and current field and laboratory research in ecology.

Teaching Apprenticeship (BIOS 30671; Spring 2006, Fall 2011) is a 1-credit course that provides graduate students with experience of various aspects of undergraduate teaching.

General Ecology Laboratory (BIOS 31312; Fall 2006-present) is a 1-credit laboratory course. Students undertake a variety of field and laboratory exercises designed to illustrate classic studies in ecology while developing their critical thinking skills.

Biological Sciences Honors Program Seminar (BIOS 36495/46490; Spring and Fall 2012-2014, Fall 2018, Spring 2019) is a 1-credit course that creates a learning community where students interact with practicing scientists in order to develop their independence, skills, and understanding. Have participated as course instructor, guest speaker, and writing mentor.

Teaching Practicum (BIOS 37495; Spring and Fall 2015-2021) is a 1-credit course that provides undergraduate students with experience of various aspects of undergraduate teaching.

Biostatistics (BIOS 40411/42411; Spring 2008-2010, 2015) is a 4-credit course for science majors and graduate students that include all aspects of the use of statistical analysis in biology. Overall course objectives include increased understanding and application of statistics, especially in the context of biological research. Specific course objectives include the ability to design experiments and studies, analyze data appropriately, and report results effectively. The course includes both a lecture and a tutorial component using R.

Current Topics in Environmental Sciences (BIOS 40491; Fall 2018-present) is a 3-credit course for senior Environmental Sciences majors that provides a capstone experience. Current Topics addresses key environmental issues on Earth within the broader context of Global Environmental Change (GEC) and the Anthropocene. The course examines both the critical features and discuss possible solutions to GEC, using the primary literature along with expert testimony. The course prepares students, whatever their future profession or career intent, to help address the various issues associated with GEC, through Literature Review, Policy Brief, Opinion-Editorial, and Presentation assignments.

Directed Readings (BIOS 46494, 46495, 46497; Spring 2009, 2017-2019, 2021) is a 1-credit course that provides students with the opportunity to discuss and practice relevant areas of scholarly endeavor in the context of relevant information. Subject areas have included introduction of non-native salmonids, intellectual virtue, environmental change, and writing opinion editorials about environmental issues.

Undergraduate Research (BIOS 48498; Spring 2006-present) is a 1-2 credit (8 hours of research per credit hour) in which undergraduates engage in research during one or more semesters, depending upon their experience and interests.

Coordinator, Organizer, or Director

Environmental Sciences Major, Director of Undergraduate Studies, University of Notre Dame (2017-present). Purpose is to provide academic and career advising to 70-80 students; strategic

planning with respect to curriculum content and enrichment activities, and outreach to prospective and incoming students as well as alumni and external partners.

Alan Guebert Public Talk: The only constant in farming (and your food) is change, Co-Organizer, Indiana University South Bend (October 2019). Purpose of event was to enable a nationally syndicated columnist to come to South Bend, and provide insights about food and farming to the local community, through a public talk and discussions with faculty and students. Co-organized with Ken Smith, Dept. of English, Indiana University South Bend, and supported by Dept. of Biological Sciences, Environmental Change Initiative, Minor in Sustainability, University of Notre Dame, and various IUSB sponsors.

STEM Teaching Conference, Co-Organizer, University of Notre Dame (January 2018). Purpose of this college-wide conference, led by Richard Felder and Rebecca Brent, nationally recognized leaders in University STEM education, was to provide proven strategies for improving both faculty effectiveness and student learning in STEM courses. Co-organized with Kristin Lewis and Michelle Whaley, Dept. of Biological Sciences, and supported by College of Science, Kaneb Center for Teaching and Learning, and Graduate School, U. of Notre Dame.

Intellectual Virtue and Introductory Biology Consultation, Co-Organizer, University of Notre Dame (July 2017). Purpose was to consider ways in which intellectual virtue might be integrated into a future Introductory Biology sequence of courses. This involved Dept. of Biological Sciences faculty. Co-organized with Michelle Whaley, Dept. of Biological Sciences, and funded by the Sir John Templeton Foundation and Dept. of Biological Sciences.

Intellectual Virtue and Science Education Consultation, Co-Organizer, University of Notre Dame (May 2017). Purpose of the consultation was to consider ways in which intellectual virtue might be integrated into science education at colleges and universities. This involved bringing psychologists, philosophers, and science educators from outside and inside the University of Notre Dame to discuss several relevant issues. Co-organized with Dan Lapsley, Dept. of Psychology, and funded by Sir John Templeton Foundation, Institute for Scholarship in the Liberal Arts, Institute for Educational Initiatives, College of Science, and Dept. of Biological Sciences, University of Notre Dame.

Undergraduate Research, Coordinator, College of Science (2007-2017). The purpose of this position was to promote undergraduate research within the College of Science, through consultations with students and faculty; distribution of funds for travel and materials; organization of summer research fellowships; contact for off-campus opportunities (Cold Spring Harbor Laboratory, MD Anderson Cancer Center, Indiana Clinical Translational Sciences Institute); acquisition, analysis and presentation of data on participation; increased visibility of undergraduate research through publications, invited speakers, outreach events, and undergraduate symposia; and working with University Relations to generate new sources of funding support. As coordinator, participation in undergraduate research almost doubled.

Biostatistics (BIOS 42411/40411; Spring 2005), Coordinator for what is the tutorial component that covers the basic principles of statistics used in the life sciences. Responsibilities included management and mentorship of 12 graduate and undergraduate TAs for weekly tutorial classes, together with classroom teaching as and when required. Tutorial exercises included data analysis using statistical software (SYSTAT).

Course Guest Speaker, Instructor, Consultant or Assistant

Biology Summer REU Program (Summer 2016-2019); *Diversity, Culture, and Religion in Science* (SCI 53320; Spring 2013, 2014); *Biological Sciences Honors Program Seminar* (BIOS 36495/46490; Spring-Fall 2014-present); *Senior Leadership Committee Training Program* (Spring 2017); *Big Questions* (BIOS 10171; Fall 2018-present); *Biological Investigations Laboratory* (BIOS 11173; Fall 2018)

Professional Affiliations

- Society of Freshwater Science
- Ecological Society of America

Grants, Awards and Honors

- Linked Experimental Ecosystem Facility Use Proposal: Data Shape Collective – The Enviro Tile Project. Environmental Change Initiative. PI. \$500. 2022.
- Intellectual Humility in Scientists. John Templeton Foundation. Co-PI (PI T. Stapleford). \$229,102. 2022-2025.
- Dockweiler Award for Excellence in Undergraduate Advising. Univ. of Notre Dame. 2021.
- Notre Dame Conference on Intellectual Virtues and Science Education. Small Henkels Mini-Conference Grant. Institute for Scholarship in the Liberal Arts, University of Notre Dame. Co-PI (PI D. Lapsley). \$5,000. 2017.
- The Dilemma of Introduced Pacific Salmon in the Great Lakes - A Theological Contribution to Environmental Ethics. Environmental Change Initiative Seed Funding, University of Notre Dame. Co-PI (PI T. Ehrman). \$12,000. 2017.
- A new, holistic paradigm for undergraduate STEM education: inspiring big questions and cultivating virtuous scientists. John Templeton Foundation. PI. \$194,562. 2015-2017.
- Novel diagnostics for biotransport of aquatic environmental contaminants. Advanced Diagnostics and Therapeutics SRI, University of Notre Dame. Co-PI (PI G. Lamberti). \$25,509. 2015-2016.
- Conservation of native fish communities in tributaries to the Great Lakes: Predicting the impacts of contaminants delivered by spawning Pacific Salmon. Great Lakes Fishery Trust. PI. \$222,115. 2013-2016.
- Impacts of introduced Pacific salmon on ecological communities of Great Lakes tributaries. Great Lakes Fishery Trust. Co-PI (PI G. Lamberti). \$150,637. 2007-2010.
- The role of salmon-derived nutrients in managed U.S. forests. USDA-NRI. Co-PI (PI G. Lamberti). \$420,000. 2006-2009.
- Determining the environmental fate, biodegradability, and impacts on aquatic ecosystems of new ionic liquids prior to widespread industrial use. NOAA-OAR. Co-PI (PI G. Lamberti). \$475,900. 2005-2007.
- USDA Forest Service Cooperative Research Agreement (PNW 96-3012-2-CA). Co-PI (PI R. Merritt, Michigan State University). \$12,000. 1997-1999.
- M. Brown Memorial scholarship. University College London, UK. 1993.
- SERC/BBSRC postgraduate studentship. University College London, UK. 1992-1995.
- Fantham Memorial postgraduate scholarship. University College London, UK. 1991.
- Frances Perch Bedford Prize. University College London, UK. 1991.

Publications (# - graduate student, * - undergraduate student)

- Walker, K.P.* , **D.T. Chaloner**, B. Styler Barry, M. DiBlasio, and E. Creveling. Assessing the Environmental and Social Impacts of the Columbia Lake Dam Removal. *Journal of Environmental Management*, in preparation.
- **Chaloner, D.T.**, D.K. Lapsley, and G.P. Crawford. The virtues of science education. *CBE – Life Sciences*, in preparation.
- Gerig, B.S., **D.T. Chaloner**, R.R. Rediske, G. Paterson, and G.A. Lamberti. Pacific Salmon as vectors of environmental contaminants: an experimental test in a natural stream. *Environmental Pollution*, in preparation.
- Lamberti, G.A., N.M. Levesque#, M.A. Brueseke, **D.T. Chaloner**, and M.E. Benbow. 2020. Animal Mass Mortalities in Aquatic Ecosystems: How Common and Influential? *Frontiers in Ecology and Evolution* 5:602225.
- N.T. Hermann*, **D.T. Chaloner**, B.S. Gerig#, and G.A. Lamberti. 2020. Influence of the Pacific salmon spawning resources on the feeding ecology and growth of Great Lakes stream-resident trout. *Canadian Journal of Fisheries and Aquatic Sciences* 77:1758-1771.
- Gerig, B.S.# , D.J. Janetski#, **D.T. Chaloner**, and G.A. Lamberti. 2020 Contaminant biotransport by Pacific salmon in the Great Lakes. *Frontiers in Ecology and Evolution*, *Frontiers in Ecology and Evolution* 8:199.
- Lapsley, D.K., and **D.T. Chaloner**. 2020. Post-Truth and Science Identity: A Virtue-Based Approach to Science Education. *Educational Psychology* 55:132-143.
- D’Amore, D.V., **D.T. Chaloner**, B. Gerig#, J. Berkowitz, and S.B. Bridgham. 2020. The nutrient legacy left by salmon tissue on riparian soils in Southeast Alaska. *Soil Science Society of America Journal* 84:877-887.
- Currier, C.M.* , **D.T. Chaloner**, J. Rüegg#, S.D. Tiegs, D.V. D’Amore, and G.A. Lamberti. 2020. Looking beyond macronutrient resource subsidies: the potential of Pacific salmon (*Oncorhynchus* spp.) as vectors of micronutrients. *Aquatic Sciences* 82:50.
- Rüegg, J. # , **D.T. Chaloner**, F. Ballantyne, P.S. Levi#, C. Song, J.L. Tank, S.D. Tiegs, and G.A. Lamberti. 2020. Understanding the relative role of salmon spawner enrichment and disturbance: spatial and temporal biofilm dynamics during a spawning run in a Southeastern Alaska stream. *Frontiers in Ecology and Evolution* 8:19.
- Larson, C.E. # , J.L. Pechal, B. Gerig#, **D.T. Chaloner**, G.A. Lamberti, and M.E. Benbow. 2020. Microbial Community Response to a Novel Salmon Resource Subsidy. *Frontiers in Ecology and Evolution* 7:505.
- Hart, J.A.* , C. Vizza#, W.E. West, **D.T. Chaloner**, S.E. Jones, and G.A. Lamberti. 2019. Methane cycling contributes to distinct patterns in carbon stable isotopes of wetland detritus. *Wetlands* 39:361-370.
- Gerig, B.S.# , **D.T. Chaloner**, S.A. Cullen*, R. Greil, K. Kapucinski, A.H. Moerke, and G.A. Lamberti. 2019. Trophic ecology of salmonine predators in Northern Lake Huron with emphasis on Atlantic salmon (*Salmo salar*). *Journal of Great Lakes Research* 45:160-166.
- Gerig, B.S.# , N.T. Hermann*, **D.T. Chaloner**, and G.A. Lamberti. 2019. Using dynamic bioenergetic-bioaccumulation models to understand mechanisms of uptake and

- bioaccumulation of salmon-derived contaminants by stream resident fish. *Science of the Total Environment* 652:633-642.
- Vizza, C.[#], J.L. Pechal, M.E. Benbow, J.M. Lang, **D.T. Chaloner**, S.E. Jones, and G.A. Lamberti. 2018. Nitrate alters biofilm communities in relatively unimpacted sub-arctic ponds. *Freshwater Science* 37:251-263.
 - Gerig, B.S.[#], **D.T. Chaloner**, D.J. Janetski[#], A.H. Moerke, R.R. Rediske, J.P. O’Keefe, D.A. de Alwis Pitts, and G.A. Lamberti. 2018. Context-dependent controls on Pacific salmon-mediated contaminant biotransport to tributaries of the Laurentian Great Lakes. *Journal of Applied Ecology* 55:1846-1859.
 - Gerig, B.S.[#], D.N. Weber*, **D.T. Chaloner**, L. McGill*, and G.A. Lamberti. 2018. Interactive effects of introduced Pacific salmon and brown trout on native brook trout: an experimental and modeling approach. *Canadian Journal of Fisheries and Aquatic Sciences* 75:538-548.
 - McGill, L.* , Gerig, B.S.[#], **D.T. Chaloner**, and G.A. Lamberti. 2017. An ecosystem model for evaluating the effects of introduced Pacific salmon on contaminant burdens of stream-resident fish. *Ecosystem Modelling* 355:39-48.
 - Vizza, C.[#], B.L. Sanderson, H.J. Coe, and **D.T. Chaloner**. 2017. Examining the effect of salmon-derived nutrients using condition metrics: are they ecologically meaningful for riparian organisms? *Ecology and Evolution* 7:1313-1324.
 - Gerig, B.S.[#] , **D.T. Chaloner**, D.J. Janetski[#], R.A. Rediske, J.P. O’Keefe, A.H. Moerke, and G.A. Lamberti. 2016. Pacific salmon are a source of persistent organic pollutants for stream-resident fish within Great Lakes tributaries. *Environmental Science and Technology* 50:554-563.
 - Rüegg, J.[#], C.M. Currier*, **D.T. Chaloner**, S.D. Tiegs, and G.A. Lamberti. 2014. Habitat influences Pacific salmon (*Oncorhynchus* spp.) tissue decomposition in riparian and stream ecosystems. *Aquatic Sciences* 76:623-632.
 - Janetski, D.J.[#] , **D.T. Chaloner**, A.H. Moerke, P.S. Levi[#], E.M. Kratschmer*, and G.A. Lamberti. 2014. Novel environmental conditions alter subsidy and engineering effects by introduced Pacific salmon. *Canadian Journal of Fisheries and Aquatic Sciences* 71:502-513.
 - Shirey, P.D.[#], B.N. Kunycky*, **D.T. Chaloner**, M.A. Brueseke, and G.A. Lamberti. 2013. Commercial Internet trade of endangered plants cultivates opportunity for do-it-yourself assisted colonization. *Conservation Letters* 6:300-316.
 - Levi, P.S.[#] , J.L. Tank, S.D. Tiegs, **D.T. Chaloner**, and G.A. Lamberti. 2013. Biogeochemical transformation of a nutrient subsidy: salmon, streams, and nitrification. *Biogeochemistry* 113:643-655.
 - Reisinger, A.J.* , **D.T. Chaloner**, J. Rüegg[#], S.D. Tiegs, and G.A. Lamberti. 2013. Effects of Pacific salmon spawners on the isotopic composition of biota differ among Southeast Alaska streams. *Freshwater Biology* 58:938-950.
 - Levi, P.S.[#] , J.L. Tank, J. Rüegg[#], D.J. Janetski[#], S.D. Tiegs, **D.T. Chaloner**, and G.A. Lamberti. 2013. Whole-stream metabolism responds to spawning Pacific salmon in their native and introduced ranges. *Ecosystems* 16:269-283.
 - Levi, P.S.[#] , J.L. Tank, S.D. Tiegs, **D.T. Chaloner**, and G.A. Lamberti. 2012. Reply to comment of Jackson and Martin - Does timber harvest influence the dynamics of marine-

- derived nutrients in Southeast Alaska streams? Canadian Journal of Fisheries and Aquatic Sciences 69:1898-1901.
- Janetski, D.J. #, **D.T. Chaloner**, A.H. Moerke, R.R. Rediske, J.P. O'Keefe and G.A. Lamberti. 2012. Resident fishes display elevated organic pollutants in salmon spawning streams of the Great Lakes. Environmental Science and Technology 46:8035-8043.
 - Rüegg, J. #, **D.T. Chaloner**, P. Levi#, S.D. Tiegs, J.L. Tank, and G.A. Lamberti. 2012. Environmental variability and the ecological effects of spawning Pacific salmon on stream biofilm. Freshwater Biology 57:129-142.
 - Collins, S.F.*, A.H. Moerke, **D.T. Chaloner**, D.J. Janetski#, and G.A. Lamberti. 2011. Response of dissolved nutrients and periphyton to the presence of spawning Pacific salmon in three Northern Michigan streams. Journal of North American Benthological Society 30:831-839.
 - Levi, P.S. #, J.L. Tank, S.D. Tiegs, **D.T. Chaloner**, and G.A. Lamberti. 2011. Does timber harvest influence the dynamics of marine-derived nutrients in Southeast Alaska streams? Canadian Journal of Fisheries and Aquatic Sciences 68:1316-1329.
 - **Chaloner, D.T.**, and R.S. Wotton. 2011. Overview: the links that bind aquatic ecosystems. Journal of North American Benthological Society 30:751-761.
 - Tiegs, S.D., P.S. Levi#, J. Rüegg#, **D.T. Chaloner**, J.L. Tank, and G.A. Lamberti. 2011. Live-salmon effects on streamwater nutrients and biofilm exceed those of salmon carcasses during an annual spawning migration. Ecosystems 14:598-614.
 - Janetski, D.J. #, A.H. Moerke, **D.T. Chaloner**, and G.A. Lamberti. 2011. Chinook salmon spawners alter brook trout movements in a Lake Michigan tributary. Ecology of Freshwater Fish 20:209-219.
 - Rüegg, J. #, S.D. Tiegs, **D.T. Chaloner**, J.L. Tank, and G.A. Lamberti. 2011. Pacific salmon (*Oncorhynchus* spp.) resource subsidies alter biofilm nutrient limitation in Southeast Alaskan streams. Canadian Journal of Fisheries and Aquatic Sciences 68:277-287.
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Other Publications

- **Chaloner, D.T.** and K. Smith. Time on the farm is time well spent. *Viewpoint*, South Bend Tribune (October 2019, Highlight of Year December 2019).
- **Chaloner, D.T.**, S.E. Jones, K.M. Lewis, M.A. Whaley, and S.W. Lee. Asking Big Questions from Molecules to Ecosystems - Our New Introductory Biology Sequence. *Biological Sciences Departmental Newsletter* (December 2019).

Selected Presentations and Panel Participant (of >100 as author or coauthor)

- Environmental Inequities. **Invited**. Enrichment Series Panel. The Office of Student Enrichment, University of Notre Dame, Notre Dame, IN, USA (March 2021).
- Theory and practice of virtues in the science classroom. **Invited**. Institute of Human Flourishing - Teaching Intellectual Virtues Workshop, University of Oklahoma, Norman, OK, USA (March 2021).
- The virtues of art for science. Inspire Session. **Invited**. 1st virtual meeting of the Ecological Society of America, Online (August 2020).
- Juday Creek: another reason Fr. Sorin chose a perfect spot for Notre Dame. **Invited**. Izaak Walton League of America, South Bend, IN, USA (September 2019).
- The influence of Pacific salmon spawners on stream ecosystems: Why context matters. **Invited**. Juneau Forestry Sci. Laboratory (USDA Forest Service), Juneau, AK, USA (April 2017).
- Introduction of Salmon to the Great Lakes: What's the (Ethical) Problem? Research Integrity Workshop. **Invited**. University of Notre Dame, Notre Dame, IN, USA (March 2017).
- Panelist. Sustainable Wisdom Conference. **Invited**. University of Notre Dame, Notre Dame, IN, USA (September 2016).
- Influence of Pacific salmon spawners on stream ecosystems: why context matters. **Invited**. 64th meeting of the Society of Freshwater Science, Sacramento, CA, USA (May 2016).
- Panelist. Breakthrough Discussion of 'Living Downstream'. **Invited**. DeBartolo Performing Arts Center, University of Notre Dame, Notre Dame, IN, USA (October 2013).
- Understanding transfer of pollutants from Pacific salmon spawners to resident fish in Michigan streams. **Invited**. Annual Meeting of the Aquatic Research Laboratory and Michigan Dept. of Natural Resources, Lake Superior State University, Sault Ste. Marie, MI, USA (May 2013).
- Contaminant Transport to Great Lakes Tributaries by Pacific salmon. **Invited**. Great Lakes Fish Health Committee Meeting, Great Lakes Fishery Comm., South Bend, IN, USA (Feb. 2013).
- Non-native Species and Ecosystem Restoration in the Great Lakes. **Invited**. Fish Passage Symp., MI Union of Cons. Clubs and Trout Unlimited, Traverse City, MI, USA (Aug. 2012).
- The bad along with the good: contaminant transport to stream ecosystems by Pacific salmon. 60th meeting of the Society of Freshwater Science (formerly known as North Amer. Benth. Soc), Louisville, KY, USA (May 2012).

- Stable isotopes reveal the influence of land use on aquatic food webs in agricultural watersheds of the Mississippi alluvial plain. 59th meeting of North Amer. Benth. Soc., Providence, RI, USA (May 2011).
- Ecological effects of Pacific salmon spawners on Great Lakes stream ecosystems. 53rd International Conference of International Association of Great Lakes Research, Toronto, Ontario, Canada (May 2010).
- Temporal patterns of isotopic enrichment in a Southeast Alaska stream foodweb: The role of salmon spawners and environmental context. 57th meeting of North Amer. Benth. Soc., Grand Rapids, MI, USA (May 2009).
- Environmental change alters the ecological role of Pacific salmon in Southeast Alaska rivers. 93rd Meeting of Ecological Society of America, Milwaukee, WI, USA (August 2008).
- Ecological influence of Pacific salmon in managed forested watersheds. 55th meeting of North Amer. Benth. Soc., Columbia, SC, USA (June 2007).
- Variation in the effects of salmon-derived nutrients on stream ecosystems in southeastern Alaska. 54th meeting of North Amer. Benth. Soc., Anchorage, AK, USA (June 2006).
- Long-term studies of the effects of salmon spawners on stream ecosystems. 53rd meeting of North Amer. Benth. Soc., New Orleans, LA, USA (May 2005).
- Do salmon carcasses and pellets of processed salmon carcasses have the same effects on streams? 51st meeting of North Amer. Benth. Soc., Athens, GA, USA (May 2003).
- Spawning Pacific salmon: what are they good for? **Invited.** Dept of Biology, Eastern Michigan University, Ypsilanti, MI, USA (February 2003).
- Do spawning Pacific salmon increase the productivity of freshwater ecosystems? 50th meeting of North Amer. Benth. Soc., Pittsburgh, PA, USA (May 2002).
- Ecological consequences of salmon enrichment for streams: where do marine-derived nutrients go? 49th meeting of North American Benthological Society, La Crosse, WI, USA (June 2001).
- Influence of enrichment by Pacific salmon on macroinvertebrate growth and standing stock in southeast Alaska streams. International Salmon Nutrient Conference: Restoring Nutrients to Salmonid Ecosystems, Eugene, OR, USA (March 2001).
- Carcass-invertebrate interactions: implications for the influence of Pacific salmon on ecosystem productivity. **Invited.** 48th meeting of North Amer. Benth. Soc., Keystone, CO, USA (May 2000).
- Colonization and processing of salmon carcasses by macroinvertebrates in Southeast Alaskan streams. 47th meeting of North Amer. Benth. Soc., Duluth, MN, USA (May 1999).
- Aquatic and terrestrial invertebrates colonizing salmon carcasses in southeast Alaska. **Invited.** AFS Western Division meeting, Anchorage, AK, USA (October 1998).
- Invertebrate fauna of salmon carcasses. **Invited.** University of Alaska Southeast, Juneau, AK, USA (June 1998).
- Invertebrates colonizing anadromous salmonid carcasses in southeastern Alaskan freshwater systems. AFS Alaska Chapter meeting, Juneau, AK, USA (November 1997).
- The biology of chironomid midges in slow sand filter beds. **Invited.** Dept. of Biology, Birbeck College, University of London, UK (June 1996).
- Particles and the coexistence of three species of midge (Diptera: Chironomidae). 43rd meeting of North Amer. Benth. Soc., Keystone, CO, USA (June 1995).
- Role of particles in the development of midges (Diptera: Chironomidae). 42nd meeting of the North Amer. Benth. Soc., Orlando, FL, USA (June 1994).