

## **STEPHEN M. COGHLAN JR.**

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Conservation Biology  
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### **EDUCATION**

**State University of New York, College of Environmental Science and Forestry (SUNY-ESF),  
Syracuse, NY**

- **Ph.D. in Environmental and Forest Biology (concentration in Fisheries and Wildlife Management) earned 12/04; GPA 3.80**

Dissertation title: Atlantic salmon restoration in the southern Lake Ontario watershed:  
evaluating anthropogenic, bioenergetic and competitive constraints.

- **B.S. in Environmental and Forest Biology earned 5/98; GPA 3.73**

**Cayuga Community College, Auburn, NY**

- **A.S. in Math and Science earned 6/96; GPA 3.90**

### **CURRENT POSITION HELD**

**Associate Professor of Freshwater Fisheries Ecology (with tenure), University of Maine and  
Maine Agricultural and Forest Experiment Station (2012-present)**

Teach undergraduate courses in Statistical Ecology (WLE 220), General Ecology (WLE 200),  
Freshwater Fisheries Ecology and Management (WLE 340/341), Introduction to Biophysical and  
Ecological Economics (EES 397 / 590), Issues and Opportunities in Ecology and Environmental  
Sciences (NFA 117), graduate course in Quantitative Fisheries Methods (WLE 650), advise  
graduate students, mentor undergraduate student researchers, and conduct research on aquatic  
systems and fisheries of concern to the state of Maine.

### **OTHER POSITIONS HELD**

**Assistant Professor of Freshwater Fisheries Ecology, University of Maine and Maine  
Agricultural and Forest Experiment Station (2006 - 20012)**

Taught undergraduate courses in Statistical Ecology (WLE 220), Freshwater Fisheries Ecology  
and Management (WLE 340/341), Issues and Opportunities in Ecology and Environmental  
Sciences (NFA 117), graduate course in Quantitative Fisheries Methods (WLE 650), advise  
graduate students, mentor undergraduate student researchers, and conduct research on aquatic  
systems and fisheries of concern to the state of Maine.

**Adjunct Assistant Professor in Environmental Sciences, Arkansas State University  
(2005-2006)**

Taught a graduate seminar in Biophysical Economics, advised graduate students, and mentored  
undergraduate student researchers.

### **National Science Foundation Postdoctoral Fellow, Arkansas State University (2004-2006)**

Mentor: Robyn Hannigan. Designed, supervised, and conducted a research program investigating early life history and migration of brown trout and aquatic insects using otolith and tissue microchemistry; mentored and supervised undergraduate research assistants; completed contracted work on fish age and growth research; served as faculty mentor for NSF-RISE undergraduate scholars.

### **Wilford A. Dence Graduate Research Fellow, SUNY-ESF – Research Foundation (2003-2004)**

Recipient of a fellowship presented to “an outstanding graduate student completing his or her dissertation, who shows an enthusiasm for the biotic world, fish and wildlife, and natural history, an aptitude in field research, and demonstrated concern for preservation of ecosystem diversity, stability, and viability”. Responsibilities included completing and publishing doctoral dissertation.

### **Research Assistant, SUNY-ESF – Roosevelt Wild Life Station (1999 – 2003)**

Project manager for Atlantic salmon restoration feasibility study. Designed and implemented a doctoral study program to assess the feasibility of restoring Atlantic salmon to the Lake Ontario watershed. Experience included stocking various life stages of Atlantic salmon; assessing survival and growth; quantifying habitat and fish community attributes; quantifying salmonine diets; conducting laboratory experiments on bioenergetics and competition; modeling fish bioenergetics; writing grant proposals; analyzing data; preparing manuscripts; and presenting results. Worked closely with state and federal resource managers, and supervised undergraduate field and laboratory technicians.

## **TEACHING EXPERIENCE**

### **Course Instructor: General Ecology (WLE 200) - University of Maine (fall semesters 2012 – present)**

Ecology is the study of how organisms interact with each other and their environments, and how these interactions contribute to, and are shaped by, flows of energy and matter on planet Earth. The goals of this course are to provide students with 1) a variety of scientific approaches and tools useful for answering questions and making predictions about ecological patterns and processes; 2) a broad overview of ecological concepts, principles, models, and theories, along with diverse and detailed empirical examples; and 3) a better understanding of the biophysical factors that interact to maintain a functional ecosphere that supports human and non-human life. Upon completion of WLE 200, students should be able to: 1) apply basic scientific principles towards answering ecological questions; 2) design and interpret results from field and laboratory studies investigating ecological phenomenon; 3) relate the abundance and distribution of organisms over time and space to major physical, chemical, geological, historical, biological, and evolutionary factors; 4) identify and describe various stocks and flows of matter and energy within the ecosphere; and 5) explain the causes, effects, and consequences of human domination of planet Earth.

### **Course Instructor: Ecological Statistics (WLE 220) - University of Maine (spring semesters 2007 – present)**

This course provides students with an introduction to the use of quantitative statistical methods for the purpose of answering ecological questions, and information and techniques useful for advanced courses in wildlife ecology and other environmental sciences. We cover such topics as data types and distributions, data exploration and visualization, sampling considerations and experimental design, formulation of testable hypotheses, one- and two-sample tests, analysis of variance, linear regression and correlation, contingency tables, and goodness-of-fit tests. Throughout the course, we emphasize the application of these methods in attempts to answer ecological questions and solve ecological problems, and focus on presenting and interpreting results verbally and in writing. Upon completion of WLE 220, successful students are able to: 1) identify various types of data common to ecology and other environmental sciences; 2) recognize and describe sources of error associated with collecting data and drawing conclusions from those data; 3) relate the concepts of sampling, parameter estimation, central tendency, dispersion, and replication to proper experimental design and statistical analysis; 4) translate ecological questions into testable hypotheses; 5) choose the appropriate analytical procedure to test a specific hypotheses; 6) present the results of their analyses in a professional written format; and 7) interpret results in the context of basic ecological knowledge gained in previous courses; and 8) communicate statistical concepts and ideas verbally

**Course Instructor: Freshwater Fisheries Ecology and Management (WLE 340/341) - University of Maine (fall semesters odd years, 2007 - present)**

In this course, we adopt an ecological approach in studying freshwater fisheries and evaluating management tactics. Topics include general fish ecology, population dynamics, bioenergetics, stock-recruitment, habitat quality, anthropogenic effects, recreational fisheries, management tools, non-game species, assessment methods, and human dimensions. We emphasize the applied aspects and techniques unique to freshwater fisheries, field work, and interaction with fishery professionals. The goal of the course is to provide students with an understanding of the ecology of freshwater fish populations, communities, and habitats, assessment methods and management of habitats and populations, and the human dimensions of fisheries management. The course emphasizes applied aspects and techniques unique to freshwater fisheries.

**Course Instructor: Introduction to Biophysical and Ecological Economics (EES 397) - University of Maine (spring semesters even years, 2014 - present)**

This course was developed in response to the overwhelming dominance of neoclassical or “orthodox” economics in public (mis)education and its pervasive role in (mis)guiding economic policy throughout the world. This course exposes the fatal flaws in neoclassical economic theory and offers alternative paradigms – biophysical and ecological economics - through which we can better study and understand the causes and consequences of human economic activity from energetic and evolutionary perspectives. Students are required to read historic and current literature and participate in (and sometimes lead) interactive class discussions. Upon completion of EES 397, successful students will be able to: 1) identify the main tenets of classical and neoclassical economic theories and discuss them in the historic context of relations between humans and the environment; 2) describe fatal flaws associated with the circular-flow model of economic activity; 3) provide an alternate perspective of economies as metabolic systems embedded within the ecosphere and subject to natural biophysical laws; 4) explain the importance of energy and power in shaping major trends in human history; and 5) evaluate implications of current economic policy on the ability of the ecosphere to support complex human civilizations sustainably

**Course Instructor: Quantitative Analysis in Freshwater Fisheries Ecology (WLE 650) - University of Maine (fall semesters 2008, 2010; co-taught w/ J. Zydlewski)**

This course is the result of conversations that centered on the need of both fisheries researchers and managers to pose questions, design sampling schemes, collect and analyze data in order to test management-driven hypotheses. As an upper-level course, the topics are meant to stimulate active participation and discussion. Topics covered include: age and growth, bioenergetics, community structure, field sampling, movements and migrations, physiology, population dynamics, statistical modeling, and trophic ecology. At the end of this course, we expect students to translate basic fisheries questions into testable hypotheses, gain direct skills in the analysis of typical data sets, be able to use a few prominent software packages often used in fisheries data analysis, and become familiar with some influential fisheries literature

**Course Instructor: Issues and Opportunities in Ecology and Environmental Sciences (NFA 117) - University of Maine (fall semesters 2011, 2012)**

This 1-credit discussion/seminar class targets freshmen in the EES program, and has 3 objectives: help the students develop life skills and relationships with faculty and peers that increase the probability of success in college; begin to develop the students' writing skills; train the students to read, think critically, and engage in discussions about environmental issues facing them as global citizens. Required readings focus on the relation among economic growth, environmental quality, and human prosperity.

**Course Instructor: Biophysical Economics - Arkansas State University (spring 2006)**

I organized and led a graduate seminar comparing and contrasting the historical role of energy in economic and ecological thought, with a relevant literature review. Curriculum included the writings of Darwin and Malthus; early classical economists (Smith, Ricardo, Mill); early energetic and trophic ecologists (Lotka, Kendeigh, Elton, Lindeman, von Bertalanffy, Hutchinson); modern energetic ecologists (Odum, Brett, Warren, Hall, Fausch); prominent neo-classical economists (Simon, Solow); ecological economists (Costanza, Daly); and biophysical economists (Georgescu-Roegen, Odum, Hall).

**Course Instructor: Diversity of Adirondack Ecosystems -SUNY-ESF / Cranberry Lake Biological Station (summers 1999 – 2004)**

Designed and taught a field course in northeastern aquatic ecosystems, with emphasis on field sampling and hypothesis testing. Worked closely with students developing independent-study projects. Curriculum included natural history, ecology, and identification of Adirondack fishes and aquatic insects; sampling techniques; habitat mapping; water safety; statistical analysis; and collaboration with instructors of related courses (ornithology, botany, etc.), all in a wilderness setting

**Course Instructor: Adirondack Ecology - SUNY-ESF / Cranberry Lake Biological Station and BOCES (summers 1999 – 2005)**

Designed and taught multiple field courses in Adirondack ecology to accelerated high-school juniors and seniors, with emphasis on field sampling and hypothesis testing. Curriculum included natural history, ecology, and identification of Adirondack fish, aquatic insects, mammals, birds,

reptiles, and amphibians; sampling techniques; statistical analysis. Worked closely with high-school teachers and students in developing independent-study projects, all in a wilderness setting.

**Course Instructor: Systematic Entomology - SUNY-ESF (spring 2003)**

Prepared lectures and laboratory exercises for a graduate-level entomology course, and wrote and graded examinations. Curriculum included evolution, taxonomy, ecology, and identification of the major orders of insects, with emphasis on adherence to principles of phylogenetic systematics. Team-taught.

**Teaching Assistant: Ichthyology - SUNY-ESF (spring semesters 1999 – 2002)**

Prepared and gave laboratory exercises and lectures for undergraduate/graduate-level ichthyology course; developed and graded assignments; assisted professor in preparing and giving lectures. Curriculum included evolution, diversity, anatomy, physiology, ecology, and distribution of fishes; natural history and identification of New York freshwater fishes. Also arranged and supervised field studies and maintained museum collection of freshwater fish specimens.

**Teaching Assistant: Fisheries Biology - SUNY-ESF (fall semesters 1998 – 2000)**

Prepared and gave laboratory exercises and lectures for a graduate/undergraduate level course in fisheries biology; developed and graded exams; assisted professor in lectures. Curriculum included sampling techniques; population dynamics; stock-recruitment; resource management; and statistical techniques. Also responsible for arranging field studies.

**Teaching Assistant: Aquatic Entomology - SUNY-ESF (fall semesters 1998, 1999)**

Prepared and gave laboratory exercises and lectures for a graduate level course in aquatic entomology; developed and graded exams; assisted professor in lectures. Curriculum included evolution, diversity, anatomy, physiology, ecology, and distribution of aquatic insects; natural history and identification of northeastern aquatic insects. Also responsible for arranging field studies and maintaining museum collection of aquatic insect specimens.

**Teaching Assistant: Genetics - SUNY-ESF (spring semesters 2000, 2001)**

Lectured and organized lab exercises for an undergraduate genetics course; graded assignments. Curriculum included Mendelian and non-Mendelian inheritance; population genetics; artificial selection; bacterial transformation; and restriction endonuclease site mapping.

**Teaching Assistant: Comparative Vertebrate Anatomy - SUNY-ESF (Spring 1998)**

Lectured and organized lab exercises for an undergraduate comparative vertebrate anatomy course; graded assignments. Curriculum included evolution and phylogeny of vertebrates; structure and function of organ systems; functional ecology; embryology; laboratory emphasis on dissection.

**PUBLICATIONS**

**(\*undergraduate student author, \*\*graduate student author)**

Demi, L. M. \*\*, K.S. Simon, D. Anderson, S.M. Coghlan Jr., J.E. Saros, and R. Saunders. 2015. Trophic status may influence top-down effects of anadromous alewife *Alosa pseudoharengus* (Actinopterygii, Clupeidae) in lakes. *Hydrobiologia* 758(1):47-59.

- Tuckett, Q. M. \*\*, K. S. Simon, J. E. Saros, S. M. Coghlan Jr., and M. T. Kinnison. 2015. Biomass versus biodiversity: the relative contribution of population attributes to consumer nutrient loading in aquatic systems. *Evolutionary Ecology Research* 16:705-723.
- Weaver, D. M. \*\*, S. M. Coghlan Jr., and J. Zydlewski. 2015 (invited; in review). Sea Lamprey Carcasses Exert Local and Variable Food Web Effects in a Nutrient-limited Atlantic Coastal Stream. *Canadian Journal of Fisheries and Aquatic Science* 000:000-000.
- Weaver, D. M. \*\*, S. M. Coghlan Jr., J. Zydlewski, R. S. Hogg, and M. Canton\*. 2015. Decomposition of sea lamprey *Petromyzon marinus* carcasses: temperature effects, nutrient dynamics, and implications for stream food webs. *Hydrobiologia* DOI 10.1007/s10750-015-2302-5.
- Hogg, R. \*\*, S.M. Coghlan Jr., J. Zydlewski, and C. Gardner. 2015. Fish community response to dam removal in a Maine coastal river tributary. *Transactions of the American Fisheries Society* 144(3):467-479.
- Ratten, S.\*\*, J. Zydlewski, S.M. Coghlan, Jr., and G. Sherwood. 2015 (submitted). Comparison of age and growth from stocked and wild populations of lake whitefish (*Coregonus clupeaformis*) in Maine, USA. *Ecology of Freshwater Fish*.
- Kiraly, I.A.\*\*, S.M. Coghlan Jr., J. Zydlewski, and D. Hayes. 2014. An assessment of fish assemblage structure in a large river. *River Research and Applications* DOI: 10.1002/rra.2738.
- Kiraly, I.A.\*\*, S.M. Coghlan Jr., J. Zydlewski, and D. Hayes. 2014. Comparison of two sampling designs for fish assemblage assessment in a large river. *Transactions of the American Fisheries Society* 143(2):508-518.
- Hogg, R. \*\*, S.M. Coghlan Jr., J. Zydlewski, and K.S. Simon. 2014. Anadromous sea lamprey *Petromyzon marinus* serve as ecosystem engineers in a coastal spawning tributary. *Freshwater Biology* 59:1294-1307.
- Hogg, R. \*\*, S.M. Coghlan Jr., and J. Zydlewski. 2013. Anadromous sea lamprey (*Petromyzon marinus*) recolonize a Maine coastal river tributary after dam removal. *Transactions of the American Fisheries Society* 142(5):1381-1394.
- Ashe, W.A.\*\*, S.M. Coghlan Jr., J. Zydlewski, and J.G. Trial. In review. First-summer survival and growth of juvenile Atlantic salmon in headwater streams: implications for restoring connectivity at road culverts. *Transactions of the American Fisheries Society* (submitted Jan 2013)
- Gardner, C.\*\*, S.M. Coghlan Jr., and J. Zydlewski. 2012. Distribution and abundance of anadromous sea lamprey spawners in a fragmented stream: current status and potential range expansion following barrier removal. *Northeastern Naturalist* 19(1):99-110
- Wathen, G.\*\*, J. Zydlewski, S.M. Coghlan Jr., and J.G. Trial. 2012. Effects of smallmouth bass on Atlantic salmon use and diel movements in an artificial stream. *Transactions of the American Fisheries Society* 141(1):174-184.

- Demi, L.M.\*\*, K.S. Simon, S.M. Coghlan Jr., R. Saunders, and D. Anderson. 2012. Anadromous alewives in linked-lake-stream ecosystems: do trophic interactions in lakes influence stream invertebrate communities? *Freshwater Science* 31(3): 973-985.
- Wathen, R.A.\*\*, S.M. Coghlan Jr., J. Zydlewski, and J. Trial. 2011. Habitat selection and overlap of Atlantic salmon and smallmouth bass juveniles in nursery streams. *Transactions of the American Fisheries Society* 140:1145-1157.
- Gardner, C. \*\*, S.M. Coghlan Jr., J. Zydlewski, and R. Saunders. 2011. Distribution and abundance of stream fishes in relation to barriers: implications for monitoring stream recovery after barrier removal. *River Research and Applications* DOI:10.1002/rra.1572.
- Coghlan Jr., S. M., and P. Damkot\*\*. 2009. Of salmon, trout, and charr. In: M.L. Hunter, Jr. and F. Schmiegelow. *Wildlife, Forests and Forestry*. Second Edition. Prentice Hall, Upper Saddle River, New Jersey.
- Valois, A., R. A. Curry, and S. M. Coghlan Jr. 2009. Smallmouth bass invasion of Gulf Region rivers: evaluating impact on Atlantic salmon populations. In: Chaput, G. (ed). *Potential impacts of smallmouth bass introductions on Atlantic salmon: a risk analysis*. Proceedings of the Canadian Science Advisory Panel, Canadian Department of Fisheries and Oceans.
- Coghlan Jr., S. M., G. R. Cain\*, and N. H. Ringler. 2007. Prey selection of subyearling Atlantic salmon and rainbow trout coexisting in a natural stream. *Journal of Freshwater Ecology* 22(4):591-608.
- Johnson, R. L., S. M. Coghlan Jr., and T. Harmon\*. 2007. Spatial and temporal variation in prey selection of brown trout in a cold Arkansas tailwater. *Ecology of Freshwater Fish* 16:373-384.
- Coghlan Jr., S. M., M. S. Lyerly\*, T. P. Bly, J. S. Williams, D. Bowman, and R. Hannigan. 2007. Otolith chemistry discriminates among hatchery-reared and tributary-spawned salmonines in a tailwater system. *North American Journal of Fisheries Management* 27:531-541.
- Coghlan Jr., S. M., M. J. Connerton\*\*, N. H. Ringler, D. J. Stewart, and J. V. Mead\*\*. 2007. Survival and growth responses of juvenile salmonines stocked in eastern Lake Ontario tributaries. *Transactions of the American Fisheries Society* 136:56-71.
- Coghlan Jr., S. M., P. L. Angermeier, J. Cech, K. Daily, T. Lang\*\*, K. E. Limburg, M. Litwin, J. V. Mead\*\*, G. Patton, and P. Pister. 2007. AFS Socioeconomic Section members clarify opinions on the proposed AFS policy statement on economic growth. *Fisheries* 32(7):353.
- Johnson, R. L., S. C. Blumenshine, and S. M. Coghlan Jr. 2006. A bioenergetic analysis of factors limiting brown trout growth in an Arkansas tailwater. *Environmental Biology of Fishes* 77:121-132.
- Czech, B., S. K. Alam, P. L. Angermeier, S. M. Coghlan Jr., G. F. Hartman, L. Krall, J. V. Mead\*\*, T. G. Northcote, P. Pister, K. M. Reed, C. A. Rose, J. A. Thompson, and P. F. Thompson\*\*. 2006. Economic growth, fish conservation, and the American Fisheries Society: conclusion to a forum, beginning of a movement? *Fisheries* 31(1):40-43.
- Mead, J. V. \*\*, S. M. Coghlan Jr., and P. F. Thompson\*\*. 2005. Symposium sparks debate: should the American Fisheries Society adopt a position on economic growth? *Fisheries* 30(11):37-40.

- Coghlan Jr., S. M., and N. H. Ringler. 2005. Temperature-dependent effects of rainbow trout on growth of Atlantic salmon parr. *Journal of Great Lakes Research* 31(4):386-396.
- Coghlan Jr., S. M., and N. H. Ringler. 2005. Survival and bioenergetic responses of juvenile Atlantic salmon along a perturbation gradient in a natural stream. *Ecology of Freshwater Fish* 14:114-124.
- Coghlan Jr., S. M., and J. L. Lund. 2005. Rapid assessment of benthic faunal responses to a small petroleum spill in a headwaters stream. *Journal of Freshwater Ecology* 20(4):777-779.
- Coghlan Jr., S. M., and N. H. Ringler. 2004. A comparison of Atlantic salmon embryo and fry stocking in the Salmon River, New York. *North American Journal of Fisheries Management* 24:1385-1397.

## **PRESENTATIONS**

(\*undergraduate student author, \*\*graduate student author)

- Coghlan Jr., S.M. 2016. Limits to Growth Imposed by Peak Energy, Climate, and Debt: the Beginning of the End for Neoclassical Economics and Complex Industrialized Civilization. *Socialist and Marxist Study Series*, Feb 4, Orono, ME (invited).
- Coghlan Jr., S.M. 2016. Limits to Growth Imposed by Peak Energy, Climate, and Debt: a Grim Outlook for Wildlife, Ecologists, and the Academic-Industrial Complex Wildlife, Fisheries, and Conservation Biology Seminar Series, Oct. 18, Orono, ME (invited).
- Begley, M., S.M. Coghlan Jr., and J. Zydlewski. 2015. Understanding Commercial Harvest Impacts on White Suckers in Maine. 145th Annual Meeting of the American Fisheries Society. Portland Oregon. August 16-20 INVITED.
- Hogg, R., S.M. Coghlan Jr., J. Zydlewski, and K.S. Simon. 2015. Anadromous Sea Lampreys Recolonize a Maine Coastal River Tributary After Dam Removal: Ecosystem Engineers? 145th Annual Meeting of the American Fisheries Society. Portland Oregon. August 16-20.
- Watson, J., S.M. Coghlan, Jr., J. Zydlewski, D. Hayes, and I.A. Kiraly. 2015. Dam removal and fish passage improvement influence fish assemblages in the Penobscot River, Maine 145th Annual Meeting of the American Fisheries Society. Portland Oregon. August 16-20 INVITED.
- Weaver, D., S.M. Coghlan, Jr., and J. Zydlewski. 2015. Anadromous Sea Lamprey Influence Stream Food Webs in an Atlantic Coastal Stream 145th Annual Meeting of the American Fisheries Society. Portland Oregon. August 16-20 INVITED.
- Begley, M.A.\*\*, S.M. Coghlan, Jr., J. Zydlewski. 2015. Understanding Commercial Harvest Impacts on White Suckers in Maine. Poster presentation at: The University of Maine Graduate Research Exposition, April 2, Orono, ME.
- Watson, J.M.\*\*, S.M. Coghlan, Jr., J. Zydlewski, D.B. Hayes, and I. Kiraly. 2015. Fish Community Changes Associated With Dam Removal in the Penobscot River, Maine. Poster presentation at: The University of Maine Graduate Research Exposition, April 2, Orono, ME
- Begley, M.A.\*\*, S.M. Coghlan, Jr., J. Zydlewski. 2015. Understanding Commercial Harvest Impacts on White Suckers in Maine. Poster and oral presentation at: Maine Cooperative Fish and Wildlife Research Unit Annual Meeting, March 25, University of Maine, Orono, ME.



- Watson, J.M.\*\* , S.M. Coghlan, Jr., J. Zydlewski, D.B. Hayes, and I. Kiraly. 2015. Fish Community Changes Associated With Dam Removal in the Penobscot River, Maine. Poster presentation at: The USGS Cooperative Fish and Wildlife Research Unit Annual Meeting, March 25, University of Maine, Orono, ME
- Watson, J.M.\*\* , S.M. Coghlan, Jr., J. Zydlewski, D.B. Hayes, and I. Kiraly. 2015. Graduate Focus: A Summary. Oral presentation at: The USGS Cooperative Fish and Wildlife Research Unit Annual Meeting, March 25, University of Maine, Orono, ME
- Weaver, D. M.\*\* , S. M. Coghlan Jr., and J. Zydlewski. 2015. Anadromous sea lamprey influence stream nutrients and primary productivity. Poster presented at Maine Cooperative Fish and Wildlife Research Unit Annual Meeting, March 25, University of Maine, Orono, ME.
- Coghlan Jr., S.M., R. Hogg, I.A. Kiraly, K.S. Simon, J. Watson\*\*, D.M. Weaver\*\*, and J. Zydlewski. 2015. Effects of dam removals on fish populations and assemblages in the Penobscot River. Invited presentation at the Maine Science Festival, March 21, Bangor, ME.
- Begley, M.A.\*\* , S.M. Coghlan, Jr., and J. Zydlewski. 2015. Understanding Commercial Harvest Impacts on White Suckers in Maine. Poster presentation at 1st Annual Freshwater Symposium, January 29, University of Maine, Orono, ME.
- Watson, J.M.\*\* , S.M. Coghlan, Jr., J. Zydlewski, D.B. Hayes, and I. Kiraly. 2015. Fish Community Changes Associated With Dam Removal in the Penobscot River, Maine. Poster presentation at 1st Annual Freshwater Science Symposium, January 29, Orono, ME
- Weaver, D.M.\*\* , S.M. Coghlan Jr., and J. Zydlewski. 2015. Anadromous sea lamprey influence stream nutrients and primary productivity. Poster presented at 1st Annual Freshwater Science Symposium, January 29, University of Maine, Orono, ME.
- Weaver, D. M.\*\* , S. M. Coghlan Jr., and J. Zydlewski. 2014. Effects of anadromous sea lamprey as vectors of marine-derived nutrients in freshwater ecosystems. Presented at 144th Annual Meeting of the American Fisheries Society, August 17-21, Quebec City, Quebec.
- Begley, M.A.\*\* , S.M. Coghlan, Jr., J. Zydlewski. 2014. Impacts of Commercial Harvest on White Suckers. Oral presentation at: Department of Inland Fisheries and Wildlife Stakeholder Meeting, November 15, Bangor, ME.
- Begley, M.A.\*\* , S.M. Coghlan, Jr., J. Zydlewski. 2014. Impacts of Commercial Harvest on White Suckers. Oral presentation at: Maine Cooperative Fish and Wildlife Research Unit Annual Meeting, March 22, Orono, ME.
- Hogg, R., S.M. Coghlan Jr., K.S. Simon, and J. Zydlewski. 2014. Anadromous Sea Lampreys Recolonize a Maine Coastal River Tributary After Dam Removal: Ecosystem Engineers? Presented at Oregon Chapter AFS meeting, February 27, Eugene, Oregon.
- Weaver, D., S.M. Coghlan Jr., J. Zydlewski, and M. Canton. 2014. Anadromous Sea Lamprey *Petromyzon marinus* as vectors of marine-derived nutrients. Presented at the Atlantic Salmon and their Ecosystems Forum, Jan 10, Orono, ME

- Coghlan Jr., S.M. 2013. The elephant in the room: preparing the current generation of students for the limits to growth. Presented at the School of Biology and Ecology's weekly seminar series, April 12, Orono, ME (invited)
- Coghlan Jr., S.M. 2013. Current and future aquatic research at the University of Maine. Presented at the Maine Inland Fisheries and Wildlife Department's annual fisheries staff meeting, April 25, Bangor, ME (invited)
- Kocik, J., M. Guyette, and S.M. Coghlan Jr. 2013. Interactions among coevolved diadromous species and their implications for Atlantic salmon recovery. Presented at the Diadromous Species Restoration Science Meeting, Jan 10, Orono, ME (invited)
- Coghlan Jr., S.M. 2012. Improving Atlantic salmon and brook trout habitats from headwaters to mouth. Presented at the Androscoggin River Watershed Council's Annual Meeting, May 23, Auburn, ME (invited)
- Coghlan Jr., S.M. 2012. Impacts of spawning sea lamprey on foraging behaviors and growth potential of stream fishes". Presented at the Northeastern Natural History Conference, April 17, Syracuse, NY
- Coghlan Jr., S.M. and P.D. Damkot\*\*. Effects of large woody debris addition on wild brook trout and in-stream habitat in Western Maine. Presented at the Northeastern Natural History Conference, April 18, Syracuse, NY
- Kiraly, I.A. \*\*, S.M. Coghlan Jr., J. Zydlewski, and D.B. Hayes. 2012. Quantifying fish assemblage structure in the Penobscot River prior to dam removal. Presented at the Northeastern Natural History Conference, April 18, Syracuse, NY
- Coghlan Jr., S.M., R. Hogg\*\*, J. Zydlewski, C. Gardner, K. Simon, and R. Saunders. 2012. Effects of dam removal on anadromous fishes, resident fishes, and physical habitat in a coastal Maine stream. Presented at the Northeastern Natural History Conference, April 16, Syracuse, NY
- Kiraly, I.A. \*\*, S.M. Coghlan Jr., J. Zydlewski, and D.B. Hayes. 2012. Quantifying fish assemblage structure in the Penobscot River prior to dam removal. Presented at the Maine Water Conference, March 14, Augusta, ME
- Ashe, W.A. \*\*, S.M. Coghlan Jr., J.G. Trial, and J. Zydlewski. 2012. The growth and survival of stocked juvenile Atlantic salmon in small tributaries of the Machias River watershed. Presented at the Maine Water Conference, March 14, Augusta, ME
- Damkot, P.D. \*\* and S.M. Coghlan Jr. 2012. Influence of riparian forest structure on terrestrial invertebrate input and brook trout diet in headwater streams". Presented at the Maine Water Conference, March 14, Augusta, ME
- Coghlan Jr., S.M. and P.D. Damkot\*\*. 2012. Effects of large woody debris addition on wild brook trout and in-stream habitat in Western Maine. Presented at the Maine Water Conference, March 14, Augusta, ME
- Coghlan Jr., S.M. 2012. Restoring the Penobscot River: dam removal and recovery of native fishes. Presented at the Marine Environmental Research Institute's Rachel Carson Seminar Series, Blue Hill, ME. Jan 26 (invited)

- Coghlan Jr., S.M. 2012. Impacts of spawning sea lamprey on foraging behaviors and growth potential of stream fishes. Presented at the Atlantic Salmon and their Ecosystem Research Forum, January 10, Orono, ME
- Ashe, W.A. \*\*, S.M. Coghlan Jr., J.G. Trial, and J. Zydlewski. 2012. Growth and survival of stocked juvenile Atlantic salmon in small tributaries of the Machias River watershed. Presented at the Atlantic Salmon and their Ecosystem Research Forum, January 10, Orono, ME
- Hogg, R. \*\*, S.M. Coghlan Jr., J. Zydlewski, and C. Gardner. 2012. Barrier removal in Sedgeunkedunk Stream: sea lamprey recolonization and implications for Atlantic salmon restoration. Presented at the Atlantic Salmon and their Ecosystem Research Forum, January 10, Orono, ME
- Coghlan Jr., S. M., R. Hogg\*\*, J. Zydlewski, R. Saunders, and K. S. Simon. 2011. Barrier removal and range expansion of sea lamprey: quantifying habitat conditioning in Atlantic salmon nursery streams. Presented at the 141st annual American Fisheries Society National Conference, Seattle, WA. Sep 5-7 (invited).
- Coghlan Jr., S. M., and P. D. Damkot\*\*. 2011. Effects of large woody debris addition on brook trout and in-stream habitats in western Maine. Presented at the 141st annual American Fisheries Society National Conference, Seattle, WA. Sep 5-7.
- Ashe, W.\*\*, and S. M. Coghlan Jr. 2011. Atlantic salmon growth and survival as an indicator of habitat quality in small tributaries of the Machias River watershed. Presented at the 141st annual American Fisheries Society National Conference, Seattle, WA. Sep 5-7.
- Damkot, P. D.\*\*, and S. M. Coghlan Jr. 2011. The influence of riparian forest characteristics on terrestrial invertebrate input and brook trout diet in headwater streams. Presented at the 141st annual American Fisheries Society National Conference, Seattle, WA. Sep 5-7.
- Saunders, R., S. M. Coghlan Jr., J. Zydlewski, and T. F. Sheehan. 2011. Dam removal allows recolonization of historic habitat by three species of anadromous fish in Sedgeunkedunk Stream, Maine. Presented at the 141st annual American Fisheries Society National Conference, Seattle, WA. Sep 5-7 (invited).
- Hogg, R.\*\*, S. M. Coghlan Jr., J. Zydlewski, and C. Gardner. 2011. Barrier removal in Sedgeunkedunk Stream: sea lamprey recolonization and resident fish community dynamics. Presented at the 141st annual American Fisheries Society National Conference, Seattle, WA. Sep 5-7.
- Ashe, W.\*\* and S.M. Coghlan Jr. 2011. Atlantic salmon (*Salmo salar*) growth and survival as an indicator of habitat quality in tributaries of the Machias River watershed. Poster presented at Maine Water Resource Research Institute – 2011 Maine Water Conference, Augusta, ME, Mar 17.
- Hogg, R. \*\*, S.M. Coghlan Jr., J. Zydlewski, K. Simon, C. Gardner\*\*, S. Ratten. 2010. Barrier removal in Sedgeunkedunk Stream: Sea lamprey recolonization and implications for Atlantic salmon habitat restoration. 140th Annual Meeting of the American Fisheries Society. Pittsburgh, Pennsylvania. Sep 13-16.
- Demi, L. M. \*\*, K.S. Simon, S.M. Coghlan Jr., R. Saunders, and D. Anderson. 2010. Anadromous alewives in linked lake-stream ecosystems: can trophic interactions in lakes influence streams? Joint

meeting of the American Society for Limnology and Oceanography and the North American Benthological Society. Santa Fe, New Mexico, June 2.

Coghlan Jr., S. M., S. Ratten, C. Gardner\*\*, R. Hogg\*\*, J. Zydlewski, and K. Simon. 2010. Barrier removal and range expansion in sea lamprey: quantifying habitat conditioning in small streams. Presented at the 2010 Maine Sea Grant Research Symposium, Orono, ME. Mar 22.

Ashe, W. A. \*\* and S. M. Coghlan Jr. 2010. Survival and growth of stocked Atlantic salmon in 1st and 2nd order tributaries of the Machias River. Presented at the Atlantic Salmon and Their Ecosystems research forum, Orono, ME. Jan 6-7.

Gardner, C. \*\*, S. M. Coghlan Jr., and J. Zydlewski. 2010. Monitoring changes in resident and anadromous fish communities in Sedgeunkedunk stream after barrier removal. Presented at the Atlantic Salmon and Their Ecosystems research forum, Orono, ME. Jan 6-7.

R. Hogg\*\*, S. M. Coghlan Jr., S. A. Ratten, C. Gardner\*\*, J. Zydlewski, and K. Simon. 2010. Barrier removal in Sedgeunkedunk stream: lamprey colonization and implications for salmon habitat restoration. Presented at the Atlantic Salmon and Their Ecosystems research forum. Orono, ME. Jan 6-7

Wathen, R. A. \*\*, S. M. Coghlan Jr., J. D. Zydlewski, and J. G. Trial. 2010. Interactive ecology of Atlantic salmon and smallmouth bass: a tale of three experiments. Presented at the Atlantic Salmon and Their Ecosystems research forum, Orono, ME. Jan 6-7.

Coghlan Jr., S. M., J. Zydlewski, R. A. Wathen\*\*, C. Gardner\*\*, S. Ratten, R. Hogg\*\*, and K. Simon. 2010. Penobscot River research summary. Presented at the Penobscot Science Exchange / Diadromous Species Research and Restoration Network Meeting, Orono, ME. Jan 26.

Coghlan Jr., S. M. 2009. Lyrical Fisheries Research. Invited musical performance at the 35th Annual Meeting of the Atlantic International Chapter of the American Fisheries Society, Shelburne, NH. Sep 20-22.

Coghlan Jr., S. M., S. Ratten, C. Gardner\*\*, J. Zydlewski, and K. Simon. 2009. Barrier removal and range expansion in sea lamprey: quantifying habitat conditioning in small streams. Presented at the 35th Annual Meeting of the Atlantic International Chapter of the American Fisheries Society, Shelburne, NH. Sep 20-22.

Stern, J., S. M. Coghlan Jr., and P. D. Damkot\*\*. 2009. Chop and Drop in Western Maine Streams. Presented at the 35th Annual Meeting of the Atlantic International Chapter of the American Fisheries Society, Shelburne, NH. Sep 20-22.

Wathen, R. A. \*\*, S. M. Coghlan Jr., J. D. Zydlewski, and J. G. Trial. 2009. Interactive ecology of Atlantic salmon and smallmouth bass: a tale of three experiments. Presented at the 35th Annual Meeting of the Atlantic International Chapter of the American Fisheries Society, Shelburne, NH Sep 20-22.

Coghlan Jr., S.M. 2009. A fish-eye view of Atlantic salmon habitat in Maine streams: restoration from a bioenergetics perspective. Presented at the Project SHARE annual research conference, Orono, ME.

- Gardner, C. G.\*\*, S. M. Coghlan Jr., J. Zydlewski, R. A. Saunders, and K. R. Ravana\*. 2008. Monitoring the response of resident fish communities and anadromous species to dam removals on Sedgeunkedunk Stream, Maine. Presented at the 138th annual American Fisheries Society Annual Conference, Ottawa, ON.
- Wathen, R. A. \*\*, S. M. Coghlan Jr., J. Zydlewski, and J. G. Trial. 2008. A controlled invasion: do exotic smallmouth bass compete for habitat with Atlantic salmon? Presented at the American Fisheries Society Annual Conference, Ottawa, ON.
- Shepard, S., K. Beland, R. Saunders, and S.M. Coghlan Jr. 2007. Dam removal and rock ramp fish passage to restore Sedgeunkedunk Stream alewife and Atlantic salmon populations. Presented at the Annual Meeting of the Atlantic International Chapter of the American Fisheries Society, French Village, NB. Sep 23-23.
- Coghlan Jr., S.M., R. Hannigan, M.S. Lyerly\*, T.R. Bly, J. Williams, and D. Bowman. 2007. Using otolith chemistry to discriminate among salmonine stocks in a tailwater system. Poster presented at the American Fisheries Society National Conference, San Francisco, CA. Sep 2-5.
- Wathen, R.A. \*\*, J. Zydlewski, S.M. Coghlan Jr., and C. Jackson\*\*. 2007. Construction of an artificial stream to assess interactions between Atlantic salmon and smallmouth bass. Poster presented at the American Fisheries Society National Conference, San Francisco, CA. Sep 2-5.
- Coghlan Jr., S.M., M.J. Connerton\*\*, and N.H. Ringler. 2006. Does temperature mediate the coexistence of Atlantic salmon and rainbow trout in Lake Ontario tributaries? Presented at the American Fisheries Society National Conference, Lake Placid, NY.
- Coghlan Jr., S.M., G. R. Cain\*, and N.H. Ringler. 2006. Prey selection of subyearling Atlantic salmon and rainbow trout coexisting in a natural stream. Presented at the American Fisheries Society National Conference, Lake Placid, NY.
- Coghlan Jr., S.M., M.S. Lyerly\*, T. R. Bly, J. Williams, D. Bowman, and R. Hannigan. 2006. Otolith chemistry distinguishes between hatchery and wild salmonines in a tailwater system. Presented at the American Fisheries Society National Conference, Lake Placid, NY.
- Coghlan Jr., S.M., J.V. Mead\*\*, P.F. Thompson\*\*, and L. Castello\*\*. Moderator of discussion panel / symposium "Fisheries and the End of Cheap Oil", American Fisheries Society National Conference, Lake Placid, NY.
- Medlin, E. \*\*, S. M. Coghlan Jr., and R. A. Hannigan. 2006. Using otolith chemistry to investigate stock structure and natal homing of walleye in the Little Red River, AR. Presented at the American Fisheries Society National Conference, Lake Placid, NY.
- Coghlan Jr., S.M., and B. Czech. 2006. Economic growth and fisheries conservation: empirical and theoretical considerations. Presented at the Southeast Division American Fisheries Society Conference, San Antonio, TX.
- Coghlan Jr., S.M., and R. A. Hannigan. 2005. Use of otolith chemistry to investigate philopatry within a tailwater brown trout population. Presented at the American Fisheries Society National Conference, Anchorage, AK.

- Coghlan Jr., S.M., and N. H. Ringler. 2005. Survival and energetic responses of juvenile Atlantic salmon to a pollution gradient in a natural stream. Poster presented at the American Fisheries Society National Conference, Anchorage, AK.
- Coghlan Jr., S.M., Stewart, D. J., A. J. Sheldon, and D. Carlson. 2005. Historical changes in a headwaters stream fish community. Poster presented at the American Fisheries Society National Conference, Anchorage, AK
- Coghlan Jr., S.M., and R. A. Hannigan. 2005. Use of otolith microchemistry to investigate natal homing within a fluvial brown trout population. Presented at the Joint Meeting of Arkansas Chapters of American Fisheries Society, Society of American Foresters, and The Wildlife Society, Russellville, AR.
- Coghlan, S.M., and N. H. Ringler. 2005. Survival and energetic responses of juvenile Atlantic salmon to a perturbation gradient. Presented at the Joint Meeting of Arkansas Chapters of American Fisheries Society, Society of American Foresters, and The Wildlife Society, Russellville, AR.
- Stewart, D. J., A. J. Sheldon, S. M. Coghlan Jr., and D. Carlson. 2005. A 40-year change in fish communities in headwaters of the Susquehanna River: minnows and killifish bite the silt. Presented at the New York Chapter American Fisheries Society Meeting, Canandaigua, NY.
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2004. Temperature-dependent competitive effects exerted on age-0 Atlantic salmon by juvenile rainbow trout. Presented at the 60th Annual Northeast Fish and Wildlife Conference, Ocean City, MD.
- Coghlan Jr., S.M. \*\*, M.J. Connerton\*\*, N.H. Ringler, D.J. Stewart, and J.V. Mead\*\*. 2004. Survival and bioenergetic responses of juvenile salmonines to multiple environmental gradients in tributaries in the Lake Ontario watershed. Presented at the 60th Annual Northeast Fish and Wildlife Conference, Ocean City, MD
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2004. Temperature-dependent competition among juvenile salmonines, and implications for the Lake Ontario watershed. Presented at the International Association of Great Lakes Research Annual Conference, Windsor, ON.
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2003. Survival and growth responses of juvenile Atlantic salmon to a perturbation gradient. Presented at the 59th Annual Northeast Fish and Wildlife Conference, Newport, RI.
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2002. Temperature-dependent competition among juvenile salmonines, and implications for Atlantic salmon restoration. Presented at the 58th Annual Northeast Fish and Wildlife Conference, Portland, ME.
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2002. Atlantic salmon in the Onondaga Lake watershed: past, present, and future. Presented at the Salt City Chapter of the American Water Resources Association, Syracuse, NY.
- Coghlan, S.M. \*\*, A.J. Storch\*, and N.H. Ringler. 2002. Temporal and spatial variation in feeding of sympatric juvenile salmonines: testing for the occurrence of interspecific competition, and implications for native species restoration. Presented at the New York Chapter American Fisheries Society annual meeting, Canandaigua, NY.

- Coghlan Jr., S.M. \*\*, D.J. Stewart, and R. Barriga-Salazar. 2001. Spatial and temporal patterns of pelagic fish larvae drifting in lowland rivers of eastern Ecuador. Presented at the 81st annual meeting of the American Society of Ichthyologists and Herpetologists, State College, PA.
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2001. The status of Atlantic salmon in the Salmon River, NY. Presented at the Salt City Chapter of the American Water Resources Association, Syracuse, NY.
- Coghlan Jr., S.M. \*\*, and N.H. Ringler. 2001. Atlantic salmon (*Salmo salar*) survival and growth: testing two methods of reintroduction, and potential limitations on restoration. Presented at the 57th annual Northeast Division Fish and Wildlife Conference, Saratoga Springs, NY.
- Coghlan Jr., S.M.\*\*, and N.H. Ringler. 2001. Comparing the efficacy of stocking embryos vs. fry of Atlantic salmon (*Salmo salar*), and implications for restoration. Presented at the New York chapter American Fisheries Society annual meeting, Owego, NY (won “Best Student Paper” award).
- Coghlan Jr., S.M.\*, J. Dembeck\*\*, K. Preiser, T. Freidrich, and P. Renne. 1998. Comparisons of two methods of stocking brown trout: effects on survival, movement, and angling susceptibility. Presented at SUNY-ESF’s Spotlight on Undergraduate Research, Syracuse, NY.

## **INVITED LECTURES**

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/14/2015

The fundamental and irreconcilable conflict between economic growth and ecological sustainability. Invited lectures to WLE 230 (Introduction to Wildlife Conservation), University of Maine, Orono, 4/14, 4/16, 4/21, and 4/23/2015.

A fish-eye view of instream habitat. Guest lecturer at Kennebec Valley Trout Unlimited’s monthly meeting, Waterville, ME. 3/9/2015.

Diversity and natural history of fishes in the Northeastern United States. Guest lecture to BIO 4xx (River Ecology), University of Maine, Orono, ME 9/29/2014.

Fly fishing for trout and salmon in Central New York: a stream for all seasons. Guest lecturer at University of Maine Student Subunit of the American Fisheries Society monthly meeting, Orono, ME, 9/23/2014.

Fish / forestry interactions. Guest lecture / field demonstration for FTY 101 (Introduction to Forest Resources), Tanglewood Education Center, Lincolnville, ME 8/26/2014

Penobscot River fisheries and electrofishing demonstration. Guest lecture / field demonstration at Hirundo Wildlife Refuge field days, Alton, ME, 8/17/2014.

Collection, identification, and natural history of Maine's freshwater fishes. Trout Unlimited Youth Trout Camp, North Anson, ME 6/26/2014.

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/13/2014

Summary of UMaine's fisheries research programs. Presented at the Maine Department of Inland Fisheries and Wildlife Annual Staff Meeting, Bangor, ME. 4/25/2014

The fundamental and irreconcilable conflict between economic growth and ecological sustainability. Invited lecture to WLE 230 (Introduction to Wildlife Conservation), University of Maine, Orono, 4/17/2014

How I became an aquatic ecologist, and other tales of excitement and intrigue. Invited lecture to WLE 100 (Introduction to Wildlife Seminar), University of Maine, Orono, ME. 11/8/2013

Fish / forestry interactions. Guest lecture / field demonstration for FTY 101 (Introduction to Forest Resources), Tanglewood Education Center, Lincolnville, ME 8/27/2013

Collection, identification, and natural history of Maine's freshwater fishes. Trout Unlimited Youth Trout Camp, North Anson, ME 6/27/2013.

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/17/2013

Otolith chemistry as a tool for fisheries management. UMaine Student Chapter of the American Fisheries Society meeting, Orono, ME 2/21/2013.

Restoring the Penobscot River: dam removal and recovery of Native Fishes. Maine Maritime Academy Department of Ocean Studies' Seminar Series, Castine, ME 12/3/2012.

How I became an aquatic ecologist, and other tales of excitement and intrigue. Invited lecture to WLE 100 (Introduction to Wildlife Seminar), University of Maine, Orono, ME. 11/12/2012

Fish / forestry interactions. Guest lecture / field demonstration for FTY 101 (Introduction to Forest Resources), Tanglewood Education Center, Lincolnville, ME 8/29/2012

Ecology and conservation of Maine's Freshwater Fishes. Kezar Lake Watershed Association's monthly meeting, Lovell, ME 8/22/2012.

Restoring the Penobscot River: dam removal and recovery of native fishes. Carrabec High School's Diversity Day, North Anson, ME 4/23/2012.

Dam removal and recovery of Maine's native fishes. Hirundo Wildlife Refuge's Summer Activities Series, Alton, ME 8/18/2012

Collection, identification, and natural history of Maine's freshwater fishes. Trout Unlimited Youth Trout Camp, North Anson, ME 6/26/2012.

Fly fishing in Central New York: a stream for all seasons. Kennebec Valley Trout Unlimited / Maine Sportsmen's Show, Augusta, ME 3/31/2012



Aquatic life through the ice: winter ecology of fish and invertebrates. Maine Audubon Fields Pond Nature Center Winter Activity Series, Holden, ME 2/3/2012

How I became an aquatic ecologist, and other tales of excitement and intrigue. Invited lecture to WLE 100 (Introduction to Wildlife Seminar), University of Maine, Orono, ME. 11/09/2011

Penobscot River fish community: past, present, and future. Guest lecture for Northaven High School's field experience in ecology summer program, Chesuncook, ME 9/14/2011

Fish / forestry interactions. Guest lecture / field demonstration for FTY 101 (Introduction to Forest Resources), Tanglewood Education Center, Lincolnville, ME 7/24/2011

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for Trout Unlimited's Youth Trout Camp, Solon, ME 7/1/2011

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/13/2011

The fundamental conflict between economic growth and environmental conservation. Invited lecture to WLE 230 (Introduction to Wildlife Conservation), University of Maine, Orono, 4/12/2011

Barrier removal and range expansion of sea lamprey: effects on Atlantic salmon nursery streams. Presented at Maine Sportsmen's Show / Kennebec Valley Chapter of Trout Unlimited, Augusta, ME. 4/02/2011

Winter ecology of lake fishes and techniques of ice fishing. Guest lecture / field demonstration for Maine Audubon community program, Fields Pond, Holden, ME 1/21/2011.

Fish natural history and identification. Guest lecture / field demonstration for WLE 423 (Wetlands Ecology), held at Fields Pond Nature Center, Holden, ME 10/01/2010.

Sea Lamprey in Sedgeunkedunk Stream. Presented at Sedgeunkedunk Stream Celebration Symposium, Holden, ME, 9/17/2010.

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for Trout Unlimited's Youth Trout Camp, Solon, ME 6/29/2010

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/12/2010

The fundamental conflict between economic growth and environmental conservation. Invited lecture to WLE 230 (Introduction to Wildlife Conservation), University of Maine, Orono, 4/23/2010

Brook trout research in Western Maine. Presented at Maine Sportsmen's Show / Kennebec Valley Chapter of Trout Unlimited, Augusta, ME. 4/02/2010.

Brook trout research in Western Maine. Invited talk to annual Stream Research Group Meeting, Maine Department of Inland Fisheries and Wildlife, Bangor, ME 1/14/2010.

Fish / benthos relations. Invited lecture to BIO 430 (Ecology and Systematics of Aquatic Insects), University of Maine, Orono, ME 11/23/2009.

How I became an aquatic ecologist, and other tales of excitement and intrigue. Invited lecture to WLE 100 (Introduction to Wildlife Seminar), University of Maine, Orono, ME. 11/12/2009.

Aquatic entomology. Invited field lecture / demonstration to BIO 326 (General Entomology). University of Maine, Orono and Orrington, ME. 9/27/2009.

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for Trout Unlimited's Youth Trout Camp, Solon, ME 6/26/2009

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/16/2009

The fundamental conflict between economic growth and environmental conservation. Invited lecture to WLE 230 (Introduction to Wildlife Conservation), University of Maine, Orono, 4/14/2009.

Fish habitat. Invited lecture to WLE 450 (Habitat Analysis), University of Maine, Orono, 4/9/2009

A fish-eye view of habitat. Presented at the Project SHARE annual board meeting, Whitneyville, ME. 3/12/2009.

Summary of UMaine's fisheries research programs. Presented at the Maine Atlantic Salmon Joint Staff Meeting, Eddington, ME. 12/19/2008

Fish community structure in the Sedgeunkedunk Stream. Presented at the Lower Penobscot Watershed Council Meeting, Rockland, ME. 9/20/2008.

Brook trout research in Western Maine. Presented at the Eastern Brook Trout Joint Venture regional planning meeting, Waterville, ME. 5/12/2008.

Ecology, natural history, and collection of Maine fishes. Guest lecture / field demonstration for WLE 250 (Field Ecology), Friedman Field Station, Edmunds, ME. 5/10/2008

Interactive ecology of Atlantic salmon and smallmouth bass in Maine rivers. Presented at Maine Sportsmen's Show / Trout Unlimited, Augusta, ME. 3/29/2008.

Brook trout ecology in Maine: current research and new directions. Presented at Maine Department of Inland Fisheries and Wildlife fisheries staff meeting, 10/14/2007.

Interactive ecology of Atlantic salmon and smallmouth bass. Presented at the Maine Atlantic Salmon Commission's Technical Advisory Committee meeting, Bangor, ME. 7/12/2007.

Atlantic salmon restoration in the Lake Ontario and Finger Lakes watersheds, NY. Maine Atlantic Salmon Joint Staff Meeting, Eddington, ME 12/19/06.

The fundamental conflict between economic growth and fish and wildlife conservation. American Fisheries Society, University of Maine Student Subunit, Orono, ME. 11/7/06.

How I became an aquatic ecologist, and other tales of excitement and intrigue. Introduction to Wildlife Seminar, University of Maine, Orono, ME. 11/2/06.

Distribution and abundance of stream macroinvertebrates: energetic considerations. General Ecology Laboratory, Arkansas State University, Jonesboro, AR. 3/27/06 and 3/29/06.

The fundamental conflict between economic growth and fisheries and wildlife conservation. Joint Student Chapter of the American Fisheries Society and The Wildlife Society, Arkansas State University, Jonesboro, AR. 12/2/05.

Otoliths: a key to reconstructing fish life history. Student Chapter of American Fisheries Society, University of Arkansas. Fayetteville, AR. 11/6/05.

Feeding ecology of trout and salmon. Northeast Arkansas Fly-fishers meeting, Jonesboro, AR, 10/20/05

An introduction to otolithology: what can fish earstones tell us about life history? Graduate Fish Ecology class, University of Arkansas Pine Bluff, 3/22/05.

Atlantic salmon restoration in the Lake Ontario watershed. Environmental Science Seminar Series, Arkansas State University, 10/15/04.

Natural history, ecology, and identification of New York State fishes: Petromyzontidae, Acipenseridae, Polyodontidae, Lepisosteidae, Amiidae, Anguillidae, Clupeidae, and Cyprinidae. Ichthyology class, SUNY-ESF, 2/17/04.

Natural history, ecology, and identification of New York State fishes: Catostomidae, Ictaluridae, Salmonidae, Osmeridae, Esocidae, and Umbridae. Ichthyology class, SUNY-ESF, 2/24/04.

Natural history, ecology, and identification of New York State fishes: Percopsidae, Gadidae, Atherinidae, Fundulidae, Moronidae, Centrarchidae, Percidae, and Cottidae. Ichthyology class, SUNY-ESF, 3/08/04.

The skeletal and muscular systems of fishes. Ichthyology class, SUNY-ESF, 3/06/04.

Applied regression analysis in aquatic research. Introduction to Statistics class, SUNY-ESF, 10/03/03.

Graduate research spotlight: the ecology of Atlantic salmon in New York State. General Zoology class, SUNY-ESF, 11/17/03.

Homeostasis in fishes. Ichthyology class, SUNY-ESF, 3/12/03.

Atlantic salmon: past, present, and future. 11th grade Environmental Sciences class, Cicero-North Syracuse High School (NY), 4/18/02.

The evolution, structure, and function of silk in Trichoptera. AquaLunch Seminar Series, SUNY-ESF, 2/6/01.

The ecology of migratory salmonines in the Owasco Lake watershed. Fall Creek Chapter of Trout Unlimited, 5/3/99.

Fall fishing opportunities in Central New York. SUNY-ESF Chapter of the American Fisheries Society meetings, September 1998, 1999, 2000, 2001, 2002, 2003.

The ecology of fly-fishing. SUNY-ESF Chapter of the American Fisheries Society meetings, March 1999, 2000, 2001, 2002, 2003.

## **INTERVIEWS, OTHER MEDIA EXPOSURE, AND OUTREACH**

“The hated, invasive parasite that’s actually a key part of its ecosystem”, 4/13/2015:  
<http://nautil.us/blog/the-hated-invasive-parasite-thats-actually-a-key-part-of-its-ecosystem>

"River Reviver." UMaine Today Magazine, 12/31/2012: <http://umainetoday.umaine.edu/past-issues/winter-2012/river-reviver/>

“Sea lamprey, dam removal, and habitat restoration.” Produced by Maine Sea Grant, 5/25/2012:  
<http://www.youtube.com/watch?v=9VZX8HU-BRA>

"The Penobscot undammed: restoring the river." MPBN's Speaking in Maine, 2/10/2012:  
<http://www.mpbn.net/OnDemand/AudioOnDemand/SpeakingInMaine/tabid/294/ctl/ViewItem/mid/3480/ItemId/20207/Default.aspx#.TzhO9y15TeI.facebook>

“Lamprey Thriving in Sedgeunkedunk Stream”, Bangor Daily News, 7/24/2011:  
<http://bangordailynews.com/2011/06/24/outdoors/misunderstood-lamprey-thriving-in-sedgeunkedunk-stream/>

“Fish Return to Sedgeunkedunk Stream”, Bangor Daily News, 7/14/2010:  
<http://www.bangordailynews.com/detail/148875.html>

“Migratory Fish Inch Up Sedgeunkedunk Stream in Wake of Dam Removals”, WLBZ2, 6/18/2010:  
<http://www.wlbz2.com/news/local/story.aspx?storyid=119177>

“UMaine Students Study Fish in Pushaw Stream”, WLBZ2, 6/7/2010:  
<http://www.wlbz2.com/news/local/story.aspx?storyid=118722>

“Ecology and conservation of brook trout in western Maine”, Kennebec Journal, 6/2/2008:  
<http://morningsentinel.mainetoday.com/sports/stories/5218102.html>

Collector and taxonomic expert for Acadia National Park BioBlitz: Aquatic Insects. Acadia National Park / Schoodic Education and Research Center Institute, 7/13/2012, Winter Harbor, ME, USA.

## **GRADUATE STUDENT ADVISING**

Jonathan Watson, University of Maine (MS advisor). 2014 – present. “Fish assemblage responses to dam removal in the Penobscot River”

Megan Begley, University of Maine (MS co-advisor). 2014 – present. “Effects of commercial harvesting on white sucker populations”

Dan Weaver, University of Maine (PhD co-advisor). 2013 – present. “Functional role of sea lamprey in stream food webs”.

Betsy Irish, University of Maine (PhD committee member). 2013 – present. “Marine-derived nutrient cycling in the St. Croix River watershed”

Thoman Evans, SUNY-ESF (PhD committee member). 2014 – present. “Using otolith chemistry to study fish migration and foraging”.

Ian Kiraly, University of Maine (MS advisor). 2010 – 2013. “Quantifying the effects of dam removal on the structure and function of fish communities in the Penobscot River”.

Rob Hogg, University of Maine (MS co-advisor). 2009 – 2013. “Barrier removal and range expansion of sea lamprey: quantifying effects on Atlantic salmon nursery streams”.

Wes Ashe, University of Maine (MS advisor). 2009 – 2012. “Production of Atlantic salmon in headwater streams”.

Paul Damkot, University of Maine (MS advisor). 2007 – 2011. “Riparian forest effects on brook trout energetics: interactions between water temperature and prey availability”.

Richard Wathen, University of Maine (MS co-advisor). 2007- 2010. “Interactive ecology of Atlantic salmon, smallmouth bass, and brook trout”.

Cory Gardner, University of Maine (MS co-advisor). 2007 – 2010. “Fish community response to dam removal on Sedgeunkedunk Stream, a small tributary of the Penobscot River”.

Elizabeth Medlin, Arkansas State University (MS co-advisor). 2005-2008. “Using otolith chemistry to identify natal homing in walleye of the Little Red River, AR”.

Stefanie Kroll, SUNY-ESF (PhD, committee member). 2009 – present. “Measuring the effects of current and future flow regimes on the macroinvertebrate community of the Upper Segura Watershed (Albacete, Spain) and comparisons with the Salmon River (NY, USA).”

Jeff Veiser, University of Maine (MS, committee member). 2012 – present. “Assessment of fish communities in Cobscook Bay”

Quenton Tuckett, University of Maine (PhD, committee member). 2012 – present. “XXXXXX”

Andy O’Malley, University of Maine (MS, committee member). 2013 – present. “XXXX”

Heather Arnett, University of Maine (PhD, committee member). 2010 – present. “XXXXXX”

Katie Norris, University of Maine (MS, committee member). 2010 – present. “Nutrient limitation in Maine streams and the effects of alewife spawning migrations.”

Ed Hughes, University of Maine (MWC, committee member). 2009 – present. “Migration patterns of adult Atlantic salmon in the Penobscot River.”

Silas Ratten, University of Maine (MS, committee member). 2010 – present. “Ecology of lake whitefish in Maine.”

Lee Demi, University of Maine (MS, committee member). 2007 – 2009. “Anadromous alewives in linked lake stream ecosystems: can trophic interactions in lakes influence streams?”

### **UNDERGRADUATE STUDENT RESEARCH MENTORING**

Nick Cormier, University of Maine (advisor, EES independent study). 2015. “XXXXX”

Darlene Turcotte, University of Maine (Honor’s Thesis committee member). 2013 – 2014. “XXXX”

Kathryn Chenard, University of Maine (Honor’s Thesis committee member). 2011 - 2012. “XXXX”

Hannah McDaniel, University of Maine (Honor’s Thesis committee member). 2010 – 2011. “Phenotypic divergence within and among populations of redbreast sunfish in Maine lakes.”

Ben Wasserman, University of Maine (Honor’s Thesis committee member). 2007 – 2008. “Evolutionary response of guppies to predation in Trinidad streams.”

Michael Lyerly, Arkansas State University. 2005-2006. “Otolith chemistry discriminates between wild and stocked salmonines in the Little Red River tailwater system, AR” (won Best Student Paper Award at the University of Memphis’ Undergraduate Research Conference, Memphis, TN 2/27/06).

Kyle Schumann, University of Alaska-Fairbanks. 2005. “Using tissue chemistry to identify natal homing in *Isonychia* mayflies” (NSF-RISE intern).

James Willacker, SUNY-ESF. 2004. “Temporal and taxonomic variability of invertebrate drift in Decker Creek, NY”.

Jessica Fischer, SUNY-ESF. 2004. “Effect of abiotic variables on juvenile Atlantic salmon survival in Great Lakes tributaries”.

Elizabeth DeAngelo. SUNY-ESF. 2004. “Effect of water quality on juvenile Atlantic survival in Great Lakes tributaries”.

Rich Chiavelli, SUNY-ESF. 2003. “Survey of rare, threatened, and endangered fishes in New York State”.

David Messmer, SUNY-ESF. 2003. “Temporal and taxonomic variability of invertebrate drift in Dresserville Creek, NY”.

Gerrit Cain, SUNY-ESF. 2002. “Feeding ecology of juvenile Atlantic salmon”.

Chrisman Starczek, SUNY-ESF. 2002. “Laboratory consumption and respiration estimates of juvenile rainbow trout”.

James Beasely, SUNY-ESF. 2002. “Production of wild rainbow trout and stocked Atlantic salmon in Finger Lakes tributaries”.

Adam Storch, SUNY-ESF. 2001. “Food partitioning among sympatric juvenile salmonines in the Owasco Inlet, NY”.

Theodore Smith, SUNY-ESF. 2001. "Food partitioning among sympatric juvenile salmonines in Hemlock Creek, NY".

Joe Mizstal, SUNY-ESF. 2000. "Fish community variation along a stream gradient in Sterling Creek, NY".

Rich Chiavelli, SUNY-ESF. 2000. "Fish community variation along a stream gradient in Tioughnioga River, NY".

Stefanie Kroll, SUNY-ESF. 1999. "Production of wild steelhead and stocked juvenile salmon in the Salmon River, NY".

Everett McNeill, SUNY-ESF. 1998. "Competition between Atlantic salmon and brown trout juveniles".

Amy Dunbar, SUNY-ESF. 1998. "Migratory patterns of reproductive steelhead in Finger Lakes tributaries".

## **HONORS / AWARDS**

### **SUNY-ESF:**

Wilford A. Dence Fellowship, 2003-2004

Graduate Student Association Award for Community Service, 4/03

Graduate Alumni Scholarship Honorable Mention, 4/02 and 4/03

Edna Bailey Sussman Scholarship, 6/98 to 8/98

Undergraduate Alumni Scholarship, 8/97 to 5/98

President's List, 8/97 to 1/00

Nominated twice for "Teaching Assistant of the Year" award

International Association of Great Lakes Research (IAGLR):

Paul W. Rodgers Scholarship, 6/01

### **Northeast Division American Fisheries Society**

Student Travel Award, 2003 and 2004

### **New York Chapter American Fisheries Society:**

Best Student Paper Award, 1/01

Cayuga Community College:

Honors Scholarship, 8/93 to 6/95

Alumni Scholarship, 8/93 to 6/94

President's List, 8/93 to 6/95

## **FUNDING SOUGHT**

*Improving assessment of critical habitat for Atlantic salmon in a rapidly-changing climate: unraveling the impacts of temperature, flow, prey availability, and competitors on juvenile performance*, submitted to Maine Sea Grant for **\$88,720**, awarded to Hamish Grieg (50%) and SMC (50%)

*Quantifying the structure of fish assemblages in the Penobscot River and subsequent changes due to dam removal (Phase 2 - post removal monitoring)*, submitted to Penobscot River Restoration Trust / NOAA for **\$58,600**, awarded to SMC (75%) and JZ. 2016.

*Expanding experiential learning in freshwater fisheries techniques and management*, submitted to the UM College of Natural Sciences, Forestry, and Agriculture – Student Unified Fees Award. **\$8,000** for repairs and maintenance of backpack electrofishers, awarded to SMC on behalf of the Department of Wildlife Ecology. 2016.

*Assessing the distribution and abundance of three species of rare fish in Maine*, submitted to Maine Department of Inland Fish and Wildlife State Wildlife Grants Program for **\$32,778** (pending). SMC (100%). 2015

*Quantifying the structure of fish assemblages in the Penobscot River and subsequent changes due to dam removal (Phase 2 - post removal monitoring)*, submitted to Penobscot River Restoration Trust / NOAA for **\$67,601**, awarded to SMC (75%) and JZ. 2014.

*Expanding experiential learning in freshwater fisheries techniques and management*, submitted to the UM College of Natural Sciences, Forestry, and Agriculture – Student Unified Fees Award. **\$9,529** for purchase of backpack electrofisher, awarded to SMC on behalf of the Department of Wildlife Ecology. 2014.

*Closing the loop: quantifying the importance of anadromous sea lamprey as vectors and processors of marine-derived nutrients and energy in Maine watersheds*, submitted to Maine Sea Grant for \$112,572 (declined)

*Distribution and abundance of sea-run and resident fishes in the Penobscot River watershed*, submitted to Maine Outdoor Heritage Fund for **\$16,930** awarded to SMC (75%) and JZ. 2012

*Quantifying the effects of dam removal on the structure and function of Penobscot River fish assemblages*, submitted to Penobscot River Restoration Trust / American Recovery and Reinvestment Act. Supplemental **\$2,000**, awarded to SMC (75%) and JZ. 2012.

*Experiential learning in aquatic ecology*, submitted to the UM College of Natural Sciences, Forestry, and Agriculture – Student Unified Fees Award. **\$8,000** for purchase of waders, awarded to SMC and W. Livingston on behalf of the Department of Wildlife Ecology and School of Forest Resources. 2012.

*Conserving wild brook trout in headwaters streams*, submitted to Maine Outdoor Heritage Fund for **\$8,627** awarded to SMC. 2011.

*Ecology of spawning sea lamprey*, submitted to University of Maine Faculty Research Fund for **1.5 month summer salary award**, awarded to SMC. 2011.

*Conserving wild brook trout in headwaters streams* submitted to Maine Corporate Wetlands Restoration Partnership for \$5,000 (2011 - declined).

*Restoration of anadromous fishes to the Sedgeunkedunk Stream watershed after barrier removal: monitoring juvenile abundance and outmigration of alewife*, submitted to Maine Corporate Wetlands Restoration Partnership for \$58,000 (2011 - declined).



*Restoration of anadromous fishes to the Sedgeunkedunk Stream watershed after barrier removal: effects of spawning sea lamprey on stream food webs*, submitted to Maine Corporate Wetlands Restoration Partnership for \$14,000 (2011 - declined).

*Production of Atlantic salmon in headwaters streams*, submitted to Project SHARE / American Recovery and Reinvestment Act. Supplemental **\$2,900**, awarded to SMC. 2011.

*Quantifying the effects of dam removal on the structure and function of Penobscot River fish assemblages*, submitted to Penobscot River Restoration Trust / American Recovery and Reinvestment Act. Supplemental **\$12,000**, awarded to SMC (75%) and JZ. 2011.

*Quantifying the effects of dam removal on the structure and function of Penobscot River fish assemblages*, submitted to Penobscot River Restoration Trust / American Recovery and Reinvestment Act (co-PI = J. Zydlewski, MCFWRU). **\$172,000** awarded to SMC (75%) and JZ. 2010-2011.

*Barrier removal and range expansion of sea lamprey: quantifying habitat conditioning in small streams*, submitted to Maine Sea Grant (co-PIs - J. Zydlewski, MCFWRU, and K. Simon, UM SBE). **\$105,000** awarded to SMC (50%), JZ, and KS. 2010-2011.

*Conserving wild brook trout in headwaters streams*, submitted to Fly Fishing in Maine Grassroots Grant for **\$2,000** awarded to SMC. 2010.

*Production of Atlantic salmon in headwaters streams*, submitted to Project SHARE / American Recovery and Reinvestment Act. **\$56,000** awarded to SMC (100%). 2009-2011.

*Fish community responses to dam removal in Sedgeunkedunk Stream*, submitted to NOAA (co-PI - J. Zydlewski, MCFWRU). **\$60,000**: awarded to SMC (50%) and JZ 2007-2009.

*Fish community responses to dam removal in Sedgeunkedunk Stream*, submitted to NOAA (co-PI - J. Zydlewski, MCFWRU). **\$14,000** supplemental: awarded to SMC (50%) and JZ 2009.

*Ecology and conservation of brook trout in headwater streams in western Maine*, submitted to National Fish and Wildlife Foundation. **\$100,000**: awarded to SMC (100%). 2007-2010.

*Interactive ecology of Atlantic salmon and smallmouth bass in Maine rivers*, submitted to Maine Outdoor Heritage Fund (co-PI - J. Zydlewski). **\$8,000**: awarded to SMC (50%) and JZ. 2008-2009.

*Aquatic invertebrate abundance in headwater streams*, submitted to Maine Department of Environmental Protection. **\$3,000**: awarded to SMC (100%). 2007-2008.

*Fish community structure in the Lower Penobscot River*, gift received from NOAA Fisheries, passed through Kleinschmidt Associates. **\$1,500**: presented to SMC.

*Interactive ecology of Atlantic salmon and smallmouth bass in Maine rivers*, **\$7,500** awarded by the Maine Atlantic Salmon Commission in the form of equipment purchases to SMC and JZ. 2007.

*Development of an Isotopic/Elemental Assay to Identify Diadromy in Brook Trout and its Influence on Coastal Stream Ecosystems*, submitted to Maine Department of Inland Fisheries and Wildlife. **\$11,700**: awarded to M. Kinnison, K. Simon (UMaine SBE), and SMC (33%). 2007-2009.

*Dam removal and range expansion of diadromous fishes in Maine rivers*, submitted to NOAA's Atlantic Salmon Conservation Fund (co-PI: J. Zydlewski). \$162,947 (reviewed favorably, but funding retracted from program). 2009.

*Forest succession and aquatic-terrestrial biodiversity in Northern Forest watersheds*, submitted to Northeastern States Research Cooperative. **\$80,000**: awarded to W. Lowe, K. Nislow, D. King, and SMC (20%). 2009.

*Response of a linked lake-stream system to dam removal and restoration of migratory fish*, submitted to George Mitchell Center – Water Resources Research Institute (lead PI – K. Simon). **\$98,751**: awarded to K. Simon, D. Hart, and SMC (25%). 2008.

*Aquatic-terrestrial linkages in watersheds draining the Northern Forest: quantifying the effects of dam removal and recovery of sea-run fishes*, submitted to Northeastern States Research Cooperative (lead PI – SMC). \$62,400 (declined). 2013.

*Collaborative Research: Effects of riparian forests and area compensation on the energetic ecology of stream fishes*, submitted to National Science Foundation (lead PI- J. Mead, UPenn). \$1,570,519 (declined). 2009.

*Collaborative Research: Effects of riparian forests and area compensation on the energetic ecology of stream fishes*, submitted to National Science Foundation (lead PI- J. Mead, UPenn). \$1,330,121 (declined). 2008.

*Movements of Atlantic salmon and brook trout between tributaries and mainstem rivers: implications for roads crossings and culvert*, submitted to Maine Cooperative Forestry Research Unit (co-PI - J. Zydlewski, MCFWRU). \$103,208 (declined). 2009.

*Adding large woody debris to improve brook trout habitat in headwaters streams in Western Maine*, submitted to Maine Cooperative Forestry Research Unit. \$75,240 (declined). 2009.

*Riparian forest effects on brook trout conservation in western Maine streams*, submitted to the Davis Conservation Foundation (PI – S. Coghlan). \$13,000 (declined). 2007.

*Effects of riparian forest structure on brook trout growth potential in headwater streams: interaction between temperature and food availability*, pre-proposal submitted to Maine Cooperative Forestry Research Unit (PI – S. Coghlan). \$64,000 (declined). Collaborators: K. Simon, G. Zydlewski.

*The effects of dam removal on fish and macroinvertebrate community structure and function in the Penobscot River*, submitted to NOAA / The Nature Conservancy (PI – S. Coghlan). \$77,000 (declined). 2007. Collaborators: J. Trial, B. Kulik, R. Saunders.

*Conserving endangered Atlantic salmon by removing invasive smallmouth bass*, pre-proposal submitted to National Fish and Wildlife Foundation (PI – S. Coghlan. \$65,000 (declined). 2007. Collaborators: J. Trial, G. Mackey, M. Gallagher.

*Understanding the ecology of sea-run brook trout in Acadia National Park*, submitted to Maine Sea Grant (lead PIs - J. Zydlewski, MCFWRU, and B. Letcher, S. O. Conte Lab). \$10,115 (declined). 2007.

*Long-term changes in aquatic biodiversity: a systematic survey of the macroinvertebrate and fish fauna of streams in Acadia National Park*, submitted to L. L. Bean Conservation Fund (co-PIs – K. Simon and S. Coghlan). \$5,000 (declined). 2007.

*Forest Succession and Terrestrial-Aquatic Biodiversity in Northern Forest Watersheds: Relationships, Causes, and Implications for Management*, submitted to Northeastern States Research Cooperative (lead PI - W. Lowe, U. Montana). \$110,000 (declined). 2007.

*Impacts of environmental change on beaver populations, and resultant feedback on native fish populations in the Delaware River, Kennebec River, and Acadia National Park watersheds*, pre-proposal submitted to the Wildlife Action Fund (lead PI- J. Mead, Univ. Penn.). \$199,000 (declined). 2006.

*Otolith Preparation and Analysis*, submitted to the Faculty Research Funds Committee – Scholarly Materials and Equipment Award. **\$7,798.49** for purchase of otoliths sectioning saw and video microscopy system (awarded). 2006.

*Interactive Ecology of Atlantic Salmon, Brook Trout, and Smallmouth Bass*, submitted to the Faculty Research Funds Committee – Summer Salary Award. **\$7,500** (awarded). 2007.

Tablet Laptop PC ~ **\$2,000** – purchased by the Office of the Vice President for Research and the Department of Wildlife Ecology. 2009.

Tablet Laptop PC ~ **\$2,000** – purchased by the Office of the Vice President for Research and the Department of Wildlife Ecology. 2007.

*Evaluating the effects of pollution on Atlantic salmon restoration in Onondaga Creek*, submitted to EPA via Don Leopold, SUNY-ESF. **\$10,000** awarded to SMC. 2003.

*Atlantic salmon restoration in the Lake Ontario watershed*, submitted to Roosevelt Wild Life Station, SUNY-ESF. **\$12,000** awarded to SMC. 2001-2003.

*Temperature-dependent competition between Atlantic salmon and rainbow trout*, submitted to International Association of Great Lakes Research’s Paul W. Rodgers fund. **\$2,000** awarded to SMC. 2002.

*Testing the efficacy of fry-stocking and embryo-stocking methods towards restoring Atlantic salmon to the Salmon River, NY*, submitted to Trout Unlimited’s Embrace-A-Stream Fund via Iroquois Chapter of Trout Unlimited. **\$3,000** awarded to SMC. 1999.

## **PROFESSIONAL SERVICE / AFFILIATIONS**

- Invited reviewer and contributor to Canadian DFO’s meeting “Risk assessment of smallmouth bass introduction on Atlantic salmon populations in Gulf Region rivers”, 1/27/2009.
- Peer-reviewer for manuscripts submitted to Transactions of the American Fisheries Society, North American Journal of Fisheries Management, Environmental Biology of Fish, Hydrobiologia, Ecology of Freshwater Fish, Journal of Great Lakes Research, Journal of Aquaculture, Journal of Freshwater Ecology, Environmental Toxicology and Chemistry, Geological Society of America publications
- Peer-reviewer for grant proposals and manuscripts submitted to the Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative

- Peer-reviewer for grant proposals submitted to the National Science Foundation
- Peer-reviewer for internal reports and scientific proposals generated by Maine Department of Inland Fisheries and Wildlife
- Member of interview panel for hiring biologists for Maine Department of Marine Resources and Maine Department of Inland Fisheries and Wildlife
- President of the SUNY-ESF Chapter American Fisheries Society, 8/99 to 6/04
- Member of American Fisheries Society, International Association of Great Lakes Research, North American Benthological Society
- Network Speaker for the Center for the Advancement of the Steady-State Economy (CASSE)

### **UNIVERSITY SERVICE**

- Chair of Peer Committee, Department of Wildlife Ecology
- NSFA College representative to Faculty Senate / serve on Environment Committee
- Member of review committee for NSFA College Graduate Student Awards
- Departmental representative on the committee to review UM's Ecology and Environmental Sciences Program
- Departmental committee member on Master's of Wildlife Conservation curriculum assessment
- Departmental leader on Fisheries curriculum revision
- Faculty advisor for the Department of Wildlife Ecology graduate student seminar committee
- Faculty advisor for the University of Maine Student Subunit of the American Fisheries Society
- Departmental representative to the Graduate Board / served on Environment Committee
- Unofficial faculty advisor for the UM student fly-tying club

### **EXTRACURRICULAR ACTIVITIES**

- Volunteer with Trout Unlimited's Youth Trout Camp and demonstrated electrofishing to camp participants veterans (Kennebec River – Solon, ME)
- Volunteered with local high school teachers and helped elementary- and high school students collect fish and aquatic insects for mercury contamination studies in the Penobscot River watershed
- Volunteered with Trout Unlimited's Project Healing Waters and taught fly-fishing to wounded veterans (Rapid River – Forest Lodge, Upton Twp., ME)
- Responsible for collecting and identifying aquatic vertebrates and invertebrates for numerous BioBlitzes (Bedford Hills Audubon Society, SUNY-ESF)
- Volunteered with Northeast Arkansas Fly Fishers and taught aquatic entomology, fly-fishing, and fly-tying to boy scouts (Jonesboro, AR troop) and high school students
- Conducted ichthyofaunal and entomological surveys of New York State and maintained museum collections of fish and aquatic insect specimens
- Volunteered with the Museum of Science and Technology (MOST), Syracuse NY – (e.g., judged elementary school science fairs, gave fly-tying demonstrations)
- Volunteered with local conservation agencies (e.g., Onondaga Soil and Water Conservation Agency) and instructed elementary school students in aquatic ecology
- Mentored J. Danforth Magnet Elementary School students for local science fairs
- Volunteered with local high schools and state parks (e.g., gave guest lectures, assisted in field trips)

## **RELEVANT SKILLS**

Computer Skills: Much experience with univariate, multivariate, parametric, and nonparametric statistical procedures and applications. Proficient in SAS, Systat, Microsoft Word, Microsoft Excel, Microsoft PowerPoint, SigmaPlot, PC-Ord, Fish Bioenergetics 3.0, RAMAS Age, RAMAS Stage, GeoPro. Some experience in FORTRAN 90, Statistix, IDRISI, ArcGIS, MARK, STELLA, geographic modeling techniques.

Field Skills: Proficient in collection and identification of fish, aquatic and terrestrial insects, mammals, amphibians, and reptiles in a variety of ecosystems, including lakes, rivers, streams, wetlands, ponds, and forests. Experienced with aquatic sampling gear including backpack electrofisher, electrofishing boat, gill net, seine net, fyke net, trap net, Surber sampler, PIB sampler, plankton net, kick screen, colonization plates, Benthic Metabolism Chamber, radio telemetry, snorkeling surveys. Able to work in inclement weather and remote settings, operate motorboats, operate GPS unit, orienteer using map and compass. Certified in boat electrofishing operation and safety, CPR / First Aid, snowmobile operation and safety.

Laboratory Skills: Experienced in otolith preparation and examination for age and growth studies and cohort identification, conducting consumption and respiration experiments, raising juvenile salmonines, maintaining an aquatic laboratory, identifying stomach contents of stream fishes, identifying invertebrates in benthic and drift samples, supervising undergraduate technicians, maintaining museum collections of fish and aquatic insects. Experienced in chemical analyses of fish otoliths using laser ablation – inductively coupled plasma – mass spectrometry (LA-ICP-MS), and analysis of water samples and insect tissue for trace metals using solution-based ICPMS. NABS taxonomic certification in identification to genus for eastern Ephemeroptera, Plecoptera, and Trichoptera (scored 100% on certification exam).

## **HOBBIES / INTERESTS**

- Experienced fly-fisherman and fly-tier
- Enjoy camping, backpacking, hunting, ice-fishing, pondering evolution and natural history, observing fish and aquatic insects, immersing myself in wilderness experiences
- Served as guitarist / bassist / vocalist for “Snap Crow Legs”, “Classic Rock Overdose”, “Benthic Groove”, “The Four of Us”; served as stunt bassist for “Radio Rodeo”
- Maintain a small non-certified organic farm and raise chickens, turkeys, honeybees, and vegetables
- Maintain small-scale lumber milling and timber harvesting operation