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Heather Ann Arnett

Focus

Interests in ecological effects on population dynamics using evolution and plasticity to explore invasion and conservation in coordination with teaching and outreach.

Research Experience

09/2010-Current	**University of Maine Dr. Michael Kinnison**	**Orono, ME**

Graduate Research Assistantship

Chase Distinguished Research Assistantship

Eco-evolutionary dynamics and phenotypic plasticity studies on an invasive fish species. A focus on the role of sex and transgenerational effects on plastic traits.
Collaboration with Duke University and University of California Santa-Cruz

10/2010-11/2012	**University of Maine/ Bangor Water District Dr. Michael Kinnison**	**Orono, ME**

Research Project Leader, Field Aid

Studying the population size and growth of the Arctic Charr via mark and recapture methods

07/2008-05/2010	**University of Maine/USGS/NPS Dr. Jasmine Saros**	**Orono, ME**

Graduate Research Assistantship

Nutrient loading on lake ecology using paleoecology and transfer function modeling

11/2007-05/2008	**University of Wisconsin-La Crosse Dr. Gregory Sandland**	**La Crosse, WI**

Undergraduate Research Student

Inbreeding depression on snail species responsible for parasite spread in the Mississippi River

06/2007-08/2007	**Mayo Clinic Biochemical Genetics Laboratory**	**Rochester, MN**

Undergraduate Research Intern

Genetics testing and microbiology work using human tissue samples

Publications

Arnett, H. A., and M. T. Kinnison. Parallel and Unique Patterns of Predator-Induced Phenotypic Plasticity in Two Species and Sexes of Mosquitofish. In Review

Fryxell, D. C., H. A. Arnett, T. M. Apgar, M. T. Kinnison, and E. P. Palkovacs. 2015. Sex ratio variation shapes the ecological effects of a globally introduced freshwater fish. Proceedings of the Royal Society B: Biological Sciences online.

Arnett, H. A., J. E. Saros, and M. Alisa Mast. 2012. A caveat regarding diatom-inferred nitrogen concentrations in oligotrophic lakes. Journal of Paleolimnology 47:277–291.

Saros, J. E., K. C. Rose, D. W. Clow, V. C. Stephens, A. B. Nurse, H. A. Arnett, J. R. Stone, C. E. Williamson, and A. P. Wolfe. 2010. Melting Alpine glaciers enrich high-elevation lakes with reactive nitrogen. Environmental science & technology 44:4891–6.

Presentations

01/2015	Freshwater Science Symposium	Orono, ME

Poster Presentation

- "Shared and Unique Plastic Responses to Predators in Two Species of Mosquitofish"
- Research presented included completed doctoral research on predator induced plastic changes in fishes ranging from physical to behavioral traits
- Overarching theme of ecosystem function and foraging tradeoffs affecting ecological processes

08/2014	American Fisheries Society	Quebec City, Quebec, Canada

Poster Presentation

- "Ecological Implications of Sex Ratio Variation in Mosquitofish"
- Research presented included completed doctoral research on predator effects driving sex ratio and density
- Overarching theme of ecosystem function and ecological and evolutionary feedbacks on the environment

02/2013	Women in Academia	Bangor, ME

Poster Presentation

- "The Role of Predator Exposure in Phenotypic Plasticity of Foraging Traits of Prey"
- Research presented included predictive doctoral research on plastic responses to predation using sex and size as a framework
- Overarching theme of ecological processes

Grants and Funding

Spring 2015 Spring 2014 Spring & Fall 2013	Graduate School Government Individual Grants	University of Maine

Research Grants

- Campus wide grants for continuing programs of study
- Biannual grant cycle for moderate funds
- Funds used for research or academic travel purposes, including animal maintenance, experimental needs, and conference travel costs

09/2013-05/2014	Chase Distinguished Research Assistantship	University of Maine

Research Fellowship

- Campus wide fellowship for established graduate students
- Only one nomination per department
- Fellowship covered stipend for one academic year and tuition for one calendar year to work on graduate program of study

9/2014-8/2015	Ecology and Environmental Sciences Graduate Research Awards	University of Maine

Research Grant

- Program wide research awards
- One to three awards per cycle
- Funds used to hire undergraduate research aid to increase mentorship experience and increase data collection and experimental productivity in the program of study

Teaching and Educational Development Experience

09/2010-Current | **University of Maine** | **Orono, ME**

Teaching Assistant
Teacher Assistant of the Year: Nomination 2015

- **Vertebrate Biology Laboratory**: 1 credit laboratory focused on application and synthesis at the 300 level. 4 years of experience. Course includes lectures, laboratory practicals, field trip, and discussion.
- **Comparative Human Anatomy Laboratory:** Part of a 4 credit course at the 300 level focused on anatomical exploration of humans with contracts to cats and fish. Course includes microscope work and dissection of cat, sheep, and pig structures. Course content and specimen were co-developed and designed to fit a new human focused curriculum.
- **Anatomy and Physiology Laboratory**: 1 credit laboratory course focused on hands-on experience to synthesize material at the 200 level. 1 year experience. Course includes talks, exams, quizzes, short essays, dissections, and human physiology monitoring.

05/2015 | **University of Maine** | **Orono, ME**

Guest Lecturer

- **Comparative Human Anatomy Lecture:** Week long guest lecture for part of a 4 credit 300 level course.

05/2013-01/2014 | **University of Maine School of Biology and Ecology** | **Orono, ME**

Seminar Coordinator

- Contacting, scheduling, and budgeting speakers for weekly departmental seminars
- Initiated a symposium "*Women in Science and Academia*"
- Collaborated with several campus departments for speakers, seminars, and the symposium

10/2010-11/2012 | **Bangor Water District** | **Orono, ME**

Research Presenter

- Designing and presenting aquatic ecology, fish ecology, and mark-recapture research
- Community and primary through secondary school outreach

Education

09/2010-*05/2016* | **University of Maine** | **Orono, ME**

- Ecology and Environmental Ecology (School of Biology and Ecology) *Doctorate of Philosophy*
- 3.845 GPA

09/2011-Current | **University of Maine** | **Orono, ME**

Seminars on instruction and teaching methods

- Scaffolding undergraduate peer facilitation (The Maine Learning Assistant Program)
- Issues related to grades and grading (Maine Center for Research in STEM through Physical Sciences Partnership)
- Everything you always wanted to know about laboratory learning (Maine Center for Research in STEM)
- Facilitating collaborative group work (Maine Center for Research in STEM)

09/2008-05/2010 | **University of Maine** | **Orono, ME**

- Ecology and Environmental Ecology (School of Biology and Ecology) *Master's of Science*
- Affiliation with the Climate Change Institute (CCI)
- 3.835 GPA

09/2004-05/2008 | **University of Wisconsin-La Crosse** | **La Crosse, WI**

- *Bachelor's of Science* ; Biology Major, Chemistry Minor, University and Departmental honors
- 3.60 GPA

References

09/2010-current	**University of Maine** **Doctoral Advisor**	**Orono, ME**

Michael T. Kinnison

- michael.kinnison@umit.maine.edu
- 207-581-2575
- 313A Murray Hall, Orono, ME 04469 USA

9/2010-5/2016	**University of Maine** **Teaching Advisor and Coordinator**	**Orono, ME**

Lynn Atkins

- lynn.atkins@umit.maine.edu
- 207-581-3084
- 207 Murray Hall, Orono, ME 04469 USA

11/2010	**University of Maine** **Doctoral Committee**	**Orono, ME**

Brian McGill

- brian.mcgill@maine.edu
- 207-581-2680
- 303 Deering Hall, Orono, ME 04469 USA

07/2008-07/2010	**University of Maine** **Master's Advisor**	**Orono, ME**

Jasmine Saros

- jasmine.saros@maine.edu
- 207-581-2112
- 137 Sawyer Environmental Sciences Center, Orono, ME 04469 USA

09/2015-12/2015	**University of Maine** **Teaching Advisor and Coordinator**	**Orono, ME**

Molly MacLean

- molly.maclean@maine.edu
- 207-581-2568
- 301A Murray Hall, Orono, ME 04469 USA