Department of Biological and Environmental Sciences, Longwood University Farmville, VA 23909

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#### Education

• BA, Biology – May 1994 Greensboro College, Greensboro, NC

• MS, Biology, May 2000

Appalachian State University, Boone, NC

Thesis Title: Does a predator transition determine the distribution of

crayfish species in the New River, NC?

Advisor: Robert P. Creed Jr.

PhD, Environmental Science and Engineering, August 2010
University of North Carolina Chapel Hill, Chapel Hill, NC
Dissertation Title: Organic matter processing in arctic lake sediments.

Advisor: Steve Whalen

### Teaching Experience

- Assistant Professor, Longwood University, Farmville, VA August 2012 - present
- Part-Time Assistant Professor of Biology, DePauw University, Greencastle, IN

August 2009 - July 2012

- o Organismal Biology
- Ecology and Evolution
- Independent Research for Undergraduates
- Human Anatomy

 Math and Science Tutor, Carteret Community College, Morehead City NC

August 2008 - May 2009

- o Algebra, Precalculus, Biology, Anatomy & Physiology
- Teaching Assistant, University of North Carolina Chapel Hill, Institute of Marine Sciences, Morehead City, NC

August 2008 - December 2008

- o Coastal Community Ecology, Human Impacts on Estuarine Processes
- Teaching Assistant, University of North Carolina Chapel Hill, Chapel Hill, NC

August 2004 - May 2005

- o Estuarine Processes
- Adjunct Instructor, University of North Carolina Greensboro, Greensboro, NC

August 2001 - May 2003

- Introduction to biology for non-majors
- Adjunct Instructor, Appalachian State University, Boone, NC August 2000 - May 2001
  - Introduction to biology for non-majors
- Teaching Assistant, Appalachian State University, Boone, NC August 1997 - May 2000
  - Ecology laboratories, Biology laboratories for non majors

#### Publications

- Fortino, K., A. E. Hershey, M. D. Keyse. 2009. Summer sedimentation in six shallow lakes. *Hydrobiologia*. 621:75-84.
- Tranvik, L. J., J. Downing, and 26 others. 2009. Lakes and impoundments as regulators of carbon cycling and climate. *Limnology and Oceanography*. 54:2298-2314. (This is a summary paper from a working group at the Chapman Conf. on Lakes as Sentinels, Integrators, and Regulators of Climate Change.)
- **Fortino, K.** and Creed, R. P., 2007. Abiotic factors, competition, or predation: what determines the distribution of young crayfish in a watershed? *Hydrobiologia*. 575:301-314.

Keyse M.D., Fortino K., Hershey A.E., O'Brien W.J., Lienesch P.W., Luecke C., McDonald M.E. 2007. Effects of large lake trout (Salvelinus namaycush) on the dietary habits of small lake trout: a comparison of stable isotopes ( $\delta^{15}$ N and  $\delta^{13}$ C) and stomach content analyses. *Hydrobiologia*. 579:175-185.

- Beaty, S. R., Fortino, K., Hershey, A. E. 2006. Distribution and growth of benthic macroinvertebrates among different patch types of the littoral zone of two arctic lakes. *Freshwater Biology*. 51:2347-2361.
- Fortino, K. 2006. Effect of season on the impact of ecosystem engineers in the New River, NC. 2006. *Hydrobiologia*. 559: 463 466.
- Goodman, K. J., Hershey, A. E., **Fortino, K.** 2006. The effect of forest type on benthic macroinvertebrate structure and ecological function in a pine plantation in the North Carolina Piedmont. *Hydrobiologia*. 559: 305 318.
- Hershey, A. E., Beaty, S., Fortino, K., Kelly, S., Keyse, M., Luecke, C., O'Brien, W. J., Whalen, S. C. 2006. Stable isotope signatures of benthic invertebrates in arctic lakes indicate limited coupling to pelagic production. *Limnology and Oceanography*. 51: 177 188.
- Hershey, A. E., S. C. Whalen, W. J. O'Brien, M. D. Keyse, and K. Fortino. 2006. The effect of landscape surface age on linking terrestrial productivity to higher trophic levels in lake ecosystems through methanotrophic bacteria. Pages 225-233 in Water and the Landscape: The Landscape Ecology of Freshwater Ecosystems, B. Davies and S. Thomson Eds. Colin Cross Printers, Ltd., Garstang, UK. (Proceedings of the International Association for Landscape Ecology (UK)).
- Hershey, A. E., Beaty, S., Fortino, K., Keyse, M., Mou, P. P., O'Brien, W. J., Ulseth, A. J., Gettel, G. A., Lienesch, P. W., Luecke, C., McDonald, M. E., Mayer, C. H., Miller, M. C., Richards, C., Schuldt, J. A., Whalen, S. C. 2006. Effect of landscape factors on fish distribution in arctic Alaskan lakes. Freshwater Biology. 51: 39 55.
- Hershey, A. E., Fortino K., Peterson, B. J., Ulseth, A. J. 2006. Stream Food Webs. in Hauer, F. R. and Lamberti, G. A. (Eds.) Methods in Stream Ecology Academic Press. Burlington, MA.
- Whalen, S. C., Chalfant, B. B., Fischer, E. N., Fortino, K., Hershey, A. E. 2006. Comparative influence of resuspended glacial sediment on physicochemical characteristics and primary production in two arctic lakes. *Aquatic Sciences*. 68: 65 77.
- Hershey, A. E., S. Beaty, K. Fortino, S. Kelly, M. Keyse, C. Luecke, and

W. J. O'Brien. 2005.  $\delta^{13}$ C signatures of chironomids in arctic lakes: role and direction of benthic-pelagic coupling. *Verh. Internat. Verein. Limnol.* 29(1):92-96.

Fortino, K., Hershey, A. E., Goodman, K. J. 2004. Utility of biological monitoring for detection of timber harvest effects on streams and evaluation of Best Management Practices: a review. *Journal of the North American Benthological Society.* 23: 634 - 646.

## Manuscripts Submitted

Fortino, K., Whalen, S. C., Smoak, J. Patterns in the sediment organic matter content of arctic lakes. submitted to Fundamental and Applied Limnology

## Manuscripts in Preparation

- Fortino, K., Whalen, S. C., Johnson, C. The effect of climate change on sediment organic processing in lakes: The role of changing transparency. in prep. for Biogeochemistry
- Leech, D. M., Bedard, L. and **Fortino, K.** Factors affecting the distribution of and diversity of aquatic microbes in small ponds. in prep. for ISME

#### Contributed Presentations and Posters

- K. Fortino and S. C. Whalen. 2008. Organic Matter Burial in Arctic Lake Sediments: The Effect of Temperature, Oxygen Availability, and Organic Matter Source. Poster at Chapman Conference: Lakes as Sentinels, Integrators, and Regulators of Climate Change. Lake Tahoe, CA.
- K. Fortino and S. C. Whalen. 2008. Burial efficiency in three shallow oligotrophic lakes in the Alaskan Arctic: The effect of temperature, oxygen availability, and organic matter quality. American Society of Limnology and Oceanography Annual Meeting, Saint Johns, Newfoundland
- K. Fortino, M. Keyse, A. E. Hershey, and S. R. Beaty. 2006. The utilization of lake-derived nitrogen by the outlet stream communities of two fertilized lakes in the Alaskan arctic. North American Benthological Society Annual Meeting, Anchorage, AK.
- K. Fortino, A. E. Hershey, and S. C. Whalen. 2005. Possible landscapescale explanations for sedimentation rate variability in Alaskan arctic lakes. Poster. American Society of Limnology and Oceanography

- Aquatic Sciences Meeting, Salt Lake City, UT.
- K. Fortino, A. E. Hershey, S. C. Whalen, and C. Luecke. 2004. The effect of landscape position on the resuspension of benthic material: implications for lake trophic dynamics. North American Benthological Society Annual Meeting, Vancouver, BC.
- K. Fortino, A. E. Hershey, W. J. O'Brien, P. W. Lienesch, and C. M. Mayer. 2003. The effect of fish on benthic community structure in arctic lakes. North American Benthological Society Annual Meeting, Athens, GA.
- K. Fortino and R. P. Creed Jr. 2000. Does a predator transition maintain the crayfish distribution in the South Fork of the New River, NC. Annual Meeting of the Ecological Society of America, Snowbird, UT.
- K. Fortino and R. P. Creed. 2000. The possible role of a predator transition in the maintenance of the crayfish distributions on the South Fork of the New River (Watauga Co., NC). North American Benthological Society Annual Meeting, Keystone CO.
- K. Fortino and R.P. Creed. 1999. What determines the distribution and abundance of stream-dwelling crayfish in the New River, NC? North American Benthological Society Annual Meeting, Duluth MN.

## Recent Participation in Campus Programs

- 2010 Participated in drafting campus sustainability statement
- 2010 Led a panel discussion on fisheries for a symposium on sustainable food production
- 2011 Panelist for a discussion of the effects of Tar Sand exploitation on ecosystems
- 2011 Member of the advisory committee for student run campus farm

#### **Professional Societies**

American Society of Limnology and Oceanography North American Benthological Society

#### Grants

1998 – Theodore Roosevelt Grant

1998 – Graduate School Thesis/Dissertation Grant

### Scholarships & Fellowships

1999 – Daniel Boone Native Gardens Grant - in - Aide Scholarship

# Awards

 $2000-{\rm Eugene}$  P. Odum Award. for the best paper presented in ecology. 61st Annual Meeting of the Association of Southeastern Biologists, Chattanooga, TN.