### ABIGAIL E. CAHILL, Ph.D.

**Assistant Professor** 

Department of Biology

Albion College

Albion, Michigan 49224 (USA)

Tel. (517) 629-0570

Email: acahill@albion.edu

Website: http://aecahill.weebly.com/

### **EDUCATION AND TRAINING**

- 2014 Postdoctoral Researcher, Université Aix-Marseille, Station Marine d'Endoume Mediterranean Institute of Biodiversity and Marine and Continental Ecology (IMBE) Supervisor: Anne Chenuil
- 2014 Ph.D., Ecology and Evolution, Stony Brook University Advisor: Jeffrey S. Levinton
- 2007 B.A., Colgate University, Magna Cum Laude Majors: Biology (high honors) and French

## **PEER-REVIEWED PUBLICATIONS** (\* contributed equally‡; undergraduate mentee)

# **Manuscripts published or in press:**

2016	Danovaro R.*, L. Carugati*, M. Berzano, <b>A.E. Cahill</b> , S. Carvalho, A. Chenuil, C. Corinaldesi, S. Cristina, R. David, A. Dell'Anno, N. Dzhembekova, E. Garcès,
	J.M. Gasol, P. Goela, JP. Féral, I. Ferrera, R. Forster, A.A. Kurekin, E. Rastelli,
	V. Marinova, P. Miller, S. Moncheva, A. Newton, J.K. Pearman, S. Pitois, A.
	Reñé, N. Rodríguez-Ezpeleta, V. Saggiomo, S. Simis, K. Stefanova, C. Wilson,
	M. Lo Martire, S. Greco, S. Cochrane, and A. Borja. Implementing and
	innovating marine monitoring approaches for assessing marine environmental
	status. Frontiers in Marine Science, 3:213.
2016	Cahill, A.E., and S.A. Koury. Larval settlement and metamorphosis in a marine
	gastropod in response to multiple conspecific cues. <i>PeerJ</i> , e2295.
2016	Cahill, A.E., and J.S. Levinton. Genetic differentiation and lower genetic
	diversity at the northern range edge of two species with different dispersal modes.
	M 1 1 E 1 25 515 526

- diversity at the northern range edge of two species with different dispersal modes *Molecular Ecology*, 25: 515-526.

  Data associated with this manuscript have been published at DataDryad (<a href="http://dx.doi.org/10.5061/dryad.ct5q3">http://dx.doi.org/10.5061/dryad.ct5q3</a>) and the Sequence Read Archive at NCBI (SRP058970).
- 2015 **Cahill, A.E.**, A. Juman ‡, A. Pellman-Isaacs ‡, and W.T. Bruno ‡. Physical and chemical interactions with conspecifics mediate sex change in a protandrous gastropod, *Crepidula fornicata*. *Biological Bulletin*, 229: 276-281.
- 2015 **Cahill, A.E.** Adult density affects larval settlement in the calyptraeid gastropod *Crepidula fornicata. Journal of Experimental Marine Biology and Ecology*, 465: 77-82.
- 2014 **Cahill, A.E.**, and F. Viard. Genetic structure in native and non-native populations of the direct-developing gastropod *Crepidula convexa*. *Marine Biology*, 161: 2433-2443.
- 2014 **Cahill, A.E.\***, M.E. Aiello-Lammens\*, M.C. Fisher-Reid, X. Hua, C.J. Karanewsky, H.Y. Ryu, G.C. Sbeglia, F. Spagnolo, J.B. Waldron, and J.J. Wiens.

Causes of warm-edge range limits: systematic review, proximate factors, and implications for climate change. *Journal of Biogeography*, 41: 429-442.

Cahill, A.E.\*, M.E. Aiello-Lammens\*, M.C. Fisher-Reid, X. Hua, C.J. Karanewsky, H.Y. Ryu, G.C. Sbeglia, F. Spagnolo, J.B. Waldron, O. Warsi, and J.J. Wiens. How does climate change cause extinction? *Proceedings of the Royal Society B*, 280: 20121890.

Hoch, J.M., and A.E. Cahill. Variation in size at sex-change among natural populations of the protandrous hermaphrodite, *Crepidula fornicata* (Gastropoda, Calyptraeidae). *Marine Biology*, 159: 897-905.

### **GRANTS AND FELLOWSHIPS**

2012	National Science Foundation Doctoral Dissertation Improvement Grant
2012	Conchologists of America Grants to Malacology
2011	Clench/Turner Special Award, Conchologists of America
2011	Melbourne R. Carriker Student Research Award, American Malacological Society
2011	Grant in Aid of Research, Society for Integrative and Comparative Biology
2010	Graduate Dean's Fellowship, Stony Brook University
2010	Lerner Gray Fellowship, American Museum of Natural History
2009	National Science Foundation International Research Experience for Students
2009	Melbourne R. Carriker Student Research Award, American Malacological Society

2009 Graduate Student Fellowship, Friday Harbor Laboratories, Friday Harbor, WA

2008 National Science Foundation Graduate Research Fellowship

### **TEACHING EXPERIENCE**

2016 –	Invertebrate Zoology, Albion College
	Ecology, Evolution, and Biodiversity, Albion College
	Marine Biology, Albion College
2014	Evolution, Stony Brook University
2013	Statistics and Data Analysis: A Conceptual Approach, Stony Brook University

## As Teaching Assistant

2012	Invertebrate Zoology, Stony Brook University
2011, 13, 14	Marine Ecology, Stony Brook University
2007, 08, 10	Fundamentals of Scientific Inquiry in the Biological Sciences I & II, Stony Brook
	University

### Mentoring

Writing-to-win program mentor: helping minority graduate students prepare grant applications. Successfully coached one student to an NSF Graduate Research Fellowship and one to a GRF honorable mention. Head instructor starting in 2010.

Undergraduate mentees († poster at Stony Brook University undergraduate research symposium)

2013	‡ William Bruno, ‡ Aaron Pellman-Isaacs, John Tay
2012-13	‡ Alia Juman, ‡ Thomas Ralicky
2012	Kaitlyn Smith, Debbie Tan
2011-12	‡ Annastacia Woytash
2011	Khosnur Alam Priyanga Jeyasri Annamaria Viazzo

Undergraduate thesis committees at Albion College

2016-17 Elise Anderson, Julia Armitage

	CTS (‡ undergraduate mentee; § presenting author when not listed first)
2016	Cahill, A.E., J.K. Pearman, A. Borja, L. Carugati, S. Carvalho, R. Danovaro, S.
	Dashfield, R. David, JP. Féral, S. Olenin, A. Siaulys, P. Somerfield, A.
	Trayanova, M.C. Uyarra, and A. Chenuil §. Comparing community composition
	in artificial sampling units from the Red Sea to the Baltic Sea: morphology and
	metabarcoding complementarity. Oral presentation, 5 <sup>th</sup> annual meeting of the
	European project DEVelopment Of innovative Tools for understanding marine
	biodiversity and assessing good Environmental Status (DEVOTES). Brussels,
2016	Belgium.  Cohill A.E. A. Borio, I. Comparti, S. Compelho, B. Donovero, S. Dochfield, B.
2016	<b>Cahill, A.E.</b> , A. Borja, L. Carugati, S. Carvalho, R. Danovaro, S. Dashfield, R. David, JP. Féral, S. Olenin, J.K. Pearman, A. Siaulys, P. Somerfield, A.
	Trayanova, M.C. Uyarra, and A. Chenuil §. Community composition of
	macroinvertebrates in the Mediterranean Sea and other regional seas. Poster
	presentation, Mediterranean Science Commission, Kiel, Germany.
2016	<b>Cahill, A. E.</b> , Aurelle, D., Boissin, E., Bouzaza, Z., DeJode, A., Egea, E., Erga,
2010	Z., David, R., Dubois, S., Ledoux, JB., Mérigot, B., Weber, A., and Chenuil, A.
	Determinants of connectivity in the marine environment: a multispecies approach.
	Society for Integrative and Comparative Biology.
2015	Cahill, A.E. Variation in community composition in the Bay of Marseille as
	measured with Artificial Substrate Units (ASUs). 4th annual meeting of the
	European project DEVelopment Of innovative Tools for understanding marine
	biodiversity and assessing good Environmental Status (DEVOTES).
2015	Cahill, A. E., Aurelle, D., Boissin, E., DeJode, A., Egea, E., Erga, Z., David, R.,
	Dubois, S., Ledoux, JB., Mérigot, B., Weber, A., and Chenuil, A. Determinants
	of connectivity in the marine environment: a multispecies approach. 5 <sup>th</sup> annual
2015	meeting of the working group Marine French Connection (MarCo).
2015	Cahill, A. E., Aurelle, D., Boissin, E., DeJode, A., Egea, E., Erga, Z., David, R.,
	Dubois, S., Ledoux, JB., Mérigot, B., Weber, A., and Chenuil, A. Determinants of connectivity in the marine environment: a multispecies approach. European
	Society of Evolutionary Biology (poster).
2014	Cahill, A.E. Physical and chemical interactions mediate sex change in a
<b>2</b> 017	protandrous gastropod. Evolution.
2014	Bruno, W.T. ‡, Pellman-Isaacs, A. ‡, <b>Cahill, A.E.</b> , and Levinton, J.S. An analysis
-	, , , , , , , , , , , , , , , , , , , ,

of sex change in Crepidula fornicata in different social environments.

Undergraduate Research and Creative Activities Research Celebration, Stony Brook University (poster). 2013 **Cahill, A.E.** Population differentiation in *Crepidula convexa*: genotypes, phenotypes, and latitude. Evolution (poster). Cahill, A.E., O'Donnell, K.L.§, and O'Neal, M. Vodcasts as a weekly 2013 preparation for introductory labs in undergraduate biology: a comparison of student performance in a phylogenetics lab. Evolution (poster). 2013 Juman, A.‡, Cahill, A.E., and Levinton, J.S. Physical and chemical interactions affect sex transformation in a protandrous marine snail. Undergraduate Research and Creative Activities Research Celebration, Stony Brook University (poster). 2013 Ralicky, T.‡, Cahill, A.E., and Levinton, J.S. Effect of diet on Crepidula longevity. Undergraduate Research and Creative Activities Research Celebration, Stony Brook University (poster). 2013 Cahill, A.E. Metamorphosis of *Crepidula* larvae in response to varying conspecific densities and settlement cue concentrations. Society for Integrative and Comparative Biology. Cahill, A.E. Local adaptation to thermal regime in early life stages of calyptraeid 2012 gastropods with different developmental modes. Evolution (poster). Woytash, S.‡, Cahill, A.E., and Levinton, J.S. How Crepidula fornicata 2012 settlement patterns differ in response to local adult densities. Undergraduate Research and Creative Activities Research Celebration, Stony Brook University (poster). 2012 Cahill, A.E. Response of *Crepidula* larvae to temperature as a function of geography and developmental mode: existence of local adaptation. Society for Integrative and Comparative Biology. Cahill, A.E. Response of *Crepidula* larvae to temperature as a function of 2011 geography and developmental mode: existence of local adaptation. Workshop: The Effects of Climate Change on Vulnerable Life Traits of Aquatic Ectotherms: Towards an Integrated Approach. 2011 Cahill, A.E. Response of *Crepidula* larvae to temperature as a function of geography and developmental mode: existence of local adaptation. Workshop: Adaptation to Climate Change from a Spatial Perspective (poster). Cahill, A.E., K.L. O'Donnell, and M.H. O'Neal III. Vodcasts as a weekly 2011 preparation for inquiry labs in undergraduate biology. National Meeting of the Society for the Advancement of Biology Education Research (poster). Cahill, A.E., Viard, F. Population genetic structure in native and non-native 2011 populations of a direct-developing gastropod. Benthic Ecology Meeting. 2011 **Cahill, A.E.** The role of adult density in larval settlement of *Crepidula fornicata* and *C. plana*. Society for Integrative and Comparative Biology (poster). 2010 Cahill, A.E., S. Crickenberger., R.N. Crim, and R.L. Selden. Dispersal limitation and post-settlement survival of an introduced ascidian (Botrylloides violaceus) in San Juan Islands, WA. Society for Integrative and Comparative Biology. Cahill, A.E. Propagule pressure: the link between species introductions and 2009 neutral ecological theory. Benthic Ecology Meeting.

Cahill, A. Variations in response to calcium addition in New York State. National

Conference on Undergraduate Research.

2007

**Cahill, A.**, F. Frey, R. Brereton, M. Bukoski, and Z. Zimmer. Maintenance of floral-color variation in *Claytonia virginica*. I. The role of pollinator-mediated selection estimated through female reproductive success and pollinator visitation rates. Northeast Ecology and Evolution Conference (poster).

### **INVITED LECTURES**

- 2016 Understanding dispersal and connectivity in marine invertebrates. Biology Department, Salisbury University.
- 2015 Understanding dispersal and connectivity in marine invertebrates. Biology Department, Albion College.
- 2015 Understanding how climate change affects species distributions. Institut des Sciences d'Evolution Montpellier, Université Montpellier 2.
- The role of developmental mode and population-level processes in shifting distributions: a study of calyptraeid gastropods. Wilson Lab, Brooklyn College.
- 2013 Chemical ecology in a marine system: larval settlement and sex determination in *Crepidula fornicata*. Department of Biology, Muhlenberg College.

## HONORS AND AWARDS

- 2013 Outstanding Service Award, Dept. of Ecology & Evolution, Stony Brook University
- 2013 Top Graduate Student Award, Stony Brook University
- 2007 Phi Beta Kappa membership
- 2007 Christopher J. Oberheim Award for research in biology, Colgate University
- 2007 Charles A. Choquette Award for excellence in French, Colgate University
- 2005 Beta Beta Beta biological honor society
- 2003 Alumni Memorial Scholar, Colgate University

#### PROFESSIONAL MEMBERSHIPS

- 2011- Society for the Study of Evolution
- 2009- Society for Integrative and Comparative Biology
- 2008- Ecological Society of America

### PROFESSIONAL SERVICE

Panelist for the National Science Foundation

Reviewer for Biological Bulletin, Climatic Change, Conservation Biology, Current Zoology, International Journal of Molecular Science, Marine Biodiversity Records, Marine Biology Research, Molecular Ecology, Revista de Biología Marina y Oceanografía

- Organizer, journal club of the group Interactions, Diversité, Evolution et Adaptation (IDEA) at the IMBE.
- 2011-14 **Student representative**, Division of Ecology and Evolution, Society for Integrative and Comparative Biology.
- 2012-13 **Student representative** on the search committee for an outside department chair, Department of Ecology and Evolution, Stony Brook University.