

**DR. EMMA S. PERRY**  
Professor of Marine Biology  
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## ACADEMIC DEGREES

### Ph. D. Biology

UNIVERSITY OF SOUTH FLORIDA

**1990-1997**  
TAMPA, FLORIDA

DISSERTATION: Clypeasteroid intraskeletal matrix proteins.

The intraskeleton matrix proteins were extracted from a variety of clypeasteroid taxa. These proteins were then characterized and the data used to investigate the relationships between these proteins.

### B. Sc. Biology (Zoology) Hons.

UNIVERSITY OF EXETER

**1987-1990**  
EXETER, DEVON, UNITED KINGDOM

## PROFESSIONAL EXPERIENCE

### Professor of Marine Biology

UNITY COLLEGE

**2015-present**  
UNITY, MAINE

### Associate Professor of Marine Biology and Physiology

UNITY COLLEGE

**2004-present**  
UNITY, MAINE

### Assistant Professor of Marine Biology and Physiology

UNITY COLLEGE

**1997-2004**  
UNITY, MAINE

BI 1014 Biology I, BI 1024 Biology II, BI 2033 Marine Biology, BI 3654 Microbiology, BI 3883 Littoral Marine Ecology, BI 4013 Marine Ecology, CS 2881 Computer Presentations, BI 3254 Comparative Animal Physiology, BI 3243 Genetics, BI 3154 Vertebrate Structure and Function, IC 1113 Perspectives on Nature, IC 4123 Environmental Stewardship, BI 2303 Cell Biology, BI 3133 Environmental Plant Physiology, BI 3253 Invertebrate Zoology, BI 3003 Research Methods, ES 3013 Oceanography, AR 1881 Introduction to Oriental Dance

### Graduate Teaching Assistant

UNIVERSITY OF SOUTH FLORIDA

**1991-1996**  
TAMPA, FLORIDA

BSC 2050 Environment, BSC 2035 Sex in Today's World, PCB 3023 Cell Biology, ZOO 3203 Invertebrate Zoology, BSC 2011 Biodiversity, BSC 2010 Biology II: Cellular biology and general chemistry

## GRANT AWARDS

NSF IUSE MATH: SUMMIT-P A national consortium for synergistic undergraduate mathematics via multi-institutional interdisciplinary teaching partnerships (Marine Biology & Calculus @ Unity College)	\$2.65 Million
The intertidal distribution of intertidal tardigrades on Prince Edward Island, CA, Faculty Research award	\$984.30
The relationship between morphology and ecology of <i>Echiniscoides sigismundi</i> and <i>E. wyethi</i> on Allen Island, Up East Foundation, 2016	\$14,968
Faculty Undergraduate Mentor Award	\$1000
Distribution and ecology of <i>Echiniscoides wyethi</i> on Allen Island, Up East Foundation, 2015	\$14,880.36
NSF ROA #1433142 supplemental funding to visit Kansas for 2 weeks (for myself and a bryologist)	\$6679
Preliminary Biodiversity Surveys to Establish Baseline Trophic Structure at Allen Island, St. George, Knox Co., Maine, USA, Up East Foundation (with A.Arnett, D. Potter, A. Baker)	\$4,875.00 (\$13,035.00)
The Tardigrades of Maine, Faculty Research Award, Unity College 2014	\$1,292.85
The Tardigrades of Maine, Faculty Research Award, Unity College 2013	\$819.46
A Preliminary Survey of the Tardigrades of Maine, Faculty Research Award, Unity College 2011	\$1,624
Population study of Mysis Shrimp, Faculty Research Award, Unity College 2006	\$2,500
SMARTer Kids grant for Smart Roomware products, 2002	\$689
Institute of Biomolecular Science, Summer Fellowship Awards 1992, 1993.	\$1,417
Institute of Biomolecular Science, Travel Grant, Summer 1993	\$300
Dept. Biology, Travel Grant, Summer 1993	\$200

**PUBLICATIONS**

- Perry, E.S., Rawson, P., Ameral, N.J.∧, Miller, W.R. and Miller J.D. (in revision) *Echiniscoides rugostellatus* a new marine tardigrade from Washington, U.S.A. (Heterotardigrada: Echiniscoidea: Echiniscoididae), Proceedings of the Biological Society of Washington
- Miller, W.R. and Perry, E.S. (2016) Marine Tardigrades of the Americas, *Zootaxa*, 4126 (3): 375-396 doi: 10.11646/zootaxa.4126.3.4
- Perry, E.S. and Miller, W.R. (2015) *Echiniscoides wyethi*, a new marine tardigrade from Maine, U.S.A. (Heterotardigrada: Echiniscoidea: Echiniscoididae), Proceedings of the Biological Society of Washington, 128 (1): 103-110. doi: 10.2988/0006-324X-128.1.103
- Perry, E.S., Miller, W.R. and Lindsay, S. (2015), Looking at tardigrades in a new light: using epifluorescence to interpret structure. *Journal of Microscopy*, 257: 117–122. doi: 10.1111/jmi.12190
- Creaser, E. S. 2013. *Why the Big Picture Matters*. Published online and emailed to every Sigma Xi member: <http://www.sigmaxi.org/programs/giar/newsletters/022013GIARNewsletter.shtml>
- Creaser, E.S. & Johnson, A. 2009. *Your life as an Environmental Biologist*. Published online: [www.thehighschoolgraduate.com/editorial/BO/environmental\\_biologist.htm](http://www.thehighschoolgraduate.com/editorial/BO/environmental_biologist.htm)
- Polson, E. S., Robbins, L. L. and Lawrence, J. M. 1993. *Intraskeletal matrix proteins in echinoderms*. *Journal of the Marine Biological Association U.K.*, **73**, 727-730.

**PUBLISHED ABSTRACTS FOR POSTER PRESENTATIONS**

- Diaz Eaton, C. & **Perry, E.S.** Diving into Calculus. CoRAL: A SUMMIT-P project. Joint Math Meetings, Atlanta, 2017.
- Pittendreigh, J.∧, Rago, B.∧ and **Perry, E.S.** 2016. An initial survey of Tardigrada in Acadia National Park. 13th Acadia National Park Science Symposium, Schoodic Point, Maine.
- Tway, C; (**Creaser E.** faculty sponsor) 2011. Tardigrades of Mount Desert Island, Maine. Sigma Xi Student Research Conference, Raleigh Durham, North Carolina.
- Romney, C.; **Creaser, E.S.** & Arnett, A. 2008 *A Behavioral Response of Asterias forbesi*: Sensing Umami. Fifth NAEC, Florida Institute of Technology, FL
- Creaser, E.S.** 2006 Sigma Xi Grants-in Aid of Research. Council for Undergraduate Research 2006 National Conference: Learning through Research, DePauw University.
- Creaser, E. S.**, Malmberg, M. and Fox, D. 2000. *Integration of biology into an interdisciplinary environmental stewardship curriculum*. *American Zoologist*, **39(5)**, 74A.
- Creaser, E. S.** 2000. *An unusual mucus gland on the tubefeet of Acrocnida brachiata, a burrowing brittlestar*. *American Zoologist*, **39(5)**, 52A.
- Polson, E. S.**, Robbins, L. L. and Lawrence, J. M. 1994. *Clypeasteroid skeletal matrix proteins (Abs)*. In: *Echinoderms through time*. David, B., Guille, A., Féral, J-P., Roux, M. (eds.), 835. Balkema, Rotterdam.
- Polson, E. S.**, Robbins, L. L. and Lawrence, J. M. 1992. *Shell matrix proteins - a potential tool for investigating the phylogenetic relationships of the Echinodermata*. The Paleontological Society, Special Publication **6**, 236. Abstracts and Program of the Fifth North American Paleontological Convention.

**CHAPTERS REVIEWED**

- Chapter 24: Circulation and Chapter 23: Transportation of Oxygen and Carbon Dioxide. *In: Animal Physiology 3ed. Hill, R.W.; Wyse G.A. & Anderson M. in press. Sinauer Associates*
- Chapter 24: Circulation *In: Animal Physiology 2ed. Hill, R.W.; Wyse G.A. & Anderson M. 2008. Sinauer Associates*

**INVITED WORKSHOP PRESENTATIONS**

- Creaser, E. S. 2011 Successful Grant Writing using GIAR as a template, Sigma Xi Student Research Conference. Raleigh, NC
- Creaser E. S. & Padgett, P. Successful Grant Writing: Using GIAR as a model Sigma-Xi annual meeting, Nov 2010 Raleigh, NC
- Sigma-Xi annual meeting, Nov 2007 Orlando, FL – series of workshops explaining the role of GIAR to the different constituencies
- North American AEE conference workshop – Adventure Bellydancing, April 11-13<sup>th</sup>, 2008
- Inland Hospital Wellness, Waterville February 19<sup>th</sup>, 2008
- Two sessions on in-service day March 19<sup>th</sup>, 2007; Fryeburg
- Health and Wellness Presentation May 19<sup>th</sup>, 2007

**SENIOR THESES**

- *Describing an unknown species of Anthozoa, Drake Bay, Costa Rica; Kathryn Downey; 2011*

- *Butterfly Diversity*; Russell, Aubrie; 2009
- *Morphological Differentiation of Disjunct Quercus macrocarpa Populations in Waldo and Kennebec Counties, Maine*; Coolbeth, Suzanne; 2008
- *Comparative Frequency of Black Bears*; Hunt, Jessica; 2008
- *Inventory of Wood Burrowing Insects*; O'Brien, Brent; 2008
- *Asterias forbesi and "taste-choice testing" sensing Umami*; Romney, Chanel; 2008
- *Is Amphibian Biodiversity in Wetlands declining due to urbanization?*; French, Nicole; December 2006
- *Iridovirus Outbreak In Eastern Box Turtles*; Snyder, Sarah; 2007
- *Domestic Cat Predation on Wildlife*; Haverly, Jayme; May 2006
- *Plant Hormone Effects on Earthworm Size And Biomass*; Poulin, Hana; May 2006
- *Correlation of dominant tree species to root restrictive horizons on Northern Pond Property: Monroe, Maine* Beasley, Lorie; April 2002
- *Investigating the effects of plant spatial arrangement and color on the frequency of bee pollination visits to Trifolium pretense and Prunella vulgaris*; Twombly, Erin; December 2003
- *Effects of wave action on Nucella lapillus along the coast of Maine*; Bannister, Rebecca; May 2005
- *Management techniques for common loon (Galvia immer) nests subject to human disturbance, on lakes and ponds in new Hampshire*; Colligan, Gregory M.; May 2003
- *Phenotypic plasticity in the common periwinkle (Littorina littorea) observed in the Gulf of Maine.*; Devlin, Shawn P.; May 2003
- *Physiology of Limpets*; Gagne, Priscilla; May 2003
- *The Psychology and Behavior of Dolphins*; Girard, Kristen; May 2003
- *Hatching success of laughing gulls (Larus atricilla) in relation to vegetative cover and inter- and intraspecific nest placement.*; Nagy, Jennifer; 2002
- *Rodent Population Study in Response to a Clear Cut Northern Hardwood Mixed Forest*; Mace, Michael C.; May 2002
- *Histology of Beroë cucumis, a ctenophore.*; Miller, Jennifer; May 2001
- *Tubefoot morphology of Ophiopholis aculeata.* Weiss, Perry; 2001
- *A Comparative study of sediment contamination in three Maine estuaries: Belfast Bay, the Penobscot River Estuary in Bucksport, and the Back Cove in Casco Bay, Portland*; Hill, Laura; 2001

**ACHIEVEMENTS AND AFFILIATIONS**

Chair, Committee on Qualifications and Membership, Sigma Xi	2016-
Committee member, Grants in Aid of Research Committee, Sigma Xi	2015-
Co-Chair, BRLI Fundraising Committee	2007-2011
Member of the Sigma Xi Executive Director Hiring Committee	2007
Chair, Grants in Aid of Research Committee, Sigma-Xi	2007-2014
Consultant, Moosehead Lake Fisheries Coalition	2000-2007
Member of Sigma-Xi (Member at large) on Grants in aid of Research Committee	2000-2004; 2006-present
Guest reader for Sigma-Xi (Member at large) on Grants in aid of Research Committee	2004-2005
Member of Sigma-Xi (Member at large)	2000-present
Member of the American Microscopical Society	1998- 2000
Outstanding Teaching Assistant Award, Dept. of Biology, University of South Florida	1992-2003
Organizer of Fourth North American Echinoderm Conference	August 2001
Graduate of Bangor Region Leadership institute	2001
Colleagues on a Mission award, Unity College	Fall 2006

**FACULTY COMMITTEES**

Member, Cell Biology Search Committee	2010-2011
Academic Regulations Committee member	2008-2010
Chair Computing and GIS Search Committee	2008-2009
Faculty Moderator	2005-2007
Member, President's Council	2005-2007
Chair, Chemistry Search Committee	2005-2006
Information Technology Committee	2004-2009

**Chair, NEASC Five Year Report Committee**

2006-2007

As chair of this committee, I was the primary author of the five year report to maintain our Accreditation.

**Marine Biology Coordinator**

2005-

I researched, designed and proposed new major in Marine Biology, which following a reexamination by a committee was approved by the Faculty in November 2005. Since then I have been working with admissions and corresponding with prospective students.

Member of Sabbatical and Professional Development Committee	2005-2009
Chair of Sabbatical and Professional Development Committee	2004-2005, 2007-2009
Member of Outdoor Recreation Search Committee	2004-2005

<b>Faculty Planning Committee Chair,</b>	2003
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During my chairmanship we undertook and successfully completed a major redesign of all of the majors. This entailed a huge amount of paperwork and consolidation and tracking of data during this highly accelerated process. This included presenting all completed versions of the new majors to the faculty for their approval, and also compiling a list of all courses that the college offers with all the changes resulting from the program review and other decisions regarding offering frequency.

<b>Member Faculty Planning Committee</b>	2002
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<b>Director of Teacher Education Program</b>	Fall 2002 - 2003
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The first job upon appointment was to find out where we were in the process of establishing the program. I found the last submitted transcript analysis application and set about meeting the deficits in our application to the state. With the help of an excellent committee, we quickly met the deficits and had the faculty approve the necessary new courses. We then hired an assistant director and have been working very hard to establish the field experience component of the program, and to write the student handbook and the assessment criteria.

<b>Computer and GIS Search Committee, Chair</b>	2008-2009
<b>Environmental Biology Coordinator</b>	1998-2005
<b>Faculty Academic Committee Chair</b>	2001-2002
<b>Dean Search Committee</b>	2001-2002
<b>Food Task Force</b>	2001
<b>Urban and Community Forestry Review Committee</b>	2001
<b>Wildlife Review Committee</b>	2000-2001
<b>Director of Institutional Advancement Search Committee</b>	2000, 2001
<b>Writing Task Group</b>	2000
<b>Faculty Policies and Procedures Committee</b>	1998-2000
<b>General Education Committee</b>	1998-2000
<b>Biology Task Group</b>	1999-2000
<b>Philosophy Search Committee</b>	1999
<b>Biology Search Committee, Chair</b>	1998-9

## PROFESSIONAL DEVELOPMENT

Attended Nature Education Webinar -Evolving with "digital" in a print world	03/06/2014
Attended Nature Education Webinar -Engaging students in the first year biology course	04/02/2014
Sabbatical to study the tardigrades in Maine	
Established an ongoing Collaboration with William Miller (Baker University, KS) and Sara Lindsay (University of Maine Orono, ME) to study tardigrades from around Maine	2012-
Attended virtual online seminars from the Wiley Faculty Network:	
Putting your course online: practical Strategies for getting started , 09/24/2012	
Getting the most out of an online course: effectively facilitating discussion threads 10/08/2012	
Collaborated with Dr. A. Yezerski at King's College to update molecular techniques	2009
North American Echinoderm Conference, Florida	2008
Chataqua Marine Field course development, Maui	2007
Attended Fish Otolith Mark Detection Training Session held at IF&W, Augusta Maine	September 2006
Council for Undergraduate Research Conference	2000, 2002, 2006
Attended Bioquest Workshop: Mammalian Bioinformatics,	2004
As part of this workshop I authored, together with Sarah Kenick, an exploratory module on Leptin called 'LIMPET: Leptin, an insular molecule physiologically	

investigates evolutionary theory.'	
Faculty Development Workshops every fall and spring	1999-present
Attended Science Education Workshop for Life Science and Chemistry, Boston College	
Sessions: Hands-On Biology <i>Labs</i> Online, Incorporating Original Research,	
Science Assessment Strategies	2002
Bangor Region Leadership Institute	2001
NSF workshop on Curriculum Development, Implementation and Support	2001
Went with student Mark Huard to Posters on the Hill Conference, Washington, DC	2001
Assisted Mike Horst teaching "Molecular Approaches to Marine Invertebrate Zoology"	2000, 2001
Darling Marine Center, University of Maine	
Molecular Approaches to Marine Invertebrate Zoology short course	1998,1999