Curriculum Vitae

Emily Ralston

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Education

B.S., 2000 James Cook University (Marine Biology)

B.S.(Hons.), 2001 James Cook University (Marine Biology),

Major Advisors: Dr. John Collins and Dr. Paul Southgate

Thesis Title: "Temporal and vertical patterns of abundance in mobile invertebrates and predatory effects of brachyuran crabs on suspended culture of pearl oysters at Orpheus Island"

Ph.D., (anticipated Spring 2012) Florida Institute of Technology (Biological Oceanography)

Major Advisor: Dr. Geoffrey Swain

Dissertation Title: "An investigation of the biology of grooming and the effect of mucus on maintaining surfaces free of fouling"

Honors and Awards

ONR Student Travel Bursary

14th International Congress on Marine Corrosion and Fouling (Kobe, Japan 2009)

Graduate Student Paper Honorable Mention

Florida Academy of Sciences 74th Annual Meeting (Ft. Pierce, Fl 2010)

"An *in-situ* method to study early recruitment of barnacles"

Graduate Student Poster Award

Benthic Ecology Meeting (Wilmington, NC 2010)

"The ghost of fouling communities past: evidence for carry-on effects on transplanted panels"

ONR Student Travel Bursary

15th International Congress on Marine Corrosion and Fouling (Newcastle, UK 2010)

Outstanding Graduate Student Oral Paper

Florida Academy of Sciences 75th Annual Meeting (Melbourne, Fl 2011)

"The ghost of fouling communities past: evidence for carry-on effects on transplanted panels"

Professional Experience

Research Scientist – Center for Corrosion and Biofouling Control
Florida Institute of Technology (2009-present)

Graduate Research Assistant – Center for Corrosion and Biofouling Control
Florida Institute of Technology (2005-2009)

Benthic Ecologist – Department of Marine and Wildlife Resources
American Samoa (2001-2002)

B.S.(Hons.) Research Student – James Cook University
Queensland, Australia (2001)

Field Assistant – Orpheus Island Marine Laboratory
James Cook University, Queensland, Australia (1999-2000)

Research Interests

The settlement and recruitment of invertebrates is my primary research focus. Specifically, I am interested in how surface cues and conditioning affect settlement and recruitment. Additional interests include the ecology of biological invasions, fouling community biology and ecology, performance of marine coatings, and biomimetic and bioinspired approaches to antifouling.

Skills, Certifications & Other Interests

Dive Certifications
Rescue Diver, Open Water, Advanced Open Water, Underwater Naturalist

Photography – Land and Underwater

Computing
MS Office Suite, Adobe Photoshop, PRIMER, SigmaScan, SigmaPlot, SigmaStat, SPSS

Scientific
Aquaculture and taxonomy of marine organisms
Strong fieldwork background, laboratory experience
Working knowledge of environmental monitoring equipment, artificial substrates, light traps and other active and passive collection devices
Designed and built four new test apparatuses for data collection

Professional Activities

Co-President COIPM Early Researchers Group (2008-present)

Poster Session Organizer
Office of Naval Research: Coatings Workshop (Las Vegas, Nv 2011)
Office of Naval Research: Coatings Workshop (Portland, Or 2009)
Office of Naval Research: Concepts and Strategies for Surface Engineering to Control

Biofouling (St. Petersburg, Fl 2009)

Manuscript reviewer: Biofouling, Journal of the Royal Society Interface and Biomimicry and Bioinspiration

Publications

1) Ralston E and Swain G (2011) Can Biomimicry and bioinspiration provide solutions for fouling control? Mar Tech Soc J 45(4): 11 pgs. (Invited Paper)

2) Ralston E and Swain G (2009) Bioinspiration – the solution for biofouling control? Bioinsp Biomim 4: 9 pgs. (Invited Paper)

3) Ralston E and Swain G (2008) Biomimicry – the universal solution for biofouling control? Biological Approaches for Engineering. University of Southampton, Southampton, UK, 26-29.

4) Ralston E, Bacon A and Johnson K (2007) *In situ* phototaxis of zooplankton in the Indian River Lagoon (Florida) determined using LED light traps. Florida Sci 70(4): 489-505.

Reports

I have collected and analyzed the data, prepared and provided over 100 reports for investigators associated with North Dakota State University, University of Buffalo, Cornell, Purdue, Virginia Commonwealth University, University of Florida, University of North Carolina, University of Toronto, International Paints, Novus International, Semprus Biosciences, Wearlon, PPG, the Tjarno Marinbiologiska Laboratorium and others.

Conference Presentations/Posters

75th Annual Meeting of the Florida Academy of Sciences (Melbourne, Fl 2011)

Ralston E and Swain G. The ghost of fouling communities past: evidence for carry-on effects on transplanted panels. (presentation)

15th International Congress on Marine Corrosion and Fouling (Newcastle, UK 2010)

Ralston E and Swain G. The ghost of fouling communities past: evidence for carry-on effects on transplanted panels. (presentation)

74th Annual Meeting of the Florida Academy of Sciences (Ft. Pierce, Fl 2010)

Ralston E and Swain G. An *in-situ* method to study early recruitment of barnacles. (presentation)

39th Benthic Ecology Meeting (Wilmington, NC 2010)

Ralston E and Swain G. The ghost of fouling communities past: evidence for carry-on effects on transplanted panels. (poster)

Office of Naval Research: Coatings Workshop (Portland, Or 2009)

Ralston E, Zargiel K, Tribou M and Swain G. The effect of grooming on micro- and macrofouling community structure. (poster)

14th International Congress on Marine Corrosion and Fouling (Kobe, Japan 2008)

Ralston E and Swain G. Bioinspiration – the solution for biofouling control? (presentation)

70th Annual Meeting of the Florida Academy of Sciences (Melbourne, Fl 2006)

Ralston E, Bacon A and Johnson K. *In situ* phototaxis of zooplankton of the Indian River Lagoon (Florida) determined using LED light traps. (presentation)

13th International Congress on Marine Corrosion and Fouling (Rio de Janeiro, Brazil 2006)

Ralston E, Tribou M, Herpe S and Swain G. Short term testing of antifouling coatings. The influence of color. (poster)