

## Carly A. Strasser

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### EDUCATION **Massachusetts Institute of Technology/Woods Hole Oceanographic Institution**

Ph.D. Biological Oceanography, March 2008  
Dissertation: “Metapopulation Dynamics of the Softshell Clam, *Mya arenaria*”

### **University of San Diego**

B.A., Marine Science with Biology emphasis, Summa Cum Laude, May 2001  
Thesis: “Population structure of the Antarctic krill, *Euphausia superba*”

### RESEARCH & PROFESSIONAL EXPERIENCE

#### **DataONE**, based at National Center for Ecological Analysis & Synthesis, UC Santa Barbara

*Postdoctoral Associate* September 2010 - present

Engaging the scientific and data management community in the Data Observation Network for Earth (DataONE), a cyberinfrastructure that will provide universal access to environmental and ecological data. Advisor: Stephanie Hampton.

- Member, Community Engagement and Education Working Group
- Preparing manuscript to encourage data sharing and archiving among Ecologists
- Creating learning modules for best practices in data management, to be used in undergraduate or graduate education settings
- Assessing undergraduate education in data management, reuse, and preservation by surveying Ecology professors at top universities
- Coordinating workshop at ESA 2011 meeting, “How to Manage Ecological Data for Effective Use and Re-use: A Workshop for the Early Career Scientist”
- Preparing *Primer on Best Practices for Data Management*, intended for novices and accessible via DataONE website
- Primary mentor for two DataONE graduate student interns and secondary mentor for two DataONE graduate interns, working on projects related to data management, data reuse, and the nature of ecological data
- Member, DataONE Users Group; guides and evaluates DataONE progress
- Co-led workshop on Best Practices for Data Management sponsored by DataONE, Santa Fe NM May 2011; led sessions on NSF Data Management Plans

#### **University of Alberta & Dalhousie University**, Edmonton AB & Halifax NS, Canada

*Postdoctoral Investigator* January 2009 - October 2010

Used theoretical and experimental approaches to understand the role of life stage in establishment of invasive copepods introduced via ballast water. Advisors: Mark Lewis (University of Alberta) and Claudio DiBacco (Dalhousie University & Bedford Institute of Oceanography).

#### **Woods Hole Oceanographic Institution**, Woods Hole MA

*Postdoctoral Investigator* March 2008 - December 2008

Developed demographic models of the endangered North Atlantic right whale population based on mark-recapture data. Advisor: Hal Caswell.

#### **MIT-WHOI Joint Program**, Boston & Woods Hole MA

*PhD Candidate* June 2002 - March 2008

Combined experimental, field, and theoretical techniques to explore the metapopulation dynamics of the softshell clam, *Mya arenaria*. Advisors: Lauren Mullineax, Simon Thorrold, Mike Neubert.

**Maric College**, San Diego CA

*Laboratory Manager*

June 2001 - June 2002

Managed education laboratories for Biology, Anatomy, and Biochemistry courses. Generated budgets, ordered supplies, prepared and maintained materials for student laboratories.

MENTORING  
EXPERIENCE

**Primary Advisor**, DataONE & NCEAS

*Sarah Clark, UCSB masters student, Bren School of Environmental Science & Management*

**Primary Advisor**, DataONE 2011 Summer Internship Program

*Michelle Chang, UCSB masters student, Bren School of Environmental Science & Management*

**Co-Advisor**, DataONE 2011 Summer Internship Program

*Melody Basham, Arizona State University PhD student, Mary Lou Fulton Teacher's College*

**Co-Advisor**, DataONE 2011 Summer Internship Program

*Shan Huang, University of Georgia PhD student, Odum School of Ecology*

**Co-Advisor**, Wood Hole Oceanographic Institution

*Alexis Jackson, Undergraduate Minority Fellow, Summer 2005*

**Advisor**, Wood Hole Oceanographic Institution

*Victoria Stearns & Stephanie Pommrehn, High school interns, Summer 2004 & 2006*

TEACHING  
EXPERIENCE

**Teaching Assistant & Guest Lecturer**

Dalhousie University, Halifax NS

*Dynamics of Oceanography*, August 2010

Two week intensive course for 20 students that included 7 field trips aboard a small vessel. Prepared supplies for and oversaw labs, organized research vessel trips, and assisted students in report preparation.

**Instructor**

University of Alberta, Edmonton AB

*Marine Science*, Winter term 2009 & 2010

Taught third and fourth year undergraduates about the ecological, physical, biological, and chemical components of the marine environment.

**Guest Lecturer**

Bamfield Marine Sciences Centre, Bamfield BC

*Models in Ecology*, August 2009

**Instructor**

Mullen Hall Elementary School, Falmouth MA

*COSEE Program*, Fall 2006

Participant in NSF-sponsored Centers for Ocean Sciences Education Excellence (COSEE) program, intended to establish a relationship between marine scientists and school teachers.

**Teaching Assistant & Guest Lecturer**

Woods Hole Oceanographic Institution

*Biological Oceanography*, Spring 2004 & 2005

**Instructor**

Maric College, San Diego CA

*Introduction to Biology*, 2001 - 2002

Taught lecture and laboratory components. Developed curriculum, prepared lectures, organized field trips, and developed testing and other assessment materials.

**Teaching Assistant**

University of San Diego, San Diego CA

*Invertebrate Zoology*, 2000UPCOMING  
ACTIVITIES

Presenter & Participant, Fourth Annual Summer Institute on Data Curation, University of Illinois Graduate School of Library and Information Science, June 2011

Organizer & Presenter, ESA 2011 Conference Workshop, "How to Manage Ecological Data for Effective Use and Re-use: A Workshop for the Early Career Scientist", August 2011

Presenter & Mentor, SACNAS 2011 National Conference (Advancing Hispanics/Chicanos & Native Americans in Science), October 2011

Symposium Organizer, ESA 2012 Conference, "21st century Ecology serving society: Growing pains of an adolescent giant", August 2012

SERVICE &  
PROFESSIONAL  
ACTIVITIES

**Reviewer**, Conservation Genetics, Journal of Sea Research, Marine Ecology Progress Series, Journal of Marine Biology, Marine Biology Research, Aquatic Biology, Journal of Experimental Marine Biology and Ecology, NSF Proposals

**Workshop Organizer**, "NCEAS Servers and the Command Line" at NCEAS, 2010; "Subversion: version control" at NCEAS, 2010; "Introduction to Morpho and the Knowledge Network for Biocomplexity" at NCEAS, 2010; "Data Management Plans: What you need to know before your next NSF proposal" at NCEAS

**Workshop Participant**, COMPASS (Communication Partnership for Science and the Sea) training 2011; "Population Modelling" at NCEAS, 2010; "NCEAS Servers and the Command Line" at NCEAS, 2010; "Subversion: version control" at NCEAS, 2010; "Introduction to Morpho and the Knowledge Network for Biocomplexity" at NCEAS, 2010; "Teaching Enhancement Series", sponsored by the University of Alberta Centre for Teaching and Learning, 2010

**Member**, American Society of Limnology and Oceanography (2003 - present); Ecological Society of America (2007 - present); Society for Mathematical Biology (2007 - 2010); Student Representative Committee to the Joint Program in Biological Oceanography, WHOI (2007); Biology Department Graduate Student Representative (2004)

## COMPUTER SKILLS

Extensive experience with MATLAB, R, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office, and Adobe Creative Suite. Some experience with SYSTAT, Mathematica, and XML. Active Twitter user (@carlystrasser)

## PUBLICATIONS

Strasser, CA, MA Lewis, and C DiBacco. A mechanistic model for understanding invasions: Using the environment as a predictor of population success. In press, *Diversity and Distributions*.

Strasser, CA, M Neubert, H Caswell, and C Hunter. 2010. Contributions of high and low quality patches to a metapopulation with stochastic disturbance. In press, *Theoretical Ecology*. doi:10.1007/s12080-010-0106-9

Strasser, CA, and PH Barber. 2009. Limited genetic variation and structure in softshell clams (*Mya arenaria*) across their native and introduced range. *Conservation Genetics* 10: 803-814.

doi:10.1007/s10592-008-9641-y

Strasser, CA, LS Mullineaux, and SR Thorrold. 2008. Temperature and salinity effects on elemental uptake in the shells of larval and juvenile softshell clams (*Mya arenaria*). *Marine Ecology Progress Series* 370: 155-1639. doi:10.3354/meps07658

Strasser, CA, LS Mullineaux and BD Walther. 2008. Growth rate and age effects on *Mya arenaria* shell chemistry: implications for biogeochemical studies. *Journal of Experimental Marine Biology and Ecology* 355: 153-163. doi:10.1016/j.jembe.2007.12.0

Strasser, CA SR Thorrold, VR Starczak, and LS Mullineaux. 2007. Laser ablation ICP-MS analysis of larval shell in softshell clams (*Mya arenaria*) poses challenges for natural tag studies. *Limnology & Oceanography: Methods* 5: 241-249.

PUBLICATIONS  
SUBMITTED OR IN  
PREPARATION

Rajakaruna, H, CA Strasser and MA Lewis. A stage-structured, temperature-dependent model of invasive copepods: Implications for *Pseudodiaptomus marinus*. In preparation for *Biological Invasions*.

Strasser, CA, H Caswell and M Neubert. Sensitivity analyses of a subsidized metapopulation model for a harvested shellfish population. In preparation for *Natural Resource Modeling*.

Caswell, H, CA Strasser and C Hunter. An update on the demography of the North Atlantic right whale: New models and new patterns. In preparation for *Ecology*.

White, MM, CA Strasser and LS Mullineaux. Spatial and temporal variations in trace elemental signatures of juvenile soft-shell clams (*Mya arenaria*). In preparation for *Estuarine, Coastal and Shelf Science*.

CONFERENCE  
PRESENTATIONS

Strasser, CA. 2011. A mechanistic model for understanding invasions: Using the environment as a predictor of population success. Canadian Aquatic Invasive Species Network Final Meeting, Quebec City, QU.

Strasser, CA and M Lewis. 2010. Parameterization of a temperature- and salinity-dependent model for invasive copepods: experiments with *Eurytemora affinis*. Canadian Aquatic Invasive Species Network Annual General Meeting, Victoria BC.

Strasser, CA, H Rajakaruna, and M Lewis. 2009. A stage-structured, temperature-dependent model of invasive copepods: Implications for *Pseudodiaptomus marinus*. Canadian Aquatic Invasive Species Network Annual General Meeting, Halifax NS (2nd place, best poster) and Marine Bioinvasions Conference, Portland OR.

Strasser, CA, H Caswell, and C Hunter. 2008. An update on the demography of the North Atlantic right whale: New models and new patterns. North Atlantic Right Whale Consortium Annual Meeting, New Bedford MA.

Strasser, CA, H Caswell, and C Hunter. 2008. Demographic models for the North Atlantic right whale: How viable is the population? WHOI Postdoctoral Symposium, Woods Hole MA.

Strasser, CA, H Caswell, and M Neubert. 2008. Sensitivity analyses of a subsidized metapopulation model for a harvested shellfish population. Ecological Society of America Annual Meeting, Milwaukee WI.

Strasser, CA, M Neubert, C Hunter, and H Caswell. 2007. Stochastic disturbance and the impact

of high and low quality patches on metapopulation growth rate. Ecological Society of America & Society for Mathematical Biology Annual Meetings, San Jose CA.

Strasser, CA, LS Mullineaux, and SR Thorrold. 2006. LA-ICPMS burns through larval shell of *Mya arenaria*, posing challenges for connectivity studies. ASLO Ocean Sciences Conference, Honolulu, HI.

Strasser, CA, LS Mullineaux and S Mills. 2004. Trace Element Composition of Larval Bivalve Shells Reflects Natal Environment. 2004 ASLO Ocean Research Conference, Honolulu, HI and Ecological Society of America Annual Meeting, Portland OR.

#### HONORS & AWARDS

National Defense Science and Engineering Graduate Fellowship (2002-2005), National Barry M. Goldwater Scholarship recipient (1999-2001), University of San Diego (USD) Deans List (1997-2001), Outstanding Scholarship for Marine Science Department, USD (2001), Outstanding Research for Marine Science Department, USD (2001), USD Associated Students Research Grant (1999), USD Trustee Scholarship Recipient (1997-2001)

#### OUTREACH & COMMUNITY INVOLVEMENT

Volunteer, Fighting Back Mentor Program, Santa Barbara CA (2010 - present); Volunteer, Graduates at Alberta Mathematics Etc. (GAME) in the Schools Outreach program at University of Alberta (2009 - 2010); Volunteer, Big Brothers and Big Sisters of the Cape and Islands (2005 - 2009); Judge, Falmouth Middle School Science Fair (2009); Volunteer, Cape Cod Center for Women (2008); Judge, Falmouth Academy Science Fair (2007 - 2008)