

SARAH TEPLER DROBNITCH

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EDUCATION

- 2011 - 2016 Ph.D. from **University of California, Santa Cruz** Santa Cruz, California
Ecology and Evolutionary Biology
Advisors: Jarmila Pittermann and Mark Carr
- 2008 B.A. from **Columbia University** (Archaeology) New York, New York
- 2006 *Study Abroad* — University of Otago Dunedin, New Zealand

FELLOWSHIPS, GRANTS, and AWARDS

- NSF Graduate Research Fellow, 2011 - 2015
- UCSC Chancellor's Fellow, 2015 - 2016
- Earl and Ethel Myers Oceanographic and Marine Biology Research Trust Award, 2012
- BSA Graduate Student Research Award, Botanical Society of America, 2012
- PSA Grants-In-Aid of Phycological Research, 2012
- CNPS Natalie Hopkins Award, 2015
- ESA Physiological Ecology Section Travel Award, 2016

CURRENT RESEARCH

As a plant and algae *eco-physiologist*, I seek to understand the ecological and evolutionary drivers of plant physiological traits. In particular, I am interested in the anatomy, function, and scaling of *phloem* and macroalgal transport networks; *photosynthesis* and *carbon acquisition* physiology of aquatic plants and terrestrial algae; and arid plant adaptations to *desiccation stress*.

PUBLICATIONS

- Drobnitch, S.T.**, *Pochron, T., and *C. Miranda. In revision. Patterns and drivers of $\delta^{13}\text{C}$ variation in the giant kelp, *Macrocystis pyrifera*. *Limnology and Oceanography*.
- Drobnitch, S.T.**, Nickols, K.J., and M. Edwards. 2016. Abiotic influences on bicarbonate use in the giant kelp, *Macrocystis pyrifera*, in the Monterey Bay. *Journal of Phycology*.

*Knoblauch, J., **Drobnitch, S.T.**, Peters, W.S., and M. Knoblauch. 2016. In situ-microscopy reveals reversible cell wall swelling in kelp sieve tubes: one mechanism for turgor generation and flow control? *Plant, Cell & Environment*.

Drobnitch, S.T., Jensen, K.H., *Prentice, P., and J. Pittermann. 2015. Convergent evolution of vascular optimization in kelp (Laminariales). *Proceedings of the Royal Society B* 282: 20151667.

Tepler, S.K., Mach, K.J., and M.W. Denny. 2011. Performance versus Preference: Body Temperature of *Chlorostoma funebris*. *Biological Bulletin* 220: 2, 107-117.

Mach, K.J., **Tepler, S.K.**, Staaf, A.V., *Bonhoff, J.C., and M.W. Denny. 2011. Failure by fatigue in the field: A model of fatigue breakage of the macroalga *Mazzaella*, with validation. *Journal of Experimental Biology* 214, 1571-1585.

Denny, M.W., Mach, K.J., **Tepler, S.K.**, and P. Martone. 2013. Indefatigable: an erect coralline alga is highly resistant to fatigue. *Journal of Experimental Biology* 216, 3772-3780.

* denotes undergraduate authors

RELEVANT COURSEWORK

- *Plant Water Relations*. Jarmila Pittermann, UCSC.
- *Global Change Ecology*. Kristy Kroeker, UCSC.
- *Aquatic Organic Chemistry*. Matthew McCarthy, UCSC.
- *Isotopic Methods in Environmental Science*. Paul Koch, UCSC.
- *Plant Propagation*, Nicola Hughes, Cabrillo College.
- *Marine Algae*, Friday Harbor Laboratories, University of Washington

PROFESSIONAL and RESEARCH EXPERIENCE

2016 **Teaching Assistant**

Systematic Botany of Flowering Plants (BIOE 117) and Lab (117L)

2013 **Teaching Assistant**

Marine Botany (BIOE 120) and Marine Botany Lab (120L)

Marine Ecology (BIOE 208); 3 weekly discussion sections.

2010 **Technician**

Mitch Pavao-Zuckerman Lab, Biosphere 2, University of Arizona, AZ

Urban and arid soil microbial ecology

2008 **Technician**

Mark Denny Lab, Hopkins Marine Station of Stanford University, CA
Biomechanics of intertidal organisms

2007 **Intern**

Susan Brawley Lab, University of Maine, ME
Molecular biogeography and phylogeography

Intern

Hilary Callahan Lab, Barnard College, New York, NY
Plant physiology and ecology

ACADEMIC PRESENTATIONS

Drobnitch, S.T., Pochron, T., and C. Miranda. Patterns and drivers of $\delta^{13}\text{C}$ variation in the giant kelp, *Macrocystis pyrifera*. *Western Society of Naturalists*, Monterey, California, 2016.

Drobnitch, S.T., Pochron, T., Miranda, C. and M.H. Carr. Carbon stable isotope fractionation in giant kelp (*Macrocystis pyrifera*): From individuals to ecosystems. *Ecological Society of America*, Ft. Lauderdale, Florida, 2016.

Tepler, S.K., Jensen, K.H., Prentice, A., and J. Pittermann. Taking the pulse of kelp: functional anatomy of the vascular system in large brown seaweeds. *Phycological Society of America*, Portland, Oregon, 2014.

Tepler, S.K., Prentice, A., and J. Pittermann. Taking the pulse of kelp: functional anatomy of the vascular system in large brown seaweeds. Invited presentation for Symplast/Apoplast Symposium. *Botanical Society of America*, New Orleans, Louisiana, 2013.

Tepler, S.K. and M. Pavao-Zuckerman. Native, Arid Green Design: Strategies to Combat Urban Heat Island Effect. *American Geophysical Union*, San Francisco, California. 2010.

Tepler, S.K., M.W. Denny, and Mach, K.J. Why does *Chlorostoma funebris* have a black shell? *Western Society of Naturalists*, Seaside, California. 2009.

EXTRA-SCIENTIFIC PURSUITS

I am a watercolorist, glassworker, potter, and trained vocalist.