

Ty J. Samo

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Ph.D Candidate
Scripps Institution of Oceanography
Marine Biology Research Division
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◆ Education

BS, Cell Biology and Biochemistry, University of California,
San Diego, 2004
AA, General Science, Solano Community College, 2002
AA, Liberal Studies, Solano Community College, 2002

◆ Graduate Studies

Specialization: Microbial Ecology
Cognate Area: Marine Biology
Dissertation: Ecological and biogeochemical significance of
transparent organic particles and associated microbiota in coastal
and open ocean environments
Dissertation advisor: Farooq Azam

◆ Professional Experience

*Graduate Student Researcher, Scripps Institution of Oceanography, July
2005 – present*

Work has focused on the characterization of transparent marine
particles and relating the chemical and macromolecular features
to dynamics of microbial community composition and

metabolism. Techniques used in these investigations include epifluorescence, confocal laser scanning, deconvolution, and atomic force microscopies, radiolabeling and uptake measurements, and molecular approaches, including nucleic acid extraction, PCR, and denaturing gradient gel electrophoresis.

Staff Research Associate, Scripps Institution of Oceanography, Jan 2005 – Jun 2005

Provided assistance with field study logistics and completed laboratory work on the viability of various stains used for visualization of marine microbes and organic material.

Laboratory Assistant, Scripps Institution of Oceanography, Jan 2004 – Dec 2004

Duties included providing support with experiments, laboratory publication listings, product ordering, and equipment organization.

◆ **Teaching experience**

Laboratory Teaching Assistant, University of California, San Diego, Spring 2009

Guided undergraduates through an intensive marine microbiology laboratory course designed to expose students to the scientific method, advanced research techniques, and analysis of results via outlined lab experiments as well as completing a personal mini-research project.

Reader, University of California, San Diego, Winter 2008 & 2009

Provided grades for microbial genetics examinations and assisted with scoring feedback.

Guest instructor, Scripps Institution of Oceanography, 2008
Presented microbiological and microscopy techniques to incoming graduate students, including general principles and hands-on instruction for microscope use.

Guest lecturer, University of California, San Diego, 2008
Introduced an undergraduate "Oceans" class to the background, techniques, equipment, and importance of microbial oceanography in understanding ocean and climate cycles.

◆ **Honors**

Kiwanis Club College Scholarship, 2000
Solano College Dean's Honor Roll, 2000 - 2002
UCSD Provost's Honors, 2002 - 2004
Marine Biology student representative, 2008 - 2009
Scripps Institution of Oceanography TA Award 2008 - 2009

◆ **Publications & Presentations**

Samo, TJ, F Malfatti, and F Azam. 2008. A new class of transparent organic particles in seawater visualized by a novel fluorescence approach. *Aquatic Microbial Ecology*. 53(3): 307-321

Samo, TJ, JR Ward, and F Azam. 2008. Microbial interactions with transparent particles and implications for carbon export flux. Oral presentation. UC-Long Term Ecological Research (LTER) Graduate Student & Postdoc Symposium, La Jolla, CA.

Samo, TJ, JR Ward, and F Azam. 2007. Bacteria-mediated carbon fluxes in the California Current Ecosystem. Poster Presentation. NSF California Current Ecosystem-LTER Site Review, La Jolla, CA.

Samo, TJ, F Malfatti, and F Azam. 2006. A class of organic transparent particles visualized with a novel staining technique. Poster Presentation. American Society of Limnology & Oceanography Meeting, Santa Fe, NM.

◆ **Field Experience**

Microbial community and metabolism responses in the North Pacific subtropical gyre
CMORE/Agouon summer course in microbial oceanography at the University of Hawaii
Aboard the R/V Kilo Moana
22 June 2009 – 30 June 2009

Microbe-transparent particle interactions within oceanic water mass gradients and boundaries
California Current Ecosystem – Long Term Ecological Research (CCE-LTER) Process Cruise
Aboard the R/V Melville
30 September 2008 – 29 October 2008

Demonstrating the potential for non-linear transitions in marine microbial ecosystems
California Current Ecosystem – Long Term Ecological Research (CCE-LTER) Process Cruise
Aboard the R/V Thomas G. Thompson
2 April 2007 – 21 April 2007

Plankton Community Structure and Iron Distribution in the Southern Drake Passage and Scotia Sea
Aboard the RV/IB Nathaniel B. Palmer
3 July 2006 – 15 August 2006