

## **Kelly C Rakow**

Woods Hole Oceanographic Institution, Woods Hole, MA 02543 USA, [krakow@whoi.edu](mailto:krakow@whoi.edu)

### **EDUCATION**

#### **MIT-WHOI Joint Program in Oceanography**

Ph.D. candidate. Biological Oceanography. Thesis: *Morphology, locomotion and filtration mechanics of salps*. Advisor: Larry Madin

#### **University of South Alabama and Dauphin Island Sea Lab**

M.Sc. Marine Sciences, 2004. Thesis: *Oriented swimming by the scyphomedusa Aurelia against shear flow*. Advisor: Monty Graham

#### **Tufts University**

B.S. Biology and Child Development, 1999

#### **James Cook University, Australia**

Semester Abroad. Department of Marine Biology. 1998

### **RECOGNITION**

Journal of Experimental Biology Traveling Fellowship (2006)

University of South Alabama Graduate Fellowship (2003)

Nelson Award for best M.Sc. candidate in Marine Sciences, U. South Alabama (2004)

### **RESEARCH & PROFESSIONAL EXPERIENCE**

#### **Woods Hole Oceanographic Institution, Woods Hole, MA (2004- present)**

- Studying filtration mechanics and jet propulsion of salps using Particle Image Velocimetry, dye visualizations, fluorescence microscopy and blue water diving techniques off the Pacific coast of Panama.
- Assisted in study of *Salpa thompsoni* in the Southern Ocean using a combination of net tows, towed optical instruments, blue water diving and laboratory measurements.

#### **Dauphin Island Sea Lab, Dauphin Island, AL (2002- 2004)**

- Studied jellyfish swimming mechanics in the laboratory using frame-by-frame video analysis and in the field using ADCP, CTD and 'JellyCam' video profiles.
- Assisted in study of zooplankton distribution data using tucker trawl, MOCNESS, ring nets, and blue water diving in the Gulf of Mexico.
- Processed plankton samples: identifications, dry weights and C:N ratios.

#### **New England Aquarium, Boston, MA (1999- 2002)**

- As jelly culture aquarist, maintained jellies and investigated new display species, culturing methods and tank designs. Advised other institutions on jellyfish maintenance.
- Selected, trained and supervised a group of 10 interns.

## TEACHING AND MENTORING

**Teaching assistant** at Sea Education Association (2006 and 2007)

**Teaching assistant** to Dr. Mullineaux and Dr. Beaulieu, WHOI (2005)

**Ocean scientist liaison** for Plymouth, MA middle schools, COSEE-NE (2005 – present)

**Mentor** to SOARS intern (Significant Opportunities in Atmospheric Research in Science) (2006)

**Science fair judge** at Falmouth high school (2005 and 2007)

**Women in Science workshop leader** for middle school girls (2003 and 2004)

**Aquarium Educator** at the New England Aquarium (2000- 2001)

## PUBLICATIONS

**Rakow, K.C.** and Graham, W.M. (2006) Orientation and swimming mechanics by the scyphomedusa *Aurelia* sp. in shear flow. *Limnology and Oceanography* 51(2)

## PRESENTATIONS

**Rakow, K.** and Graham, W.M. Swimming mechanics by jellyfish in shear flow – Oral presentation. ASLO 2004 Summer Meeting

**Rakow, K.** and Graham, W.M. Oriented swimming by jellyfish in flow – **Best oral presentation.** Southeastern Ecology and Evolution Conference. March, 2004

**Rakow, K.** Blue water diving with gelatinous zooplankton – Invited oral presentation. New England Aquarium, April 2002

## ACTIVITIES AND SKILLS

- Elected Graduate Student Representative, 2005
- Elected Graduate Student Organization Treasurer, 2002
- AAUS Research SCUBA certified; experience blue water and dry suit diving
- Conversant in Spanish

## MEMBERSHIPS

American Society of Limnology and Oceanography, Union of Concerned Scientists

## PEER REVIEW

*Limnology and Oceanography* (1), *Deep Sea Research* (1 co-review), *Marine Biology* (1 co-review)