# 2011 Summer Student Fellow Research Projects

# Antoniya A. Aleksandrova, Williams College

Advisor: John Collins, G&G

# Isabella B. Arzeno, Stanford University

Looking under the Ross Ice Shelf: Tidal and subtidal analysis

Advisors: Robert Beardsley, Breck Owens and Richard Limeburner, PO

### Maria F. M. Bangal, San Jose State University

Comparative analysis of protein expression in a marine cryptophyte and the ciliate that robs its organelles

Advisor: Matthew Johnson, BIO

# Yana S. Bebieva, Moscow Institute of Physics and Technology

Chaotic stirring in 3D eddies Advisor: Lawrence Pratt, PO

#### **Alice M. Carter**, Northwestern University

Controls on particle export in the West Antarctic Peninsula

Advisors: Kenneth Buesseler, MC&G

#### **Eleanor M. Caves**, Pomona College

Characterizing the vocalizations of long-finned pilot whales (Globicephala melas): Auditing DTAG recordings of three simultaneously-tagged individuals to create an analyzable data set

Advisor: Peter Tyack, BIO

#### **Kristina L. Deak**, Northeastern University

The effects of developmental valproic acid and ethanol exposure on microRNA expression in zebrafish (Danio rerio)

Advisors: Mark Hahn and Neel Aluru, BIO

#### **Thomas M. DeCarlo**, University of San Diego

Rayleigh-based multi-element coral paleothermometry: New developments and applications

Advisors: Anne Cohen and Glenn Gaetani, G&G

### Jacinta Edebeli, UMass-Amherst & Mount Holyoke College

A simplified spectrophotometric method for measurements of seawater alkalinity Advisor: Zhaohui Aleck Wang, MC&G

### **Leah Fine**, Amherst College

A record of hurricane overwash deposition at Quissett Harbor, Woods Hole, MA Advisor: Jeffrey Donnelly, G&G

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#### Anne Sasha Glanville, University of Kansas

The roles of the tropics and the North Pacific in Pacific decadal variability

Advisor: Young-Oh Kwon, PO

#### Niya G. Grozeva, Stony Brook University

Modeling geochemical environments in black smoker chimneys at the Kilo Moana vent field

Advisor: Margaret Tivey, MC&G

#### **Eric Hawley**, DePauw University

Cytochrome P450 regulation in the early development of two teleosts, Danio rerio and

Fundulus heteroclitus

Advisor: John Stegeman, BIO

# **Grant Jiang**, University of Maryland, College Park

Carbon variability off the West Antarctic Peninsula coast

Advisors: Scott Doney and David Glover, MC&G

#### Maxwell Kaplan, University of St. Andrews, Scotland

Impact of elevated CO2 conditions on paralarval longfin squid (Loligo pealeii)

development and early life

Advisor: T. Aran Mooney, BIO

#### **Katelyn M. Lewis**, Western Washington University

Advisor: Robert Pickard, PO

#### Max K. Lloyd, Amherst College

Constraining cooling rates of UHP metamorphic rocks with closure temperature

geospeedometry: a case study from the Dabie orogen

Advisor: Nobumichi Shimizu, G&G

#### Joseph J. Lozier, Yale University

Sponsors: Steven Jayne and Louis St. Laurent, PO

# Casey C. Maue, Stanford University

Continuous CH4 flux measurements from the shallow Beaufort Sea using cavity ring-

down spectroscopy (CRDS)

Advisor: John Pohlman, USGS

#### Alyssa J. McKenna, Mount Holyoke College

Groundwork for a Toolbox in MATLAB to Analyze CT Scans of Coral

Advisor: Hanumant Singh, AOPE

# 2011 Summer Student Fellow Research Projects

#### Kevin T. Mori, Stanford University

SuPR-DUPR: Design of an AUV hydrothermal vent sampler

Advisor: Dana Yoerger and John 'Chip' Breier, AOPE

#### Molly A. Moynihan, Cornell University

Biogeochemical Modeling of West Falmouth Harbor

Advisor: Neil Ganju, USGS

# Catrion Munro, University College London

Tracking habitat use of mobile hydrothermal vent fauna along the East Pacific Rise

Advisor: Timothy Shank, BIO

# Sujata A. Murty, Oberlin College

Multi-century records of NAO variability using spatial SST gradients from Red Sea corals

Advisor: Konrad Hughen, MC&G

# Alison O'Connor, Oberlin College

Mercury speciation and distribution in a wastewater-impacted groundwater plume

Advisor: Carl Lamborg, MC&G

# Olivia N. Osicki, University of Cambridge, UK

Constraints on mineralogy and primary productivity in hydrothermal vent plumes of the Lau Basin

Advisor: John 'Chip' Breier, AOPE

#### **Nivette M. Pérez Pérez**, University of Puerto Rico at Humncao

Analysis of zooplankton in internal waves at Stellwagen Banks

Advisor: Jesús Pineda, BIO

#### Ana Karina Ramos Musalem, Universidad Nacional Autónoma de México

Experiments on tilting horizontal shear layers

Advisor: Karl Helfrich, PO

#### **Emlyn Resetarits**, Columbia University

Distribution patterns of toxic Pseudo-nitzschia species on Georges Bank during the spring/summer transition in 2010

Advisor: Donald Anderson, BIO

# Rose Stanley, Cornell University

A review of Federal aquaculture legislation

Advisors: Hauke Kite-Powell and Porter Hoagland, MPC

# 2011 Summer Student Fellow Research Projects

# Jason S. Sadowski, Rutgers University

Spatial analysis of the orange clownfish (Amphiprion percula) and its associated habitat in Kimbe Bay, Papua New Guinea

Advisor: Rubao Ji and Julie Kellner, BIO

# Laura A. Stevens, Wellesley College

Expressions and mechanisms of off-axis hydrothermal activity in the Guaymas Basin

Advisor: S. Adam Soule, G&G