

## **CURRICULUM VITAE**

Kate Hubbard

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### **EDUCATION**

- 2010 Ph.D., Biological Oceanography, University of Washington, Seattle, WA  
2005 M.S., Biological Oceanography, University of Washington, Seattle, WA  
2002 B.A., Biology, New College of Florida, Sarasota, FL

### **PROFESSIONAL EXPERIENCE**

- 2012-present Research Scientist at Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission  
2012-present Guest Investigator, Biology, Woods Hole Oceanographic Institution  
2012 Postdoctoral Investigator, Biology, Woods Hole Oceanographic Institution, mentored by Dr. Donald Anderson  
2010-2012 Postdoctoral Scholar, Biology, Woods Hole Oceanographic Institution, mentored by Dr. Donald Anderson and Dr. Dennis McGillicuddy  
2011-present Online Course Scientist for The Ocean System, as part of Seminars on Science at the American Museum of Natural History  
2002-2010 Research assistant, Center for Environmental Genomics, University of Washington, mentored by Dr. Ginger Armbrust  
2008-2010 Researcher, NSF-funded exchange between the Woods Hole and Pacific Northwest Centers for Human Health and Ocean Studies  
2008-2009 Lead trainee, NOAA Pacific Northwest Oceans and Human Health Initiative Graduate Traineeship  
2008-2009 Coordinator of Sanger DNA sequencing facility at Center for Environmental Genomics, University of Washington  
2008 Researcher, NSF-funded “International Research Experience for Students: Ecology and Evolution of Marine Photosynthetic Organisms”, Station Biologique de Roscoff, FR  
2002 Instructor, Marine Science Consortium, Wallops Island, VA  
2001 Research assistant (Research Experience for Undergraduates), Great Lakes WATER Institute, University of Wisconsin at Milwaukee, mentored by Dr. Harvey Bootsma  
1999-2002 Laboratory assistant, Allyn Museum of Entomology, Sarasota, FL  
1999 Intern, Chemical ecology, Mote Marine Laboratory, Sarasota, FL

### **PUBLICATIONS**

Fernandes, L.F.\*, Hubbard, K. A.\*, Richlen, M., Smith, J., Bates, S. S., Ehrmann, J., Leger, C., Mafra, L., Kulis, D., Quilliam, M., Libera, K., McCauley, L., Anderson, D.M.

(2013). Diversity and toxicity of the diatom *Pseudo-nitzschia* Peragallo in the Gulf of Maine, Northwestern Atlantic. *Deep-Sea Research Part II*, special edition.

\*The first and second authors contributed equally to this project.

Ribalet, F., Marchetti, A., Hubbard, K.A., Brown, K., Durkin, C.A., Morales, R. Robert, M., Swalwell, J., Tortell, P.D., van den Engh, G., Armbrust, E.V. 2010. Unveiling a phytoplankton hotspot at a narrow boundary between coastal and offshore waters. *Proceedings of the National Academy of Science* 107:16571-6.

Hubbard, K. A., Rocap, G. & Armbrust, E. V. 2008. Inter- and intraspecific community structure within the diatom genus *Pseudo-nitzschia* (Bacillariophyceae). *Journal of Phycology* 44:637–649.

Marchetti, A., Lundholm, N., Kotaki, Y., Hubbard, K., Harrison, P. J. & Armbrust, E. V. 2008. Identification and assessment of domoic acid production in oceanic *Pseudo-nitzschia* (Bacillariophyceae) from iron-limited waters in the northeast subarctic Pacific. *Journal of Phycology* 44:650-661.

Erdner, D.L., Dyble, J., Parsons, M.L., Stevens, R.C., Hubbard, K.A., Wrabel, M.L., Moore, S.K., Lefebvre, K.A., Anderson, D.M., Bienfang, P., Bidigare, R.R., Parker, M.S., Moeller, P., Brand, L.E., and Trainer, V.L. 2008. Centers for Oceans and Human Health: a unified approach to the challenge of harmful algal blooms. *Environmental Health* 7:S2.

### **RECENT PRESENTATIONS**

Hubbard, K. A., Ellis, C.H., Resetarits, E., Armbrust, E.V., and Anderson, D.M. August 2012. “Seasonal, spatial, and niche-driven patterns of species succession in Gulf of Maine communities of the toxic marine diatom *Pseudo-nitzschia*.” 97<sup>th</sup> Annual Meeting of the Ecological Society of America, Portland, OR (poster).

Resetarits, E., Hubbard, K. A., Ellis, C.H., Armbrust, E.V., and Anderson, D.M. August 2012. “Co-occurrence of *Pseudo-nitzschia* species and the neurotoxin domoic acid in the Gulf of Maine during 2008 and 2010.” 97<sup>th</sup> Annual Meeting of the Ecological Society of America, Portland, OR (poster).

Hubbard, K.A. 2012. “Insights into the genetic and ecological diversity of harmful algal blooms (HABs) using the model genus *Pseudo-nitzschia*.” Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, St. Petersburg, FL (oral).

Tuney, I., Hubbard, K.A., Sukatar, A. 2012. “Phylogenetic relationships and distribution patterns of *Cystoseira* spp. in the Aegean Sea. 51<sup>st</sup> Annual Meeting of the Northeast Algal Society, Acadia National Park, ME (poster).

Hubbard, K.A., Ellis, C.H., Fernandes, L.F., Resetarits, E., Tuney, I., Anderson, D.M., Armbrust, E. V. 2012. “Seasonal succession in Gulf of Maine *Pseudo-nitzschia*

communities.” 51<sup>st</sup> Annual Meeting of the Northeast Algal Society, Acadia National Park, ME (poster).

Hubbard, K.A., Ellis, C.H., Fernandes, L.F., Richlen, M., McGillicuddy, D.J., Anderson, D.M., Armbrust, E. V. 2011. “Patterns of *Pseudo-nitzschia* diversity and domoic acid toxicity in the Maine Coastal Current System during two hydrographically distinct summer (2008 and 2010).” Sixth Symposium on Harmful Algae in the U.S., Austin, TX.

Resetarits, E., Hubbard, K.A., Anderson, D. M. 2011. “Distribution patterns of toxic *Pseudo-nitzschia* species on Georges Bank during the spring/summer transition in 2010.” Summer Student Fellow Biology Seminar at Woods Hole Oceanographic Institution, Woods Hole, MA (August 25).

Marchetti, A., Moreno, C., Oleinikov, I, Durkin, C.A., Hubbard, K.A., Armbrust, E.V. 2011. “Development of molecular indicators for diatom iron nutritional status.” Phycological Society of America, Seattle, WA (oral).

Hubbard, K. 2011. “Structure and diversity in Atlantic and Pacific communities of the toxigenic diatom *Pseudo-nitzschia*.” Biology Seminar at Woods Hole Oceanographic Institution, Woods Hole, MA (July 28).

#### **TEACHING EXPERIENCE**

- Online Course Scientist for The Ocean System, as part of Seminars on Science at the American Museum of Natural History, 2011-present
- Instructor, Ocean Inquiry Project (NPO, [www.oceaninquiryproject.org](http://www.oceaninquiryproject.org)), 2005-2010
- Teaching Assistant, Introduction to Oceanography, University of Washington, Spring 2005
- Instructor, Coastal Ecology, Marine Science Consortium, Wallops Island, VA, Spring-Summer 2002

#### **INVITED LECTURES**

- Phytoplankton Training Courses for Maine Volunteer Phytoplankton Monitoring Network, Maine Department of Marine Resources (ME DMR), “*Pseudo-nitzschia* in the Gulf of Maine,” at Marine Environmental Research Institute, Blue Hill, ME and at ME DMR Brunswick Satellite Location, May 2013.
- Speaker, “*Pseudo-nitzschia* blooms and domoic acid in the Gulf of Maine and surrounding regions: Implications for research, monitoring, management, and industry,” Maine Fisherman’s Forum, Rockland, ME, March 2013.
- Guest lecture, “Diversity and ecology of plankton in fresh and marine systems,” Marine Biology Laboratory, Wheaton College, 2012
- Guest lecture, “From microbes to mammals- An overview of Vancouver Island biology,” Oceanography Senior Capstone Class, University of Washington, Seattle, WA, 2010

- Guest lecture, “Diversity in toxic diatoms,” Ocean 430 Biological Oceanography, University of Washington, Seattle, WA, 2009
- Guest lecture, “Pacific Northwest Harmful Algal Blooms,” Ocean Research College Academy (ORCA), Edmonds, WA, 2009.

### **FIELD EXPERIENCE**

- 2012 Chief scientist on 2-day survey as part of NOAA-NSCOR funded Amnesic Shellfish Poisoning emergency response cruise to investigate toxic *Pseudo-nitzschia* bloom in the Schoodic Peninsula region (R/V *Tioga*)
- Conducted 4-day survey and several day surveys mapping blooms of *Karenia* spp. in the easter Gulf of Mexico (R/V *Eugenie Clarke*)
- 2011 Conducted 3-day survey of phytoplankton diversity in the Gulf of Maine (off the coast of New Hampshire) during deployment and recovery of the Environmental Sample Processor moored platforms (R/V *Connecticut*)
- Conducted emergency response sampling during unusual marine mammal mortality event for harmful algal bloom species in New Hampshire and Massachusetts coastal waters (R/V *Gulf Challenger*)
- Conducted 12-day survey of *Pseudo-nitzschia* and *Prorocentrum micans* distribution patterns in Gulf of Maine and the Bay of Fundy during October-November (R/V *Oceanus*)
- 2009 Conducted 3-day survey of *Pseudo-nitzschia* distribution patterns in Puget Sound as part of Oceans and Human Health cruise (R/V *Thompson*)
- 2008 Conducted 7-day survey of *Pseudo-nitzschia* distribution patterns in the Bay of Fundy and Gulf of Maine as part of GOMTOX, and assisted with standard sampling for *Alexandrium fundyense* (R/V *Endeavor*)
- 2008 Conducted 7-week time series of *Pseudo-nitzschia* distribution patterns in the English Channel and Penzé Estuary, FR (*Mysis*)
- 2006 Conducted 4-day survey of *Pseudo-nitzschia* distribution and hydrographic properties in Puget Sound as part of the Puget Sound Regional Synthesis Model semi-annual cruise (R/V *Thompson*)
- 2005 Conducted multiple shore-based samplings of *Pseudo-nitzschia* distributions in Puget Sound and the Strait of Juan de Fuca during two toxic blooms (wetsuit)
- 2005 Conducted 7-day survey of *Pseudo-nitzschia* distributions in Vancouver Island coastal waters and filtered for DOM analysis (R/V *Barnes*)

- 2004 Conducted 1-day survey of *Pseudo-nitzschia* distribution patterns in Puget Sound as part of Oceans and Human Health cruise (R/V *Thompson*)
- 2004 Assisted with CTD operations on 14-day Pacific Northwest ECOHAB cruise (R/V *Wecoma*).
- 2004 Assisted with piston and box coring of marine sediment from Vancouver Island waters (R/V *Barnes*).
- 2001 Conducted chlorophyll *a* sampling and analysis during 7-day survey of southern Lake Michigan (R/V *Neeskay*)