

CURRICULUM VITAE

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I. Education

- 1983 B.S., Boston College, Chestnut Hill, MA. Biology.
- 1982 Sea Education Association, Woods Hole, MA; SEA Semester Student R/V Westward
- 1987 M.S., State University of New York at Stony Brook, NY. Marine Environmental Science.
- 1995 Ph.D., University of Maryland, College Park, MD. Marine Environmental and Estuarine Science (Biological Oceanography).

II. Professional Background

- 1995-1999 Research Officer, School of Marine Science/Zoology Department University of Queensland, Brisbane, Australia.
- 1999-2001 Australian Research Council Fellow (APDI), Botany Department and Lecturer, Centre for Marine Studies, University of Queensland, Brisbane, Australia
- 2002-2004 Lecturer (Assistant Professor), Centre for Marine Studies, University of Queensland, Brisbane, Australia (50%)
- 2002-2013 Assistant Research Professor, Horn Point Laboratory, University of Maryland Center for Environmental Science, Cambridge, MD
- 2011 Visiting Scientist, Global Change Institute, University of Queensland, Brisbane, Australia Jan-July '11- Host: Professor Ove Hoegh-Guldberg.
- 2013- Associate Research Professor, Horn Point Laboratory, University of Maryland Center for Environmental Science, Cambridge, MD

III. Awards/ Recognitions

Reviewer Award for "Exceptional Contribution to the journal *Harmful Algae*": Elsevier Publishing Co., Amsterdam, The Netherlands.

IV. Research

A. Areas of professional expertise:

Biological oceanography, cyanobacterial ecophysiology, plankton trophodynamics, harmful algal bloom ecology, nutrient dynamics, marine botany, (sub) tropical coastal marine ecology, coral reef biology.

B. Peer Reviewed Publications (Last 5 years; * indicates student paper)

In Review

*Meyer, J.A., **O'Neil, J.M.**, Crump, B.C. (in revision) Differences in microbial community composition and production within cultured isolates of *Karenia brevis* and related species. (*FEMS Microbiology Letters*)

*Gao, Y., **O'Neil, J.M.**, and Stoecker, D.R., Cornwell, J. (2014) Photosynthesis and nitrogen fixation during cyanobacterial blooms in an oligohaline / tidal fresh estuary. *Aquatic Microbial Ecology* doi: 10.3354/ame01692

O'Neil, J.M. and Heil, C.A. (Editors) (2014) "Nutrient dynamics of *Karenia brevis* red tide blooms in the Eastern Gulf of Mexico"; Special Issue of *Harmful Algae*. Volume 38: pp 1-140.

O'Neil, J.M. and O'Neil, C.A. (2014) Preface and dedication: Nutrient dynamics of *Karenia brevis* red tide blooms in the Eastern Gulf of Mexico. Special Issue of *Harmful Algae*, 38: 1-2.

*Meyer, K.A., **O'Neil, J.M.**, Hitchcock, G.L., and Heil, C.A. (2014) Microbial production along the West Florida shelf: Responses of bacteria and viruses to the presence and phase of *Karenia brevis* blooms. *Harmful Algae* 38: 110-118.

* Walsh, B.M., **O'Neil, J.M.** (2014) Zooplankton Community Composition and Copepod Grazing on the West Florida Shelf in Relation to Blooms of *Karenia brevis*. *Harmful Algae*, 38: 63-72.

Heil CA, Bronk, DA, Mulholland, MR, **O'Neil, J.M.**, Bernhardt, P. Murasko S., Havens, J.A. and Vargo, G.A. (2014) Influence of surface aggregation behavior on nutrient cycling during a *Karenia brevis* (Davis) G. Hansen & Moestrup bloom: Migration to the surface as a nutrient acquisition strategy. *Harmful Algae*, 38: 86-94.

*Killberg-Thoreson, L., Mulholland, M.R., Heil, C.A., Sanderson, M.P. **O'Neil, J.M.**, Bronk, D.A. (2014). Nitrogen uptake kinetics in field populations and cultured strains of *Karenia brevis*. *Harmful Algae*, 38: 50-62.

Mulholland M. R, P. W. Bernhardt, I. Ozmon, L. A. Procise, **O'Neil, J.M.**, Heil, C.A., Bronk, D.A. (2014) Contributions of diazotrophy to nitrogen inputs supporting *Karenia brevis* blooms in the Gulf of Mexico. *Harmful Algae*, 38: 20-29.

Heil CA, Dixon, LK, Hall, E. Garrett, M., Lenes, **J.M.**, **O'Neil, J.M.**, Walsh, B.M., Bronk, D.A., Killberg-Thoreson, L., Hitchcock GL, Meyer, K.A., Mulholland, M.R., Procise, L. Kirkpatrick G., Walsh, JJ, Weisberg R,W.(2014). *Karenia brevis* (Davis) G. Hansen & Moestrup blooms in the eastern Gulf of Mexico: Nutrient Sources and Management Strategies based on a 5 year regional study. *Harmful Algae*, 38: 127-140.

Heil, C.A. , Bronk, D.A. Dixon, LK, Hitchcock GL, Kirkpatrick G., Mulholland MR, **O'Neil J.M.**, Walsh, J, Weisberg R, Garrett, M. (2014). The Gulf of Mexico ECOHAB: *Karenia* Program 2006-2012. *Harmful Algae*, 38: 3-7.

Bronk, D. A., Killberg-Thoreson, L. Mulholland, M. R. Sipler, R. E., Roberts, Q. N., Bernhardt, P. W., Garrett, M., **O'Neil, J. M.**, C. A. Heil. (2014). Nitrogen uptake and regeneration (ammonium regeneration, nitrification and photo-production) in waters of the West Florida Shelf prone to blooms of *Karenia brevis*. *Harmful Algae*, 38: 50-62.

Mulholland M. R., P. W. Bernhardt, I. Ozmon, L. A. Proch, **O'Neil, J.M.**, Heil, C.A., Bronk, D.A. (2014) Contributions of diazotrophy to nitrogen inputs supporting *Karenia brevis* blooms in the Gulf of Mexico. *Harmful Algae*, 38: 20-29.

*Fertig, B., **O'Neil, J.M.**, Beckert, K., Cain, C.J., Needham, D.M., Carruthers, T.R., Dennison, W.C. (2013) Cryptic nutrient sources in a coastal lagoon and catchment streams, Chincoteague Bay, Maryland, USA. *Estuarine, Coastal Shelf Science*: doi.org/10.1016/j.bbr.2011.03.031

O'Neil, J.M., Davis, T.W., Burford, M.A., Gobler, C.J. (2012) The Rise of Harmful Cyanobacteria Blooms: Potential Role of Eutrophication and Climate Change. *Harmful Algae* 14: 313-334.

C. Contracts and Grants Awarded (current 2014)

1. United States Department of State: Bureau of Educational and Cultural Affairs, Washington, DC- Fulbright-Hayes funding to administer the "Global Exchange Program *U.S.-Australia Virtual Environmental Partnership*"; \$100K (**O'Neil**) CoPIs: Costanzo and Dennison (UMCES); C. Heil (Bigelow); A. Campbell (Charles Darwin University, Australia): Current: 10/1/12-12/31/13: <http://www.usaus-h2o.org/> (Phase 1 Reporting period extension through 3/14)
2. Maryland Environmental Serviced (MES): ENVIRONMENTAL RESTORATION PROJECT (ERP) TASK 50: "*Microcystis* Blooms and Associated Bird Mortalities Studies and Investigation of *Microcystis* Management Options for the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island": (~100,000) PIs: Sellner, K.(SERC), **O'Neil, J.M.**, & Schott, E. (UMCES); T. Davis (Environment Canada). 3/13-12/13; 30K Supplement 8/14 extension through 12/14.
3. Australian Department of Education, Canberra. *U.S.-Australia Virtual Environmental Partnership*" (Phase 2 continuation of State Dept. project) \$38k (**O'Neil**) CoPIs: Costanzo and Dennison (UMCES); C. Heil (Bigelow); Subcontract through Prof. A. Campbell (Charles Darwin University, Australia): Awarded 12/13- deferred implementation 6/14 for 18 month <http://www.usaus-h2o.org/>.
4. National Science Foundation: Curriculum and Community Enterprise for New York Harbor Restoration in New York City Public Schools and Billion Oyster Partnership-STEM C: Subcontract with Pace University, New York; Harbor School Foundation, NYC, Columbia University (\$415K) with Dennison, Costanzo, Jones and **O'Neil**; Awarded 1 Nov. 2014 (3 years).

D. Other Submitted Proposals (2014)

1. National Science Foundation Biological Oceanography: Submitted Aug. 2013: "Collaborative Proposal: Understanding the distribution, growth and fate of pelagic *Sargassum* in the Atlantic" PIs Coles, V., Hood, R. and **O'Neil, J.M.** (UMCES) \$980K w/ CoPIs M. Lomas (Bigelow Lab); Steinberg, D. (VIMS). (unsuccessful- prepared for resubmit Feb 2015).
2. National Oceanic and Atmospheric Administration: Submitted Aug 2014-Ocean Acidification Program: "Assessing the Synergistic Effects of Acidification and Eutrophication on the Formation of Toxic Cyanobacteria Blooms and Hypoxia Events". Greenfield, D. (USC), Mulholland, M. (ODU), **O'Neil, J.M.** (UMCES) \$186K

3. National Oceanic and Atmospheric Administration: ECOHAB Regional: "Understanding and Predicting the Regional Expansion and Toxicity of Harmful Cyanobacteria Blooms in Coastal Atlantic Environments: Effects of Eutrophication, Temperature and Grazing" **O'Neil, J.M.**, Coles, C., (UMCES), Howarth, R.W., Marino, R. (Cornell), Greenfield, D. (USC), Mulholland, M.R. (ODU), Engene, N. (FIU). \$828K.

E. Conferences, Seminars and Presentations (2014)

1. AGU Ocean Sciences/ Association of Limnology and Oceanography (ASLO) Annual Meeting Feb, 2014, Honolulu, HI: **O'Neil, J.M.**, Costanzo, S., Jones, A., Heil, C.A., Dennison, W.C., Campbell, A., Schwaab, A. "US-Australia Virtual Environmental Partnership: Engaging 'Digital Native' High School Students in Water Issues".
2. AGU Ocean Sciences/ Association of Limnology and Oceanography (ASLO) Annual Meeting Feb, 2014, Honolulu, HI: Boardman, A.L, **O'Neil, J.M.**, Gustafson, A.B., Sellner, K.G. "Cyanobacteria Succession and Nitrogen Fixation in a Eutrophic Restored Wetland System within Chesapeake Bay.
3. International Riversymposium, Canberra, Australia September, 2014: **O'Neil, J.M.**, Gao, Y., Stoecker, D., Cornwell, J.. "Toxic Cyanobacterial Blooms in River Reaches of the Chesapeake Bay: Management Challenges"
4. World Harbour Program Launch Workshop: Sydney Institute of Marine Science, Australia. **O'Neil, J.M.** "Linking Iconic Harbour Cities through Virtual Environmental Partnerships".

F. Active Memberships in Professional Societies

American Society for Limnology and Oceanography
International Society for Study of Harmful Algae

V. Teaching and Training (2014)

- A. **Biological Oceanography MEES 622** – co-instructor Fall 2009-2014 with Raleigh Hood (course coordinator) and main co-instructors: Louis Plough. Lectures on microzooplankton, energetics, harmful algae and grazing & field-laboratory work aboard *R/V Rachel Carson* and salt-marsh field trips to Poplar Island.
- B. **Graduate Students Committees at U Maryland MEES and other institutions:**

Fan Zhang	PhD	(MEES UM College Park/IMET) Advisor: Russell Hill
Sharein El-Tourky	PhD	(University of Miami, FL/RSMAS) Advisor: G. Hitchcock
Dorothea Bender	PhD	(Univ. of Queensland, Australia) Advisor: O. Hoegh-Guldberg
Maureen Brooks	PhD	(MEES UM College Park/HPL) Advisor: Victoria Coles
- C. **Research Experience for Undergraduates (REU) Program Mentor- MD Seagrant:**
Adam McAnally Suwanee, College of the South, TN 2014

VI. Outreach and Service (2014)

- A. **Editorship:** Editorial Board, *Harmful Algae*; Elsevier journal.
Associate Editor for cyanobacterial and dinoflagellate submissions (2005- present)
- B. **Public Service**

- i) Tidewater Environmental Health Association TEHA 3 Dec 2014 Public Talk: The Rise of Slime: Harmful algal blooms and influence of humans, Wicomico Board of Health, Salisbury
- ii) Member Board of Directors Chesapeake Girl Scout Council, Dover DE. Covers Eastern Shore (DE, MD, VA). Environmental representative. 2005-2011; Midshore Advisory Council and Lake Williston (Caroline County) Cyanobacteria Expert Panel, DNR 2014.

C. **Federal/State/Local Government**

- i) UMCES Representative on Governor O'Malley's Agricultural Certainty Advisory Board- Maryland Department of Agriculture; Secretary Earl F. (Buddy) Hance (Chair). June 2013- to June 2014
- ii) Member: Harmful Algal Task Force, DNR Annapolis. 2007-present
- iii) Member: Coastal Bays Science and Technology and Advisory Committee: 2008-present

D. **International:** UMCES contact for the World Harbour Project, Sydney Institute of Marine Science; Workshop November 2014; Chair of Education Committee and Member of Water Quality Committee.

E. **UMCES and Laboratory:**

- i) Horn Point Environmental Sustainability Committee (2007-present; Chair 2012, 2013, 2014)
- ii) Horn Point Laboratory Diving Safety Committee (2002- current)

F. **Manuscript reviewer:** *Estuarine and Coast Science, Oceologia, MERES Limnology and Oceanography; FEMS Microbiology, Hydrobiologia; Harmful Algae, Microbial Ecology, Applied and Environmental Microbiology; Nature; Oikos*