News Items – July 2016

I hope everyone has been having a great summer!! From the communications I have had, there have been some exciting travels and research work going on, as well as a little relaxation and getting ready for the fast-approaching new academic year. Below are some of the activities and recognitions folks have submitted for July.

Outreach, recognitions, other notables:

- Stephanie Kamel (Biology and Marine Biology): Interviewed by Time Werner Cable News on Wrightsville Beach Sea Turtle Nests:

  http://www.twcnews.com/nc/coastal/news/2016/07/12/wrightsville-beach-sea-turtle-nests-hit-double-digits-.html

- Stephanie Titzel (an eighth grade science teacher at Roland-Grise Middle School in Wilmington) was profiled for her Kenan Fellowship Program for Teacher Leadership work in aquaculture with UNCW professors Wade Watanabe (CMS), Ami Wilbur (BMB) and Lisa Brown Buchanan (WCE):

  http://www.uncw.edu/profiles/Stephanie%20Titzel%20.html

- Summer has been a busy time for field research among the coral reef ecologists at CMS. Pawlik (BMB) led a 2 week research diving trip to the Florida Keys in June to use Florida International University's Aquarius dive operations, with Postdoctoral researchers Steve McMurray, Amber Stubler, PhD student Lindsey Deignan, and new MS students Alec Scott and Emily Fox. Pawlik, McMurray, Stubler and Deignan also spent 10 days research diving at the Smithsonian Research Station on Carrie Bow Cay, Belize, in mid-July.

- Larry Cahoon (BMB) and two of his graduate students in the MCOP program (Jonathan Bingham and Kathryn Cyr; PIA) were featured in a Coastal Review article on "Barges Proposed as Dredging Alternative".
  http://www.coastalreview.org/2016/07/barges-proposed-dredging-alternative/

- Lauren Bohrer defended "Primary productivity in relation to urbanization in three oligohaline North Carolina tidal creeks", and Jade Burtchett defended "Quantification of fecal bacteria removal by micro-zooplankton grazing in stormwater BMPs". Mike Mallin (CMS), Larry Cahoon (BMB) and Brooks Avery (Chemistry) served as Lauren's committee, and Mike Mallin, Larry Cahoon and Rob Whitehead (CMS) served as Jade's committee.

- Rob Condon's (BMB) work with local students, involving a weather balloon launch, was highlighted in Lumina News. The project was conducted by middle school students at Wilmington Academy of Arts Sciences and also involved Sridhar Varadarajan in Chemistry. http://luminanews.com/2016/07/middle-schoolers-gather-data-from-the-stratosphere/#ath

- Mike Mallin (CMS) was interviewed by the Good Life Film Company and the Waterkeeper Alliance for a series of on-line educational videos regarding the CAFO industry and its environmental impacts.

- Amanda Southwood Williard's (BMB) former honors student, Ciera Ames, and current PhD student, Susan Barco, were highlighted in a North Carolina Sea Grant Coastwatch magazine article about their on-going sea turtle research (https://ncseagrant.ncsu.edu/coastwatch/previous-issues/2016-2/summer-2016/it-runs-in-the-blood-how-sea-turtles-respond-to-interactions-with-fishermen/)

  Amanda's former PhD student Leigh Anne Harden has been hired by Benedictine University in Lisle, IL (Chicago area) as a tenure track Assistant Professor. She starts this fall!

- The MARBIONC group provided rapid toxin analysis of a cyanobacterial bloom to Martin County, Florida. The MARBIONC Chemical and Molecular Diversity Group on the CREST campus of UNCW received samples from four different locations. In less than 24 hours, analysis of the processed samples using a recently acquired Waters Xevo G2-XS Q-tof mass spectrometer provided a full toxin analysis (including more than half a dozen microcystin congeners) as well as the identification of several additional bioactive compounds being produced by the bloom. Among the researchers involved with this effort were: Alison Stewart, Jeffrey Wright, and Wendy Strangman.

- The Benthic Ecology lab was involved with two large scale restoration projects. In both events, there were >100 volunteers from the local communities (including the Town of St. James) as well as state managers, environmental groups, UNCW students, and students involved in the summer Marine Quest program. Restorations occurred during the last week of June and July and involved marsh grass plantings combined with

oyster reef construction designed to both provide habitat and reduce shoreline erosion. The effort was led by Troy Alphin (CMS / BMB) and Ed Arb (BMB)

- Thanks to the efforts of Dean Volety, UNCW has signed an MOU with L'Université de Bretagne Occidentale (UBO) in Brest, France. This will facilitate collaborations with the European Institute of Marine Science in Brest: http://uncw.edu/news/2016/06/uncw-establishes-mou-with-université-de-bretagne-occidentale.html
  This is one of several international partnerships currently being explored between UNCW and other institutions with coastal and marine expertise.

Presentations:

- Biology Assistant Professor Raymond Danner and Fellow Researchers will preside over a symposium at the 2016 North American Ornithological Conference: http://www.uncw.edu/news/2016/07/biology-assistant-professor-raymond-danner-and-fellow-researchers-to-conduct-symposium-at-ornithology-conference.html

- Troy Alphin, Ed Arb and Martin Posey presented "Benthic discoveries in the Lower Cape Fear River: an annual update" to the Lower Cape Fear Program Advisory Board and Technical Committee.

Publications:

- CMS-FMP Lab (Wilson Freshwater, CMS):
  Iha C, O'Shaughnessy KA, Guimarães SMPB, Oliveira MC & Freshwater DW. Taxonomic reappraisal of *Gelidium coarctatum* (Gelidiales, Rhodophyta) and *Gelidium lineare* sp. nov. from the tropical western Atlantic. Phycologia 55:555-563.
  Lead author Cíntia Iha was a visiting international graduate student, and second author, Kathryn O'Shaughnessy, was a UNCW DIS student in the Freshwater lab.

- Raymond Danner (BMB):
  R. M. Danner, B. J. Olsen, and D. Luther. 2016. Migratory Status, Winter Subspecies Interactions, and Habitat Segregation of Atlantic Song Sparrows (*Melospiza melodia atlantica*). The Wilson Journal of Ornithology: 128:434-437.

- Susanna Lopez-Legentil (BMB):
  Screiber L, Kjeldsen KU, Funch P, Jensen J, Obst M, Lopez-Legentil S, Schramm A (2016) *Endozoicomonas* are specific, facultative symbionts of sea squirts. Frontiers in Microbiology 7: 1042

Pineda MC, Lorente B, Lopez-Legentil S, Palacin C, Turon X (2016) Stochasticity in space, persistance in time: genetic heterogeneity in harbour populations of the introduced ascidian *Styela plicata*. PeerJ 4: e2158

- Suzanne Brander and UNCW Ph.D. students Molly Gabler and Nicholas Fowler (BMB):
  Susanne M Brander, Molly K Gabler, Nicholas L Fowler, Richard Edward Connon, and Daniel Schlenk. 2016. Pyrethroid pesticides as endocrine disruptors: Molecular mechanisms in vertebrates with a focus on fishes. Environmental Science and Technology. **DOI:** 10.1021/acs.est.6b02253
  (Molly Gabler and Nicholas Fowler took BIO 604 (Aquatic Toxicology) with Susanne a few semesters ago and did the bulk of the research and initial stages of writing together during the class.)

- Art Frampton (BMB):
  Stephanie Johnstone, Jekaterina Barsova, Isabel Campos, Arthur R. Frampton 2016 Equine herpesvirus type 1 modulates inflammatory host immune response genes in equine endothelial cells. Veterinary Microbiology 192. 52-59
  (all co-authors are former graduate students)

Grants:

- M. Posey, H. Sutton, B. Toothman, and H. Wells. "Reserve monitoring and stewardship programs", $208,565; and "Research reserve support", $9,951. NCDENR Department of Environmental Quality.

CMS and Partners:

- Save the date: We are planning a faculty and staff meeting on Monday, 29 August, from 4-5 in the CMS auditorium. This will be a working meeting where we hope to discuss a variety of initiatives as well as planning and policies. More details to come.

  - We will have some informal, social time together afterwards. Following suggestions, we will have a summer photo contest. Students will be encouraged to bring their best mentor picture from the summer season (G-rated and shareable!).

- MarineQuest has again been selected as a partner with AmeriCorps. The new partnership will leverage the work done as part of the NOAA Marine Debris Prevention through Education grant that MarineQuest received last year. Data collected from the Traveling Through Trash project revealed just how little students in grades 3-8 know about the

coast, including its geographic boundaries, what ocean it borders, how their actions impact the coastal environment, and the potential impacts sea level might have on them. Project Ocean Change will continue this outreach to K-8 schools in rural coastal counties using the inflatable whale classroom, but the focus of the new curriculum will be on climate change. Anyone interested in contributing their knowledge or skills to the project should contact Sue Kezios (kezioss@uncw.edu). Students or recent graduates interested in taking on this AmeriCorps service position can find more information or apply at:
https://americorps.hiringthing.com/job/30641/americorps-project-ocean-change-coordinator

- Thank you to everyone who helped directly or indirectly with the filming for the virtual tour stops! This will provide a basic introduction for the general public and students and will be combined with photos, videos and other material to provide details on the great research, education, student mentorship, and outreach we are doing in coastal and marine sciences at UNCW.

- Steve Fontana (MARBIONC) recently attended the BIO International Conference in San Francisco which drew 15,937 attendees from 76 countries and 48 states. In addition to attending educational meetings, Fontana made contacts to potentially expand screening of marine natural products and new chemical entities from UNCW's Department of Chemistry and Biochemistry and is developing relationships with U.S. and international entities as potential outlets for a novel environmental monitoring kit from UNCW's Department of Biology and Marine Biology (Joe Covi).

- Updates from UNCW Physical Plant:
  - The CMS cold chamber renovations are scheduled to be completed this week
  - Gas line work is still being discussed to combine the usage of CMS ops and MARBIONC to lower monthly bills

- If you come across a situation where you need to notify our Guard House immediately, whether it be an lab alarm or a stranger on campus, call the University Police Department at 962-2222.Our guards are sometimes making their rounds and the UNCWPD dispatch desk can contact them quicker and easier than we can most of the time (*especially* after hours/on weekends).

- SPARC and OIC days at CMS: Beginning the week of July 11th, SPARC will increase their support of CMS in Room 1121-8. Proposal development support will be provided by M.J. West every Tuesday from 9 – 3 pm. Please stop in to discuss your intentions to submit a proposal or work through your proposal issues or email her at westmj@uncw.edu to make an appointment. Patty Fox will continue to be at CMS each

Thursday for any post award items. The Office of Innovation and Commercialization will have varied hours on Monday, Wednesday and Friday. An announcement will be coming in early August on their times.

- From MBCOI:
  - Kepley BioSystems has been selected as a finalist for the Hello Tomorrow Global Startup Challenge. Kepley BioSystems is responsible for developing OrganoBait™ a hockey puck-shaped product that mimics the smell emitted by decaying forage fish, the traditional bait used to catch crab and lobster, but uses no animal byproducts. KBI was ranked top ten Food and Agriculture startup in North & Central America. The *Hello Tomorrow Challenge* is a global startup competition for the most promising science-technology projects and startups that aim to solve the world's pressing issues.

  - *Save the Date*! **9-10 October 2016** for the **2nd NC Marine Biotechnology and Seafood Symposium to be held at the NC Biotechnology Center in RTP.** The event will address future supply of seafood worldwide. The event is hosted by NC State University Center for Marine Sciences and Technology and co-sponsored by the Marine Bio-Technologies Center of Innovation. More information coming soon.