

# UNCW Coastal & Marine February 2018 Science News

## *A note from the director of CMS, Dr. Martin Posey:*

*A few reminders as we pass spring break, enter the home stretch for another academic year, and start thinking about summer research: The various governance committees should meet (if you have not already done so) and provide recommendations for any needs to the Director. Along those lines, we hope to have the Coastal and Marine Council selected and ready to prepare for the coming year by the time you get the next monthly news update. Please let the appropriate people (appropriate committee or operations person) know as soon as possible if you anticipate any special needs for boats, seawater facilities, or other facilities – especially during the busy summer period. Please let Brittani know as soon as possible if you will be bringing in new students this summer who will need office space. Please also remember to let us know as soon as possible if you are organizing a meeting at the center. Congratulation to everyone on a very active year!!*

*- Martin*

## **Outreach, Recognitions, & Other Notables**

- ◆ Dr. Narcisa Pricope (Earth and Ocean Sciences) was recently named a Fulbright Specialist with the U.S. Department of State's Bureau of Educational and Cultural Affairs (ECA) and World Learning for a tenure of three years. The Fulbright Specialist program provides unique opportunities for U.S. academic experts to engage internationally into project-based exchanges at various institutions across the globe. Dr. Pricope is currently discussing joining an interdisciplinary team from Universidad Nacional Agraria La Molina in Peru to lend her expertise towards a rangeland degradation project.
- ◆ Jennifer McCall (School of Nursing) was noted by [Medical Technology Schools](#) as a Professor to Know in Clinical and Translational Research.
- ◆ The Undersea Vehicle Program's (CMS) Mohawk work was mentioned in a [feature](#) on deep sea coral research.
- ◆ Roger Shew (EOS) discussed the prospect of drilling off the coast of North Carolina for oil and natural gas on [WHQR](#).

## Outreach, Recognitions, & Other Notables

- ◆ UNCW researchers and students were acknowledged for their help and contributions in a recent paper on buffer zones around reefs: “Fish use of reef structures and adjacent sand flats: implications for selecting minimum buffer zones between new artificial reefs and existing reefs” Marine Ecology Progress Series 587:187-199.”
- ◆ Jim Blum (Department of Mathematics and Statistics) and his Data Science Student team of SAS Super FREQs were selected as one of 8 finalists for the 2018 SAS Global Forum (also on LinkedIn). This is SAS’s biggest event of the year. There are three projects from the DSC team highlighted on [this page](#), including work within the National Estuarine Research Reserve, work on turtle nesting, and work on coastline communities.
- ◆ Art Frampton (Biology and Marine Biology) was a guest on [WHQR’s](#) coastline radio talk show discussing flu shot protection.
- ◆ Ami Wilbur (Shellfish Research Hatchery and BMB) was featured in a [WRAL](#) segment examining the support provided by the SRH for the developing shellfish mariculture industry.
- ◆ The UNCW Surfrider club hosted the second annual “We Love Our Oceans” [event](#).
- ◆ Gen-X articles and interviews:
  - ◇ As part of UNCW’s research effort into Gen-X and other related chemicals, Chris Dumas (Environmental Sciences) developed and mailed out a survey to a random sample of 4,000 registered voters in the area. [WECT article](#).
  - ◇ Trace amounts of GenX were detected in rainwater on the [UNCW campus](#).
  - ◇ [WECT](#) interview with Dean Vetter on Gen-X oyster research and other sampling.
  - ◇ Larry Cahoon (BMB) was interviewed by ACS on the presence of Gen-X in the Cape Fear River.



## Presentations

- ◆ Wade O. Watanabe, Patrick M. Carroll, Md Shah Alam, Christopher F. Dumas, and Jennifer G. Gabel; “Recent progress on hatchery production of black sea bass juveniles to support finfish mariculture growout industry development in the eastern US” presented at Aquaculture America 2018. (CMS, EVS)
- ◆ Patrick M. Carroll, Wade O. Watanabe, Md Shah Alam, Paul W. Dimling, and Jennifer E. Gabel; “The effects of stocking density on growth, survival, and resistance to acute crowding of post-metamorphic stage black sea bass *Centropristis striata* in a pilot commercial scale nursery”, presented at Aquaculture America 2018. (CMS)
- ◆ Dr. Beth Darrow (CMS, BMB) was invited to present at the Oyster South Symposium, on the NOAA project she is leading, collaborating with many other CMS researchers and community partners. Oyster South is a non-profit organization whose mission is to "encourage successful oyster farms, healthy waters, and the birth of new traditions.”
  - ◇ Darrow, E.S., J.D. Kinsella, J.G. Ferreira, S.M. Bricker, T.D. Alphin, S.M. Brander, B. Puckett, M.A. Lytle, K. Billet, M.H. Posey. “Ecosystem Services of Oyster Aquaculture: A Case Study in SE North Carolina.” Invited speaker, Oyster South Symposium, Charleston, SC, February 9-10, 2017. (CMS, BMB)
- ◆ Danner Lab (BMB): Robert Snowden presented an invited seminar to the Cape Fear Audubon Society entitled “Hot beaches, hot birds.”

## Publications & Grants

- ◆ McMurray, S.E., Stubler, A.D., Erwin, P.M., Finelli, C.M., Pawlik, J.R. 2018. A test of the sponge-loop hypothesis for emergent Caribbean reef sponges. *Marine Ecology Progress Series*, 588:1-14 doi: 10.3354/meps12466 ([MEPS featured article](#)) (BMB)
- ◆ Pawlik, J.R., Loh, T.-L., McMurray S.E. 2018. A review of bottom-up vs. top-down control of sponges on Caribbean fore-reefs: What's old, what's new, and future directions. (BMB) [PeerJ](#) 6:e4343
  - ◇ Some of the concepts in the PeerJ paper were reported in a recent post on the [National Geographic website](#).
- ◆ Dawson, M.R., M.S. Alam, W.O. Watanabe, P.M. Carroll and P.J. Seaton. 2018. Evaluation of poultry by-product meal as an alternative to fish meal in the diet of juvenile black sea bass *Centropristis striata* reared in a recirculating aquaculture system. *North American Journal of Aquaculture* 80: 74-87. (CMS, Chemistry and Biochemistry)

## Publications & Grants

- ◆ Scott Nooner (EOS) coauthored publication: William S.D. Wilcock , Robert P. Dziak , Maya Tolstoy , William W. Chadwick Jr. , Scott L. Nooner , DelWayne R. Bohnenstiehl , Jacqueline Caplan-Auerbach , Felix Waldhauser , Adrien F. Arnulf , Christian Baillard , Tai-Kwan Lau , Joseph H. Haxel , Yen Joe Tan , Charles Garcia , Samuel Levy , M. Everett Mann; “The Recent Volcanic History of Axial Seamount: Geophysical Insights into Past Eruption Dynamics with an Eye Toward Enhanced Observations of Future Eruptions”, [Oceanography](#).
- ◆ M.S. Alam, W.O. Watanabe, P.M. Carroll, J.E. Gabel, M.A. Corum, P. Seaton, T.C. Wedegaertner, K.S. Rathore, M.K. Dowd. 2018. Evaluation of genetically-improved (glandless) and genetically-modified low-gossypol cottonseed meal as alternative protein sources in the diet of juvenile southern flounder *Paralichthys lethostigma* reared in a recirculating aquaculture system. *Aquaculture* 489: 36-45. (CMS, CHM)
- ◆ Borrett co-authored publications (BMB): de la Vega, C., Horn, S., Baird, D., Hines, D., Borrett, S., Jensen, L.F., Schwemmer, P., Asmus, R., Siebert, U. and Asmus, H., 2018. Seasonal dynamics and functioning of the Sylt-Rømø Bight, northern Wadden Sea. *Estuarine, Coastal and Shelf Science*. 203: 100-118. [Link](#).
- ◆ Allison K. Stewart, Rudravajhala Ravindra, Ryan M. Van Wagoner, and Jeffrey L. C. Wright. 2018. Metabolomics-Guided Discovery of Microginin Peptides from Cultures of the Cyanobacterium *Microcystis aeruginosa*; *Journal of Natural Products*: 81 (2), 349-355 DOI: 10.1021/acs.jnatprod.7b00829. (MARBIONC; CHM)
- ◆ Stewart, A.K., Strangman, W.K., Percy, A., Wright, J.L.C. The biosynthesis of <sup>15</sup>N-labeled microcystins and the comparative MS/MS fragmentation of natural abundance and their <sup>15</sup>N-labeled congeners using LC-MS/MS ; *Toxicon* (2018). doi: 10.1016/j.toxicon.2018.01.021 (MARBIONC; CHM)
- ◆ Peter Zamora (EOS) received a \$40,000 grant to work with the Bald Head Nature Conservancy and the Town of White Lake to identify groundwater sources and quantify their nutrient contribution to White Lake. Results of the project will be used to guide mitigation measures to restore/improve the water clarity of the lake.
- ◆ Joseph Covi (BMB). Biochemical regulation of dormancy and resurrection from dormancy in the Antarctic copepod, *Boeckella poppei*. Korea Polar Research Institute. \$46,497.00.
- ◆ Henry Styron (CMS). Outer Channel Cape Fear River Survey. Dial Cordy and Associates. \$3,397.00.
- ◆ Fred Scharf (BMB). Brunswick Field Sampling. Duke Energy Corporation. \$10,000.00.

## CMS & Partners

- ◆ Blue Heron Bowl, hosted by Marine Quest and CMS, was held at [UNCW](#).
- ◆ On behalf of Melissa Smith (please forward to any students involved): Please have posters for this year's Benthic Ecology Meeting (which starts on 03/27) to Melissa by Wednesday, March 21st if at all possible. Please note that all posters must be PORTRAIT, not landscape. As always, a "poster heads-up" email is always much appreciated in advance, so she can plan accordingly.
- ◆ From Jay Styron: Just a friendly reminder as we approach to summer field season... Please plan ahead if you need to use a truck from the marine operations group. We will do our best to accommodate folks as requests come in. If you need a certain truck (e.g. one with a cap) please let us know. As our Marine Science family grows so do the use of our resources.
  - ◇ As with other State vehicles, please be sure to clean the vehicle inside and out if there is sand, mud, saltwater etc. in the bed or inside. Also, be sure to top off the fuel after use. If you need a four wheel drive truck due to field conditions please be sure to drive appropriately as not to have mud coat the engine compartment. Generally it is better to drive slowly through mud. Keep constant check on gauges and others dashboard systems that might tell you if a vehicle is over heating or low on fuel or oil. If we lose a vehicle due to inattentiveness there will be many others affected. Remember, vehicle use is a privilege not a right.
  - ◇ If you have any questions on scheduling a vehicle please contact Dan Aten ([atend@uncw.edu](mailto:atend@uncw.edu)) or Steve Hall ([halls@uncw.edu](mailto:halls@uncw.edu)).
  - ◇ Additional Note: Thanks to CAS, we will be getting a new truck for CMS use.
- ◆ The Board of Governors will be having a large reception at CMS the evening of March 22nd. There will be tours of the main CMS building, Shellfish Research Hatchery, and MARBIONC. Please help us by tidying up your areas ahead of the BoG visit!
- ◆ The North exterior door by the auditorium is fixed, the door by Marine Quest is being repaired, the flooring in the hallway (original to the building) has been replaced, the first floor hallway seawater fill station has been repaired, and the greenhouse controller should be replaced within the next few weeks!!! Expect a little landscape work over the coming week.