

**2019 Spring Semester**  
Duke Marine Lab Undergraduate Research Independent Study Projects  
(updated 12-Oct-2018)

**Humberto Diaz - Tropical marine ecology; aquaculture**  
**Room 210, Lab 7 (Bookhout); (252) 504-7611; [hdiaz@duke.edu](mailto:hdiaz@duke.edu)**

**Effects of acidity on:**

**1) Settlement and early growth of barnacles.**

Larval culture and settlement of the barnacle *Amphibalanus amphitrite* on glass panels coated with silicone will be registered under an under laboratory conditions at different pH conditions. Barnacle growth will be measured weekly using digital photography. After 4 weeks, barnacle adhesion will be determined.

**2) Orientation responses of hermit crabs in presence of different chemical cues.**

While under the influence of several odor sources that evoke the presence of refuge or predators, we will study the changes in orientation responses that might occur when media pH varies.

**3) Food ingestion ratio of pink shrimps.**

Food ingestion will be determined under artificial increased levels of acidity as well as a response to

**Zackary Johnson - Biological oceanography and biotechnology**  
**Room 104, Pilkey Lab; (252) 504-7543; [zij@duke.edu](mailto:zij@duke.edu)**

The Johnson Lab studies the abundance, diversity and activity of marine microbes – the most abundant and important organisms in the global ocean. We study biological oceanography, marine molecular ecology, marine microbiology and biogeochemistry. Together with Hunt lab our group will be conducting experiments on the effects of ocean acidification and temperature rise on microbial populations in coastal and open ocean waters. Students interested in working with our group on this project should email Dr. Johnson to discuss further details.

**Dave Johnston -**  
**Room 315, Lab 7 (Bookhout); (252) 504-7593; [david.johnston@duke.edu](mailto:david.johnston@duke.edu)**

Interested students are encouraged to contact Dr. Johnston to discuss project ideas.

**Doug Nowacek - Marine conservation, bioacoustics, marine mammals**  
**Room 117, Lab 7 (Bookhout); (252) 504-7566 [doug.nowacek@duke.edu](mailto:doug.nowacek@duke.edu)**

Interested students are encouraged to contact Dr.

**Room 104A, Pilkey Lab; (252) 504-7635; [brian.silliman@duke.edu](mailto:brian.silliman@duke.edu)**

Dr. Silliman is on sabbatical and so not able to advise projects during Spring 2019.

**Cindy Van Dover – Deep sea science, marine technology**

**Lab 5, office on 2<sup>nd</sup> floor office; (252) 504-7655; [c.vandover@duke.edu](mailto:c.vandover@duke.edu)**

Dr. Van Dover will not be able to advise new projects during Spring 2019.

**Joseph Fader– Marine conservation biology, marine mammal ecology**

**Pilkey Research Laboratory (first floor office space); (513) 515-1401; [jef41@duke.edu](mailto:jef41@duke.edu)**

Short-finned pilot whales (*Globicephala macrorhynchus*) are highly social toothed whales that forage along s-4 c