

SIO 139. Current Research in Marine Biology (2)

Provides an introduction to current research topics and developments in marine biology and biological oceanography. Faculty members and graduate students from Scripps Institution of Oceanography will offer perspectives in these areas. Practice in scientific research and communication skills. P/NP grades only. *Prerequisites:* upper-division standing or consent of instructor. (S)

Instructor: Brian Palenik 3110 Hubbs
Office hours by arrangement. bpalenik@ucsd.edu

M Jan 8 Types of Writing: lab notebooks, lab reports, scientific papers, reviews.
Homework: Obtain data from SIO pier at <http://sccoos.org/data/habs/index.php>. Write an abstract. See below.

M Jan 15 Holiday ----
Tuesday March 16: SIO Collections tour. 11:30-1pm. Meet at Collections location in Vaughn Hall. Writing assignment due. Read one paper from suggested reading that used collections.

M Jan 22 Analyzing data, R. Eric Archer and Brian Stock.
Homework: Create a graph using R.

M Jan 29 What else did they write? Reference managers. Amy Butros
Homework: Find 5 refs from the SIO Collections associated publications (1), and find 5 more related references that cited them and create a reference library in Endnote online.

M Feb 5 3-4 Short graduate student talks.
Homework: Using your 10 papers above, write a 2 paragraph introduction with references. Create a reference list using your reference manager and put citations in the paragraphs.

M Feb 12 Guest graduate/faculty talk. Dede Lyons. Homework: Read a paper by the speaker. Write a one paragraph summary.

M Feb 19 Holiday

M Feb 26 Guest lecture. Mike Fox
Homework: Read a paper by guest. What did they put in the discussion section? Write a one paragraph critique of the discussion section.

M Mar 5 Science Communication. Birch Aquarium Jennifer Brandon

M Mar 12 Guest lecture. Jeff Bowman
Homework: Write a 1 page reflection on the types of marine science research you find interesting and why. Provide citations (5) to publications you find interesting. Due Friday March 16.

Paper choices from collections:

Goldstein MC, Rosenberg M, and LN Cheng, 2012. Increased oceanic microplastic enhances oviposition in an endemic pelagic insect. *Biology Letters*, 8(5): 817-820.

Bargu S, Silver MW, Ohman MD, Benitez-Nelson CR, and DL Garrison, 2012. Mystery behind Hitchcock's birds. *Nature Geoscience*, 5(1): 2-3.

Hastings PA, Craig MT, Erisman BE, Hyde JR, and H J Walker, 2014. Fishes of Marine Protected Areas Near La Jolla, California. *Bull. Southern California Acad. Sci.* 113(3): 200–231.

Rouse GW, Wilson NG, Worsaae K, and RC Vrijenhoek, 2015. A Dwarf Male Reversal in Bone-Eating Worms. *Current Biology*, 25 (2): 236-241.

Goffredi SK et al. 2017 Hydrothermal vent fields discovered in the southern Gulf of California clarify role of habitat in augmenting regional diversity. *Proc. R. Soc. B* 284: 20170817.

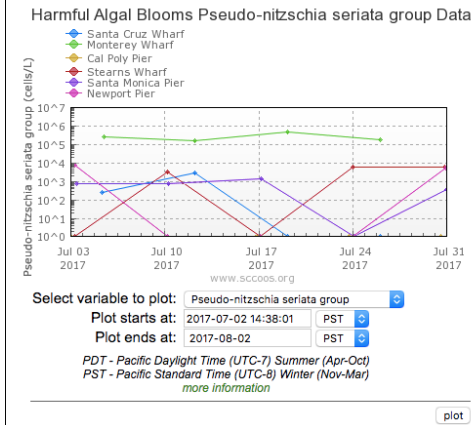
Other papers:

Paper by Dede Lyons, TBD

Paper by Mike Fox, TBD

Assignments

1. Jan 8 Find data at ... <http://sccoos.org/data/habs/index.php>. Go to the bottom of the page, pick an alga, pick a data range, and take a screen shot of the resulting plot. Write an imaginary **abstract** with a broad opening and closing sentence and some reporting of the data you found. Due Jan 16. Bring to collections tour.



2. Jan 22. Create a graph in R. Due Jan 29.
3. Jan 29. Find 5 refs from the SIO Collections associated publications (<https://scripps.ucsd.edu/collections>), and find 5 more related references that cited those papers and create a reference library in Endnote online. Keep the 10 papers somewhat similar. Due Feb 5.
4. Feb 5. Using your 10 papers above, write a 2 paragraph **introduction** with references. Create a reference list using your reference manager and put citations in the paragraphs. Due Feb 12.
5. Feb 12. Read a paper by the speaker. Write a one paragraph summary. Due Feb 26.
6. Feb 26 Read a paper by guest. What did they put in the **discussion** section? Write one paragraph your critique of the discussion section. Due March 5.
7. Feb 12. Write a 1 page reflection on the types of marine science research you find interesting and why. Provide citations to at least 5 publications you find interesting. Due Friday March 16.

When possible we will have peer-reading/commenting of your exercises in class. Thus turn in assignments as hard copies with your name on all pages. All papers should demonstrate mastery of grammar, punctuation, spelling and syntax expected of college level students. If you need writing assistance, please seek help from Student Support Services and the Writing Centers. All papers are to be word-processed, proofread, and solely the work of the author.