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**NSF-NIEHS Oceans & Human Health Center Role: Co-Investigator-
Genomic HABs**

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Education

- (1970) B.S. Cornell University, Biological Sciences, Honors
- (1973) M.S. Univ. of Rhode Island
- (1977) Ph.D. Univ. of Rhode Island

Research Interests

Phytoplankton form the base of pelagic marine food chains, reaching maximum densities when nutrient supply, light conditions, and grazing losses favor net growth rates. The central objective of our research is the study of phytoplankton dynamics in relation to physical processes that regulate their growth and distribution. Much of our fieldwork is cooperative with physical oceanographers, and is 'Lagrangian' in nature. That is, we observe plankton dynamics from surface drifters, floats, and tracers in order to 'tag' plankton populations in the sea. Recent field studies have employed

drifters with solid-state fluorometers that described the evolution of plankton biomass along trajectories from upwelling regions to less-productive offshore waters of the Arabian Sea. A second study examined the temporal change in fluorescent Chromophoric Dissolved Organic Matter (CDOM) flowing from the Mississippi River delta to the Louisiana Bight. Dr. Jennifer Jurado recently completed her PhD in our lab from a study of plankton distributions and growth rates in western Florida Bay. Mr Christopher Kelble also completed his MS degree in 2003 in a study of how phytoplankton, CDOM, and particulate matter influence the subsurface light field in Florida Bay.

Representative Publications

Hitchcock, G.L., P. Lane, S. Smith, J. Luo, and P.B. Ortner. 2002. Zooplankton spatial distributions in coastal waters of the northern Arabian Sea, August, 1995. *Deep-Sea Research II*. 49 (12): 2403-2423.

Hitchcock, G. L., G. A. Vargo, and M. L. Dickson. 2000. Plankton community composition, production, and respiration in relation to dissolved inorganic carbon on the west Florida Shelf, April, 1996. *J. Geophys. Res.* 105 (C3): 6579-6589.

Hitchcock, G. L., E. Key, and J. Masters. 2000. The fate of upwelled waters in the Great Whirl, August, 1995. *Deep-Sea Res. II*. 47 (7-8): 1605-1621.

Hitchcock, G. L., W. J. Wiseman, Jr., W. C. Boicourt, A. J. Mariano, N. Walker, T. A. Nelson, and E. Ryan. 1997. Property fields in an effluent plume of the Mississippi River. *Journal of Marine Systems*. 12(2): 109-126.

Wanninkhof, R., G. L. Hitchcock, W. J. Wiseman, Jr., G. Vargo, P. B. Ortner, W. Asher, D. T. Ho, P. Schlosser, M.

L. Dickson, R. Masserini, K. Fanning, and J.-Z. Zhang. 1997. Gas exchange, dispersion, and biological productivity on the west Florida Shelf: Results from a Lagrangian tracer experiment. *Geophysical Research Letters*. 24(14): 1767-1770.

More Info:

<http://www.rsmas.miami.edu/divs/mbf/people/ghitchcock.html>