

Cabell S. Davis

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Education and Awards:

B.S., University of Tampa (Biology) 1975

Ph.D., Boston University Marine Program (Marine Biology) 1982

Magna Cum Laude, Olsen Science Scholarship, Seimer Science Award,
ASLO Lindeman Award, WHOI OLI Fellowship

Military Service: U.S. Navy, USNAB, Norfolk, VA, 1969-1971

Academic and Research Experience:

Director, Ocean Life Institute, WHOI, 2006-Present

Senior Scientist, Department of Biology, WHOI, 1999-Present

Associate Scientist, Department of Biology, WHOI, 1990-1998

Assistant Scientist, Department of Biology, WHOI, 1985-1989

Postdoctoral Investigator (Warm Core Rings Project), WHOI, 1982-1984

Fishery Biologist (Plankton Ecology), NOAA, NMFS, Woods Hole, 1977-1982

Laboratory Instructor, General Biology, Boston University, 1976-1977

Research Assistant, Boston University Marine Program, Woods Hole, 1976

Publications over last 3 years (2006 – Present) :

Hu, Q. and C. S. Davis. 2006. Accurate automatic quantification of taxa-specific plankton abundance using dual classification with correction. *Mar. Ecol. Prog. Ser.*, 306, 51-61.

Davis, C. S. and D. J. McGillicuddy. 2006. Transatlantic abundance of the N₂-fixing colonial cyanobacterium *Trichodesmium*, *Science*, 312, 1517 – 1520.

Ashjian, C. A., R. Rnone , C. S. Davis, B. Jones, M. Kahru, C. Lee , and B. G. Mitchell. 2006. Biological structure and seasonality in the Japan/East Sea. *Oceanography*, 19(3), 126-137.

McGillicuddy, D. J., L. A. Anderson, N. R. Bates, T. Bibby, K. O. Buesseler, C. Carlson, C. S. Davis, C. Ewart, P. G. Falkowski, S. Goldthwait, D. A. Hansell, W. J. Jenkins, R. Johnson, V. K. Kosnyrev, J. R. Ledwell, Q. P. Li, D. A. Siegel, and D. K. Steinberg. 2007. Mid-ocean plankton blooms modulated by eddy-wind interactions. *Science*, 316, 1021-1026.

Benfield M. C, Grosjean P, Culverhouse P, Irigoien X, Sieracki M. E, Lopez-Urrutia A, Dam H. G, Hu Q, Davis C. S, Hansen A, Pilskaln C H, Riseman E, Schultz H, Utgoff P E, Gorsky G. 2007. RAPID: Research on Automated Plankton Identification. *Oceanography*, 20, 172-187.

Ashjian, C.J., C.S. Davis, S.M. Gallager, P. H. Wiebe, and G. L. Lawson. Distribution of Larval Krill and Zooplankton in Association with Hydrography in Marguerite Bay, Antarctic Peninsula, in Austral Fall and Winter 2001 described using the Video Plankton Recorder. *Deep Sea Res II*, 55, 455–471.

Li, W., N. C. Loomis, Q. Hu, and C. S. Davis. 2007. Focus detection from digital in-line holograms based on spectral l_1 norms. *J. Optical Soc. Am.*, 24(10), 3054-3062.

Hu, Q., C. Davis, and C. Petrik. A simplified age-stage model for copepod population dynamics. *Mar. Ecol. Prog. Ser.*, 360, 179–187.

Hu, Q., C. Petrik, and C. S. Davis. 2007. Normal versus Gamma: Stochastic model of copepod molting process. *J. Plankton Res.* 29(11), 985-997.

- Ji, R., C. Davis, C. Chen, R. Beardsley. Influence of local and external processes on the annual nitrogen cycle and primary productivity on Georges Bank: A 3-D biological-physical modeling study. *J. Mar. Systems*, 73, 31-47.
- Ji, R. C. Davis, C. Chen, D. Townsend, D. Mountain, R. Beardsley, 2007. Influence of ocean freshening on shelf phytoplankton dynamics. *Geophysical Research Letters*, 34, L24607, doi:10.1029/2007GL032010.
- Davis, C. S. 2008. Optical Imaging of Ocean Plankton: A Fantastic Voyage, in Digital Holography and Three-Dimensional Imaging, *OSA Technical Digest* (CD) (Optical Society of America, 2008), paper DMB1, 3pp.
- Ji, R. C. Davis, C. Chen, D. Townsend, D. Mountain, R. Beardsley. 2008. Modeling the influence of low-salinity water inflow on winter-spring phytoplankton dynamics in the Nova Scotian Shelf – Gulf of Maine region. *Journal of Plankton Research*, (in press).
- Mitra, A. and C. S. Davis. Defining the “to” in end-to-end models. *Prog. Oceanogr.* accepted with revision.

Five Pertinent Publications

- Davis, C. S., G. R. Flierl, P. J. Franks and P. H. Wiebe. 1991. Micropatchiness, turbulence, and recruitment in plankton. *J. Mar. Res.*, 49, 109-151.
- Davis, C. S., S. M. Gallager, and A. R. Solow. 1992. Microaggregations of oceanic plankton observed by towed video microscopy. *Science*, 257, 230–232.
- Davis, C. S., Q. Hu, S. M. Gallager, X. Tang, and C. A. Ashjian. 2004. Real-time observation of taxa-specific plankton distributions: An optical sampling method. *Mar. Ecol. Prog. Ser.*, 284, 77-96.
- Davis, C. S., F. Thwaites, S. M. Gallager, and Q. Hu. 2005. A three-axis fast-tow digital Video Plankton Recorder for rapid surveys of plankton taxa and hydrography. *Limnol. Oceanogr.: Methods*, 3, 59–74.
- Davis, C. S. and D. J. McGillicuddy. 2006. Transatlantic abundance of the N₂-fixing colonial cyanobacterium *Trichodesmium*, *Science*, 312, 1517 – 1520.

Other Activities

Chair GLOBEC NW Atlantic Program Executive Committee
 Member US GLOBEC Scientific Steering Committee
 Convener of international workshops on plankton and biological-physical interactions.
 Large program development: GLOBEC NW Atlantic, Southern Ocean, Pan-regional.
 ICES Working Group on Zooplankton Ecology
 SCOR WG-130 Automatic Visual Plankton Identification
 NSF future research planning meetings
 Author popular articles on marine science.
 Instructor, Zooplankton Ecology, WHOI
 Participant/lead 49 oceanographic research cruises.

Graduate Advisor: Dr. Ivan Valiela, BU; Postdoctoral Advisor: Dr. Peter Wiebe, WHOI
 Thesis Advisor for Craig Lewis, Qiao Hu, Qingling Du, Colleen Petrik (current), Nick Loomis (current). Committee member for numerous PhD students. Advisor for numerous undergraduate summer students.

Postgraduate-Scholar Sponsor for: Dr. Stephen Bollens, Dr. Fredrika Norrbin, Dr. Carin Ashjian; Dr. Mark Benfield; Dr. Tracey Sutton; Dr. Rubao Ji