

POSITIONS HELD:

Research Assistant, Scripps Institution of Oceanography, 1962-1968
Postdoctoral Fellow, Hopkins Marine Station, Stanford University, 1968-1969
Temporary Assistant Professor, Oregon State University, July-August, 1969
Assistant Scientist, Woods Hole Oceanographic Institution, 1969-1974
Associate Scientist, Woods Hole Oceanographic Institution, 1974-1984
Director, Center for Analysis of Marine Systems (WHOI), January 1983-December 1986
Senior Scientist, Woods Hole Oceanographic Institution, 1984-January 2007
Department Chairman, Biology Department, Woods Hole Oceanographic Institution, 1988-1992
Adjunct Professor, Boston University, 1989-1997
Emeritus Scientist, Woods Hole Oceanographic Institution, May 2007 - present

AWARDS AND HONORS:

Awarded the Adams Chair in May 1996
NOAA Earth Day Environmental Hero award, May 1999 (by letter from Vice-President Al Gore)
Inducted into the Northern Arizona University College of Engineering, Forestry, and Natural Sciences Academy of Distinguished Alumni in 2008.

Awarded the ICES Outstanding Achievement Award, 19 September 2016.

SOCIETIES:

American Association for the Advancement of Science (elected Fellow, May 1984)
American Society for Limnology and Oceanography
Phi Kappa Phi
American Geophysical Union

SELECTED PUBLICATIONS:

Wiebe, P.H. and S. Boyd. 1978. Limits of *Nematoscelis megalops* in the Northwestern Atlantic in relation to Gulf Stream cold-core rings. Part I. Horizontal and vertical distributions. J. Mar. Res. 36: 119-142.

Haury, L.R., J.A. McGowan, and P.H. Wiebe. 1978. Patterns and processes in the time-space scales of plankton distribution. In: Spatial Pattern in Plankton Communities, J.H. Steele (ed.), Plenum Press, New York. pp. 277-327.

Wiebe, P.H., L.P. Madin, L.R. Haury, G.R. Harbison and L.M. Philbin. 1979. Diel vertical migration by *Salpa aspera* and the potential for large-scale particulate organic matter transport to the deep-sea. Mar. Biol. 53: 249-255.

Wiebe, P.H. and G.R. Flierl. 1983. Euphausiid invasion/dispersal in Gulf Stream cold core rings. Aust. J. Mar. Freshwater Res. 34(4): 625-652.

Wiebe, P.H., Morton, A.W., Bradley, A.M., Backus, R.H., Craddock, J.E., Cowles, T.J., Barber, V.A., and Flierl, G.R. 1985. New developments in the MOCNESS, an apparatus for sampling zooplankton and micronekton. Mar. Biol., 87: 313-323.

Wiebe, P.H., G.R. Flierl, C.S. Davis, V. A. Barber, and S.H. Boyd. 1985. Macrozooplankton biomass in Gulf Stream warm-core rings: spatial distribution and temporal changes. J. Geophys. Res. 90: 8885-8901.

Wiebe, P.H., C.H. Greene, T. Stanton, and J. Burczynski. 1990. Sound scattering by live zooplankton and micronekton: empirical studies with a dual-beam acoustical system. J. Acous. Soc. Amer. 88: 2346-2360.

Miller, C.B., T.J. Cowles, P.H. Wiebe, N.J. Copley, and H. Grigg. 1991. Phenology in *Calanus finmarchicus*; hypotheses about control mechanisms. Mar. Ecol. Prog. Ser. 72: 79-91.

Wiebe, P.H., D. Mountain, T.K. Stanton, C. Greene, G. Lough, S. Kaartvedt, J. Dawson, and N. Copley. 1996. Acoustical study of the spatial distribution of plankton on Georges Bank and the relation of volume backscattering strength to the taxonomic composition of the plankton. Deep-Sea Research II. 43: 1971-2001.

Bucklin, A., P.H. Wiebe, S. B. Smolenack, N.J. Copley, and M.E. Clarke. 2002. Integrated biochemical, molecular genetic, and bioacoustical analysis of mesoscale variability of the euphausiid *Nematoscelis difficilis* in the California Current. Deep-Sea Research. 49(3): 437-462.

Wiebe, P.H., T.K. Stanton, C.H. Greene, M.C. Benfield, H.M. Sosik, T. Austin, J.D. Warren, and T. Hammar. 2002. BIOMAPER II: An integrated instrument platform for coupled biological and physical measurements in coastal and oceanic regimes. IEEE Journal of Oceanic Engineering. 27(3): 700-716.
<http://ieeexplore.ieee.org/ielx5/48/22313/1040951/1040951.html>

Lawson, G.L., P.H. Wiebe, C.J. Ashjian, S.M. Gallager, C.S. Davis, and J.D. Warren. 2004. Acoustically-inferred zooplankton distribution in relation to hydrography west of the Antarctic peninsula. Deep Sea Research II. 51(17-19): 2041-2072.

Madin, L.P., P. Kremer, P.H. Wiebe, J.E. Purcell, E.H. Horgan, D.A. Nemazie. 2006. Periodic swarms of the salp *Salpa aspera* in the Slope Water off the NE United States: Biovolume, vertical migration, grazing, and vertical flux. Deep-Sea Research I 53: 804–819.

Lawson, G.L., P.H. Wiebe, C.J. Ashjian, and T.K. Stanton. 2008. Euphausiid distribution along the Western Antarctic Peninsula - Part B: Distribution of euphausiid aggregations and biomass, and associations with environmental features. Deep-Sea Research II. 55(3-4): 432-545. [DOI: doi:10.1016/j.dsr2.2007.11.014].

Ashjian,C.J., C.S. Davis, S.M. Gallager, P.H. Wiebe, and G.L. Lawson. 2008. 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 Research Part II. 55(3-4): 451-471.

Warren J.D. and P. H. Wiebe. 2008. Accounting for biological and physical sources of acoustic scattering improves estimates of zooplankton biomass. Canadian Journal of Fisheries and Aquatic Sciences. 65: 1321-1333.

Wiebe, P.H., D. Chu, S. Kaartvedt, A. Hundt ,W. Melle, E. Ona, and P. Batta-Lona. 2010. The acoustic properties of *Salpa thompsoni*. ICES Journal of Marine Science. 67: 583-593. doi:10.1093/icesjms/fsp263

Wiebe, P.H., S.B. Schnack-Schiel, and S. Nishida, Introduction to species diversity of marine zooplankton. Deep-Sea Research II. 57(24-26): 2061-2063.

Wiebe, P.H., A. Bucklin, L. Madin, M.V. Angel, T. Sutton, F. Pagés, R.R. Hopcroft, D. Lindsay. 2010. Deep-sea sampling on CMarZ cruises in the Atlantic Ocean – an Introduction. Deep-Sea Research II. 57(24-26): 2157-2166.

Bucklin, A., Ortman, B.D., Jennings, R.M., Nigro, L.M., Sweetman, C.J., Copley, N.J., Sutton, T., and Wiebe, P.H. 2010. A “Rosetta Stone” for metazoan zooplankton: DNA barcode analysis of species diversity of the Sargasso Sea (Northwest Atlantic Ocean). DSR-II (CMarZ special volume).57(24-26): 2234-2247.

Sutton, T.T., P.H. Wiebe, L. Madin, and A. Bucklin. Diversity and community structure of pelagic fishes to 5000 m depth in the Sargasso Sea. Deep-Sea Research II. 57(24-26): 2220-2233.

Wiebe, P.H., C.J. Ashjian, G. L. Lawson, A. Piñones, and N.J. Copley. 2011. Horizontal and vertical distribution of euphausiid species on the Western Antarctic Peninsula Southern Ocean GLOBEC study site. Deep-Sea Research II. 58(13-16): 1630-1651.

Batta Lona, P.G., A. Bucklin, P.H. Wiebe, N.J. Copley, and T. Patarnello. 2011. Population genetic variation of the Southern Ocean krill, *Euphausia superba*, in the Western Antarctic Peninsula region based on mitochondrial single nucleotide polymorphisms (SNPs). Deep-Sea Research II. 58(13-16): 1652-1661.

Wiebe, P.H., Rudels, B., Cadri, S.X., Drinkwater, K.F., and Lavin, A. 2012. Introduction to variability of the North Atlantic and its marine ecosystems, 2000–2009, the proceedings of an ICES/NAFO symposium held in Santander, Spain, 10–12 May 2011. ICES Journal of Marine Science, 69(5), 697–702. doi:10.1093/icesjms/fss090

Skjoldal, H.R., P.H. Wiebe, L. Postel, T. Knutsen, S. Kaartvedt, and D.D. Sameoto. 2013. Intercomparison of zooplankton (net) sampling systems: Results from the ICES/GLOBEC sea-going workshop. Progress in Oceanography. 108: 1-42. DOI: 10.1016/j.pocean.2012.10.006.

Wiebe, P.H., G.L. Lawson, A.C. Lavery, N.J. Copley, E. Horgan, and A. Bradley. 2013. Improved agreement of net and acoustical methods for surveying euphausiids by mitigating avoidance using a net based LED strobe light system. ICES Journal of Marine Science. (2013) 70(3): 650-664 doi:10.1093/icesjms/fst005.

Wiebe, P.H., Allison, D., Kennedy, M., and Moncoiffe, G. 2015. A Vocabulary for the Configuration of Net Tows for Collecting Plankton and MicroNekton. Journal of Plankton Research., 37(1): 21–27. First published online November 6, 2014 doi:10.1093/plankt/fbu101

Wiebe, P.H., and Allison, M.D. 2015. Bringing Dark Data into the Light: A case study of the recovery of Northwestern Atlantic zooplankton data collected in the 1970s and 1980s. In special issue: “Rescuing Legacy Data for Future Science”. GeoResJ. 6: 195–201. <http://dx.doi.org/10.1016/j.grj.2015.03.001>.

Lawson, G.L., Hückstädt, L.A., Lavery, A.C., Jaffré, F.M., Wiebe, P.H., Fincke, J.R., Crocker, D.E., and Costa, D.P. 2015. Development of an Animal-Borne ‘Sonar Tag’ for Quantifying Prey Abundance: Test Deployments on Northern Elephant Seals. Animal Biotelemetry 3:22 (16 pages). DOI 10.1186/s40317-015-0054-7

Bucklin, A., McGillicuddy,D.J., Wiebe, P.H., and Davis, C.S. 2015. Habitat usage by the cryptic copepods *Pseudocalanus moultoni* and *P. newmani* on Georges Bank (Northwest Atlantic)., Continental Shelf Research. 111: 83–94.

Wiebe, P.H., Harris, R.P., Valdes, L.J., Skjoldal, H.R., Margonski, P., Benfield, M., Gislason, A., and O’Brien, T. 2016. A History of the ICES Working Group on Zooplankton Ecology: The first 25 years. Progress in Oceanography. 141, 179–201.

Chu, D., Lawson, G.L, and Wiebe, P.H., 2016. Estimation of biological parameters of marine organisms using linear and nonlinear acoustic scattering model-based inversion methods. JASA, 139: 2885–2895.
[<http://dx.doi.org/10.1121/1.4948759>]

Wiebe, P.H., Bucklin, A., Kaartvedt, S., Røstad, A., and Blanco-Bercial, L. 2016. Vertical distribution and migration of Euphausiid species in the Red Sea. Journal of Plankton Research. 38 (4): 888-903. [doi:10.1093/plankt/fbw038]

Endo, Y., Fujii, D., Nishitani, G. and Wiebe, P.H. 2017. Life cycle of the suctorian ciliate *Ephelota plana* attached to the krill *Euphausia pacifica*. Journal of Experimental Marine Biology and Ecology, 486: 368–372. Published online November 2016. <http://dx.doi.org/10.1016/j.jembe.2016.11.003>

Batta-Lona, P.G., Maas, A., O'Neill, R., Wiebe, P.H., and Bucklin. A. 2017. Transcriptomic profiles of spring and summer populations of the Southern Ocean salp, *Salpa thompsoni*, in the Western Antarctic Peninsula region. Polar Biology, 40(6), 1261-1276. Published online November 2016. doi:10.1007/s00300-016-2051-6

Knutsen, T., Wiebe, P.H., Gjøsæter, H., Ingvaldsen, R.B., and Lien, G. 2017. High Latitude Epipelagic and Mesopelagic Scattering Layers – A Reference for Future Arctic Ecosystem Change. Frontiers in Marine Science. 4: 334 (21 pages). Doi: 10.3389/fmars.2017.00334 [<https://www.frontiersin.org/articles/10.3389/fmars.2017.00334/full#supplementary-material>]

Gjøsæter, H., Wiebe, P.H., Ona, E., Knutsen, T., and Ingvaldsen, R.B. 2017 Evidence for diel vertical migration of sound-scattering organisms in the Arctic. *Frontiers in Marine Science*. 4: 332 (14 pages). doi: 10.3389/fmars.2017.00332. [<https://www.frontiersin.org/articles/10.3389/fmars.2017.00332/full#supplementary-material>]

Knutsen, T., Hosia, A., Falkenhaug, T., Skern-Mauritzen, R., Wiebe, P.H., Larsen, R.B., Aglen, A., and Berg, E. 2018. Coincident Mass Occurrences of Gelatinous Zooplankton in Northern Norway. *Frontiers in Marine Science*. 5: 158. doi.org/10.3389/fmars.2018.00158

Sakinan, S., Lawson, G.L., Wiebe, P.H., and Chu, D. 2019. Accounting for seasonal and composition-related variability in acoustic material properties in estimating copepod and krill target strength. *Limnology and Oceanography Methods*. 17: 607–625. doi: 10.1002/lom3.10336.

Drinkwater, K.F., Sundby, S., and Wiebe, P.H. 2020. Exploring the hydrography of the boreal/arctic domains of North Atlantic seas: Results from the 2013 BASIN survey. *Deep-Sea Research II*. 180. <https://doi.org/10.1016/j.dsr2.2020.104880>

Melle, W., Klevjer, T., Drinkwater, K., Strand, E., Knutsen, T., Naustvoll, L.J., Wiebe, P.H., Aksnes, D., Sundby, S., Slotte, A., Dupont, N., Gro Vea Salvanes, A., Korneliussen, R., and Huse, G. 2020. Structure and functioning of four North Atlantic ecosystems - a comparative study. *Deep-Sea Research II*. 180. <https://doi.org/10.1016/j.dsr2.2020.104838>

Crouch, K.B., L. Blanco-Bercial, D.E. Richardson, N.J. Copley, P.H. Wiebe, A. Bucklin. 2020. Species-specific patterns of distribution and abundance of the cryptic copepods *Pseudocalanus moultoni* and *P. newmani* on Georges Bank (NW Atlantic Ocean) 1995-2012. *Continental Shelf Research*. 208. <https://doi.org/10.1016/j.csr.2020.104242>,

Govindarajan, A., Francolini, R., Jech, J.M., Lavery, A.C., Llopiz, J., Wiebe, P.H., and Zhang, W.G. 2021. Exploring the use of environmental DNA (eDNA) to detect animal taxa in the mesopelagic zone. *Frontiers in Ecology and Evolution, section Conservation and Restoration Ecology*. <https://doi.org/10.3389/fevo.2021.574877>

Bucklin, A., Peijnenburg, K.T.C.A., Kosobokova, K.N., O'Brien, T.D., Blanco-Bercial, L., Cornils, A., Falkenhaug, T., Hopcroft, R.R., Hosia, A., Laakmann, S., Li, C., Martell, L., Questel, J.M., Wall-Palmer, D., Wang, M., Wiebe, P.H., and Weydmann-Zwolicka, A. 2021. Toward A Global Reference Database of COI Barcodes for Marine Zooplankton. *Marine Biology* 168, 78. <https://doi.org/10.1007/s00227-021-03887-y>

Yoerger, D.R., Govindarajan, A.F., Howland, J.C., Llopiz, J.K., Wiebe, P.H., Curran, M., Fujii, J., Gomez-Ibanez, D., Katija, K., Robison, B.H., Hobson, B.W., Risi, M., Rock, S.M. 2021. A hybrid underwater robot for multidisciplinary investigation of the ocean twilight zone. *Sci. Robot.* 6, DOI: 10.1126/scirobotics.abe1901.

Ji, R., Runge, J.A., Davis, C.S., and Wiebe, P.H. 2021. Drivers of variability of *Calanus finmarchicus* in the Gulf of Maine: roles of internal production and external supply. *Ices Journal of Marine Science*. doi.org/10.1093/icesjms/fsab147 doi.org/10.1093/icesjms/fsab147

Bucklin, A., Questel, J.M., Frenzel, A., Smolenack, S.B., and Wiebe P.H., 2021. Population connectivity of the euphausiid, *Stylocheiron elongatum*, in the Gulf Stream (NW Atlantic Ocean) in relation to COI barcode diversity of *Stylocheiron* species. *ICES Journal of Marine Science*. <https://doi.org/10.1093/icesjms/fsab158>.

Wiebe, P.H., Baumgartner, M.F., Copley, N., Lawson, G.L., Davis, C., Ji, R., and Greene, C.H. 2022. Does predation control the diapausing stock of *Calanus finmarchicus* in the Gulf of Maine? *Progress in Oceanography*. 206. <https://doi.org/10.1016/j.pocean.2022.102861>

Wiebe, P.H., Lavery, A.C., and Lawson, G.L. 2022. Biogeographic Variations in Diel Vertical Migration Determined from Acoustic Backscattering in The Northwest Atlantic Ocean. Deep-Sea Research 1. <https://doi.org/10.1016/j.dsr.2022.103887>.