

## CURRICULUM VITAE

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### DEGREES AND ADVANCED STUDY:

B. A. Lake Forest College (Biology), 1971  
M. A. The City College (Biology), 1973  
Ph.D. University of New Hampshire (Zoology), 1976

### POSITIONS HELD:

Director, Horn Point Laboratory, University of Maryland Center for Environmental Science, October 2001 – November 2022.

Professor, University of Maryland, Center for Environmental and Estuarine Studies, Horn Point Environmental Laboratory, July 1990- Present.

Acting Director, University of Maryland Center for Environmental and Estuarine Studies, Horn Point Environmental Laboratory, April 1, 1989-October 31, 1990.

Associate Professor, University of Maryland Center for Environmental and Estuarine Studies, Horn Point Environmental Laboratories, July 1986 July 1990.

Assistant Professor, University of Maryland, Center for Environmental and Estuarine Studies, Horn Point Environmental Laboratories, September 1983 – June 1986.

Assistant Professor, University of Maryland, Center for Environmental and Estuarine Studies, Chesapeake Biological Laboratory, June 1981- September 1983.

Assistant Professor, University of Miami, School of Marine and Atmospheric Science, June 1978-June 1981.

Postdoctoral Fellow, University of Miami, School of Marine and Atmospheric Science, October 1976-June 1978.

Research Assistant, Woods Hole Oceanographic Institution, October 1975 – February 1976.

Guest Student Investigator, Woods Hole Oceanographic Institution, September 1974-October 1976.

### SYNERGISTIC ACTIVITIES:

Chair of the Scientific Steering Committee of the NSF/NOAA/ONR Coastal Oceanographic Processes Program (CoOP)- this program planned and helped implement a series of interagency coastal research programs.

Chair of the National Academy of Sciences Committee planning long-term research in the Gulf of Alaska after the Exxon Valdez oil spill- this committee developed a plan for a long-term monitoring program in the Gulf of Alaska.

Member of the National Academy of Sciences Committee to review the impact of major programs on ocean research- this committee reviewed the implementation and products from a number of US large oceanographic research programs.

Twice served as Co-chair of the Committee of Visitors for NSF Ocean Sciences- this committee reviews the funding portfolio of the NSF Ocean Sciences Division.

Vice-Chair of the IGBP Program on Integrated Marine Biogeochemistry and Ecosystem Research (IMBER)- see website for description: <https://imber.info/>

U.S. Committee for Census of Marine Life- <http://www.coml.org/about-census/>

Steering Committee – NSF/NASA Ocean Carbon and Biogeochemistry (OCB); <https://www.us-ocb.org/>

Steering Committee NSF Planning Arctic- North Atlantic Research Program

Co-Chair 2nd International Ocean Future Research Conference Barcelona Spain 11/2014.

Steering Committee- UNESCO Committee on Global Ocean Oxygen Network; 2016-*present*; see - <https://en.unesco.org/go2ne>

Led a NOAA review of: Ecosystem-Based Management: An analysis of national needs and opportunities. 2019-2021

Steering Committee of NOAA Cooperative Institute of North Atlantic Region (CINAR) 2010-*present*; <https://website.whoi.edu/cinar/>

Trustee of the Consortium of Ocean Leadership 2018-*present*; <https://oceanleadership.org/>

Roman served as President of the Oceanography Society 2011-2012.

Advisory Board of the Ferry Cove Oyster Hatchery, Tilghman Island, MD. 2021-*present*.

## PUBLICATIONS:

2022 Pierson, J.J., J. M. Testa and M. R. Roman. Copepod habitat suitability estimates vary among oxygen metrics in Chesapeake Bay. *ICES Journal of Marine Science*, DOI: 10.1093/icesjms/fsac019.

Roman, M.R. and J. J. Pierson. Interactive effects of increasing temperature and decreasing oxygen on coastal copepods. *Biological Bulletin*, <https://doi.org/10.1086/722111>

A. Woods, A. L. Moran, D. Atkinson, A. Audzijonyte, M. Berenbrink, F. O. Borges, K. G. Burnett, L. E. Burnett, C. J. Coates, R. Collin, E. M. Costa-Paiva, M. I. Duncan, R. Ern, E. M. J. Laetz, L. A. Levin, M. Lindmark, N. M. Lucey, L. R. McCormick, J. J. Pierson, R. Rosa, M. R. Roman, E. Sampaio, P. M. Schulte, E. A. Sperling, A. Walczyńska, W. C. E. P. Verberk. Integrative approaches to understanding organismal responses to aquatic deoxygenation. *Biological Bulletin*, *In Press*.

2021 Grégoire, M., V. Garçon, H. Garcia, D. Breitburg, K. Isensee, A. Oschlies, M. Telszewski, A. Barth, H. Bittig, J. Carstensen, T. Carval, F. Chai, F. Chavez, D. Conley, L. Coppola, S. Crowe, K. Currie, M. Dai, B. Delfandre, B. Dewitte, R. Diaz, E. Garcia-Robledo, D. Gilbert, A. Giorgetti, R. Glud, D. Gutierrez, S. Hosoda, M. Ishii, G. Jacinto, C. Langdon, S.K. Lauvset, L.A. Levin, K.E.Limburg, H. Mertens, I. Montes, W. Naqvi, A. Paulmier, B. Pfeil, G. Pitcher, S. Pouliquen, N. Rabalais, C. Rabouille, V. Recape, M. Roman, K. Rose, D. Rudnick, J. Rummer, C. Schmechtig, S. Schmidtke, B. Seibel, C. Slomp, U.R. Sumalia, T. Tanhua, V. Thierry, H. Uchida, R. Wanninkhof, and M. Yasuhara. A global ocean oxygen database and atlas for assessing and predicting deoxygenation and ocean

health in the open and coastal ocean. *Frontiers in Marine Science* 8, Article 724913. <https://doi.org/10.3389/fmars.2021.724913> 11.

Pitcher, G.C., A. Aguirre-Velarde, D. Breitburg, J. Cardich, J. Carstensen, D.J. Conley, B. Dewitte, A. Engel, D. Espinoza-Morriberón, G. Flores, V. Garçon, M. Graco, M. Grégoire, D. Gutiérrez, J. M. Hernandez-Ayon, H. M. Huang, K. Isensee, M. E. Jacinto, L. Levin, A. Lorenzo, E. Machu, L. Merma, I. Montes, S.W. Naqvi, A. Paulmier, M. Roman, K. Rose, R. Hood, N. N. Rabalais, A. G. Salvanes, R. Salvatelli, S. Sánchez, A. Sifeddine, A. W. Tall, A. K. van der Plas, M. Yasuhara, J. Zhang, Z.Y. Zhu. System controls of coastal and open ocean oxygen depletion. *Progress in Oceanography* 197, 102613  
<https://doi.org/10.1016/j.pocean.2021.102613>.

West, A.O., L. Wainger, K. Rose, M.R. Roman, T. Miller, F. Moser, W. Dennison and F. Martinez. *Ecosystem-Based Management: An analysis of national needs and opportunities*. NOAA Technical Memorandum NOS NCCOS 288: Silver Spring, MD.

- 2020 Roman, M.R. & J.J. Pierson. Chapter 8.7: Estuarine and Coastal Plankton. In: *Ocean deoxygenation: everyone's problem*. IUCN Report  
<https://doi.org/10.2305/IUCN.CH.2019.14.en>
- 2019 Glaspie, C. N., M. Clouse, K. Huebert, S. A. Ludsin, D. M. Mason, J. J. Pierson, M. R. Roman, and S. B. Brandt. Fish diet shifts associated with the northern Gulf of Mexico hypoxic Zone. *Estuaries and Coasts*. doi:10.1007/s12237-019-00626-x
- Roman, M.R., Brandt, S.B., Houde, E.D., Pierson, J.J. Interactive effects of hypoxia and temperature on coastal pelagic zooplankton and fish. *Frontiers of Marine Science*. doi: 10.3389/fmars.2019.00139
- 2018 Breitburg, D., Levin, L.A., Oschlies, A., Grégoire, M., Chavez, F.P., Conley, D.J., Garçon, V., Gilbert, D., Gutiérrez, D., Isensee, K., Jacinto, G.S., Limburg, K.E., Montes, I., Naqvi, S.W.A., Pitcher, G.C., Rabalais, N.N., Roman, M.R., Rose, K.A., Seibel, B.A., Telszewski, M., Yasuhara, M., Zhang, J. Declining oxygen in the global ocean and coastal waters. *Science*. (80) 359:7240. doi: 10.1126/science.aam7240
- Glaspie, C.N., Clouse, M., Adamack, A.T., Cha, Y.K., Ludsin, S.A., Mason, D.M., Roman, M.R., Stow, C.A., Brandt, S.B. Effect of hypoxia on diet of Atlantic bumper *Chloroscombrus chrysurus* in the Northern Gulf of Mexico. *Trans. Amer. Fish. Soc.* <https://doi.org/10.1002/tafs.10063>
- 2017 Pierson, J.J., Slater, W.C.L., Elliott, D., Roman, M.R. Synergistic effects of seasonal deoxygenation and temperature truncate copepod vertical migration and distribution. *Marine Ecology Progress Series*. 575, 57-68.

- 2016 Pierson, J. J., D. G. Kimmel & M. R. Roman. Temperature impacts on *Eurytemora* size and vital rates in the upper Chesapeake Bay in winter. *Estuaries and Coasts*. 39 (4): 1122–1132.
- 2015 K.K. Liu, K.C. Emeis, L.A. Levin, W. Naqvi, M.R. Roman. Preface — Biogeochemistry–ecosystem interaction on changing continental margins in the Anthropocene. *J. of Mar. Sys.* 141: 1-2.
- 2014 Zhang H, Mason D.M., Stow C.A., Adamack A.T., Brandt S.B., Zhang X., Kimmel D.G., Roman M.R., Boicourt W.C., Ludsin S.A. Impact of hypoxia on habitat quality of pelagic planktivorous fishes in the northern Gulf of Mexico. *Mar. Ecol. Prog. Ser.* 505:209-226.
- 2013 Elliott, D.T., J. J. Pierson, M. R. Roman. Predicting the effects of coastal hypoxia on vital rates of the planktonic copepod, *Acartia tonsa* Dana. *PLOS One*. 8(5): e63987. doi:10.1371/journal.pone.0063987
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- Elliott, D.T., J. J. Pierson, M. R. Roman. Relationship between environmental conditions and zooplankton community structure during summer hypoxia in the northern Gulf of Mexico. *Jour. Plankton Res.* 34: 602-613.
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2009

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2008

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2007

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2006

Hood, R.E., X. Zhang, P.M. Glibert, D.K. Stoecker and M.R. Roman. Modeling the influence of nutrients, turbulence and grazing on *Pfiesteria* populations. *Harmful Algae* 5:459-479.

Kimmel, D.G., M.R. Roman and X. Zhang. Spatial and temporal variability in factors affecting mesozooplankton dynamics in Chesapeake Bay: Evidence from biomass size spectra. *Limnology and Oceanography* 51:131-141.

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2005 Roman, M.R., J.E. Adolf, J. Bichy, W.C. Boicourt, L.W. Harding, E.D. Houde, S. Jung, D.G. Kimmel, W.D. Miller and X. Zhang. Chesapeake Bay plankton and fish abundance enhanced by Hurricane Isabel. *EOS* 86:261-265.

Roman, M., X. Zhang, C. McGilliard and W. Boicourt. Seasonal and annual variability in the spatial patterns of plankton biomass in Chesapeake Bay. *Limnology and Oceanography*.50:480-492

Kemp, W.M., Boynton, Adolf, Boesch, Boicourt, Brush, Cornwell, Fisher, Glibert, Hagy, Harding, Houde, Kimmel, Miller, Newell, Roman, Smith and Stevenson. Eutrophication of Chesapeake Bay: Historical trends and ecological interactions. *Mar.Ecol.Prog.Ser.*303:1-29

2004 Kimmel, D.G. and M.R. Roman. Long-term trends in mesozooplankton abundance and community composition in the Chesapeake Bay, USA: Influences of fresh water input. *Marine Ecology Progress Series*.267:71-83.

Richardson, T.L., G.A. Jackson, H.W. Ducklow and M.R. Roman. Planktonic food webs of the equatorial Pacific at 0°, 140°W: a synthesis of EqPac time-series carbon flux data. *Deep-Sea Research* 51:1245-1274.

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2003 Valle-Levinson, A., C. Lascara, W.C. Boicourt and M. Roman. On the linkage among density, flow and bathymetry gradients at the entrance to the Chesapeake Bay. *Estuaries* 26: 1437-1449.

- 2002 Roman, M.R., H.A. Adolf, M.R. Landry, L.P. Madin, D.K. Steinberg and X. Zhang. Estimates of oceanic mesozooplankton production: A comparison using the Bermuda and Hawaii time-series data. *Deep Sea Research II* 49:175-192.
- Roman, M.R., H.G. Dam, R. LeBorgne and X. Zhang. Latitudinal comparisons of Equatorial Pacific Ocean zooplankton. *The Equatorial Pacific JGOFS Synthesis* 49(13-14): 2695-2713.
- Roman, M.R. et al. *A Century of Ecosystem Science: Planning Long-Term Research in the Gulf of Alaska*. National Academy Press, Washington, DC.
- 2001 Roman, M.R., D.V. Holliday and L.P. Sanford. Temporal and spatial patterns of zooplankton in the Chesapeake Bay turbidity maximum. *Marine Ecology Progress Series*. 213: 215-227.
- 2000 Bamstedt, U., D.J.Gifford, X.Irigoien, A.Atkinson and M.Roman. Zooplankton Feeding. P 297-399, (In) *ICES Zooplankton Methodology Manual*. R. Harris, P.Wiebe, J.Lenz, H.R. Skoldal and M.Huntley (Eds). Academic Press,N.Y.684p.
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- Zhang, X., M. Roman, A. Sanford, H. Adolf, C. Lascara and R. Burgett. Can an optical plankton counter produce reasonable estimates of zooplankton abundance and biovolume in water with high detritus? *J. Plankton Res.* 22:137 -150.
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1995

Caron,D.A., H.G.Dam, P.Kremer, E.J.Lessard, L.P.Madin, T.C. Malone, J.M.Napp ,E.R.Peele, M.R.Roman and M.J.Youngbluth. The contribution of microorganisms to particulate carbon and nitrogen in surface waters of the Sargasso Sea near Bermuda. *Deep-Sea Res.* 42:943-972.

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Dam, H.G., X. Zhang, M. Butler and M.R. Roman. Mesozooplankton grazing and metabolism on the equator at 140° W during the JGOFS EqPac study: implications for carbon and nitrogen fluxes. *Deep-Sea Res.*42:735-756.

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O'Neil, J.M. and M.R. Roman. Grazing of the pelagic harpacticoid copepods *Marcosetella*, *Miracia* and *Oculasetella*, on the colonial cyanobacterium *Trichodesmium* spp. from the Caribbean. *Hydrobiol.* 292/293:235-240.

Roman, M.R., D.A.Caron, P.Kremer, E. J. Lessard, L.P.Madin, T.C. Malone, J.M.Napp, E.R.Lessard and M.J Youngbluth. Spatial and temporal changes in the partitioning of organic carbon in the plankton community of the Sargasso Sea off Bermuda. *Deep-Sea Res.*42:973-992.

Roman, M.R.,H.G. Dam, A.L. Gauzens and J.Urban-Rich. Mesozooplankton variability on the equator at 140W during the JGOFS Eq Pac study. *Deep-Sea Res.*42:673-694.

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Zhang, X., H.G. Dam, J.R. White and M. R. Roman. Latitudinal gradients in mesozooplankton grazing and metabolism along 140W during the JGOFS EqPac study. *Deep-SeaRes.*42:695-714.



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