

BIOGRAPHICAL SKETCH – W. Michael Kemp

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Professional Preparation:

Georgia Institute of Technology, Civil Engineering B.S. 1969
Georgia Institute of Technology, Environmental Engineering M.S. 1971
University of Florida, Systems Ecology Ph.D. 1977

Positions Held:

Full Professor, Horn Point Laboratory, Univ. Maryland CES, Cambridge, MD, 1989–Present
Assoc. Professor, Horn Point Laboratory, Univ. Maryland CES, Cambridge, MD, 1984–1989
Visiting Faculty, University of Copenhagen and University of Aarhus, Denmark, 1985
Asst. Professor, Horn Point Lab, Univ. Maryland CES, Cambridge, MD, 1980–1984
Post-doctoral fellow, Chesapeake Biological Laboratory, UMCES, Solomons, MD, 1997–1979

Publications, Last Three Years:

- Apple, J. K., P. del Giorgio, W. M. Kemp. 2006. Temperature regulation of bacterial production, respiration and growth efficiency in a temperate salt-marsh estuary. *Aquat. Microbial Ecol.* 43: 243-254.
- Kemp, W.M., W. Boynton, J. Adolf, D. Boesch, W. Boicourt, G. Brush, J. Cornwell, T. Fisher, P. Glibert, J. Hagy, L. Harding, E. Houde, D. Kimmel, W.D. Miller, R. I.E. Newell, M. Roman, E. Smith, J.C. Stevenson. 2006. Eutrophication of Chesapeake Bay: Historical trends and ecological interactions. *Mar. Ecol. Prog. Ser.*303: 1-29.
- Fulford, R.S., D.L. Breitburg, R.I.E. Newell, W.M. Kemp and M.W. Luckenbach. 2007 Effects of oyster population restoration strategies on phytoplankton biomass in Chesapeake Bay: a flexible modeling approach. *Mar. Ecol. Prog. Ser.* 336:43-61.
- Newell, R.I.E., W.M. Kemp, J.D. Hagy, C.F. Cerco, J.M. Testa, W.R. Boynton. 2007. Top-down control of phytoplankton by oysters in Chesapeake Bay, USA: Comment on Pomeroy et al. (2006). *Mar. Ecol. Prog. Ser.* 341: 293-298.
- Boynton, W.R., W. M. Kemp. 2008. Nitrogen in estuaries, pp. 809-866, In: D.G. Capone, D.A. Bronk, M. Mulholland, E. Carpenter (eds.) *Nitrogen in the marine environment*, 2nd ed. Academic Press, New York.
- Ball, W., D. Brady, M. Brooks, R. Burns, B. Cuker, D. Di Toro, T. Gross, W.M. Kemp, L. Murray, R. Murphy, E. Perlman, M. Piasecki, J. Testa). 2008. A prototype system for multi-disciplinary shared cyberinfrastructure—Chesapeake Bay Environmental Observatory (CBEO). *J. Hydrol. Eng., ASCE* 13: 960-970.
- Testa, J. and W.M. Kemp. 2008. Regional, seasonal, and inter-annual variability of biogeochemical processes and physical transport in a partially stratified estuary: Box-modeling analysis. *Mar. Ecol. Prog. Ser.* 356: 63-79.
- Boynton, W.R., J. Hagy, J. Cornwell, W.M. Kemp, S. Greene, M. Owens, J. Baker, R. Larsen. 2008. Nutrient budgets and management actions in the Patuxent River estuary, Maryland. *Estuar. Coasts.* 31: 623-651.

- Petersen, J.E. & W.M. Kemp. 2008. The role of enclosed experimental ecosystems (“mesocosms”) in ocean science, In: J.H. Steele, S.A. Thorpe, and K.K. Turekian (eds.). Encyclopedia of ocean sciences, vol. 7. Academic Press, New York.
- Testa, J., W. Boynton, J. Hagy, W.M. Kemp. 2008. Responses of water quality and biogeochemical fluxes to nutrient management and freshwater inputs in the Patuxent River estuary. *Estuar. Coasts*. 31: 1021-1037.
- Nagel, J.L., S. Henson, B. Jacobson, W.M. Kemp. 2008. Influence of the submersed plants, *Ruppia maritima* and *Potamogeton perfoliatus*, on sediment biogeochemistry and nutrient cycling in Chesapeake Bay. *Mar. Ecol. Prog. Ser.* (In press).
- Chen, C-C, F-K Shiah, K-P Chiang, G-C Gong, W.M. Kemp 2008. Effects of the Changjiang (Yangtze) River discharge on planktonic community respiration in the East China Sea. *J.Geophys.Res.* (in press).

Five Other Relevant Publications:

- Kemp, W.M., 1989. Estuarine chemistry, pp. 79-143, In: J. Day, C. Hall, W.M. Kemp and A. Yanez-Arancibia (ed.), *Estuarine ecology*. Wiley and Sons, New York.
- Kemp, W. M., M. Brooks, R. R. Hood. 2001. Nutrient enrichment, habitat variability and trophic transfer efficiency in simple models of pelagic ecosystems. *Mar. Ecol. Prog. Ser.* 223: 73-87.
- Kemp, W. M., J. E. Petersen R. H. Gardner. 2001. Scale-dependence & the problem of extrapolation: Implications for experimental and natural coastal ecosystems, pp. 3-57, In: R.H. Gardner, W.M. Kemp, J.E. Petersen, V.S. Kennedy (eds.) *Scaling relations in experimental ecology*. Columbia Univ. Press, New York
- Smith, E.M. and W.M. Kemp. 2001. Size-structure and the production/respiration balance in a coastal plankton community. *Limnol. Oceanogr.* 46: 473-485.
- Kemp, W. M., R. Batiuk, R. Bartleson, P. Bergstrom, V. Carter, G. Gallegos, W. Hunley, L. Karrh, E. Koch, J. Landwehr, K. Moore, L. Murray, M. Naylor, N. Rybicki, J. C. Stevenson, D. Wilcox. 2004. Habitat requirements for submerged aquatic vegetation in Chesapeake Bay: Water quality, light regime, and physical-chemical factors. *Estuaries* 27: 363-377.

Synergistic Activities:

Estuarine Research Federation—Executive Board, Member at Large (1987-1989); Conference Program Co-Chair (1989), Workshop/Session Chair (1987, 1989, 1991, 1997, 2001, 2009); Swedish Academia—Royal Swedish Academy of Sciences, Crafoord Award Lecturer (1996); University of Stockholm, External Expert Member of Appointments Board (1995-1996); Florida Center Environmental Studies, Distinguished Coastal Scientist Sabbatical Award (1998-1999); Editorial Boards: *Estuarine Coastal Shelf Science*, *Ophelia*, *Ecological Applications*, *Marine Ecology Progress Series* (1998-present); Maryland Governor's Citation for Chesapeake Bay Seagrass Research (1992).

Collaborators and Other Affiliations:

Advisors: H. T. Odum (PhD), A. W. Hoadley (MS), J. A. Mihursky (Post-doc)
Colleagues: R. Batiuk, P. Bergstrom, D. Breitburg, G. Brush, D. Conley, P. Del Giorgio, D. DiToro, G. Gallegos, D. Gilbert, J. Hagy, R. Hood, J. Landwehr, M. Li, C. Madden, R. Orth, N. Rybicki, D. Wilcox.
Students: J. Apple, M. Brooks, J. Caffrey, C.-C. Chen, J. Cunningham, M. Mayer, J. Nagel, W. Goldsborough, M. Jenkins, W. Kuhn, M. Lewis, K. Moore, J. Neundorfer, J. Petersen, K. Schulte, E. M. Smith, K.A. Staver, J. Testa, C. Wazniak

Post-docs: S. Blumenshine, W.C. Dennison, J. Petersen, R.W. Twilley