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Education: Ph.D., Boston University Marine Program, Woods Hole, MA, 1982, Ecology
B.S., Rensselaer Polytechnic Institute, Troy, NY, 1975, Biology

Awards: Phi Lambda Upsilon Chemical Honor Society
Aldo Leopold Leadership Fellowship 2001
Estuaries – recognized for outstanding contributions to peer review 2005

Societies: American Association for the Advancement of Science
Council Delegate for Biological Sciences 1995-1998
American Institute of Biological Sciences
American Society of Limnology and Oceanography
American Association of Underwater Sciences
American Chemical Society
Ecological Society of America
Estuarine Research Society:
Governing Board 1988-1990; President-Elect 1997-1999, President 1999-2001,
Past-President 2001-2003
New England Estuarine Research Society
Member-at-Large 1987-1989; President 1989-1991
Oceanographic Society
Sigma Xi

Research Experience:

Senior Scientist, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, 2003-present
Professor MBL/Brown Joint Program 2007-Present
Graduate Faculty, Graduate School of Oceanography, University of Rhode Island 2005-Present
Associate Scientist, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, 1990-2003
Adjunct Associate Professor, Boston University, Boston, MA, 1991-Present
Assistant Scientist, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA, 1983-1989
Postdoctoral Investigator, Woods Hole Oceanographic Institution, Woods Hole, MA, 1982-1983
Coordinator, Summer Marine Ecology Course, Marine Biological Laboratory, Woods Hole, MA, Summer 1981
Research Assistant, Boston University Marine Program, Woods Hole, MA, 1977 - 1981
Teaching Fellow, Boston University Marine Program, Woods Hole, MA, 1975 - 1977
Taught Freshman Chemistry Lab, Rensselaer Polytechnic Institute, Summer 1975

Publications:

Giblin, A. E., A. Bourg, I. Valiela and J. M. Teal. 1980. Uptake and losses of heavy metals in sewage sludge by a New England salt marsh. *American Journal of Botany* 67: 1059-68.
Breteler, R. J., A. E. Giblin, J. M. Teal and I. Valiela. 1981. Trace enrichments in decomposing litter of *Spartina alterniflora*. *Aquatic Botany* 11:111-120.
Luther, G. W. III, A. E. Giblin, R. W. Howarth and R. A. Ryans. 1982. Pyrite and oxidized iron mineral phases formed from pyrite oxidation in salt marsh and estuarine sediments. *Geochimica et Cosmochimica Acta* 46:2665-2669.

- Teal, J. M., A. E. Giblin and I. Valiela. 1982. The fate of pollutants in American salt marshes, pp. 357-366. In: B. Gopal (ed.), *Wetlands: Ecology and Management*. Proc. Int. Wetl. Conf., New Delhi.
- Valiela, I., B. L. Howes, R. W. Howarth, A. E. Giblin, K. H. Foreman, J. E. Hobbie and J. M. Teal. 1982. The regulation of primary production and decomposition in a salt marsh ecosystem, pp. 261-290. In: B. Gopal (ed.), *Wetlands: Ecology and Management*. Proceedings of International Wetlands Conference, New Delhi.
- Giblin, A. E., I. Valiela and J. M. Teal. 1983. The fate of metals introduced into a New England salt marsh. *Water Air and Soil Pollution* 20:81-98.
- Giblin, A. E., M. Piotrowski, B. Leighty, I. Valiela and J. M. Teal. 1983. Response of a salt marsh microbial community to inputs of heavy metals: Aerobic heterotrophic metabolism. *Environmental Toxicology and Chemistry* 2:343-351.
- Howarth, R. W., and A. E. Giblin. 1983. Sulfate reduction in the salt marshes at Sapelo Island, Georgia. *Limnology and Oceanography* 28:70-82.
- Howarth, R. W., A. E. Giblin, J. Gale, B. J. Peterson and G. W. Luther III. 1983. Reduced sulfur compounds in the pore waters of a New England salt marsh. In: R. O. Hallberg (ed.), *Environmental Biogeochemistry*. *Ecological Bulletin (Stockholm)* 35:135-152.
- Giblin, A. E., and R. W. Howarth. 1984. Pore water evidence for a dynamic sedimentary iron cycle in salt marshes. *Limnology and Oceanography* 29:47-63.
- Giblin, A. E. 1985. Comparisons of the processing of elements by ecosystems: II Metals, pp. 158-179. In: P. J. Godfey, E. R. Kaynor, S. Pelozarski and J. Benforado (eds.), *Ecological Considerations in Wetland Treatment of Municipal Wastewater*. Van Nostrand Reinhold Co., NY.
- Luther, G. W. III, A. E. Giblin and R. Varsolona. 1985. Polarographic analysis of sulfur species in marine porewaters. *Limnology and Oceanography* 30:727-736.
- Luther, G. W. III, T. M. Church, A. E. Giblin and R. W. Howarth. 1986. Speciation of dissolved sulfur in salt marshes by polarographic methods, pp. 340-355. In: M. L. Sohn (ed.), *Organic Marine Chemistry*. American Chemical Society, Washington, D.C. ACS Symposium Series No. 305.
- Giblin, A. E., G. W. Luther III and I. Valiela. 1986. Trace metal solubility in salt marsh sediments contaminated with sewage sludge. *Estuarine Coastal and Shelf Science* 23:477-498.
- Giblin, A. E. 1988. Pyrite formation in marshes during early diagenesis. *Geomicrobiology Journal* 6:77-97.
- Giblin, A. E., and A. G. Gaines. 1990. Nitrogen dynamics in a marine embayment: the importance of groundwater. *Biogeochemistry* 10:309-328.
- Giblin, A. E., G. E. Likens, D. White and R. W. Howarth. 1990. Sulfur storage and alkalinity generation in New England lake sediments. *Limnology and Oceanography* 35:852-869.
- Shaver, G. R., K. J. Nadelhoffer and A. E. Giblin. 1990. Biogeochemical diversity and element transport in a heterogeneous landscape, the North Slope of Alaska, pp. 105-125. In: M. G. Turner and R. H. Gardner (eds.), *Quantitative Methods in Landscape Ecology*. Springer Verlag, NY.
- Kling, G. W., A. E. Giblin, B. Fry and B. J. Peterson. 1991. The role of seasonal turnover in lake alkalinity dynamics. *Limnology and Oceanography* 36:106-122.
- Giblin, A. E., K. J. Nadelhoffer, G. R. Shaver, J. A. Laundre and A. J. McKerrow. 1991. Biogeochemical diversity along a riverside toposequence in Arctic Alaska. *Ecological Monographs* 61:415-435.
- Nadelhoffer, K. J., A. E. Giblin, G. R. Shaver and J. A. Laundre. 1991. Effects of temperature and organic matter quality on C, N, and P mineralization in soils from six arctic ecosystems. *Ecology* 72:242-253.
- Nadelhoffer, K. J., A. E. Giblin, G. R. Shaver and A. E. Linkins. 1991. Microbial processes and plant nutrient availability in arctic soils, pp. 281-300. In: F. S. Chapin, R. Jefferies, G. Shaver, J. Reynolds and J. Svoboda (eds.), *Physiological Ecology of Arctic Plants: Implications for Climate Change*. Academic Press.
- Giblin, A. E., G. E. Likens and R. W. Howarth. 1991. Reply to the comments by Robert Stauffer on "Sulfur storage and alkalinity generation in New England lake sediments" by Giblin et al. (1990). *Limnology and Oceanography* 36:1265-1271.
- Giblin, A. E., and R. K. Wieder. 1992. Sulfur cycling in marine and freshwater wetlands, pp. 85-117. In: R. W. Howarth, J. W. B. Stewart and M. V. Ivanov (eds.), *Sulfur Cycling on the Continents*. John Wiley and Sons, Ltd.
- Giblin, A. E., G. E. Likens and R. W. Howarth. 1992. The importance of reduced sulfur to the sulfur cycle of lakes. pp 233-244. In: Deegans, E. S. Kempe, A. Lein, and Y. Sorokin (eds) *Interactions of biogeochemical cycles in aqueous ecosystems: Part 7*. Mitt. Geol-Palaont. Inst. Univ. Hamburg Heft 72.
- Shaver, G. R., W. D. Billings, F. S. Chapin III, A. E. Giblin, K. J. Nadelhoffer, W. C. Oechel and E. B. Rastetter. 1992. Global change and the carbon balance of arctic ecosystems. *BioScience* 42(6):433-441.

- Costa, J. E., B. L. Howes, A. E. Giblin and I. Valiela. 1992. Monitoring nitrogen and indicators of nitrogen loading to support management actions in Buzzards Bay, pp. 449-531. In: McKenzie et al. (eds.) *Ecological Indicators*.
- Hines, M. E., G. T. Banta, A. E. Giblin, J. E. Hobbie and J. B. Tugel. 1994. Acetate concentrations and oxidation in salt marsh sediments. *Limnology and Oceanography* 39: 140-148.
- Dornblaser, M., A. E. Giblin, B. Fry and B. J. Peterson. 1994. Effects of sulfate concentration in the overlying water on sulfate reduction of sulfur storage in lake sediments. *Biogeochemistry* 24:129-144.
- Giblin, A. E., J. Laundre, K. Nadelhoffer and G. Shaver. 1994. Measuring nutrient availability in arctic soils using ion-exchange resins: A field test. *Soil Science Society of America Journal* 58:1154-1162.
- Giblin, A. E., K. H. Foreman, G. T. Banta. 1995. Biogeochemical processes and marine benthic community structure: Which follows which? In: Jones, C. G. and J. H. Lawton (eds.) pp 37-44. *Linking Species and Ecosystems*. Chapman and Hall, New York.
- Banta, G. T., A. E. Giblin, J. E. Hobbie, J. Tucker. 1995. Benthic respiration and nitrogen release in Buzzards Bay, Massachusetts. *J. Mar. Res.* 53:107-135.
- Banta, G. T., A. E. Giblin, J. Tucker and J. E. Hobbie. 1995. The fate of nitrogen regenerated from sediments in Buzzards Bay, Massachusetts: Indirect estimates of denitrification. In: K.R. Dyer and R.J. Orth (eds.), *Changes in Fluxes from Estuaries: Implications from Science to Management*, pp. 203-209. Olsen and Olsen, Fredensborg, Denmark.
- Deegan, L. A., J. T. Finn, C. S. Hopkinson, A. E. Giblin, B. J. Peterson, B. Fry and J. E. Hobbie. 1995. Flow model analysis of the effects of organic matter - nutrient interactions on estuarine trophic dynamics. . In: K.R. Dyer and R.J. Orth (eds.), *Changes in Fluxes from Estuaries: Implications from Science to Management*, pp. 273-281. Olsen and Olsen, Fredensborg, Denmark.
- Chapin, F. S., G. R. Shaver, A. E. Giblin, K. G. Nadelhoffer and J. A. Laundre. 1995. Response of Arctic tundra to experimental and observed changes in climate. *Ecology* 76:694-711.
- Fry, B., A. E. Giblin, M. Dornblaser, B. J. Peterson. 1995. Stable sulfur isotopic compositions of chromium reducible sulfur in lake sediments. pp 397-410, Vairavamurthy, M.A. and Schoonen, M. (eds) *Geochemical Transformations of Sedimentary Sulfur*, American Chemical Society, ACS Symposium series 612.
- Seitzinger, S. P., and A. E. Giblin. 1996. Estimating denitrification in North Atlantic continental shelf sediments. *Biogeochemistry* 35:235-260.
- Nixon, S.W., J. Ammerman, L. Atkinson, V. Berounsky, G. Billen, W. Boicourt, T. Church, D. DiToro, R. Elmgren, J. Garber, A. Giblin, R. Jahnke, N. Owens, M. Pilson, and S. Seitzinger. 1996. The fate of nitrogen and phosphorus at the land-sea margin of the north Atlantic ocean. *Biogeochemistry* 35: 141-180.
- Shaver, G. R., J. A. Laundre, A. E. Giblin and K. J. Nadelhoffer. 1996. Changes in vegetation biomass, primary production, and species composition along a riverside toposequence in arctic Alaska. *Arctic and Alpine Research* 28:363-379.
- Johnson, L.C., G.S. Shaver, A.E. Giblin, K.J. Nadelhoffer, E.R. Rastetter, J.A. Laundre, and G.L. Murray. 1996. Effects of drainage and temperature on carbon balance of tussock tundra microcosms. *Oecologia* 108: 737-748.
- Nadelhoffer, K.J., G. Shaver, A.E. Giblin, L. Johnson, and R. McKane. 1996. ^{15}N natural abundances and N use by tundra plants. *Oecologia* 107: 386-394.
- Rastetter, E. B., R. B. McKane, G. R. Shaver, K. J. Nadelhoffer and A. E. Giblin. 1997. Analysis of CO_2 , temperature, and moisture effects on carbon storage in Alaskan arctic tundra using a general ecosystem model. pp. 437-451, In: W. C. Oechel, T. Callaghan, T. Gilmanov, J.I. Holten, B. Maxwell, U. Molau, and B. Sveinbjornsson (eds.) *Global change and arctic terrestrial ecosystems*. Ecological Studies 124. Springer-Verlag. New York.
- Nadelhoffer, K. J., G. R. Shaver, A. E. Giblin and E. B. Rastetter. 1997. Potential impacts of climate change on nutrient cycling, decomposition and productivity in arctic ecosystems. pp. 349-364, In: W. C. Oechel, T. Callaghan, T. Gilmanov, J.I. Holten, B. Maxwell, U. Molau, and B. Sveinbjornsson (eds.) *Global change and arctic terrestrial ecosystems*. Ecological Studies 124. Springer-Verlag. New York.
- Giblin, A.E., C.S. Hopkinson, and J. Tucker. 1997. Benthic metabolism and nutrient cycling in Boston Harbor, Massachusetts, U.S.A. *Estuaries* 20:346-364.
- McKane, R. B., E. B. Rastetter, G. R. Shaver, K. J. Nadelhoffer, A. E. Giblin, J. A. Laundre and F. S. Chapin. 1997a. Climatic effects on tundra carbon storage inferred from experimental data and a model. *Ecology* 78: 1170-1187.

- McKane, R. B., E. B. Rastetter, G. R. Shaver, K. J. Nadelhoffer, A. E. Giblin, J. A. Laundre and F. S. Chapin. 1997b. Reconstruction and analysis of the historical changes in carbon storage in Arctic tundra. *Ecology* 78: 1188-1198.
- Portnoy, J. W., and A. E. Giblin. 1997. Effects of historic tidal restrictions on salt marsh sediment chemistry. *Biogeochemistry* 36: 275-303.
- Portnoy, J.W, and A. E. Giblin. 1997. Biogeochemical effects of seawater restoration to diked salt marshes. *Ecological Applications*: 7:1054-1063.
- Shaver, G. R., A. E. Giblin, K. J. Nadelhoffer, E. B. Rastetter. 1997. Plant functional types and ecosystem change in arctic tundras. pp 153-173 In: Smith, TM, H.H. Sugart, and F.I. Woodward (eds.) *Plant Functional Types: Their relevance to ecosystem properties and global change*.
- Shaver, G.R., E.B. Rastetter, K.J. Nadelhoffer, A.E. Giblin. 1997. Carbon-nutrient interactions as constraints on recovery of Arctic ecosystems from disturbance. pp 553-562 In: Crawford, R.M.M. (ed.) *Disturbance and recovery in Arctic lands: An ecological perspective*. Kluwer Academic Publishers, Dordrecht, the Netherlands.
- Shaver, G.R., L.C. Johnson, D.H. Cades, G. Murray, J.A. Laundre, E.B. Rastetter, K.J. Nadelhoffer, and A.E. Giblin. 1998. Biomass and CO₂ flux in wet sedge tundras: Responses to nutrients, temperature, and light. *Ecological Monographs* 68:75-95.
- Hopkinson, C.S., A.E. Giblin, R.H. Garritt, J. Tucker, M.A.J. Hullar. 1999. Influence of the benthos on growth of planktonic estuarine bacteria. *Aquatic Microbial Ecology* 16: 109-118.
- Hopkinson, C.S., A.E. Giblin, J. Tucker, R.H. Garritt. 1999 Benthic metabolism and nutrient cycling along an estuarine salinity gradient. *Estuaries* 22: 863-881.
- Tucker, J, N. Sheats, A.E. Giblin, C.S. Hopkinson. 1999. Using stable isotopes to trace sewage derived material through Boston Harbor and Massachusetts Bay. *Marine Environmental Research* 48:353-375.
- Stieglitz, M., J. Hobbie, A.E. Giblin, G. Kling. 1999. Hydrologic modeling of an arctic tundra watershed: Towards Pan-Arctic predictions. *J. of Geophysical Research* 104 (D22) 27,507-27,518.
- Johnson, L.C., G. R. Shaver, D.H. Cades, E. Rastetter, K. Nadelhoffer, A. Giblin, J. Laundre, and A. Stanley. 2000. Plant carbon-nutrient interactions control CO₂ exchange in Alaskan wet sedge tundra ecosystems. *Ecology* 81:453-469.
- Kremer, J. N., W. M. Kemp, A. E. Giblin, I. Valiela, S. P. Seitzinger, and E. E. Hofmann. 2000. Linking Biogeochemical Processes to Higher Trophic Levels. Chapter 12, pp. 299-341. In: J. Hobbie (ed.), *Estuarine Science. A Synthetic Approach to Research and Practice*. Island Press, Washington, DC, p. 539.
- Stieglitz, M., A.E. Giblin, J. Hobbie, M. Williams, G.W. Kling. 2000. Effects of climate change and climate variability on the carbon dynamics in Arctic tundra. *Global Biogeochemical Changes*, 14(4):1123-1136.
- Zago, C. A.E. Giblin, and A. Bergamasco. 2001. Changes in the metal content of surficial sediments of Boston Harbor since the cessation of sludge discharge. *Marine Environmental Research*. 51: 389-415.
- Hopkinson, C.S., A.E. Giblin, and J. Tucker. 2001. Benthic metabolism and nutrient regeneration on the continental shelf of Eastern Massachusetts, U.S.A. *Marine Ecology Progress Series* 224:1-19.
- McKane, R. L.C. Johnson, G.R. Shaver, K.J. Nadelhoffer, E.B. Rastetter, B. Fry, A.E. Giblin, K. Kielland, B.L. Kwiatkowski, J.A. Laundre, G. Murray. 2002. Resource-based niches provide a basis for plant species diversity and dominance in arctic tundra. *Nature* 415:68-71.
- Nadelhoffer, K.J., L. Johnson, J. Laundre, A.E. Giblin, G.R. Shaver. 2002. Fine root production and nutrient use in wet and moist arctic tundras as influenced by chronic fertilization. *Plant and Soil* 242: 107-113.
- LaMontagne, M.G., A.E. Giblin, and I. Valiela. 2002. Denitrification and the stoichiometry of nutrient regeneration in Waquoit Bay, MA. *Estuaries* 25: 272-281.
- Giblin, A.E., and J.J. Vallino. 2003. The role of models in addressing coastal eutrophication. pp. 327-343 In: Canham, C.D., J.J. Cole, and W.K. Lauenroth, editors. *Models in Ecosystem Science*. Princeton (NJ): Princeton University Press.
- Siver, P.A., R. Ricard, R. Goodwin, A.E. Giblin. 2003. Estimating historical in-lake alkalinity generation and its relationship to lake chemistry as inferred from algal microfossils. *J. of Paleolimnology*, 29: 179-197.
- Tobias, C., A. E. Giblin, J. McClelland, J. Tucker, and B. Peterson. 2003. Sediment DIN fluxes and preferential recycling of benthic microalgal nitrogen in shallow macrotidal estuary. *Marine Ecological Progress Series* 257:25-36.
- Bernhard, Anne E., Thomas Donn, Anne E. Giblin, and David A. Stahl. 2005. Loss of Diversity of Ammonia-Oxidizing Bacteria Correlates with Increasing Salinity in an Estuary System. *Environmental Microbiology* 7: 1289-1297.

- Shaver, GR; Giblin, AE; Nadelhoffer, KJ; Thielert, KK; Downs, MR; Laundre, JA; Rastetter, EB. 2006. Carbon turnover in Alaskan tundra soils: Effects of organic matter quality, temperature, moisture and fertilizer. *Journal of Ecology*. 94 (4) 740-753.
- Groffman, P.M., M.A. Altabet, J.K. Böhlke, K. Butterbach-Bahl, M. B. David, M. K. Firestone, A. E. Giblin, T. M. Kana, L-P Nielsen and M. A. Voytek. (2006) Methods for measuring denitrification: Diverse approaches to a difficult problem. *Ecological Applications* 16:2091-2122.
- Hobara, S. C. McCalley, K. Koba, A.E. Giblin M.S. Weiss, G.M. Gettel, G.R. Shaver. (2006) Nitrogen fixation in an arctic tundra watershed: a key atmospheric N source. *Arctic, Antarctic and Alpine Research* 38:363-372.
- Bernhard, A.E., J. Tucker, A.E. Giblin, D.A. Stahl. 2007. Functionally different communities of ammonia oxidizing bacteria along an estuarine salinity gradient. *Environmental Microbiology* 9: 1439-1447.
- Gettel, G.M., A.E. Giblin, R.W. Howarth. The effects of grazing by the snail *Lymnaea elodes* on benthic N-fixation and primary production in oligotrophic arctic lakes. *Limnol. Oceanogr.* In press
- Hopkinson, C.S. and A.E. Giblin. Nitrogen Dynamics in Salt Marsh Ecosystems. In: (Eds.) D. Capone, D. Bronk, M. Mulholland, E. Carpenter) Nitrogen in the Marine Environment. Accepted

Submitted

- Gettel, G.M., A.E. Giblin, R.W. Howarth, D. Steniberg. Light and nutrient controls of benthic nitrogen fixation in oligotrophic, arctic lakes: Results from whole-lake fertilizations and sediment-core experiments

Peer-Reviewed Short Reports published with students:

- Zago, C. and A.E. Giblin. 1994. Analysis of acid volatile sulfide and metals to predict the toxicity of Boston Harbor sediments. *Biol. Bull.* 187:290-291.
- Monaghan, E. and A.E. Giblin. 1994. The effects of coupling between the oxic and anoxic layers of sediment on nutrient release to overlying water. *Biol. Bull.* 187:288-289.
- Weston, N., S. Carini, A. Giblin, G. Banta, C. Hopkinson, and J. Tucker. 1996. Estimating denitrification in sediments of the Parker River Estuary, Massachusetts. *Biol. Bull.* 191: 334-335.
- Carini, S., N. Weston, C. Hopkinson, J. Tucker, A. Giblin, and J. Vallino. 1996. Gas Exchange rates in the Parker River Estuary, Massachusetts. *Biol. Bull.* 191. 333-334.
- Morlock, S., D. Taylor, A. Giblin, C. Hopkinson, J. Tucker. 1997. Effect of salinity on the fate of inorganic nitrogen in sediments of the Parker River Estuary, Massachusetts. *Biol. Bull.* 193: 290-292.
- Greenbaum, A. and A.E. Giblin. 2000. Differences in properties of salt marsh sediments between hayed and reference sites. *Biol. Bull.* 199: 225-226.
- Koop-Jakobsen, K., and A.E. Giblin. 2002. Tidal flushing of ammonium from intertidal salt marsh sediments – the relative importance of adsorbed ammonium. *Biol. Bull.* 203: 258-259.
- Thoms, Trisha, A.E. Giblin, K.H. Foreman. 2003. Multiple approaches to tracing nitrogen loss in the West Falmouth wastewater Plume. *Biol. Bull.* 205: 242-243.

Technical Reports:

- Teal, J. M., A. E. Giblin, J. C. Goldman, D. G. Aubrey and A. G. Gaines, Jr. 1982. The coastal impact of groundwater discharge: An assessment of anthropogenic nitrogen loading in Town Cove, Orleans, MA. W.H.O.I.
- Dornblaser, M. M., J. Tucker, G. T. Banta, K. H. Foreman, M. L. O'Brien and A. E. Giblin. 1989. Obtaining undisturbed sediment cores for biogeochemical process studies using SCUBA. In: M. Long and W. Jaap (eds.), *Diving for Science. Proceedings of the Ninth Annual Scientific Diving Symposium.* American Academy of Underwater Sciences, Woods Hole, MA.
- Giblin, A. E. (ed.) 1990. *New England Coastal Pond Bibliography and Data Book.* Published by the WHOI Coastal Research Center.
- Banta, G. T., A. E. Giblin, J. Tucker and J. E. Hobbie. 1990. Benthic respiration and nitrogen release in Buzzards Bay Massachusetts. Report to EPA.
- Giblin, A. E., and K. H. Foreman. 1991. The habitats of Buzzards Bay. The Buzzards Bay Project, Massachusetts C.Z.M.

- Giblin, A. E., J. Tucker and C. Hopkinson. 1991. Sediment Oxygen Demand and nitrogen flux in Massachusetts Bay. MWRA Environmental Quality Dept. Technical Report Series No. 91-5 June 1991. Massachusetts Water Resources Authority, Boston, MA. 38 pp.
- Giblin, A. E., C. S. Hopkinson and J. Tucker. 1992. Metabolism and nutrient cycling in Boston Harbor sediments. MWRA Environmental Quality Dept. Technical Report Series No. 91-5, March 17, 1992 Massachusetts Water Resources Authority, Boston, MA. 38 pp.
- Giblin, A. E., C. S. Hopkinson and J. Tucker. 1993. Metabolism, nutrient cycling and denitrification in Boston Harbor and Massachusetts Bay sediments. MWRA Environmental Quality Dept. Technical Report Series No. 93-2. Massachusetts Water Resources Authority, Boston, MA. 46 pp.
- Tucker, J., A. E. Giblin and C. S. Hopkinson. 1993. Porewater profiles in Boston Harbor and Massachusetts Bay sediments. MWRA Environmental Quality Dept. Technical Report Series Massachusetts Water Resources Authority, Boston, MA.
- Giblin, A. E., C. S. Hopkinson, J. Tucker, B. Nowicki and J. R. Kelly. 1994. Metabolism, nutrient cycling and denitrification in Boston Harbor and Massachusetts Bay sediments in 1993. MWRA Environmental Quality Dept. Technical Report Series 94-5 Massachusetts Water Resources Authority, Boston, MA. 61pp.
- Giblin, A. E., C. S. Hopkinson, J. Tucker, B. Nowicki and J. R. Kelly. 1995. Metabolism, nutrient cycling and denitrification in Boston Harbor and Massachusetts Bay sediments in 1994. MWRA Environmental Quality Dept. Technical Report Series 95-13 Massachusetts Water Resources Authority, Boston, MA. 56pp.
- Tucker, J. and A. E. Giblin, and C.S. Hopkinson. 1999. Metabolism, nutrient cycling and denitrification in Boston Harbor sediments in 1998. Boston: Massachusetts Water Resources Authority. Report ENQUAD 1999-08. 33p.
- Giblin, A.E., C. Wright, S.T. Roy, 1999. Bathymetry, sediment characterization, and benthic oxygen and phosphorus fluxes in six New York City reservoirs. Prepared for the NYC Depart. of Environmental Protection. 104 pp.
- Tucker, J., A. E. Giblin, C.S. Hopkinson, and D.Vasiliou. 2000. Benthic nutrient cycling in Boston Harbor and Massachusetts Bay: 1999 Annual Report. Boston: Massachusetts Water Resources Authority. Report ENQUAD 2000-11. 63p.
- Tucker, J., A. E. Giblin, C.S. Hopkinson, and D.Vasiliou. 2001. Benthic nutrient cycling in Boston Harbor and Massachusetts Bay: 2000 Annual Report. Boston: Massachusetts Water Resources Authority. Report ENQUAD 01-07. 48p.
- Tucker, J., S. Kelsey, A. E. Giblin, and C.S. Hopkinson. 2002. Benthic metabolism and nutrient cycling in Boston Harbor and Massachusetts Bay: Summary of baseline data and observations after one year of Harbor-to-Bay diversion of sewage effluent. Boston: Massachusetts Water Resources Authority. Report ENQUAD 2002-13 83p.
- Tucker J and Giblin AE. 2002. Stable isotope analyses of sediment and invertebrate samples from Boston Harbor and Massachusetts Bay. Boston: Massachusetts Water Resources Authority. Report 2002-21. 24 p.
- Tucker J, Kelsey S, Giblin AE and Charles S Hopkinson J. 2003. 2002 annual benthic nutrient flux monitoring report. Boston: Massachusetts Water Resources Authority. Report 2003-08. 52p.
- Tucker J, Kelsey S, Giblin AE and Charles S Hopkinson J. 2004. 2003 annual benthic nutrient flux monitoring report. Boston: Massachusetts Water Resources Authority. Report 2004-05. 68p.

Book Reviews:

Review of F. M. Morel, "Principles of Aquatic Chemistry" for Biogeochemistry, 1(4).

Media/Outreach:

Appeared in the movie "Tunnel Visions" about the Boston sewage outfall. The show aired on public TV station WGBH several times during 1994-1996.

NPR Science Radio Program: Earth and Sky, Dec. 2000.

WCIA& WNAN, Cape and Islands NPR Station, interviewed for story on acid rain, Feb. 2003.

KTNA, Alaska Public Radio, interviewed for a story on the role of benthic production in Arctic Lakes and on diving in Arctic lakes, July 2004.

Other Activities:

Cruise: R/V Oceanus #46, Sorting and Identifying Benthic Organisms; 24-30 May 1978
 Cruise: R/V Knorr #73-16, Chemical Analysis of Interstitial Water Samples; 29 June - 21 July 1979
 Cruise: R/V Ibis, Sediment and water sampling on Lake Victoria; 5-12 April 1996
 Testified on the Final EIS on the MDC Proposed Sludge Management Plan, Boston; 1979
 Testified as Expert Witness for Swansea, MA in "Swansea vs. Fall River" concerning proposed sewage discharge; November 1980
 Co-Instructor in Marine Pollution Course, "Isle of Shoals Marine Station"; August 1983
 Submitted Testimony to EPA on "Proposed Regulation of Fuel and Fuel Additives: Lead Phase Down"; September 1984
 Advisor to Natural Resources Defense Council in "Norfolk Southern vs. Oberly"
 Member, Waquoit Bay National Estuarine Research Reserve Advisory Committee, 1986-1992
 Research Committee of Waquoit Bay National Estuarine Research Reserve, Chair 1986-1992
 Member, NSF Panel, Presidential Young Investigators Award, January 14-15, 1988
 Member, NSF Panel, Land Margin Ecosystems Research, May 5-6, 1988
 Member, NSF Panel, Facilities for Field Stations and Marine Labs, July 18-19, 1991
 Member, NSF Sponsored Workshop: Antarctic Dry Valleys: Terrestrial and Aquatic Ecosystems, 6-9 Oct. 1991
 Member, NAS Panel on the Coastal Ocean Program. 1993-95
 Member, NSF Panel, Environment Geochemistry and Biogeochemistry, May 1995
 Member, Model Evaluation Group, Massachusetts Water Resources Authority, 1993-95
 Member, NSF/NOAA Panel, Coastal Studies of the Great Lakes December 4-6, 1996
 Member, NSF/NOAA Panel, Coastal Studies of the Great Lakes May 19-21, 1997
 Member of Panel to evaluate Gulfwatch, Oct. 1997
 Member, Science Board for the National Parks Service, Cape Cod National Seashore, 1997-2002
 Member, Advisory Board, Cornell Research Training Grant in Biogeochemistry, 1997-2002
 Chair, Cooperative Institute for Coastal and Estuarine Environmental Technology Advisory Board, 1999-2006
 Local Organizer: April 1988 NEERS Meeting, Marine Biological Laboratory
 Co-Local Organizer: AAUS 1989 National Meeting, Joint MBL/WHOI
 Co-Organizer: ERF 2002 workshop: Estuarine Response to Climate Change and Variability. April 7-9, 2002.
 Steering Committee: Workshop on Advanced Approaches to Quantify Denitrification, May 2004.
 Steering Committee: Denitrification Research Coordination Network, 2005-Present.
 Co-Chair, Nutrients and Contaminants Working Group, Workshop on Planning Coordinated Research on Ecosystems, Climate, and Policy in the Northeast. Sponsored by WHOI and NMFS Jan 11-13, 2005.
 Member, NSF Panel, Biocomplexity, coupled human and natural systems, 2005
 Member, NSF Panel Ecosystems Studies, April 2005, April 2006

Primary Advisor

Ketil Koop-Jakobsen, Ph.D. Candidate, Boston University

Graduate Committees:

Joseph Costa, Ph.D. 1987, Boston University, Marine Program
 Diana Varela, M.S. 1990, Boston University Marine Program
 Gary Banta, Ph.D. 1992, Boston University Marine Program
 Georgia Murray, M.S., 1994, University of New Hampshire
 Michael LaMontagne, Ph.D. 1994, Boston University Marine Program
 John Portnoy, Ph.D. 1994, Boston University Marine Program
 Dean Moosavi, Ph.D. 1998, University of New Hampshire
 Cristina Zago, Ph.D. 1998, University of Venica, Italy
 Jennifer Hauxwell, Ph.D. 2000, Boston University Marine Program
 Joseph Walsh, Ph.D. 2000, Boston University
 Pingsan Zhao, Ph.D. 2000, University of Georgia
 Thomas Mondrup, MS. 2000. University of Roskilde
 Erica Stieve, M.S. 2001, Boston University Marine Program
 Jesse Schwartz, Ph.D. 2002, Boston University

Marci Cole, Ph.D. 2002, Boston University
 Gregg Moore, Ph.D. 2002, Boston University
 Ketil Koop-Jakobsen. MS. 2003, University of Roskilde, Denmark
 Ruth Herrold, Ph.D. 2003, Boston University
 Sarah Good, MS, 2004, Boston University
 Jennifer Bowen, Ph.D. 2004, Boston University
 Joanna York, Ph.D. 2006, Boston University
 Gretchen Gettel, Ph.D. 2006, Cornell University
 Mirta Teichberg, Ph.D. 2007, Boston University
 Robinson Fulweiler, Ph.D. 2007, University of Rhode Island
 Liza Fox, MS, 2007, Boston University Marine Program
 Jennifer Culbertson, Ph.D. 2007, Boston University Marine Program
 Sophia Fox, Ph.D. 2007, Boston University Marine Program
 Emily Peacock, M.S. 2007, Boston University Marine Program
 Ylva Olsen, Ph.D. Candidate, Boston University
 Lindsey Brin, M.S. Candidate, Boston University
 Gabrielle Tomasky, Ph.D. Candidate, Boston University

External Examiner

John Amaral, 1992, Ph.D. University of Manitoba
 Grace Ann Hung, 2005, MS, McGill University

Reader or Co-Advisor for Undergraduate Senior Theses:

Philip Colarusso, 1986, Worcester Polytechnic Institute
 Fiona Boyer, 1997, Stirling University, Scotland
 Shana Rapaport, 1999, Brandeis University
 Richard Ricard, 2000, Connecticut College
 Jeremy Sinaikin, 2000, Brown University
 Adena Greenbaum, 2001, Wellesley College
 Kyle Witteinghill, 2002, Middlebury College
 Sarah Foster, 2005, Hampshire College
 Craig McGowen, 2007, Brown University

Internal Committees and Activities:

Seminar Committee, Ecosystems Center, 1983-1984
 Annual Report Committee, Ecosystems Center, 1983-1984
 Chairman, Education Committee, Ecosystems Center, 1984-1986, 1989-1993
 Chairman, Facilities Committee, Ecosystems Center, 1987-1989; 1992-1997
 Chairman, Ad-Hoc Diving Safety Committee, MBL, 1985
 Member, Diving Control Board, MBL, 1986-Present; Chair - 1993-Present
 Sewage Project Oversight Committee, Ecosystems Center, 1986-1990
 Member, Nominating Committee, MBL Corporation, 1986, 1991
 Member Year-round Scientist Council, MBL, 1989
 Member, Human Resources Manager Search Committee, MBL, 1988
 Member, Ad-Hoc Grievance Committee, MBL, 1989
 MBL Representative, Coastal Research Center, WHOI 1992-present
 Member By-Laws Review Committee, MBL, 1989-1991
 Member Fellowship Committee, MBL 1991-1997
 Member Lakian Fellowship Committee 1993-4
 Member Review for the Marine Resources Center, 2002
 Member MBL Science Council 2005-2006
 Member MBL Safety Committee 2006-present