

CURRICULUM VITAE

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1966 -- B.S., Brooklyn College, City University of New York. Biology.

1972 -- Ph.D., University of North Carolina at Chapel Hill Botany.

I. Education

II. Professional Background

1971-1972, Faculty Research Associate, Department of Experimental Statistics, North Carolina State University, Raleigh, North Carolina.

1972-1977, Assistant Professor, Botany Dept., University of Maryland, College Park

1977-1988, Assistant Professor and Associate Professor, Horn Pt Lab / UMCES.

1988 - present, Professor, Horn Point Laboratory / UMCES

III. Research

A. Areas of professional expertise

Coastal zone resources and water quality management issues.

Ecology of marsh and sea grass systems.

Effects of sea-level rise on wetlands and coastal shorelines.

Environmental history of Chesapeake Bay and its watershed.

Adapting to future global change

B. Publications (Papers in Refereed Journals and Book Chapters):

- 1) Withner, C. and J. C. Stevenson. 1968. The *Oncidium tetrapetalum-pulchellum* syngameon in Jamaica. American Orchid Soc. Bull. 37:21-32.
- 2) Stevenson, J.C. with W. Scheeren. 1970. A Preliminary Checklist of the Orchids in the Luquillo Mts. of Puerto Rico. p. 282-288. In A Tropical Rain Forest, Book 3, Edited by H.T. Odum. U.S. Atomic Energy Commission. Oak Ridge, Tenn.
- 3) Stevenson, J.C. 1972. Evolutionary strategies and ecology of *Goodyera* and *Spiranthes* species (Orchidaceae). Ph.D. Dissertation, Univ. of North Carolina at Chapel Hill.
- 4) Stevenson, J.C. with M.M. Goodman. 1972. Ecology of Exotic Races of Maize 1. Leaf number and tillering of 16 races under four temperatures and two photoperiods. Crop Science 12:864-868.
- 5) Stevenson, J.C., D. Heinle, D. Flemer, R. Small, R. Rowland and J. Ustach. 1977. Nutrient exchanges between brackish water marshes and the estuary. p. 219-240, In M. Wiley (ed.) Estuarine Processes Vol. II, Academic Press, New York. 690).
- 6) Stevenson, J.C. and K. Lomax. 1977. Non point pollution source studies on the Chesapeake Bay and the Eastern Shore Watersheds at Horn Point. Chesapeake Research Consortium Special Publication #58. 190 p.
- 7) Stevenson, J.C. and N. Confer. 1978. Summary of Available Information on Chesapeake Bay Submerged Vegetation. U.S. Dept. Interior, Fish and Wildlife Service, Biological Services Program (FWS/OBS-78/66) NTIS, 335 p.
- 8) Boynton, W.R., W.M. Kemp, and J.C. Stevenson. 1979. A research design for understanding and managing complex environmental resource systems. In F. McCormick and R. Johnson (eds.) Strategies for the Protection of Wetlands and Other Riparian Ecosystems. U.S. Dept. Interior, Publ. Washington, D.C.
- 9) Lipschultz, F., J.J. Cunningham and J.C. Stevenson. 1979. Nitrogen fixation associated with four species of submerged angiosperms in the central Chesapeake Bay. Estuarine and Coastal Marine Science 9:813-818.
- 10) Stevenson, J.C., N. Confer and C. Pieper. 1979. The Decline of Submerged Aquatic Vegetation in the Chesapeake Bay: U.S. Fish and Wildlife Service Biological Services Program (FWS/OBX-79/24) 12 p plus illust.

- 11) Athanas, L.C., J.C. Stevenson and F. Monteferrante. 1980. Biomass, Production and Transpiration Responses of the Forest Community to Wastewater Irrigation. p. 49-83. In J.E. Ayers, L.C. Athanas (eds.) Spray Irrigation of Domestic Sewage Effluent on Atlantic Coastal Plain Soils and Vegetation: The St. Charles City Wastewater Irrigation Project. University of Maryland College Park, MD.
- 12) Kemp, W.M., M. Lewis, J.J. Cunningham, J.C. Stevenson and W.R. Boynton. 1980. Microcosms, macrophytes and hierarchies: environmental research in Chesapeake Bay, pp. 911-936. In J. Giesy (ed.) Microcosm Research in Ecology. U.S. Dept. Energy CONF-781101, National Technical Information Service, Springfield, VA.
- 13) Athanas, L.C., J.H. Axley, J.E. Ayars, F. Monteferrante and J.C. Stevenson. 1981. Spray irrigation of domestic sewage effluent on Atlantic Coastal Plain soils and vegetation: The St. Charles City Wastewater irrigation project. Maryland Agricultural Experiment Station, Miscel. Public no. 964. College Park. 73 p.
- 14) Boynton, W.R., W.M. Kemp, A. Herman, J. Kahn, T. Schueler, S. Bollinger, S. Longergan, J.C. Stevenson et al. 1981. An analysis of energetic and economic values associated with the decline of submerged macrophytic communities in Chesapeake Bay, pp. 441-454. In W.J. Mitsch, R.W. Bosserman, J.M. Klopatic (eds.). Energy and Ecological Modeling. Elsevier, Amsterdam.
- 15) Lomax, K.M., J.C. Stevenson, M.S. Christy and J.R. Todd. 1981. Nonpoint pollution data collection problems on low flat coastal plain topography, pp. 46-52. In K.C. Flynn (ed.) Nonpoint pollution control. Interstate Commission on the Potomac River Basin. Rockville, MD.
- 16) Jones, T.W., W.M. Kemp, J.C. Stevenson and J.C. Means. 1982. Degradation of atrazine in estuarine water/sediment systems and selected soils. Journal Environmental Quality 11:109-115.
- 17) Kemp, W.M., J.C. Means, T.W. Jones and J.C. Stevenson. 1982. Herbicides in Chesapeake Bay and the effects on submerged aquatic vegetation, pp. 503- 567. In Chesapeake Bay Program Technical Studies: A Synthesis, U.S. EPA, Washington, D.C.
- 18) Kemp, W.M., R.L. Wetzel, W.R. Boynton, D. D'Elia and J.C. Stevenson. 1982. Nitrogen cycling at estuarine interfaces, pp. 209-220. In V.S. Kennedy (ed.) Estuarine Comparisons. Academic Press, NY.
- 19) Lewis, M.R., W.M. Kemp, J.J. Cunningham, and J.C. Stevenson. 1982. A rapid technique for preparation of aquatic macrophyte samples for measuring ¹⁴C incorporation. Aquatic Botany 13:203-207.

- 20) Lomax, K.M. and J.C. Stevenson. 1982. Diffuse source loadings from flat coastal plain watersheds: water, movement and nutrient budgets. Tidewater Administration, Department of Natural Resources, Annapolis, MD. 72 p.
- 21) Kemp, W.M., W.R. Boynton, J.C. Stevenson, R.W. Twilley and J.C. Means. 1983. The decline of submerged vascular plants in upper Chesapeake Bay: summary of results concerning possible causes. *Marine Technology Society Journal* 17:78-89.
- 22) Stevenson, J.C., T.W. Jones, W.M. Kemp, W.R. Boynton and J.C. Means. 1983. An overview of atrazine dynamics in estuarine ecosystems, pp. 71-94. In *Agrichemicals and Estuarine Productivity*. NOAA Office of Marine Pollution Assessment (U.S. Govn't Printing Office: 1983-676-001/1205), U.S. Department of Commerce, Boulder, Colorado.
- 23) Cunningham, J.J., W.M. Kemp, M.R. Lewis and J.C. Stevenson. 1984. Temporal responses of the macrophyte, *Potamogeton perfoliatus* L., and its associated autotrophic community to atrazine exposure in estuarine microcosms. *Estuaries* 7:519-530.
- 24) Kemp, W.M., W.R. Boynton, R.R. Twilley, J.C. Stevenson and L.G. Ward. 1984. Influences of submersed vascular plants on ecological processes in upper Chesapeake Bay, pp. 367-394. In V.S. Kennedy (ed.) *The Estuary As A Filter*. Academic Press, N.Y.
- 25) Kearney, M.S. and J.C. Stevenson. 1985. Sea-level rise and marsh vertical accretion rates in Chesapeake Bay, pp. 1451-1461. In O.T. Magoon et al. (eds.), *Coastal Zone '85*, Volume II.
- 26) Kemp, W.M., W.R. Boynton, J.J. Cunningham, J.C. Stevenson, T.W. Jones and J.C. Means. 1985. Effects of atrazine and linuron on photosynthesis and growth of the macrophyte, *Potamogeton perfoliatus* L. and *Myriophyllum spicatum* L. in an estuarine environment. *Marine Environmental Research* 16:255-280.
- 27) Stevenson, J.C., M.S. Kearney and E.C. Pendleton. 1985. Sedimentation and erosion in a Chesapeake Bay brackish marsh system. *Marine Geology* 67:212-235. [pdf]
- 28) Stevenson, J.C., L.G. Ward, M.S. Kearney and T.E. Jordan. 1985. Sedimentary processes and sea level rise in tidal marsh systems of Chesapeake Bay, pp. 37-62. In: H.A. Groman et al. (eds.), *Wetlands of the Chesapeake*. Environmental Law Institute, Wash. D.C.

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- 32) Stevenson, J.C., K. Staver, and R. Brinsfield. 1986. Surface runoff and groundwater impacts from agricultural activities in the Chesapeake region. pp. 211-219. In: J.B. Summers and S.S. Anderson (eds.), *Toxic Substances in Agricultural Water Supply and Drainage - Defining the Problem*. U.S. Committee on Irrigation and Drainage, Denver, CO.
- 33) Stevenson, J.C., L.G. Ward and M.S. Kearney. 1986. Vertical Accretion in marshes with varying rates of sea level rise, pp. 241-259. In: D. Wolf (ed.), *Estuarine Variability*. Academic Press, N.Y.
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- 38) Staver, K.W., R. Brinsfield and J.C. Stevenson. 1988. Strategies for reducing nutrient and pesticide movement from agricultural land in the Chesapeake

- region. pp. 87-101. In: J. B. Summers and S. S. Anderson (eds.), Proceedings of National Meeting: "Toxic Substances in Agricultural Water Supply and Drainage - Searching for Solutions." Published by. U.S. Committee on Irrigation and Drainage, Denver, CO.
- 39) Stevenson, J.C. 1988. Comparative ecology of submersed grass beds in fresh, brackish and marine environments. *Limnology and Oceanography* 33:867-893.
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 - 41) Stevenson, J.C., L.G. Ward, and M.S. Kearney. 1988. Sediment transport and trapping in marsh systems: Implications of tidal flux studies. *Marine Geology* 80:37-59. [pdf]
 - 42) Kearney, M.S. and J.C. Stevenson. 1989. Marsh loss and shore erosion with sea-level rise in Chesapeake Bay. pp.506-509. In: J.C. Topping Jr. (ed.), *Coping with Climate Change*, published by The Climate Institute, Wash.,D.C.
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 - 45) Batiuk, R. A., R. J. Orth, K. A. Moore, W. C. Dennison, J. C. Stevenson et al. 1992. Chesapeake Bay Submerged Aquatic Vegetation Habitat Requirements and Restoration Goals: A Technical Synthesis. US EPA, Chesapeake Bay Program, Annapolis, MD. 186 p.
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- 48) Malone, T., W. Boynton, T. Horton and J. C. Stevenson. 1993. Nutrient loadings to surface waters: Chesapeake Bay case study. pp.8-38. IN: Uman, M. (ed.), *Keeping Pace With Science And Engineering: Case Studies In Environmental Regulation*. National Academy of Press, Washington D.C.
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- 53) Cornwell, J. C., C. Neil and J. C. Stevenson. 1995. Biogeochemical origin of *³⁴S isotopic signatures in a prairie marsh. *Can. Jour. Fish. & Aquat. Sci.* 52:1816-1820.
- 54) Staver, L. W. and J. C. Stevenson. 1995. The impacts of the exotic species *Hydrilla verticillata* on the shallows in Chesapeake Bay. *Proceedings of Chesapeake Research Conference: "Toward a Sustainable Coastal Watershed"*, Norfolk VA. Chesapeake Research Consortium, Shady Side MD.
- 55) Bricker, S.B. and J.C. Stevenson. 1996. Nutrients in coastal waters: A chronology and synopsis of research. *Estuaries* 19:337-341.
- 56) Cornwell, J. C., J. C. Stevenson, D. J. Conley and M. Owens. 1996. A sediment chronicle of Chesapeake Bay eutrophication. *Estuaries* 19:488-499.
- 57) Demas, G., M. Rabenhorst and J.C. Stevenson. 1996. Subaqueous soils: A pedological approach to the study of shallow water habitats. *Estuaries* 19:229-237.

- 58) Rice, D. and J. C. Stevenson. 1996. The distribution and expansion rate of *Phragmites australis* in six marshes in Chesapeake Bay area. pp. 467-476. IN: Hallam, C.A., J.M. Salisbury, K.L. Lanfer and W.A. Battaglin (Eds.), Proceedings of the AWRA Annual Symposium, GIS and Water Resources. American Water Resources Association, Herndon VA.
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- 93). Stevenson, J.C. 2009. Tidal marshes, nutrient filtration, and rising sea level. Pp.179-182, in: Peterson et al. (eds.) *Enclosed Experimental Ecosystems and Scale*. Springer, New York.
- 94). Brezonik, P.L., M.S. Fennessy, B.R. Hodges, J.R. Karr, M.S. Peterson, J.L. Pinckney, J.I. Restropo, R.C. Steiner, and J.C. Stevenson. 2009. Review of the St Johns River Water Supply Impact Study: Report 1. The National Academies of Sciences, Washington D.C. 81p. [pdf file available at the following website- <http://www.nap.edu/catalog/12733.html>]
- 95). Brezonik, P.L., M.S. Fennessy, B.R. Hodges, J.R. Karr, M.S. Peterson, J.L. Pinckney, J.I. Restropo, R.C. Steiner, and J.C. Stevenson. 2010. Review of the St Johns River Water Supply Impact Study: Reports 2 and 3. The National Academies of Sciences, Washington D.C.
- 96). Brezonik, P.L., M.S. Fennessy, B.R. Hodges, J.R. Karr, M.S. Peterson, J.L. Pinckney, J.I. Restropo, R.C. Steiner, and J.C. Stevenson. 2011. Review of the St Johns River Water Supply Impact Study: Final Reports (#4). The National Academies of Sciences, Washington D.C. [pdf file available at the following website- http://books.nap.edu/catalog.php?record_id=13052]
- 97). Stevenson, J.C., K. Mielcarik, J.C. L.W. Staver, Cornwell, M. Owens, L.W. Staver, & K.W. Staver. Marsh establishment in nutrient-rich material dredged from Upper Chesapeake Bay: I. Sediment implications for emergent vegetation in a created wetland at Poplar Island. To be submitted to *Estuaries and Coasts*.
- 98). Stevenson, J.C., K. Mielcarik, L.W. Staver, J.C. Cornwell, & M. Owens. Marsh Establishment in Nutrient-Rich Material Dredged from Upper Chesapeake Bay: II. Seed Germination and Growth of *Spartina spp.* and *Distichlis spicata* under varying environments in growth chambers. To be submitted to *Wetlands*.

C. Seminars and Presentations (Since 2007):

Note: *indicates invited presentation and (Abstract) indicates abstract is available.

*Stevenson, J. C. 2007. History of Horn Point. Talbot Women's Club, Easton MD, Mar 13, Mar 13.

Stevenson, J. C., Lorie Staver, M. Owen, & J. C. Cornwell. 2007 Reasons for "Sudden Marsh Dieback" in 2006 on a Dredged Materials Site at Shorter's Wharf Rd at Blackwater National Wildlife Refuge. Third Annual Blackwater Science Meeting, Cambridge MD, March 14,

- Stevenson, J. C., J. C. Cornwell, M. Owens, & L. W. Staver. 2007. Iron and Sulfide in Chesapeake Bay Marshes Restored with Dredged Materials. 10th International Symposium on Biogeochemistry of Wetlands, Annapolis MD, April 2.
- *Stevenson J. C. 2007. Impacts of Global Change and Rising Sea-Levels on Tidal Wetlands and Shallow Water Habitats. Global Warming Action Alliance Mtg, hosted by John Cleveland, Centerville MD, April 11
- *Stevenson, J. C. 2007. Reasons for “Sudden Marsh Dieback” in 2006 on a Dredged Materials Site at Shorter’s Wharf Rd at Blackwater National Wildlife Refuge. Sudden Marsh Dieback Workshop, hosted by Susan Adamowicz, USF&W, Wellfleet Mass, May 23
- *Stevenson, J. C. 2007. Tidal Marsh Decline and Restoration Efforts in Chesapeake Bay and Beyond, Wetlands and Climate Change Briefing to Senate Staffers, sponsored by American Society of Limnology and Oceanography (ASLO) & Society of Wetland Scientists (SWS), Longworth Building, Washington DC, June 18.
- *Stevenson, J. C. 2007. Tidal Marsh Decline and Restoration Efforts in Chesapeake Bay and Beyond, Wetlands and Climate Change Briefing to House Staffers, sponsored by ASLO & SWS, Rayburn Building, Washington DC, June 19.
- *Stevenson, J. C. 2007. Reasons for “Sudden Marsh Dieback” in 2006 on a Dredged Materials Site at Shorter’s Wharf Rd at Blackwater National Wildlife Refuge. Brown Marsh Disease Workgroup, sponsored by Delaware Dept. of Natural Resources and Conservation, Bethany Beach, July 25.
- *Stevenson, J. C. 2007. Post-Colonial History of Horn Point, Choptank Tributary Team Annual Meeting at Horn Point, Aug 8.
- *Stevenson, J.C. 2007. Impacts of Global Change and Rising Sea-Levels on Chesapeake Bay Marsh and Shallow Water Habitats in Chesapeake Bay and Beyond. Chesapeake Bay Maritime Museum, St. Michaels, Sept. 25.
- Orth, R.; S. Marion, K. Moore, D. Wilcox, T. Carruthers, W. Dennison, M. Kemp, J.C. Stevenson, M. Williams, H. Weinberg, M. Naylor, P. Bergstrom, E. Koch, and N. Rybicki. 2007. “Annual and Decadal Trends in Distribution and Abundance of Chesapeake Bay Submersed Aquatic Vegetation: 1984-2004.” Estuarine Research Federation Bi-annual Meeting, Providence R.I., Nov 4-8.
- Staver, L.; J. C. Stevenson, M. Owens and J.C. Cornwell. 2007. “Chesapeake Bay Marshes Restored With Dredged Materials: Biogeochemistry and Plant Success in the

First Two Years.” Estuarine Research Federation Bi-annual Meeting, Providence R.I., Nov 4-8.

*Stevenson, J.C., L. Staver, M. Owens, and J. C. Cornwell. 2007. “Reasons for Sudden Marsh Dieback in 2006 on a Restoration Site at Blackwater National Wildlife Refuge.” Estuarine Research Federation Bi-annual Meeting, Providence R.I., Nov 4-8.

*Stevenson, J.C. 2008. “Impacts of Global Change and Rising Sea-Levels on Marsh and Shallow Water Habitats in Chesapeake Bay.” Gilman School, Baltimore MD. Mar. 12.

*Stevenson, J.C., J. Cornwell, L.W. Staver, & M. Owens. 2008. “Sea-Level Rise and Marsh Survival at Blackwater National Wildlife Refuge (NWR) & Poplar Island.” Maryland Port Administration, Baltimore MD. Mar. 12.

*Stevenson, J.C., J. Cornwell, L.W. Staver, & M. Owens. 2008. “Implications of Sea-Level Rise for Marsh Restoration at Hart-Miller, Poplar Island and Mid-Bay Island Restoration Projects.” Maryland Environmental Services, Baltimore MD. Mar. 12.

*Stevenson, J.C. 2008. “Impacts of Global Change and Rising Sea-Levels on Marsh and Shallow Water Habitats in Chesapeake Bay and Beyond.” Environmental Concern, St Michaels, Jul. 17.

* Stevenson, J.C. 2008 “Global Change: What will it mean for plants and people.” Master Gardners, Ocean County NJ. Oct 2.

*Stevenson, J.C. 2008. “Implications of Global Change and Rising Sea Levels on Marsh Survival and Restoration: The Good The Bad The Ugly.” Horn Point Lab Special Seminar Series on Restoration, Nov 5.

*Stevenson, J.C., 2009. L.W. Staver, M.S. Owens and J.C. Cornwell. “Sediment and Plant Monitoring at the South Cell of Hart Miller Island – 2007.” Hart-Miller Island Citizens Advisory Group, Millersville MD, Jan. 27.

*Stevenson J.C., 2009. “Progress in Restoring Islands in Chesapeake Bay: Hart-Miller, Poplar, James and Barren Islands.” Dorchester Shoreline Erosion Group. Horn Point Lab, Feb 21.

Stevenson J.C. and M. Kearney. 2009. “Old Maps and Land Records at Blackwater: What Can we learn About Anthropogenic Impacts and Sea Level Rise since settlement?” Sixth Annual Blackwater Science Meeting, Chesapeake College, Queenstown MD. Mar. 18.

J.C. Stevenson and M.S. Kearney. 2009. “Impacts of Global Change and Sea-Level Rise on Tidal Wetlands.” Society of Wetland Scientists Annual Meeting. Madison WI. Jun 24.

Staver, L.W., J.C. Stevenson, J.C. Cornwell and M.S. Owens. 2009. "Carbon allocation and sequestration in *Spartina alterniflora* in a large-scale Chesapeake Bay wetland restoration." Coastal and Estuarine Research Federation (CERF) Biennial Meeting, Portland Oregon. Nov. 2.

Kearney M., A. Ritter and J.C. Stevenson. 2009. "Impacts of Increased Interannual and Intra-annual Sea Level Variability and Eutrophication on the Stability of Low Tidal Range Marshes During a Period of Rapid Transgression." CERF Biennial Meeting, Portland Oregon. Nov 2.

*J.C. Stevenson. 2009. Stalking Wild Orchids Around Delmarva and Beyond. Delmarva Orchid Society, DE, Nov 8.

*Stevenson, J C. 2009. "Global Change & Sea level Rise: Coping in the 21st Century at the Edges of Chesapeake Bay." Trans-Atlantic Media Dialogue for the Copenhagen Meeting, organized for journalists by Soren Haffer, Ecologic Institute of Germany, Houghton House, Aspen Institute, Queenstown MD, Nov 9.

*Stevenson J.C. 2009. "*Phragmites australis* in a Changing World". National Invasive Species Advisory Council (ISAC) Annual Meeting. Washington D.C., Dec 1.

*Stevenson, J. C. 2010. "The Health and Stability of Chesapeake Marshes: Past, Present and Future" Chesapeake Bay Perspectives Symposium organized by Tom Horton, Salisbury University, Salisbury MD, February 13.

Staver, L.W., J.C. Stevenson, J. Cornwell and M. Owens. 2010. Carbon Allocation and Sequestration in *Spartina alterniflora* in a Large-Scale Chesapeake Bay Wetland Restoration. 7th Annual Chesapeake Marshlands Science Meeting, Chesapeake College, Wye Mills, MD, March 17.

*Stevenson, J.C. 2010. "Islands of the Chesapeake: Fragile Ecosystems at High Risk from Global Warming and Rising Sea Levels." U.S. Fish & Wildlife Service Workshop-- Featured Speaker: Adapting to Climate Change in the Mid-Atlantic, held at Hyatt Regency Chesapeake Bay Resort, Cambridge MD, March 24.

*Stevenson, J.C. 2010. "Chesapeake Island Communities and Sea Level Rise." Chesapeake Bay Maritime Museum, St. Michaels MD, April 10.

*Stevenson, J.C. 2010. "Adapting to Sea Level Rise and Global Change in the Mid-Atlantic Region." Coastal Habitat Conservation in a Changing Climate Workshop: Strategies and Tools in the Mid-Atlantic, sponsored by NOAA Climate Program Office & Office of Habitat Conservation, held at Hilton Newark-Christiana Hotel, Wilmington DE, June 21.

- *Staver, L.W, Cornwell & J.C. Stevenson. 2010. Progress Report: Marsh Vegetation and Chemistry of Cells 3D & 1A, compared to Cell 4D at Poplar Island. Interagency Poplar Island Restoration Work Group Meeting, Maryland Environmental Service, Millersville MD, November 10.
- *Stevenson, J. C. 2010. "Adaptation to Warming Climate and Sea Level Rise: Plight of Tidal Wetlands in Chesapeake Bay." 2010 Annual Conference, Environmental Justice: Healthy Waters, Healthy Communities" organized by Dan Boward, Maryland Water Monitoring Council, Linthicum MD, November 18.
- *Stevenson, J. C. 2011. "Blackwater Marsh and sea-level rise: Plight of the largest tidal wetland in Chesapeake Bay." Chesapeake Bay 101, sponsored by Horn Pt Lab, AREL Lecture Hall, April 14, 2011.
- *Stevenson, J. C. 2011. "Environmental impacts of confined aquatic disposal of dredged materials." Bay Enhancement Working Group (BEWG) Meeting, MD Environmental Service, Millersville, MD. April 26.
- *Stevenson, J. C. 2011. "Environmental considerations in disposing of dredged materials in Estuaries." Baltimore Harbor Team Public Meeting, Pasadena, MD. May 12.
- *Stevenson, J.C. and L.W. Staver. 2011 "Progress of marsh establishment and long term sustainability in the current sea-level rise environment at Poplar Island." Poplar Island Work Group Meeting, Poplar Island, June 28.
- Stevenson, J.C. 2011. "Questions of sustainability in a large-scale tidal wetland restoration in Chesapeake Bay." Environmental Management of Enclosed Coastal Seas (EMECS) Meeting: Ninth Global Summit on Coastal Seas, Baltimore MD. Aug. 29.
- *Stevenson, J.C. 2011. "Health and stability of marsh and submersed aquatic vegetation in Chesapeake Bay 1992 to present." Chesapeake Bay Plenary Panel and Discussion Session chaired by Jonathon Kramer, EMECS Meeting: Ninth Global Summit on Coastal Seas, Baltimore MD. Aug. 29.
- *Stevenson, J.C. and L. W. Staver. 2011. "2009 Plant Monitoring at Hart-Miller Island" MD Environmental Service, at Hart-Miller Island. Sept. 8.
- *Stevenson, J.C. 2011. "Impacts of Sea-Level Rise on Tidal Marshes: Implications for Restoration in Chesapeake Bay." Center for Coastal & Physical Oceanography, Old Dominion University, Norfolk VA. Oct. 24.
- Staver, K.W., J. C. Stevenson, J. C. Cornwell & M. Owens. 2011. "Success of a *Spartina alterniflora* marsh in a large scale Chesapeake Bay restoration project." Biennial Coastal & Estuarine Research Federation (CERF) Mtg, Daytona Beach, FL., Nov. 7.

- *Stevenson, J. C. and L. W. Staver. 2011. "Plant establishment & survival at Hart-Miller Island. Hart-Miller Island Citizens Oversight Committee, Port of Baltimore, 2200 Broening Highway, Nov. 15.
- *Stevenson, J. C. 2012. Impacts of Rapidly Rising Sea Levels on the Erosion of Islands and Low Lying areas of Chesapeake Bay. Vorhees Lecture, Virginia Library, Richmond VA, Mar 31.
- Staver, L. W., J. C. Stevenson and J. C. Cornwell and M Owens. 2012. *Spartina alterniflora* Marsh Development on Nutrient-rich Dredged Materials in a Large-Scale Restoration Project in Mid-Chesapeake Bay. INTECOL International Wetlands Conference, Orlando, FL, June 4.
- Stevenson, J. C. 2012. Sea-level Rise and Erosion of Marshes and Islands in Chesapeake Bay. Foreign Scientists Field Trip for Wetlands Conference in Columbus, OH, HPL, Sept. 29.
- Staver, L.W., J.C. Stevenson, and J.C. Cornwell. 2012. Stoichiometry, Allometry and sustainability in created marshes at Poplar Island, Chesapeake Bay. MES Colloquium, Baltimore, MD, Oct 20.
- Cornwell, J.C. and Stevenson. 2012 Vegetation and Biochemistry Studies at Poplar Island. Poplar Island Habitat Work Group, MD Environmental Service, Millersville, Nov. 28.
- *Stevenson, J.C. 2013. "Connecting CO₂, Ocean and Atmospheric Temperature Increases with Sea-level Rise along the Edges of the Chesapeake Bay." Science for Policy Makers Forum for Chesapeake Bay Commission Staffers, Horn Point Lab, Jan 22-3.
- *Stevenson, J.C., and Lorie Staver. 2013 "Vegetation in the South Cell of Hart-Miller Island." Island Habitat Development Meeting, Dave Peters, chair, MD Environmental Services (MES) Millersville, MD, Feb 12.
- *Stevenson, J. C., L.W. Staver, & J.C. Cornwell. 2013. Summary of Marsh Vegetation Studies and at Poplar Island. Poplar Island Habitat Work Group, MD Environmental Service, Millersville, Feb. 28.
- *Stevenson, J.C. 2013. "Global Change Impacts on Marshes and SAV in Chesapeake Bay." National Defense Univ., Eisenhower College Seminars, Horn Point Lab, Apr 6-8
- *Stevenson, J. C. & T. Fisher. 2013. Potential Impacts of Nitrogen and Phosphorus Runoff from Lawns and Turfgrass in the Chesapeake Watershed on Marshes and SAV in Chesapeake Bay. 2013. TMDL and Fertilizer Symposium Hog Neck, sponsored by Talbot County Public Works, Chesapeake College, May 28.

- Stevenson, J.C., L. W. Staver. 2013 “Vegetation, Sediment Accretion and Flux Measurements at Poplar Island.” Poplar Working Group Meeting, Knapps Narrows, June 11.
- Staver, L.W., J.C. Stevenson, J. Cornwell, M. Owens. 2013 “Sustainability in Created Marshes at the Poplar Island Restoration Project in Mid-Chesapeake Bay.” 5th National Conference on Ecosystem Restoration, Chicago. July 31.
- *Stevenson, J.C. 2013 “Physiological Effects of Changing pH on Marsh and Riparian Plants.” Hart-Miller Island Oversight Group organized by Dave Bibo. Hart-Miller Island, Sept. 17
- Staver, L., J. C. Stevenson, J. Cornwell, and M. Owens. 2013. Carbon Allocation and Sequestration in *Spartina alterniflora* in a large-scale Chesapeake Bay Wetland Resoration. Coasts and Estuarine Research Federation (CERF) Biennial Meeting, San Diego CA. Nov. 4.
- Koch, E, C. Palinkas, L. Sanford, J. C. Stevenson and L.W. Staver. 2013. Physical and Ecological Impacts of Differing Shoreline-stabilization techniques in the Chesapeake Bay. CERF Biennial Meeting, San Diego CA, Nov 5.
- Stevenson, J.C., L.W. Staver, J.Cornwell, M. Owens and P. Hensel. 2013. “Can We Build Tidal Marshes in Estuaries to Keep Abreast of Sea-Level Rise?” CERF Biennial Meeting, San Diego CA, Nov. 7.
- Stevenson, J.C. 2013. “Using Performance Data to Drive Change in Shoreline Projects: Selected Examples from Chesapeake Bay”, Living Shoreline Summit, sponsored by Restore America’s Estuaries & The Coastal Society, Hyatt Hotel, Cambridge MD. Dec. 10.
- Palinkas, C.L., C.E. Koch, L. Sanford & J.C. Stevenson, & R. Ortt. 2014 “Anthropogenic influence on sediment delivery and deposition in nearshore Chesapeake Bay Modifications.” American Geophysical Union (AGU) Meeting, San Francisco, CA, Feb. 23-28.
- Stevenson, J.C. & Lorie Staver. 2014 “Investigations into Continuing Plant Dieback and Other Problems in Created Marshes.” Poplar Island Working Group Meeting, June 19.
- Stevenson, J.C. 2014. “Sea-level Rise: Can we keep up with it in the Chesapeake?” Teachers Workshop at Horn Pt Environmental Education Center organized by Donna Stotts, Cambridge MD, June 24.

Staver, L.W. & J.C. Stevenson. 2014, Plant Establishment Success at three elevations at the edge of the North Cell Pond at Hart-Miller Island. Citizens Group Meeting at Hart-Miller Island MES Facility. Sep. 23.

Staver, L.W. & J.C. Stevenson. 2014. Langurid Beetles and other boring insects cause brown marsh disease in Cell 1B at Poplar Island. Working Group Meeting. MES Headquarters Millersville MD. Nov 20.

Stevenson, J.C., L.W., C. Palinkas, J.C. Cornwell, & W.M. Kemp. 2014. "Sustainability of Marshes and Seagrass in Chesapeake Bay in a Rapidly Changing Climate." 2nd International Ocean Research Conference, Barcelona, Spain, Nov. 16-20.

Palinkas, C.L., L. Sanford, J.C. Stevenson, & R. Ortt. 2014 "Impact of Shoreline Stabilization on Shoreline Structures on Chesapeake Bay Nearshore Habitats." AGU Fall Meeting, SanFranciso, CA, Dec. 15-19.

*Stevenson, J.C. 2015. "The Challenge of Restoring Poplar Island: Can we Create Tidal Marshes to Keep Abreast of Sea-Level Rise in the Chesapeake." Smithsonian Environmental Research Center, Edgewater MD, May 21.

*Stevenson, J.C. and M.S. Kearney. 2015. "Sea-Level Rise and the Demise of Tidal Marshes: Conceptual Origins." CERF Biennial Meeting, Portland OR, Nov 10.

Staver, L., J.C. Stevenson, J. Cornwell, M. Owens & P. Hensel. 2015. "Destabilizing Effects of Nitrogen in Created Marshes in Upper Chesapeake Bay." Coastal & Estuarine Research Federation (CERF) Biennial Meeting, Portland OR, Nov 10.

*Stevenson, J.C. L.W. Staver, M.S. Kearney, and R. E. Turner. 2016 The Interplay of Geomorphic and Ecological Factors and the Ultimate Survival of Tidal Marshes. Gulf of Mexico Oil Spill and Ecosystem Science Conference, Tampa, FL, Feb. 1-4.

D. Contracts and Grants (principal investigator or co-PI – last 7 years)

Living Shorelines: impacts of structures (with Evamaria Koch) Chesapeake Bay Trust
Jan, 2006 – Jan 2007 [07-4-350055] \$ 45,000

Investigation of Vegetation at Hart-Miller Island. Maryland Environmental Service &
Port of Baltimore: Jan 2007-Nov 2008 \$ 36,095

Poplar Island Wetland Cell Sediment & Vegetation Monitoring. (with J. Cornwell)
Maryland Environmental Service (funds from Port of Baltimore & Army Corps of
Engineers): Apr 2007 – Apr 2008. \$196,000

Hart-Miller Island Vegetation Monitoring Addendum. Maryland Environmental Service (funds from Port of Baltimore & Army Corps of Engineers): Dec 2008 – Jan 2010.	\$7,174
Poplar Island Cell 3D Monitoring Program 2008 Studies to Address Sea-level Rise Issue and 2007 Marsh Dieback, (with J. Cornwell) Maryland Environmental Service with funds from Port of Baltimore & Army Corps of Engineers): Apr 2008 – Apr 2009.	\$196,007
Plant Monitoring at Hart-Miller Island. Maryland Environmental Service (funds from Port of Baltimore & Army Corps of Engineers). May 2009 – Dec 2010.	\$55,144
Poplar Island Cell 3D & 1A Monitoring Program: Vegetation Studies Maryland Environmental Service with funds from Port of Baltimore & Army Corps of Engineers) Apr 2009 – July 2013.	\$ 757,047
Ecosystem Restoration of Cove Point Fresh Water Marsh. Dominion Virginia Power. (JCS portion of grant to Lora Harris at CBL) Oct 2010 - Sep 2015	\$ 60,322
Long-term impacts of different techniques for shoreline stabilization in the MD Chesapeake Bay (E.W. Koch, PI) MD Sea-Grant 2012-15 [075-23923]	\$33,366
Hart-Miller Island Pond Issues and Potentials for Biologically Assisted Acid Neutralization. Jan 1, 2014 – Dec 31, 2015 [075-30463].	\$ 95,045
Poplar Island Vegetation, Elevation and Monitoring, contract from: Maryland Environmental Service (MES); funding from Port of Baltimore & Army Corps of Engineers. Aug. 27, 2013 – Sept 30, 2016 [07-4-304440].	\$ 812,793

III. Teaching and Training

A. University System of Maryland Courses Taught:

Botany 100 (UMCP) General Botany
 Botany 462 (UMCP) Plant Ecology Lecture
 Botany 464 (UMCP) Plant Ecology Laboratory
 Botany 471 (UMCP) Marine Botany
 Botany 661 (UMCP) Advanced Plant Ecology
 MEES 498 I (UMCP) Ecology of Chesapeake Bay and its Watershed
 MEES 608 D (UMCP) Advanced Applications relating to Scale in Ecosystems
 MEES 645 (UMCP) Ecology and Management of Wetland and SAV Systems
 MEES 698 Z (UMCP) Ecology of Wetlands and Submersed Aquatic Ecosystems

Additional Courses Taught at Johns Hopkins Univ. (Krieger School of Arts & Sciences):

CS471.468 Plant Ecology and Taxonomy
420.626 Field Methods in Ecology
420.628 Ecology and Management of Wetlands

B. Postdoctoral Fellows and Graduate Students Advised (1972-Present)

Post-doctoral Fellows:

Dr. Edward Pendleton (1980-1981); Ph.D., N.C. State Univ.

Dr. Robert Twilley (1981-1985); Ph.D., Univ. of Florida.

Dr. L. Chris Athanas (1983-1986); Ph.D., Univ. of Maryland.

Dr. Jeffrey Cornwell (1986-1987); Ph.D., Univ. of Alaska.

Dr. Kristin Saltonstall (2002-2004); Ph.D. Yale University

Dr. Alan Leslie (2015); Ph.D. Univ. of MD College Park, Entomology

Ph.D. Students:

G. Bradford Shea. Biological effects of enhanced ultraviolet radiation on a salt marsh ecosystem. (Fall 1976), Botany Dept., UMCP.

Donald R. Cahoon. Community production and biomass allocation of *Hibiscus moscheutos* L. (Malvaceae), a brackish marsh dominant (1982); Botany Dept., UMCP.

L. Chris Athanas. The effects of wastewater enrichment on a coastal plain forest ecosystem. (1982); Botany Dept., UMCP.

Cathleen Wigand. The Ecological Significance of Mycorrhizal Fungi in the Submersed Macrophyte *Vallisneria americana* in Upper Chesapeake Bay. (1994); MEES Program, UMCP.

Laura Mazanti. Effects of Herbicide Applications on the Survival and Reproductive Success of the Southern Leopard Frog, *Rana sphenocephala*, in Freshwater Depressional Wetlands. (1999); MEES Program, UMCP.

Jill Rooth. The Accretion potential of *Phragmites australis* in Chesapeake Bay. (2002); MEES Program, UMCP.

Rick Bartleson. Effects of seagrass bed size and flow regime on local water quality. Graduation: December 2003; MEES Program, UMCP.

Lorie W. Staver. Ecosystem Dynamics in Tidal Marshes Constructed with Fine-grained Nutrient Rich Dredged Material. Graduation: Dec. 2016. Joint MEES & UMCP Program

M.S. Students:

Donald R. Cahoon. Net productivity of emergent vegetation at Horn Point salt marsh. (1975); Botany Dept., UMCP.

Randy Rowland. Nutrient exchange and utilization of the Horn Point marsh system. (1976); Botany Dept., UMCP.

L. Chris Athanas. Energy flow through the birds of a brackish tidal marsh. (1976); Botany Dept., UMCP.

Robert J. Small. Inorganic nitrogen concentrations and system metabolism in a Maryland brackish marsh ecosystem. (1977); Botany Dept., UMCP.

Fredric Lipschultz. Nitrogen fixation in Horn Point Marsh on the upper Chesapeake Bay. (1978); Botany Dept., UMCP.

Jeffrey J. Cunningham. Responses of microcosm communities containing submerged aquatic vegetation to herbicide stress. (1979); Botany Dept., UMCP.

Marlon R. Lewis. An investigation of some homeostatic properties of model ecosystems in terms of community metabolism and component interaction. (1980); Botany Dept., UMCP.

Margaret Shenton Leonard. Denitrification in the shallows of Chesapeake Bay. (1982); MEES Program, UMCP.

Lorie W. Staver. Competitive interactions of submersed aquatic vegetation under varying nutrient and salinity conditions. (1986); MEES Program, UMCP.

Danielle Lucid. Nitrogen Uptake and Fixation in Algal Turf Microcosms. (1989); MEES program, UMCP.

Susan Hill (now McGinnich). Phosphorus uptake in the submersed aquatic macrophyte, *Vallisneria americana*. (1989); MEES, Program, UMCP.

Phillipe Hensel. Nitrogen Uptake in the submersed aquatic macrophyte *Vallisneria americana*. (1992); MEES Program, UMCP.

Kelly (Splain) Merrell. Effects of Flow and Mixing on *Vallisneria* and Its Associated Community in Experimental Mesocosms. (1996); MEES Program, UMCP.

Dan Rice. Determining *Pragmites australis* communities in Chesapeake Bay 1938-1995. (1996); MEES Program, UMCP.

Joshua Schmitz. Marsh Plant Community Organization in Experimental and Natural Ecosystems: Fire Response (2000), MEES Program UMCP.

Kristin Mielcarek. Plant Survival in Dredged Material on Poplar Island Restoration Site. (May, 2006); MEES Program UMCP.

3. Graduate Student Committees (& Advisors): 2007-Present

Todd Beser	(Katia Englehardt)
James Carleton	(Hubert Montas, BRE, UMCP)
Caroline Wicks	(Evamaria Koch)
Elizabeth Zinecker	(Pat Kangas, UMCP)
Charlotte Shearin	(Dennis King, CBL)
Lorie Staver	(Court Stevenson, HPL)

V. Outreach and Service

A. University (Last five years)

HPL Seminar Committee, 2009-2010

HPL Boat Committee (Chair), 2006-2007

HPL Seminar Chair, Jan-Jun, 2011

Council of University System Faculty (CUSF): UMCES Representative, Sept 2002-Aug 2007

C. Federal/State/Local Government Activities (Last 10 Years)

Submersed Aquatic Vegetation Workgroup (EPA CHESAPEAKE BAY PROGRAM).
1977 – 2008.

Scientific Technical Advisory Committee, EPA Maryland Coastal Bays Program
chaired by T. Jones and W. Dennison 1995 - 2009.

Governor's Climate Change Commission, Adaptation and Response Workgroup,
chaired by DNR Secretary John Griffen, 2007 - 2008.

Poplar Island Restoration Workgroup, 2002-present

Blackwater National Wildlife Adaptive Management Team Member 2007-present.

Cove Point Scientific Advisory Committee, R. Boxwell, Chair 2007 - present

National Academies National Research Council Panel for Water Allocations in St.
Johns River, Florida. 2008-2011.

South Florida Water Management Minimum Flows & Levels Review Team Member
for Florida Bay (Chair) & Biscayne Bay. 2006-2010.

NY Sea Grant Technical Review Panel chaired by Cornelia Schlenk, Aug 2011.

Maryland Board of Public Works – Acting Wetlands Administrator (with Allen Davis
UMCP), Nov. 2013-2014.

NY Sea Grant Technical Review Panel chaired by Cornelia Schlenk, Dec. 2014.

Chesapeake Bay Sentinel Site Cooperative (CBSSC) now chaired by Sarah Wilkins,
MD Sea Grant and MD Dept of Natural Resources. Dec 2014 - present