

LARRY G. WARD - CURRICULUM VITAE

Personal Information

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Education

1967-1972 B.A. in Earth Sciences, University of New Hampshire, Durham, N.H.
1972-1974 M.S. in Marine Geology, University of South Carolina, Columbia, S.C.
1974-1978 Ph.D. in Marine Geology, University of South Carolina, Columbia, S.C.

Professional Positions

Summer 1995-Present - Associate Research Professor of Earth Sciences, Department of Earth Sciences, University of New Hampshire, Durham

Winter 1989-Summer 1995 - Assistant Research Professor of Earth Sciences, Department of Earth Sciences, University of New Hampshire, Durham

Professional Societies

Geological Society of America
American Geophysical Union
Coastal Education and Research Foundation

PROFESSIONAL EXPERTISE

The focus of my research, publishing, and teaching over the last ~25 years has been on coastal, estuarine and inner shelf sedimentology and surficial processes. I have conducted research projects in a variety of locations along the East Coast of the United States, Alaska, the Caribbean, Iceland, and Europe. My most recent research focuses on estuarine sedimentological processes and depositional environments, coastal geomorphology and processes, and the stratigraphy, sea level history and Holocene evolution of nearshore marine systems. My teaching experience ranges from introductory geology and oceanography, undergraduate sedimentology, and graduate level coastal and estuarine sedimentology courses.

PUBLICATIONS

Scientific Journals, Book Chapters, Proceedings, and Major Reports

Ward, L.G. In Press. Variations in physical properties and water quality in the Webhannet River Estuary (Wells National Estuarine Research Reserve, Maine). Journal of Coastal Research. UNH CMB/JEL Contribution Series Number 415.

Ward, L.G. and F.L. Bub. In Press. Temporal variability in salinity, temperature and suspended sediments in a Gulf of Maine Estuary (Great Bay Estuary, New Hampshire). *In*: D.M. FitzGerald and J. Knight (eds.), High Resolution Morphodynamics and Sedimentary Evolution of Estuaries. New York: Kluwer Press. UNH CMB/JEL Contribution Series Number 411.

Grizzle, R.E., L.G. Ward, J.R. Adams, S.J. Dijkstra and B. Smith. In Press. Mapping and characterizing oyster reefs using acoustic techniques, underwater videography, and quadrat sampling. American Fisheries Society Special Publication. UNH CMB/JEL Contribution Series Number 403.

Ward, L.G., D.M. Burdick and J.R. Adams. 2003. Preliminary studies of the impact of sea level rise on coastal environments (New Hampshire, USA). Proceedings from Coastal Sediments '03. Corpus Christi, TX: East Meets West Productions. (CD Format). 13 p.

Grizzle, R.L., L.G. Ward, R. Langan, G.M. Schnaittacher, J.A. Dijkstra and J.R. Adams. 2003. Environmental monitoring in the vicinity of an open ocean aquaculture site in the southwestern Gulf of Maine: Some preliminary results. *In*: C.J. Bridger and B.A. Costa-Pierce (eds.), Open Ocean Aquaculture from Research to Commercial Reality, p. 105-117. Baton Rouge, LA: World Aquaculture Society. UNH CMB/JEL Contribution Series Number 388.

Ward, L.G. and J.R. Adams. 2001. A Preliminary Assessment of Tidal Flooding along the New Hampshire Coast: Past, Present and Future. Concord, NH: New Hampshire Office of Emergency Management and the Office of State Planning Coastal Program. UNH CMB/JEL Report Series Number 54.

Ward, L.G. and F.L. Bub. 2000. Suspended Particulate Material and Physical Properties (Salinity, Temperature, Turbidity) of the Great Bay Estuary: Distribution and Major Controlling Processes. Durham, NH: NOAA/UNH Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET) Technical Report. UNH CMB/JEL Report Series Number 53.

Ward, L.G. and F.S. Birch. 1999. Sedimentology of the New Hampshire inner continental shelf based on subbottom seismics, side-scan sonar, bathymetry, and bottom samples. Marine Georesources and Geotechnology 17:165-172. UNH CMB/JEL Contribution Series Number 378.

Ward, L.G., M.S. Kearney and J.C. Stevenson. 1998. Variations in sedimentary environments and accretionary processes in estuarine marshes undergoing rapid sea level rise, Chesapeake Bay. Marine Geology 151:111-134. UNH CMB/JEL Contribution Series Number 379.

Ward, L.G. and F.S. Birch. 1998. Sedimentology of the New Hampshire inner continental shelf based on seismics, side-scan sonar, bathymetry, and bottom samples. *In*: G. Dellagiarino, L.A. Miller, and S. Doenges (eds.), Studies Related to Continental Margins - A Summary of Year-Nine and Year-Ten Activities, p. 62-68. Verdon, VA: U.S. Department of Interior Minerals Management Service and Association of American State Geologists Continental Margins Committee.

Ward, L.G., K. Trainer, D.M. Burdick and A.C. Mathieson. 1997. Condition and Change Analysis of Tidal Wetlands on the Squamscott River, Great Bay Estuary, New Hampshire Using Remote Sensing. Durham, NH: New Hampshire Water Resources Research Center Research

Report 63 (University of New Hampshire). 29 p., plus figures and appendices. UNH CMB/JEL Report Series Number.

Ward, L.G. 1995. Sedimentology of the lower Great Bay/Piscataqua River Estuary. San Diego, CA: Department of the Navy, NCCOSC RDTE Division Technical Report. 102 p. UNH CMB/JEL Contribution Series Number 314.

Kearney, M.S., J.C. Stevenson and L.G. Ward. 1994. Spatial and temporal changes in marsh vertical accretion rates at Monie Bay: implications for sea-level rise. Journal of Coastal Research 10:1010-1020.

Ward, L.G. 1994. Nearbottom currents and sediment transport on the inner continental shelf of New Hampshire. *In*: G. Dellagiardino, A.R. Masterson and L.A. Miller (eds.), Studies Related to Continental Margins - A Summary of Year-Five and Year-Six Activities, p. 150-156. Verdon, VA: U.S. Department of Interior Minerals Management Service and Association of American State Geologists Continental Margins Committee. UNH CMB/JEL Contribution Series Number 381.

Ward, L.G. 1993. Texture of bottom sediments at sampling stations in the lower Piscataqua River Estuary. *In*: R.K. Johnston, W.R. Munns, Jr., F.T. Short and H.A. Walker (eds.), An Estuarine Ecological Risk Assessment Case Study for Portsmouth Naval Shipyard, Kittery, Maine, p. 3.1-1 to 3.1-7. San Diego, CA: Department of the Navy, NCCOSC RDTE Division Technical Report 1627.

Ward, L.G. 1992. Estuarine geomorphology. *In*: F. T. Short (ed.), The Ecology of the Great Bay Estuary, New Hampshire and Maine: An Estuarine Profile and Bibliography, Chapter 4, p. 39-43. NOAA - Coastal Ocean Program Publication. 222 p.

Ward, L.G. and F.E. Anderson. 1990. Sedimentology of sand deposits from the inner continental shelf of New Hampshire. *In*: M.C. Hunt, S. Doenges and G.S. Stubbs (eds.), Studies Related to Continental Margins - A Summary of Year-Three and Year-Four Activities, p. 194-198. Verdon, VA: U.S. Department of Interior Mineral Management Service and Association of American State Geologists Continental Margins Committee. UNH CMB/JEL Contribution Series Number 380.

Ward, L.G. and G. M. Ashley. 1989. Introduction: coastal lagoonal systems. Marine Geology 88:181-185.

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.

Fisher, T.R., L.W. Harding, Jr., D.W. Stanley and L.G. Ward. 1988. Phytoplankton, nutrients, and turbidity in the Chesapeake, Delaware, and Hudson estuaries. Estuarine Coastal Shelf Science 27:61-93.

Ward, L.G., T.F. Moslow and K. Finkelstein. 1987. Geomorphology of a tectonically active, glaciated coast, south-central Alaska. *In*: D.M. FitzGerald and P.S. Rosen (eds.), Glaciated Coasts, p. 1-31. New York: Academic Press.

Shipp, R.C., S.A. Staples and L.G. Ward. 1987. Controls and zonation of geomorphology along a glaciated coast, Gouldsboro Bay, Maine. *In*: D. M. FitzGerald and P.S. Rosen (eds.), Glaciated Coasts, p. 209-231. New York: Academic Press.

Ward, L.G. and R.R. Twilley. 1986. Seasonal distributions of suspended particulate material and dissolved nutrients in a coastal plain estuary. Estuaries 9:156-168.

Kearney, M.S. and L.G. Ward. 1986. Accretion rates in brackish marshes of a Chesapeake Bay estuarine tributary. Geo-Marine Letters 6:41-49.

Stevenson, J.C., L.G. Ward and M.S. Kearney. 1986. Vertical accretion in marshes with varying rates of sea level rise. *In*: D. Wolf (ed.), Estuarine Variability, p. 241-259. New York: Academic Press.

Ward, L.G. 1985. The influence of wind waves and tidal currents on sediment resuspension in middle Chesapeake Bay. Geo-Marine Letters 5:71-75.

Stevenson, J.C., L.G. Ward, M.S. Kearney and T. Jordan. 1985. Sedimentary processes and sea level rise in tidal marsh systems in Chesapeake Bay. *In*: E. Meyer (ed.), Wetlands of the Chesapeake: Protecting the Future of the Bay, p. 37-62. Washington, D.C.: Environmental Law Institute.

Zarillo, G., L.G. Ward, and M.O. Hayes. 1985. An Illustrated History of Tidal Inlet Changes in South Carolina. Charleston, SC: South Carolina Sea Grant Consortium. 76 p.

Kearney, M.S., L.G. Ward, C.M. Cofta, G.R. Helz and T.M. Church. 1985. Sedimentology, Geochronology and Trace Metals in the Nanticoke and Choptank Rivers, Chesapeake Bay. College Park, MD: University of Maryland Water Resources Research Center Technical Report Number 84, 94 p.

Ward, L.G., W.M. Kemp and W.R. Boynton. 1984. The influence of waves and seagrass communities on suspended particulate dynamics in an estuarine environment. Marine Geology 59:85-103.

Kemp, W.M., W.R. Boynton, R.R. Twilley, J.C. Stevenson and L.G. Ward. 1984. Influence of submerged vascular plants on ecological processes in upper Chesapeake Bay. *In*: V.S. Kennedy (ed.), The Estuary as a Filter, p. 367-394. New York: Academic Press.

Ward, L.G. 1981. Suspended-material transport in marsh tidal channels, Kiawah Island, South Carolina. Marine Geology 40:139-154.

Kana, T. and L.G. Ward. 1981. Nearshore suspended load during storm and post-storm conditions. *In: Seventeenth International Coastal Engineering Conference*, p. 1158-1173. New York: American Society Civil Engineers.

Ward, L.G. 1979. Hydrodynamics and sedimentological processes in salt marsh systems. *In: Sixteenth International Coastal Engineering Conference*, p. 1953-1970. New York: American Society Civil Engineers.

Ruby, C.H., L.G. Ward, I.A. Fischer and P.J. Brown. 1977. Buzzards Bay oil spill: an arctic analogue. *In: G.R. Peters (ed.), Fourth International Conference on Port and Ocean Engineering Under Antic Conditions*, p. 844-855. St. Johns, Newfoundland: Ocean Engineering Information Centre.

Ward, L.G., M. Stephen and D. Nummedal. 1976. Hydraulics and morphology of glacial outwash distributaries, Skeidararsandur, Iceland. *Journal Sedimentary Petrology* 46:770-777.

Book

Ward, L.G., P.S. Rosen, W.J. Neal, O.H. Pilkey, Jr, O.H. Pilkey, Sr., G.L. Anderson and S.J. Howie. 1989. Living With Chesapeake Bay and Virginia's Ocean Shores. Duke University Press. 236 p.

Map

Ward, L.G. 2000. Surficial Geology of the New Hampshire Inner Continental Shelf, Salisbury Beach, Massachusetts to the Piscataqua River, New Hampshire.

Theses

Ward, L.G. 1978. Physical and Sedimentological Processes in a Salt Marsh Tidal Channel, Kiawah Island, South Carolina. Ph.D. Dissertation, University of South Carolina, Columbia, South Carolina, 180 p.

Ward, L.G. 1974. Hydrology, Morphology and Sediment Distribution of the Skeidara Distributaries, Southern Iceland. M.S. Thesis, University of South Carolina, Columbia, South Carolina, 91 p.

SELECTED ABSTRACTS/ORAL PRESENTATIONS SINCE 2000

(* Speaker)

Ward, L.G.* and D.M. Burdick. 2004. Salt marsh development and processes in a northern New England system. Abstracts, AGU Chapman Conference on Salt Marsh Geomorphology: Physical and Ecological Effects on Landform, Halifax, Nova Scotia.

Ward, L.G.* 2003. Sedimentologic and stratigraphic studies on the New Hampshire shelf. Abstracts, Geological Society of America (GSA) Annual Meeting, Seattle, Washington, volume 35, number 6.

Ward, L.G.*, D.M. Burdick and J.R. Adams. 2003. Preliminary studies of the impact of sea level rise on coastal environments (New Hampshire, USA). Abstracts, Coastal Sediments '03, Clearwater, Florida. p. 208-209. Corpus Christi, TX: East Meets West Productions.

Grizzle, R.E.*, L.G. Ward and J.R. Adams. 2003. Mapping and quantitatively characterizing seabed habitats with underwater videography. Abstracts, Emerging Technologies, Tools, and Techniques to Manage Our Coasts in the 21st Century Meeting, USEPA, Cocoa Beach, Florida.

Ward, L.G.* 2002. Sources and controls of suspended sediments and turbidity in the Great Bay Estuary, New Hampshire. Abstracts, Northeastern Geological Society of America (NEGSA) Annual Convention, Springfield, Massachusetts.

Ward, L.G.* and F.L. Bub. 2001. Suspended sediment dynamics in the Great Bay Estuary, NH: Patterns and controlling processes. Abstracts, Geological Society of America (GSA) Annual Convention, Boston, Massachusetts, volume 33, number 6, p. A273.

Grizzle, R.L., L.G. Ward*, R. Langan, G. Schnaittacher and J. Dijkstra. 2001. Environmental monitoring in the vicinity of an open ocean aquaculture site in the southwestern Gulf of Maine: some preliminary results. Program and Abstracts for Open Ocean Aquaculture IV (from Research to Reality) Symposium, St. Andrew, New Brunswick. Mississippi-Alabama Sea Grant Consortium, P.O. Box 7000, Ocean Springs, Mississippi.