

DAVID M. BURDICK, Ph.D.

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Interim Director, Jackson Estuarine Laboratory
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RESEARCH AREAS

Ecology and restoration of coastal wetlands and their plants
Science and management of created and restored wetlands

EDUCATION

1973-1977 **B.S. Chemistry**, Hobart College, Geneva, NY
1982-1988 **Ph.D. Marine Sciences**, Louisiana State University, Baton Rouge, LA

TEACHING

Wetland Ecology & Management
Wetlands Restoration & Mitigation
Freshwater Resources
Salt Marsh Restoration & Monitoring at Eagle Hill

HONORS & AWARDS

LSU Alumni Fellowship
GERS Freeport Sulfur Award
LSU Lipsey Award
Mayors Award: Great Bog
Coastal America Partnership
Greater Piscataqua Education Partners Award
UNH Outreach Scholar
Gulf of Maine Visionary Award
Susan Snow Cotter Leadership
EPA Environmental Merit Award

PROFESSIONAL APPOINTMENTS

1979-1981 Research Assistant, Center for Coastal Studies, Provincetown, MA
1981-1982 Research Assistant, National Marine Fisheries Service, Sandy Hook, NJ
1982-1988 Graduate Student, Department of Marine Sciences, Baton Rouge LA
1988-1990 Postdoctoral Investigator, Biology Department, WHOI, Woods Hole, MA
1990-1999 Assistant Research Professor, Jackson Estuarine Laboratory, UNH, Durham NH
1999-Present Associate Research Professor, NREN & Jackson Estuarine Laboratory, UNH
2011-2013 Class of 1937 Professorship in Marine Science, Marine Program, UNH
2014-Present Interim Director, Jackson Estuarine Laboratory

SERVICE AND OUTREACH

Societies: Northeastern Estuarine Research Society, Coastal Estuarine Research Federation, Society of Wetland Scientists, Society for Ecological Restoration

Recent and Current Activities: National Academy of Sciences: Monitoring and Assessment of Gulf of Mexico Restoration Activities; NH Coastal Adaptation Workgroup; Advocates for North Mill Pond; Piscataqua Region Estuaries Partnership, Technical Advisory Committee, Great Bay NERR & Wells NERR Research Advisory Boards

SELECTED PUBLICATIONS - *Peer-Reviewed Journals*

- Burdick, D.M. and I.A. Mendelssohn. 1990. Relationship between anatomic and metabolic responses to soil waterlogging in the coastal grass *Spartina patens*. *Journal of Experimental Botany* 41:223-228.
- Short, F.T., D.M. Burdick, J. Kaldy. 1995. Mesocosm experiments quantify the effects of coastal eutrophication on eelgrass, *Zostera marina* L. *Limnology and Oceanography* 40:740-749.

- Short, F.T., D.M. Burdick. 1996. Quantifying eelgrass habitat loss in relation to housing development and nitrogen loading in Waquoit Bay, Massachusetts. *Estuaries* 19:730-739.
- Burdick, D.M., M. Dionne, R.M. Boumans, F.T. Short. 1997. Ecological responses to tidal restorations of New England salt marshes. *Wetlands Ecology and Management* 4:129-144.
- Short, F.T., D.M. Burdick, C.A. Short, R.C. Davis, P. Morgan. 2000. Developing success criteria for eelgrass, salt marsh and mud flat habitats. *Ecological Engineering* 15:239-252.
- Boumans, R.M.J., D.M. Burdick, M. Dionne. 2002. Modeling habitat change in salt marshes following tidal restoration. *Restoration Ecology* 10: 543-555.
- Seliskar, D.M., J.L. Gallagher, D.M. Burdick, L.A. Mutz. 2002. The regulation of ecosystem functions by ecotypic variation in the dominant plant: a *Spartina alterniflora* salt-marsh case study. *Journal of Ecology* 90:1-11.
- Konisky, R.A., D.M. Burdick, M. Dionne, H.A. Neckles. 2006. A regional assessment of salt-marsh restoration and monitoring in the Gulf of Maine. *Restoration Ecology* 14:516-525.
- Morgan, P.A., D.M. Burdick, F.T. Short. 2009. The functions and values of fringing salt marshes in northern New England, USA. *Estuaries and Coasts* 32:483-495.
- Eberhardt, A.L., D.M. Burdick, M. Dionne. 2011. Effects of road culverts on nekton in New England salt marshes. *Restoration Ecology* 19: 776-785.
- Chmura, G.L., D.M. Burdick, G.E. Moore. 2012. Recovering salt marsh ecosystem services through tidal restoration. pp. 233-251 *In*: Roman, C.T. and D.M. Burdick (eds.), *Tidal Marsh Restoration: A Synthesis of Science and Practice*. Island Press. Washington. 406 pp.
- Vincent, R.E., D.M. Burdick M. Dionne. 2013. Ditching and ditch-plugging in New England salt marshes. *Estuaries and Coasts* DOI 10.1007/s12237-012-9583-y
- Mora, J.W., D.M. Burdick. 2013. Effects of man-made berms upon plant communities in New England salt marshes. *Wetlands Ecology & Management* DOI 10.1007/s11273-013-9285-7
- Eberhardt, A.L., D.M. Burdick, M. Dionne, R.E. Vincent. 2015. Rethinking the freshwater eel: salt marsh trophic support of the American Eel. *Estuaries and Coasts* 38: 1251-1261.
- Raposa, K.B., M.L. Cole Ekberg, D.M. Burdick, N.T. Ernst, S.C. Adamowicz. 2016. Elevation change and the vulnerability of Rhode Island (USA) salt marshes to sea-level rise. *Regional Environmental Change*. DOI 10.1007/s10113-016-1020-5
- Rogers, J.N., C.E. Parrish, L.G. Ward, D.M. Burdick. 2018. Improving salt marsh digital elevation model accuracy with full waveform lidar and nonparametric predictive modeling. *Estuarine, Coastal and Shelf Science* 202:193-211.

SELECTED PUBLICATIONS - Outreach Products

- Regional Standards to Identify and Evaluate Tidal Wetland Restoration in the Gulf of Maine. H. Neckles, M. Dionne (eds.). 2002. Global Programme of Action Coalition for Gulf of Maine.
- Dock Design with the Environment in Mind. D.M. Burdick and F. T. Short. UNH, Jackson Estuarine Laboratory. CD/Web distribution 2003/2005
- Eelgrass Restoration Site Selection Model. F.T. Short and D. M. Burdick. UNH, Jackson Estuarine Laboratory. CD/Web distribution 2005/2006
- Hampton-Seabrook Estuary Restoration Compendium. Eberhardt, A.L. and D.M. Burdick. 2008. NH Estuaries Program, Durham, NH, and NH Coastal Program, Portsmouth, NH.
- Tidal Marsh Restoration: A Synthesis of Science and Practice. Roman, C.T., D.M. Burdick (eds.). 2012. Island Press. Washington. 406 pp.
- Effective Monitoring to Evaluate Ecological Restoration in the Gulf of Mexico. 2016. The National Academies of Sciences Press, Washington, DC. 10.17226/23476