

Integrating Information from the Past into Oyster Restoration

Gregory P. Dietl^{1,2}, Stephen R. Durham³, Heidi C. Alleway⁴, Anne Birch⁵, Robert Caballero⁶, Nicole Cannarozzi⁷, Allison Colden⁸, David Grunden⁹, Carla Hadden¹⁰, Chad Hanson¹¹, Isabelle Holland-Lulewicz¹², Jessica Jenkins¹³, Peter Kingsley-Smith¹⁴, Alix Laferriere¹⁵, Megan K. La Peyre¹⁶, Rowan Lockwood¹⁷, Julieta Martinelli¹⁸, Bonnie D. Newsom¹⁹, Bennett Paradis²⁰, Jaleigh Pier², Eric Powell²¹, Mark Rath²², Torben Rick²³, William S. Rodney²⁴, Christopher Schillaci²⁵, David M. Schulte²⁶, Victor Thompson⁹, Ruth Thurstan²⁷, Eric Weissberger²⁸, Charles Weirich²², Abby Williams¹⁹, Philine zu Ermgassen²⁹

¹Paleontological Research Institution, Ithaca, NY, USA

²Cornell University, Ithaca, NY, USA

³Florida Department of Environmental Protection, Tallahassee, FL, USA

⁴The Nature Conservancy, Adelaide, South Australia, Australia

⁵The Nature Conservancy, Indialantic, FL, USA

⁶Louisiana Department of Wildlife and Fisheries, Baton Rouge, LA, USA

⁷Florida Museum of Natural History, Gainesville, FL, USA

⁸Chesapeake Bay Foundation, Annapolis, MD, USA

⁹Town of Oak Bluffs, MA, USA (Ret.)

¹⁰University of Georgia, Athens, GA, USA

¹¹The Pew Charitable Trusts, Philadelphia, PA, USA

¹²The Pennsylvania State University, State College, PA, USA

¹³Flagler College, St. Augustine, FL, USA

¹⁴South Carolina Department of Natural Resources, Charleston, SC, USA

¹⁵Alaska Fisheries Science Center Kodiak Laboratory, Kodiak, AK, USA

¹⁶United States Geological Survey, Baton Rouge, LA, USA

¹⁷College of William & Mary, Williamsburg, VA, USA

¹⁸Washington Department of Fish & Wildlife, Seattle, WA, USA

¹⁹University of Maine, Orono, ME, USA

²⁰North Carolina Department of Environmental Quality, Morehead City, NC, USA

²¹University of Southern Mississippi, Ocean Springs, MS, USA

²²National Sea Grant Office, Silver Spring, MD, USA

²³National Museum of Natural History, Washington D.C., USA

²⁴Texas Parks and Wildlife Department, Dickinson, TX, USA

²⁵Greater Atlantic Regional Fisheries Office, NOAA Fisheries, Gloucester, MA, USA

²⁶US Army Corps of Engineers, Norfolk, VA, USA

²⁷University of Exeter, Cornwall, UK

²⁸Office of Habitat Conservation, NOAA Fisheries, Silver Spring, MD, USA

²⁹University of Edinburgh, Edinburgh, UK

In the United States, the eastern oyster (*Crassostrea virginica*) is an economically, culturally, and ecologically important oyster species that ranges from Maine to Texas. Eastern oyster populations are managed by a variety of federal, state, and local governments as well as non-governmental organizations. In addition, the long history of oyster harvesting and coastal land-use change in the United States, and asynchronous fluctuations in abundance across the species range due to diverse pressures (e.g., hydrological changes, pollution, disease, overharvesting), combined with often scarce historical monitoring records documenting the timing and magnitude of the changes, have challenged the management of oyster resources for well over a century. To explore ways to help overcome this challenge, the Oysters Past Working Group (OPWG) brings together academic researchers who specialize in collecting and interpreting information from the past (paleoecologists, archaeologists, and historical ecologists) and practitioners and resource managers who work on oyster conservation, management, and/or restoration for government agencies or non-governmental organizations. More specifically, the primary goals of the OPWG are to: 1) identify oyster management needs that require information from the past; and 2) create a guidance document on best practices for applying information from the past to oyster management. Here, we report on the results of a survey that the OPWG circulated to the broader oyster resource management and policy community to gather perspectives about currently used oyster population and habitat management indicators, the timescales on which these data are typically available, and how longer-term records may be helpful for practitioners and resource managers.

Contact Information: Gregory P. Dietl, Paleontological Research Institution, 1259 Trumansburg Road, Ithaca, NY, USA 14850, Phone: 607-273-6623 ext. 117, Email: gpd3@cornell.edu