

Preface

Robert F. Chen*

Boston Harbor and Boston Harbor Islands offer an ideal natural laboratory to study change over time. Often described as the most extensive and expensive estuarine recovery in the history of the world, the Boston Harbor Recovery is remarkable, not only because of the turnaround transformation from the “dirtiest harbor in America” to a National Recreation Area, but also because of the collaboration of diverse stakeholders engaged in the recovery planning, implementation, and monitoring. Bounded by the peninsulas of Hull and Winthrop, this semi-enclosed coastal ecosystem has long been a coupled natural–human system with people and the ocean being interdependent upon one another. While the relationship has changed over time, the stories that come out of this ever-evolving laboratory are indelible. As the use of the Harbor and its islands evolves, so does the perspective of the resources that are available. The islands are a homeland for the Massachusetts people, and have served as armaments, hospitals, isolation sites, trash heaps, factories, sewage treatment facilities, parks, visitor centers, and vacation destinations.

As use and development of the islands has changed, so have the flora and fauna that inhabit them. Long-term biological monitoring provides us with important information on the species distributions and abundances, which in turn are indicators of the chemical, biological, geological, and climate conditions as well. Each island, like the semi-enclosed Boston Harbor system, is its own laboratory, with limited inputs and outputs, so isolated influences and processes can be identified.

With climate change and the resultant sea-level rise and increase in intensity of storms, the Boston Harbor Islands system will adapt. Because of continued human influence on the ecosystem, what happens to Boston Harbor and its surrounding islands can and will be influenced by the decisions made by the people of Boston and beyond. This future can range from single solutions representing individual interests to multi-faceted, living adaptations that are more resilient and sustainable. Again, this transdisciplinary system composed of social systems and ecosystems offers a rich laboratory to study, where experiments can be conducted, data can be gathered, predictions can be tested, and analyses can lead to continuous improvements to the overall benefits of the ecosystem.

As such, the Boston Harbor and Boston Harbor Islands offer a wonderful playground for professional and amateur researchers alike. With a diverse set of ecosystems, a great deal of expertise, and continuing research and monitoring, this living laboratory remains open for a great diversity of people from a variety of backgrounds to become inspired, to find transformational experiences, and to learn and reflect in ways not possible in the classroom.

*Interim Dean, School for the Environment, University of Massachusetts at Boston, 100 William T. Morrissey Boulevard, Boston, MA 02125; bob.chen@umb.edu.

As stewards, the park managers, as well as the park visitors, have the responsibility for maintaining and improving the ecosystem services provided by the Boston Harbor Islands. Continued research, monitoring, enjoyment, and celebration of the biological riches that exist on the islands is required to optimize the experience, so different from that of nearby downtown Boston. The findings and resulting insights garnered by many researchers from many disciplines, origins, and perspectives again demonstrates the value of our unique, living laboratory.