

**ECOLOGICAL STUDIES:  
ABBOTT MARSHLANDS  
(aka HAMILTON - TRENTON - BORDENTOWN MARSH)  
1975-2021**

As with much of science, serendipity played a part in bringing the marsh to the attention of Dennis F. Whigham, then a faculty member at Rider College. To the best of his recollection, in 1972, David Earling, a Life Science student in an evening class, asked Dr. Whigham to look at the area near his house in Trenton that was threatened by development; that property was at the edge of the marsh. Thereafter began a collaboration between Drs. Whigham, Robert L. Simpson, V. Thomas Parker, and Mary A. Leck, and between them and colleagues at Rutgers - Camden, Rutgers - New Brunswick, Trenton State College, University of Kentucky, New England University (NSW, Australia), and elsewhere.

The studies, dealing with, for example, plant productivity, decomposition, seed germination ecology, as well as insects and breeding birds, have significantly increased our understanding of the structure and functions of tidal freshwater wetlands and of wetlands in general. (The list below has publications based wholly or in part on data obtained from Abbott Marshlands studies. In some cases, e.g. Leck, et al. *Seedling Ecology and Evolution*, works were stimulated by marsh findings and contain references to research done at the marsh).

These wetlands continue to instruct. Undergraduates at Rider University have studied, e.g., water quality, seed germination, seed dispersal (by studying water currents), and effect of management of Purple Loosestrife on plant species diversity. Classes from Mercer County Community College, Rider University, Rutgers University, The College of New Jersey, and the University of Pennsylvania visit regularly. Moreover, the 94-acre man-made wetland on Duck Island provides a field laboratory where colonization by plants and animals, soil development, and other changes can be studied.

In addition, the Marshlands serve as an outdoor laboratory for elementary and high schools where students can learn science by doing science. Since the opening of the Tulpehaking Nature Center in 2014, it is expected that citizen science and other activities will further understanding of the ecological value of the Abbott Marshlands.

**Publications:**

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