

The 44th Binghamton Geomorphology Symposium
Coastal Geomorphology and Restoration

Nancy L. Jackson¹, Karl F. Nordstrom², William K. Smith³, and Rusty Feagin⁴

Department of Chemistry and Environmental Science, New Jersey Institute of Technology, Newark, NJ
Institute of Marine and Coastal Sciences, Rutgers University, New Brunswick, NJ
Department of Biology, Wake Forest University, Winston-Salem, NC
Department of Ecosystem Science and Management, Texas A&M University, College Station, TX

The need to understand the complex interactions of geomorphic, biotic and human processes on beaches and dunes is growing in importance due to predictions of increases in relative sea level rise, storm activity and population density. These stressors will likely have dramatic effect on the resilience of coastal systems and the ultimate success of future adaptive management strategies to cope with place-based community hazards. Advances in research within biology and earth sciences have increased our understanding of the interactions between coastal flora and fauna and geomorphic changes in nearshore, beach and dune environments, but there is a need for a synthesis approach that will more fully describe development, feedback, and maintenance of coastal systems over space and through time. Knowledge of geomorphic-biotic interactions on coasts that have been artificially restored or urbanized is still rudimentary, despite the efforts of many investigators from the physical, natural and social sciences who study coastal ecosystems across broad spatial and temporal scales. The three-day symposium is designed to present current knowledge and provide the opportunity to discuss future research directions on coastal systems, including models of system change and adaptive management. The symposium will be held at New Jersey Institute of Technology on October 18-20, 2013. Eighteen symposium presentations will be distributed across three sessions focusing on: (1) response of beaches and dunes to episodic events; (2) geomorphic and biologic processes and interactions in beach and dune systems on undeveloped and developed coasts; and (3) ability of coastal management and restoration practices to maintain or enhance landform and ecosystem functions.