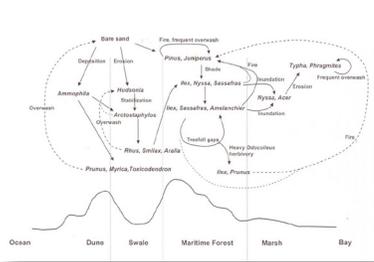
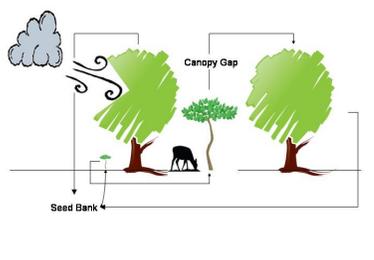


Conservation of Rare Vegetation Communities of the Atlantic Coastal Barrier Islands



The Challenge: A synthesis of the role of disturbance, in all of its manifestations, on the establishment and development of the American Holly forest is required to guide future conservation measures. Because many forest fragments have already endured >30 years of chronic deer herbivory, a legitimate question of how much more impact by deer can be tolerated and still conserve the essential type and character of the maritime forest remains unanswered.

The Science: Over 30 years of accumulated research exists for Fire Island National Seashore and Gateway National Recreation Area. These data will be used to explore the effects of chronic herbivory and important canopy disturbance factors on the probability of long-term persistence of the maritime forest type. On October 29, 2012, Hurricane Sandy devastated New York Harbor with a nearly 4.3 meter (14 ft) storm surge. Much of Fire Island was inundated with catastrophic impacts to the island's dunes, vegetation and built environment. We are in the process of assessing the ecological impact of this unusual storm on both animals and plants, particularly in the maritime forest.



The Future: Future work will assess the immediate impacts of Hurricane Sandy on the mortality of canopy trees and the creation of gaps in the maritime forests of Fire Island and Sandy Hook.