

ISLAND BEACH STATE PARK



A 1950 era Ford left to catch wind-blown sand and become a dune extension (left). Story and Photographs by L. Skip Johnson

Lovely Toms River sits securely nestled across the Barnegat Bay from the very reason for its relatively safe position - Island Beach State Park. As a Barrier Island it possesses a unique structure that allows it to perform its most obvious duty. It protects the mainland from the ravages of the sea. Ten foot waves and wind-driven flood tides are usually spent before they can unleash their fury on the mainland, on Toms River proper.

A Barrier Island actually starts out to sea from the beach on which you stroll. The rising slope of a sand bar that creates the rolling breakers is the first geological structure that defines a Barrier Island. It is the first barrier that commences wave and tidal energy dissipation. This and the actual beach front combine to form the first line of defense against storm surges.

Next in the line of structures is the more obvious Primary Dunes. Constantly exposed to sea breezes

they are protected only by the sparsest of Beach Grass, Sedge and Rocket, the few species that can survive the constant onslaught of sea spray. Human footprints create an indent that catches the wind, dislodging more sand, uprooting the small grass tufts and possibly causing a gash or "Blowout" in the primary dune. In a hurricane this could become a new inlet. Yes, keep off the dunes.

In structural succession, moping, inland, as there is no other way to comprehend how a barrier island works, is a swale and the Secondary Dune. Here, with a bit more distance from the effects of sea spray, vegetation becomes more dense and diverse. Heather, Golden Rod, Saltsea Spray Rose and Bayberry (candles) proliferate and secure the area. All but the most violent of storm surges end here in pools of sea water.

by
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Some of the many man made and natural objects that help build up sand dunes and protect the Barrier Islands.

A Sentinel On Guard Duty...and more.

Progressing along, there are the Thicket, the man-made Road Edge and the Maritime Forest. The diversity of vegetation increases again with native and imported species. Its size also increases, however. If you were to study the Holly, Oak and Pine you would notice that they are weather-dwarfed and pruned by the constant battering of the unseen sea spray. Those living further inland might now be considering canned seaspray as a means of reducing the growth of their lower forty. Look for it soon at a store near you.

Geologically speaking this is where most of us cease thinking about what a barrier island is, but we have only unearthed the half of it. From this point inland are some extremely important structure, features and

activities. Freshwater Wetlands with Fern, Cattail, **Cranberry and Rose Mallow** are formed because the lighter fresh water sits atop the salt water. This is the home for a multitude of native and migratory birds, and animals. Here biomass and water are usually plentiful.

The Tidal Marsh, flooded twice a day by the changing tide produces over ten tons of nutrients per acre - more than the best of New Jersey's farmland. This is the base, the beginning, of the entire aquatic food chain. An extremely fragile environment think of it as a huge nursery. Protection of the marsh is easily as important as the protection of the primary dune system.

The Bayshore acting almost like a

Primary dune, separate this from a vital area - the SAV - Submerged Aquatic Vegetation community. Containing submerged grasses and seaweeds it provides habitat for a variety of shellfish, fish and waterfowl. The SAV contains a wide variety of nutrients enabling it to also be an attractor of the migratory fishery. The entire package that is a Barrier Island becomes a wonder to understand.

Stepping back or crossing the Route 37 bridge you can reflect on how each unique segment or feature blends into a wonderful symbiotic environment. The interdependence within a Barrier Island serves more than to protect the mainland. Protect it and teach others to do the same.