



On the Beach, but Not Bums

For these shore plants, it's a constant struggle to survive

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The sea beach amaranth, a threatened plant, grows only in the Carolinas and on Long Island.

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For plants that live along the shore, life is no day at the beach.

Day in and day out, the waterfront is a tough place to live — what with the sun and the wind and the salt and the sea. And try putting down roots in the sand.

So the plants that live on the edge do what hardy organisms always do. They make adaptations that allow them to survive — and even thrive.

Many shore plants have thick, fleshy leaves that help them retain moisture amid the sun and salt. Sea rocket, a native mustard found on most beaches, has such leaves. It also has tiny purplish-white flowers and seed pods that resemble small rockets and shoot out ripened seeds in fall.

Another adaptation is for the plants to prostrate themselves before nature's onslaught. They grow low along the sand to avoid the brunt of fierce wind and salt spray. Not that they don't use the elements to their advantage. Salty winds carry nutrients not found in sand, so it helps that most beach plants are shallow-rooted. The spray settles on the plant and when the rains come, minerals and nutrients trickle into the ground and the roots suck them up.

Perhaps the most famous of the sand-huggers is the sea beach amaranth, which is on the federal list of threatened plants. It only grows on Atlantic barrier beaches in the Carolinas and on Long Island, where it's been compromised by erosion and human attempts to control the shifting sands with seawalls and jetties and bulkheads.

Sea beach amaranth did a disappearing act after 1950, when it was known to have grown on Fire Island. Then, in the summer of 1990 it was found in several locations along the South Shore. No one knows exactly why the little plant with fleshy pinkish-red stems and tiny yellow flowers and waxy leaves that resemble spinach returned. One guess is that its big buoyant seeds were carried here the year before from the south by Hurricane Hugo.

Because sea beach amaranth is an annual, its numbers fluctuate. That's why Gil Hanse, director of emergency preparedness for the Town of Babylon, and a group of botanists do a census in late summer before the plants die off in October. Hanse put the plant under his protection, fencing off its territory on Overlook Beach to keep it safe during a dredging project in the 1990s. "They're my babies — I don't let anyone breathe on them," he says.

Mary Laura Lamont, a ranger at Fire Island National Seashore, feels the same way about sea



The Island's own prickly pear cactus, *Opuntia humifusa*, has striking pineapple yellow blooms in June and July.

purslane. Lamont, who teaches classes in beach botany, and her husband, Eric, president of the Long Island Botanical Society, spotted the plants two years ago at Orient Beach State Park. "It's a neat little thing with itty-bitty white flowers at the end of the stalk," she says. The plant is on the state endangered list and the colony discovered by the Lamonts is one of only three known populations in New York.

Not all shore flora has small roots. There are adaptations upon adaptations. American beach grass has horizontal roots that grow longer than its botanical name — *Ammophila breviligulata*. Our most common beach grass — which grows 2 to 3 feet tall — is an erosion fighter. It captures sand and creates dunes. As blowing sand buries the blades of grass, the plant sends out new roots that form new stems that catch more sand.

Prunus maritime, which most people know as the common beach plum, is another deep-digger — most of the plant is actually buried — its roots can reach down almost 20 feet. In May, its

five-petaled white blossoms look like snow drifts in the sand. August marks the appearance of the fleshy edible fruit that turns from yellow to rose to deep plum-purple.

Perhaps the most exotic settler of the sandy range is a plant that evokes images of the golden west. There are more than 200 kinds of prickly pear cactus in the Western Hemisphere, and we have the only one that homesteads in the East. Say howdy to *Opuntia humifusa*, Long Island's very own cactus. The pineapple yellow blooms decorate vegetated areas alongside beaches from late June into July. Inch-long spines cover its bristly green oval pads. Prickly pear rides the shore from Caumsett to Orient Beach state parks.

Other plants that make the best of the shorefront include *Hudsonia*, with buttercup-like blossoms that only open on sunny days, and seaside goldenrod, whose showy yellow plumes sparkle in September and are magnets for migrating monarch butterflies.

Day in and day out, the beach belongs to the sun, wind, salt and sea. And the gardens that grow in the sand.

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