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Florida's Natural Communities OVERWASH PLAINS AND COASTAL BERMS

by Linda Conway Duever

Sometimes we don't recognize a natural community that is genuinely native to Florida just because it looks like the second growth that results from human disturbance. This is particularly likely to happen along the coast where hurricane trauma leaves scars that resemble old development wounds. And Overwash Plains and Coastal Berms are the storm-created habitats we're most likely to overlook.

Overwash Plains are the low sand flats left where storm waves have washed across a barrier island. There's a lot of loose sand, perhaps piled into dunelets and/or divided by sluiceways, and usually scattered weedy shrubs and herbs. After the site has gone for an extended period without storm scouring, the vegetation may develop into a dense mat of vines and grasses, then, eventually, into pine flatwoods.

The flatwoods on old Overwash Plains tend to be denser than most because the barrier island location protects them from spreading fires, so they don't burn as often. The literature presents contradictory views as to how much overwash and sand deposition an established pineland can take. Some authors recount instances where the pines proved extremely sensitive, whereas others contend they've seen them keep right on growing vigorously, even with sand piled thirty or forty feet high around them.

Overwash Plain soils are composed of sand and shell with some organic debris mixed in. Kesson and Canaveral

are among the soil types. These sites are prime nesting habitat for terns, skimmers, and other shore birds that nest on bare ground.

The vegetation includes a vast assortment of dune and salt marsh species as well as both native and exotic weeds. Since these are by nature disturbed sites, they are among the natural communities most readily colonized by exotics. Typical native plants include slash pine, *Pinus elliotii*; sea oats, *Uniola paniculata*; beach cordgrass, *Spartina patens*; little bluestem, *Schizachryium scoparium*; dropseed, *Sporobolus virginicus*; sandspur, *Cenchrus tribuloides*; beach elder, *Iva imbricata*; railroad vine, *Ipomoea pes-caprae*; sea purslane, *Sesuvium portulacastrum*; saltwort, *Salicornia virginica*; beach orach, *Atriplex arenaria*; sea blite, *Suaeda linearis*; seaside evening primrose, *Oenothera humifusa*; beach spurge, *Chamaesyce mesembryanthemifolia*; seaside pennywort, *Hydrocotyle bonariensis*; marsh samphire, *Phloxeris vermicularis*; and seaside ground cherry, *Physalis viscosa*.

Since the habitat is so often ignored or lumped or confused with another, there are very few plant lists specific to the community. Other species I have encountered in such data – and some of these may be taxonomically questionable – include *Chamaesyce bombensis*, *Cyperus planifolius*, *Dactyloctenium aegyptium*, *Borrchia frutescens*, *Cynachum palustre*, *Ipomoea indica*, *Sporobolus domingensis*, *Opuntia compressa*, *Cyperus lecontei*, *Juncus dichotomus*,

Juncus brachycarpus, *Eragrostis purshii*, *Panicum repens*, *Fimbristylis castanea*, *Cyperus rotundus*, *Dicanthelium acuminatum*, *Batis maritime*, *Opuntia stricta*, and *Limonium carolinianum*.

Coastal Berms are old marine bars from times of higher sea level and/or places where storms have thrown up ridges of sand, shell, and debris. They are most common along the southwest Florida coast where they often take the place of dunes. (This coast doesn't get everyday winds powerful enough to build up genuine dune systems like those along the east coast or the Panhandle.) These features are called by different names in different types of locations. In the mangroves, they can be buttonwood embankments, mangrove hammocks, coastal levees, or coastal forests. Behind a beach, they are shell ridges.

Coastal Berms support a wide variety of vegetation types because the materials that constitute them can be so varied. The soils are often composed of many layers of peat, shell, sand, and woody debris deposited by different storms.

Most commonly, the vegetation consists of a dense thicket of large shrubs and small contorted trees with the interior cluttered with branches, roots, and debris, but it may be a full-fledged hammock, a savanna, or a sparse desert-like shrub community. Florida Natural Areas Inventory has documented five Coastal Berm plant communities: Tropical Coastal Hammock, Keys Dune Hammock, Buttonwood Levee, Agave Barren, and Bouteloua Savanna.

The Agave Barrens are particularly interesting botanically. These shelly mounds, which could easily be confused with spoil piles, have scattered clumps of cacti and other drought-and salt-tolerant shrubs and herbs. Necklace-pod, *Sophora tomentosa*; forestiera, *Forestiera segregata*; beach creeper, *Ernodea littoralis*; and agave, *Agave decipiens*, are characteristic species.

The interior of Cayo Costa Island is a broad Coastal Berm covered by a unique Bouteloua Savanna dominated by hairy grama grass, *Bouteloua hirsuta*. This species is common in the west, but grows nowhere east of the Mississippi except on Coastal Berms along the southwest Florida Coast.

Other typical Coastal Berm plants include cabbage palm, *Sabal palmetto*; seagrape, *Coccoloba uvifera*; buttonwood, *Conocarpus erecta*; saltbush, *Baccharis halimifolia*; beach elder, *Iva imbricata*; scrub briar, *Smilax auriculata*; prickly pear, *Opuntia compressa*; poison ivy, *Toxicodendron radicans*; Spanish bayonet, *Yucca aloifolia*; love vine, *Cassytha filiformis*; lantana, *Lantana involucrata* and *L. ovatifolia*; barbed-wire cactus, *Cerus pentagonus*; snowberry, *Chiococca alba*; hairgrass, *Muhlenbergia capillaris*; tread-softly, *Cnidocolus stimulosus*; varnish leaf, *Dodonea viscosa*; sea daisy, *Borrchia frutescens*; coral bean, *Erythina herbacea*; and wax myrtle, *Myrica cerifera*. Most Overwash Plain species also occur in open Coastal Berm environments.

Hammock communities are liable to include white stopper, *Eugenia axillaris*; strangler fig, *Ficus aurea*; Spanish stopper, *Eugenia foetida*; live oak, *Quercus virginiana*; gumbo limbo, *Bursera simaruba*; wild coffee, *Psychotria nervosa*; serpent fern, *Phlebodium aureum*; and whisk fern, *Psilotum nudum*. Unfortunately, Brazilian pepper, *Schinum terebinthifolius* is also a common species here.

Some of the rare species that occur on Overwash Plains, Coastal Berms, and Shell Mounds (described in **The Palmetto**, Winter, 1985/86), submitted by Dennis Hardin, botanist with FNAI, are: golden leather fern, *Acrostichum aureum*; iguana hackberry, *Celtis iguanaea*; spiny hackberry, *Celtis pallida*; fragrant wooly cactus, *Cereus eriophorus* var. *fragrans*; southern lip fern, *Chelilanthes microphylla*; ghost orchid, *Polyrrhiza lindenii*; buckthorn, *Sageretia minutiflora*; beach-creeper, *Ernodea littoralis*; red stopper, *Eugenia rhombea*; joewood, *Jacquinia keyensis*; and bay cedar, *Suriana maritima*.

Most of these species could occur in any of the three natural communities of Coastal Mounds.

Though Coastal Berms and Overwash Plains are too vulnerable to hurricanes to be safe building sites, they are endangered by development pressure because they occur on high-priced coastal real estate. And they are all the more vulnerable because they don't look like anything special.

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