Florida Keys Wildlife and Environmental Area (Monroe County) Photo by Randy Grau

Coastal Berm

Description: Coastal berm is a short forest or shrub thicket found on long narrow storm-deposited ridges of loose sediment formed by a mixture of coarse shell fragments, pieces of coralline algae, and other coastal debris. These ridges parallel the shore and may be found on the seaward edge or landward edge of the mangroves or further inland depending on the height of the storm surge that formed them. They range in height from 1 to 10 feet. Structure and composition of the vegetation is variable depending on height and time since the last storm event. The most stable berms may share some tree species with rockland hammocks, but generally have a greater proportion of shrubs and herbs (Ross et al. 1992). Tree species may include gumbo limbo (*Bursera simaruba*), seagrape (*Coccoloba uvifera*), silver palm (*Coccothrinax argentata*), blolly (*Guapira discolor*), milkbark (*Drypetes diversifolia*), sevenyear apple (*Genipa clusiifolia*), and poisonwood (*Metopium toxiferum*). Characteristic tall shrub and short tree species include Spanish stopper (*Eugenia foetida*), hog plum (*Ximenia americana*), white indigoberry (*Randia aculeata*), Florida Keys blackbead (*Pithecellobium keyense*), and saffron plum (*Sideroxylon celastrinum*). Short shrubs and herbs include perfumed spiderlily (*Hymenocallis latifolia*), bayleaf capertree (*Capparis flexuosa*), buttonsage (*Lantana involucrata*), and rougeplant (*Rivina humilis*; Ross et al. 1992; Kruer 1992). More seaward berms or those more recently affected by storm deposition may support a suite of plants similar to beaches, including shoreline seapurslane (*Sesuvium portulacastrum*), saltgrass (*Distichlis spicata*), and seashore dropseed (*Sporobolus virginicus*), or scattered

to dense shrub thickets with buttonwood (*Conocarpus erectus*), stunted black, red, and white mangroves (*Avicennia germinans*, *Rhizophora mangle*, and *Laguncularia racemosa*), bay cedar (*Suriana maritima*), wild dilly (*Manilkara jaimiqui*), joewood (*Jacquinia keyensis*), and bushy seaside oxeye (*Borrichia frutescens*; FNAI 2005).

Characteristic Set of Species: Coastal berm consists of a mixture of tropical herbs shrubs and trees – it is defined by its substrate of coarse, calcareous, storm-deposited sediment forming long narrow ridges.

Rare Species: Rare plant species found on coastal berm include pride-of-big-pine (*Strumpfia maritima*), joewood (*Jacquinia keyensis*), and wild dilly (*Manilkara jaimiqui*).

Range: Coastal berm is found along low energy coastlines in South Florida and the Florida Keys.

Natural Processes: Coastal berm is deposited by storm waves along low-energy coasts. Their distance inland depends on the height of the storm surge. Tall berms may be the product of repeated storm deposition. Excavation of one berm in the Florida Keys revealed several layers of buried soils, evidence for burial by repeated storms at relatively long intervals (Kruer 1992). Coastal berms that are deposited far enough inland and remain long-undisturbed may in time succeed to maritime hammock.

Community Variations: This is a structurally variable community that may appear in various stages of succession following storm disturbance, from scattered herbaceous beach colonizers to a dense stand of tall shrub.

Associated Communities: Coastal berm is more easily distinguished from neighboring communities by its physical features than by their species composition. It is distinguished from Keys cactus barren and rockland hammock by occurring on coarse calcareous sediments rather than on limestone rock, or soils derived from limestone rock, and is distinguished from Keys tidal rock barren by its elevation above normal tide limits (Ross et al. 1992). It is distinguished from maritime hammock by its lack of continuous canopy and occurrence on primarily shelly rather than sandy substrates.

Management Considerations: Fires are rare to non-existent in this community. Invasion by the exotics, including Australian pine (*Casuarina equisetifolia*), Brazilian pepper (*Schinus terebinthifolius*), beach naupaka (*Scaevola taccada* var. *sericea*), portia (*Thespesia populnea*), and latherleaf (also known as asiatic colubrina; *Colubrina asiatica*), following storm disturbance is an ongoing threat to this community.

Reference Sites: Dagny Johnson Key Largo Hammock Botanical State Park (Monroe County), Long Key State Park (Monroe County); Marquesas Long Beach in Key West National Wildlife Refuge (Monroe County)

Global and State Rank: G3/S2

Crosswalk and Synonyms:

Kuchler	105/mangrove
Davis	9/mangrove swamp forests and coastal marshes
SCS	14/ tropical hammocks

SAF	none
FLUCCS	none
Whitney	beach dune systems-coastal berm

Other synonyms: strand hammock (Davis, Jr. 1942), coastal strand forest (Ross et al. 1992)

References:

Davis, J.H., Jr. 1942. The ecology of the vegetation and topography of the sand keys of Florida. Papers from the Tortugas Laboratory 33 (6) of the Carnegie Institution of Washington .

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Kruer, C.R. 1992. An assessment of Florida's remaining coastal upland natural communities: Florida Keys. Unpublished report submitted to the Florida Department of Environmental Protection. Florida Natural Areas Inventory, Tallahassee, Florida.

Ross, M.S., J.J. O'Brien, and L.J. Flynn. 1992. Ecological site classification of Florida Keys terrestrial habitats. Biotropica 24:488-502.