Sandplain Heathland

State Rank: S1 - Critically Imperiled

Heathland in a frost pocket with pine dead from insect outbreak. Photo: Patricia Swain, NHESP.

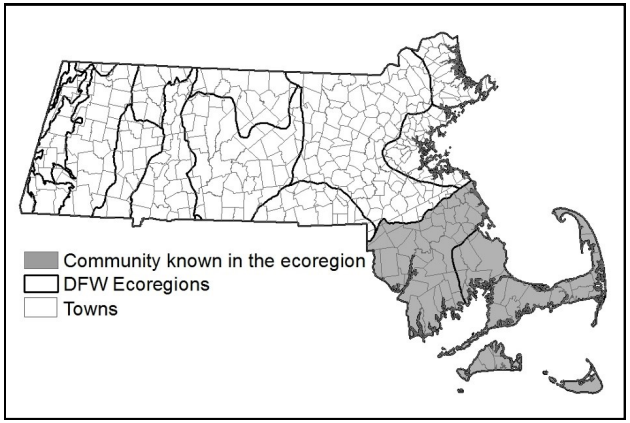
Description: Sandplain Heathlands are disturbance dependent communities occurring on sandy/gravelly outwash plains and moraines near the coast. Plant cover in these nearly treeless shrublands ranges from nearly continuous to sparse with bare soil or lichen between patches of plants. There are extreme daily and seasonal temperature variations, nutrient-poor droughty soil, and salt-laden winds. Although coastal heathlands are natural communities, until the mid-1800s land clearing, grazing, and fires increased their size and distribution. Pre-European settlement occurrences were likely small patches in successional mosaics on drought-prone soils near the coast where they were maintained by fire near Native American villages or by salt spray from coastal winds. Other occurrences are variably sized in openings in Pitch Pine – Scrub Oak Communities, often in depressions (frost pockets) on outwash sandplains where unpredictable late season frosts inhibit growth of most trees and taller shrubs.

Sandplain Heathlands are open, shrub dominated coastal communities. They share many species with Sandplain Grasslands, but also have many plants from the Heath family. Sparse patches of shrubs may have bare soil or lichen between them.

Broom-crowberry heathland. Photo: Patricia Swain, NHESP.

Characteristic Species: When black huckleberry, bearberry, and/or broom crowberry are dominant, they are considered to be indicators of a Sandplain Heathland community. In heathlands, they typically occur with other low growing woody shrubs including lowbush blueberries, bayberry, and scrub oak. Other characteristic species include hairgrass, Pennsylvania sedge, little bluestem, stiff aster, golden heather, chokeberry, sweetfern, and dewberry. Sandplain Heathlands are habitat for multiple uncommon plants in Massachusetts, including sandplain flax, sandplain blue-eyed grass, eastern silvery aster, purple cudweed, butterfly weed, and broom crowberry.

Differentiating from Related Communities: Sandplain Heathlands are part of a structural and successional continuum with other coastal communities. The best fit should be named when occurrences are not distinct. Sandplain Heathlands and Sandplain Grasslands share ~70% of their dominant species: the proportions of the species and the community structure separate the types. Sandplain Heathlands look shrubbier and taller than grasslands and have fewer plant species. Both Sandplain Heathlands and Maritime Dune Communities have low shrubs, and herbaceous and grassy growth with patches of bare soil. Dune communities are on dunes and are often dominated by beach grass and beach heather that occur less abundantly in heathlands. Sandplain Heathlands and Maritime Shrubland communities are shrublands: the Maritime Shrubland community is much denser, taller, and more diverse. Trees dominate Maritime Juniper Woodland/Shrubland and Maritime Pitch Pine Woodland on Dunes. Sandplain Heathlands - Inland Variant are located inland at distances away from maritime influences. Ridgetop Heathlands are on bedrock.



Habitat for Associated Fauna: Only a few bird species nest in Sandplain Heathlands including Horned Lark, Savannah Sparrow, Vesper Sparrow, and the Short-eared Owl that has one of its main food sources in the meadow voles that live in heathlands. Birds of prey (or raptors) that may be seen hunting over the heathlands include Red-tailed Hawk, American Kestrel, Merlin, Peregrine Falcon, and the Northern Harrier. Other animals found in heathlands include common butterflies such as the monarch and the pearl crescent and uncommon moths including the chain-dotted geometer, the coastal heathland cutworm, and barrens buckmoth, and the purple tiger beetle. Before its extirpation from Massachusetts, the regal fritillary butterfly inhabited Sandplain Heathlands.

Examples with Public Access: Wasque (TTOR), Martha's Vineyard; Middle Moors, Nantucket; Frost pockets in Myles Standish SF and Sly Ponds WMA, Plymouth.

Grassy heathland in the early spring. Photo: Patricia Swain, NHESP.

From: *Classification of Natural Communities of Massachusetts* http://www.mass.gov/nhesp/
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