Maritime Juniper Woodland/Shrubland

Community Code: CT1A2A1100

State Rank: S1

Concept: Predominantly evergreen woodland/shrubland within the coastal salt spray zone, often on dunes or bluffs over the ocean. The trees tend to be short (less than 5 m (about 15 feet)) and scattered. Tops of trees and shrubs are sculpted by winds and salt spray.

Environmental Setting: Maritime communities occur along the coast within the area of direct influence of the ocean and salt spray, but not in areas flooded by saltwater. They are usually somewhat protected from direct spray by the crests of dunes. Juniper-dominated maritime communities tend to occur on the sand of interdunal areas, backs of dunes, exposed bluffs, and salt marsh borders, and, to a lesser extent, on rocky headlands.

Vegetation Description: Trees are usually short relative to interior forests. The Maritime Juniper Woodland/Shrubland community occurs as part of a continuum of sparse shrubland to forest, and deciduous to evergreen dominants, in areas of continuous changes of levels of salt spray and substrate types. Virginia juniper, also called red cedar (*Juniperus virginiana*), dominates but occurs in variable, usually low, densities in association with scattered trees and shrubs typical of the surrounding forest such as pitch pine (*Pinus rigida*), various oaks (*Quercus* spp.), American holly (*Ilex opaca*), black cherry (*Prunus serotina*), red maple (*Acer rubrum*), bayberry (*Morella pensylvanica*), and winged sumac (*Rhus copallinum*). Greenbriar (*Smilax rotundifolia*) can be abundant in more established woodlands, particularly along open edges. The herbaceous layer is highly variable, with little bluestem grass (*Schizachyrium scoparium*), dunegrass (*Ammophila breviligulata* ssp. *breviligulata*), and sedges, often with scattered beach heather (*Hudsonia tomentosa*) or seabeach

sandwort (*Honckenya peploides*). Microtopography and local conditions strongly influence the species assemblage.

Differentiating Occurrences: Maritime Juniper Woodland/Shrubland intergrades and interdigitates with Maritime Pitch Pine Woodland on Dunes, Maritime Forest/Woodland (behind stable dunes in low protected interdunal moist areas), and Interdunal Marshes/Swales. The Maritime Juniper Woodland/Shrubland community grades from sparse shrubland to woodland, in a continuum of other communities with deciduous to evergreen dominants, in areas of constant changes of levels of salt spray and substrate stability. Even in stable situations, community edges may not be clear. Different types of communities grade into and interdigitate with each other. Very small patches of any type within another community should be considered to be part of the variation of the other community. Maritime Pitch Pine Woodlands on Dunes communities share species with the Maritime Juniper Woodland/Shrubland community, but are dominated by pitch pine. Maritime Shrubland communities are dominated by a dense mixture of primarily deciduous shrubs, but may include red cedar. Bare sand dominates Maritime Dune Communities, which are only sparsely vegetated with very scattered patches of low shrubs, including red cedar, pitch pines, herbaceous species, and grasses. The most similar vegetation to Maritime Juniper Woodland/Shrubland is old-field red cedar (which is not separated out as a community type in this classification). These are successional woodlands dominated by red cedar growing in abandoned pastures and fields and along major highways. Oldfield red cedar shrublands may be quite difficult to separate from nearby Maritime Juniper Woodland/Shrublands; they may be extensions of them, but are not maintained by salt spray, are not on steep slopes, would be expected to succeed to more forested communities, and are often more diverse. Outside of the maritime salt spray zone, some rocky outcrops with non-acidic bedrock support a shrub community that may include red cedar; in the Massachusetts classification of natural communities these are included in Circumneutral Rocky Summit/Rock Outcrop and Calcareous Rocky Summit/Rock Outcrop communities.

Associated Fauna: There are no animal species known to be restricted to maritime woodlands/shrublands. As with all maritime shrublands and woodlands, these habitats are important feeding and resting/roosting areas for migrating birds. Animal species are those of typical coastal oak areas such as the birds Eastern Towhee (*Pipilo erythrophthalmus*), Gray Catbird (*Dumetella carolinensis*), Common Yellowthroat (*Geothlypis trichas*), Ovenbird (*Seiurus aurocapillus*), and Black-and-white Warbler (*Mniotilta varia*). Small mammals such as meadow voles (*Microtus pennsylvanicus*), white-footed mice (*Peromyscus leucopus*), and gray squirrels (*Sciurus carolinensis*) are common in Massachusetts forests. Moths, butterflies, and other insects of the southeastern oak and oak-pine forest occur in maritime forests. Generally, in more salt-influenced environments, fewer animals will be expected. As in all communities on peninsulas such as Cape Cod or on islands, the more remote occurrences have fewer species than those closer to the mainland sources.

Public Access: Sandy Neck Beach Conservation Area, Barnstable; Cape Cod National Seashore, Wellfleet; Boston Harbor Islands, Hingham.

Threats: Exotics, including Oriental bittersweet (*Celastrus orbiculatus*); dune stabilization; roads through the dunes. As with other communities on dunes, these communities are sensitive to disturbance and easily damaged even by foot traffic.

Management Needs: Exotic control on the best examples. Because this is a dynamic community that moves or changes size, shape, and composition as the dunes move, large properties where natural changes can be accommodated provide long-term protection. Dune communities will be best maintained where they are part of a complex of beach and dune, woodland and shrubland, which have adequate buffers and connections between and among patches. Changes in climate that result in higher sea levels or increased severity of storms also pose direct, long-term threats.

USNVC/NatureServe: Includes: *Prunus serotina - Amelanchier spp. - Juniperus virginiana* Maritime Scrub Forest Alliance -- *Juniperus virginiana* var. *virginiana*/*Morella pensylvanica* Woodland [CEGL006212].