

II. Woodland

II.A.4.N.a.26. PINUS RIGIDA WOODLAND ALLIANCE

Pitch Pine Woodland Alliance

Physiognomic Class Woodland (II.)
Physiognomic Subclass Evergreen woodland (II.A.)
Physiognomic Group Temperate or sub-polar needle-leaved evergreen woodland (II.A.4.)
Physiognomic Subgroup Natural/Semi-natural (II.A.4.N.)
Formation Rounded-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.a.)

Alliance PINUS RIGIDA WOODLAND ALLIANCE (II.A.4.N.a.26)

Pinus rigida / Hudsonia tomentosa Woodland

Pitch Pine / Woolly Beach-heather Woodland

Pitch Pine Dune Woodland

CLASSIFICATION CONFIDENCE LEVEL: 2

USFS WETLAND SYSTEM: N/A

RANGE:

Fire Island National Seashore

This association occurs on Fire Island on stabilized dune adjacent to extensive areas of salt marsh. It does not occur on the William Floyd Estate.

Globally

This maritime woodland community is restricted to major coastal sand dune systems. It ranges from southern Maine to Cape Henlopen, Delaware; it does not occur in Connecticut or Rhode Island.

ENVIRONMENTAL SETTING:

Fire Island National Seashore

The Pitch Pine woodlands occur on sand dunes above the tidal zone; they may receive infrequent tidal flooding during storm surges.

Globally

This coastal community occurs on back dunes that are somewhat more stabilized than the oceanward foredunes. However, active sand movement occurs with storm activity, causing the boundaries of the community to migrate over time.

MOST ABUNDANT SPECIES:

Fire Island National Seashore

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus rigida</i>
Shrub	<i>Myrica pensylvanica</i>
Herbaceous	<i>Panicum virgatum</i>
Vine / liana	<i>Smilax rotundifolia</i>

Globally

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus rigida</i> , <i>Sassafras albidum</i> , <i>Juniperus virginiana</i> , <i>Prunus serotina</i>
Shrub	<i>Vaccinium pallidum</i> , <i>Gaylussacia baccata</i> , <i>Myrica pensylvanica</i>
Short shrub	<i>Hudsonia tomentosa</i>
Herbaceous	<i>Lechea maritima</i> , <i>Pteridium aquilinum</i> , <i>Dichanthelium ovale</i> var. <i>addisonii</i>
Vine / liana	<i>Smilax rotundifolia</i> , <i>Smilax glauca</i>

USGS-NPS Vegetation Mapping Program
Fire Island National Seashore

CHARACTERISTIC SPECIES:

Fire Island National Seashore

Pinus rigida, *Myrica pensylvanica*, *Smilax rotundifolia*, *Panicum virgatum*

Globally

Pinus rigida, *Hudsonia tomentosa*, lichens

VEGETATION DESCRIPTION:

Fire Island National Seashore

This maritime woodland occurs on sand dunes adjacent to shrubland or salt marsh. The canopy is composed solely of *Pinus rigida* that is 5-10 meters tall. The shrub layer is sparse with *Myrica pensylvanica* most common and *Gaylussaccia baccata* present. Vines are a prominent component, especially *Smilax rotundifolia*. Short shrubs are of sparse cover and include *Rubus flagellaris*, *Aronia melanocara*, *Gaylussacia baccata*, *Rhus copallina*. *Hudsonia tomentosa* may not always occur within this vegetation on Fire Island. The herbaceous layer is sparse with *Panicum virgatum* and *Schizachyrium scoparium* commonly occurring. Portions of Fire Island support a variant of this community in which *Pinus rigida* is stunted, reaching only 2m in height. Dowhan and Rozsa (1989) list the following additional species as common to occasional within pine woods or in open sandy areas of pine woods: *Carex artitecta*, *Minuartia caroliniana*, *Gaultheria procumbens*, *Kalmia angustifolia*, *Trientalis borealis*, and *Aronia arbutifolia*.

Globally

This maritime pitch pine woodland occurs on coastal sand dunes. The pitch pine-dominated canopy averages 10-15 meters in height, but is quite variable, ranging from 1 m in an unusual shrub form in Delaware to over 20 m. Canopy associates include *Sassafras albidum*, *Juniperus virginiana*, and *Acer rubrum*, with scattered individuals of *Quercus rubra* and *Betula papyrifera* in the northern part of the range, and *Quercus falcata* and *Pinus virginiana* to the south. The shrub layer, if present, may include *Gaylussacia baccata*, *Gaylussacia frondosa*, *Vaccinium pallidum*, *Smilax rotundifolia*, and *Smilax glauca*. The ground layer is made up of herbs and dwarf-shrubs. *Hudsonia tomentosa*, although not present in all stands, is most characteristic over the range of the type. Associated herbs include *Dichanthelium ovale* var. *addisonii*, *Solidago odora*, *Chimaphila maculata*. Lichens may form a well-developed bryophyte layer. At Cape Henlopen State Park, species included *Cladonia strepsilis*, *Cladina terrae-novae*, *Lepraria incana*, and *Cladonia squamosa*.

COMMENTS:

Fire Island National Seashore

Globally

States/Provinces:

DE:S?, MA:S?, ME:S?, NJ:S?, NY:S?

OTHER NOTEWORTHY SPECIES:

CONSERVATION RANK:

G2 (98-12-08)

DATABASE CODE:

CEGL006117

MAP UNITS:

FIIS plots 2, 9, 17

REFERENCES:

Bennett et al. 1998

Dowhan and Rozsa 1989

Maine Natural Heritage Program 1991

Nelson and Fink 1980