

USGS-NPS Vegetation Mapping Program

Isle Royale National Park

Pinus banksiana - Picea mariana / Vaccinium spp. / Pleurozium schreberi Forest

COMMON NAME	Jack Pine - Black Spruce / Blueberry species / Feathermoss Forest
SYNONYM	Jack Pine - Black Spruce / Feathermoss Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Evergreen forest (I.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen forest (I.A.8)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (I.A.8.N)
FORMATION	Conical-crowned temperate or subpolar needle-leaved evergreen forest (I.A.8.N.c)
ALLIANCE	PICEA MARIANA FOREST ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Isle Royale National Park

This community is uncommon; it is found primarily in the central portions of the island near the southeast-facing Lake Superior shore.

Globally

This community is found in northeastern Minnesota, northern Michigan, northwestern Ontario, and southeastern Manitoba.

ENVIRONMENTAL DESCRIPTION

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This community occupies moderate to somewhat steep, southeast-facing slopes at elevations from 620 to 730 feet. Soils are sandy loams that are well-drained to rapidly drained.

Globally

This community is found on flat areas and gentle upper and lower slopes but not on ridges or valley floors (Ohmann and Ream 1971). Soils are moderately deep (60-80 cm) sands, coarse loams, or silts with boulders often present at or near the surface (Ohmann and Ream 1971, Sims *et al.* 1989).

MOST ABUNDANT SPECIES

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<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus banksiana</i> , <i>Picea mariana</i>
Short shrub	<i>Vaccinium angustifolium</i>
Nonvascular	<i>Pleurozium schreberi</i>

Globally

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Pinus banksiana</i> , <i>Picea mariana</i>
Tall shrub	<i>Alnus viridis</i> , <i>Corylus cornuta</i>
Short shrub	<i>Vaccinium angustifolium</i>
Nonvascular	<i>Pleurozium schreberi</i>

CHARACTERISTIC SPECIES

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Pinus banksiana, *Picea mariana*, *Vaccinium angustifolium*, *Pleurozium schreberi*

Globally

Pinus banksiana, *Picea mariana*, *Vaccinium angustifolium*, *Pleurozium schreberi*

VEGETATION DESCRIPTION

Isle Royale National Park

This jack pine - black spruce forest type is a somewhat open canopy, evergreen forest with about 60% canopy cover. *Pinus banksiana* and *Picea mariana* are codominant in the canopy; the most abundant shrubs are *Vaccinium angustifolium*, *Rubus parviflorus*, *Lonicera canadensis*, and *Arctostaphylos uva-ursi*. The most abundant herbs are *Aster macrophyllus* and *Maianthemum canadense*. In the moss layer, the feathermoss *Pleurozium schreberi* is common (average 18% cover).

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Globally

The tree canopy is usually dominated by *Pinus banksiana*, but this species may have little successful reproduction in lower strata. *Picea mariana* is of secondary importance in the canopy but often the most abundant tree species in the lower strata (Grigal and Ohmann 1975). Other trees found in this community include *Abies balsamea*, *Acer rubrum*, *Picea glauca*, and *Populus tremuloides*. Tall and low shrubs are moderately common whereas herbaceous species are infrequent. Common shrubs include both the tall shrubs *Alnus viridis*, *Amelanchier* spp., and *Corylus cornuta*, and the low shrubs *Diervilla lonicera*, *Gaultheria procumbens*, *Vaccinium angustifolium*, and *Vaccinium myrtilloides*. Herbaceous species include *Aster macrophyllus*, *Clintonia borealis*, *Cornus canadensis*, and *Maianthemum canadense*. Mosses, especially *Pleurozium schreberi*, are abundant, and Grigal and Ohmann (1975) found that *Pleurozium schreberi* had 41% ground cover in 10 stands in northeastern Minnesota, whereas all herbaceous species had 11% coverage.

OTHER NOTEWORTHY SPECIES

Isle Royale National Park

Information not available.

CONSERVATION RANK G5.

DATABASE CODE CEGl002448

MAP UNITS 06

COMMENTS

REFERENCES

- Grigal, D. F. and L. F. Ohmann. 1975. Classification, description, and dynamics of upland plant communities within a Minnesota wilderness area. *Ecological Monographs* 45:389-407.
- Minnesota Natural Heritage Program. 1993. Minnesota's native vegetation: A key to natural communities. Ver. 1.5. Minn. Dep. Nat. Resour., Nat. Heritage Prog. St. Paul, Minn. 110 p.
- Ohmann, L. F. and R. R. Ream. 1971. Wilderness ecology: virgin plant communities of the Boundary Waters Canoe Area. Res. Pap. NC-63. St. Paul, MN. U. S. Dept. of Agr., For. Service, North Central Exper. Sta. 55 pp.
- Sims, R. A., W. D. Towill, K. A. Baldwin, and G. M. Wickware. 1989. Field guide to the forest ecosystem classification for northwestern Ontario. Ontario Ministry of Natural Resources.