

## USGS-NPS Vegetation Mapping Program

### Isle Royale National Park

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#### **Picea glauca - Abies balsamea Basalt (Conglomerate) Woodland**

COMMON NAME	White Spruce - Balsam Fir Basalt (Conglomerate) Woodland
SYNONYM	Spruce - Fir Basalt Bedrock Glade
PHYSIOGNOMIC CLASS	Woodland (II)
PHYSIOGNOMIC SUBCLASS	Evergreen woodland (II.A)
PHYSIOGNOMIC GROUP	Temperate or subpolar needle-leaved evergreen woodland (II.A.4)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (II.A.4.N)
FORMATION	Conical-crowned temperate or subpolar needle-leaved evergreen woodland (II.A.4.N.b)
ALLIANCE	PICEA GLAUCA WOODLAND ALLIANCE
CLASSIFICATION CONFIDENCE LEVEL	2
USFWS WETLAND SYSTEM	TERRESTRIAL

#### RANGE

##### ***Isle Royale National Park***

This community is uncommon, widely scattered around the park, often in sites where it grades into common juniper rocky krummholz.

##### ***Globally***

This association is found in Michigan, Minnesota, and Ontario.

#### ENVIRONMENTAL DESCRIPTION

##### ***Isle Royale National Park***

This community occupies gentle to steep slopes of rocky ridges, usually at low elevations near the Lake Superior shore, but sometimes also on high inland ridges. Sites are often on southeast- to south-facing slopes; elevations usually range from 615 to 800 feet, at least one site is at 1260 feet. Soils are usually sandy loams that are well drained to rapidly drained. Usually about 5 to 30% of the ground surface is exposed bedrock.

##### ***Globally***

Stands occur between the open basalt bedrock and the inland forests. Soils are thin and exposed areas of bedrock are common. The bedrock includes basalt, volcanic conglomerates, and localized rhyolites (Albert *et al.* 1995). This community occupies gentle to steep slopes of rocky ridges, usually at low elevations near the Lake Superior shore, but sometimes also on high inland ridges. Sites are often on southeast- to south-facing slopes; elevations usually range from 615 to 800 feet, at least one site is at 1260 feet. Soils are usually sandy loams that are well drained to rapidly drained. Usually about 5 to 30% of the ground surface is exposed bedrock (C. Reschke personal communication 1999).

#### MOST ABUNDANT SPECIES

##### ***Isle Royale National Park***

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Picea glauca</i>
Short shrub	<i>Juniperus communis</i>
Graminoid	<i>Danthonia spicata</i> , <i>Deschampsia flexuosa</i>
Nonvascular	<i>Cladina</i> spp., <i>Pleurozium schreberi</i>

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#### CHARACTERISTIC SPECIES

##### ***Isle Royale National Park***

*Picea glauca*, *Juniperus communis*, *Danthonia spicata*, *Deschampsia flexuosa*, *Cladina* spp., *Pleurozium schreberi*

##### ***Globally***

*Picea glauca*, *Juniperus communis*, *Danthonia spicata*, *Deschampsia flexuosa*, *Cladina* spp., *Pleurozium schreberi*

#### VEGETATION DESCRIPTION

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Spruce - fir basalt bedrock glade is an open canopy, evergreen woodland. Canopy cover varies from 20 to 50% and cover of tall shrubs (stunted trees) varies from 5 to 30%. *Picea glauca* is the most abundant tree (> 5 m tall) or tall shrub (2 - 5 m) with 20 to 50% cover. Other tree species that are present at low abundance (under 25% cover each) are *Abies balsamea*, *Betula papyrifera*, *Sorbus decora*, and *Thuja occidentalis*. Cover of short shrubs varies from 5 to 40%; *Juniperus communis*, *Amelanchier* spp., *Lonicera dioica*, *Rosa acicularis*, and *Diervilla lonicera* are common shrubs. Cover of herbs is usually 30 to 50%; *Danthonia spicata*, *Deschampsia flexuosa*, *Aster macrophyllus*, and *Pteridium aquilinum* are the most abundant herbs. Cover of nonvascular plants varies from 5 to 60%; *Cladina* spp. and *Pleurozium schreberi* are the most abundant nonvascular plants.

#### ***Globally***

This community consists of scattered, open-grown trees, scattered shrubs or shrub thickets, and a partial layer of graminoids, mosses, and lichens. The scattered, and often stunted, tree layer contains *Abies balsamea*, *Betula papyrifera*, *Picea glauca*, *Pinus resinosa*, *Pinus strobus*, *Quercus rubra*, *Sorbus decora*, and *Thuja occidentalis*. The shrub layer is very sparse and may contain *Amelanchier* spp. and *Juniperus communis*. More prominent is the dwarf-shrub layer, which contains *Arctostaphylos uva-ursi*, *Epigaea repens*, *Juniperus horizontalis*, *Lonicera dioica*, *Rosa acicularis*, and *Vaccinium angustifolium*. The herbaceous layer is characterized by *Achillea millefolium*, *Calamagrostis canadensis*, *Danthonia spicata*, *Festuca saximontana* (= *Festuca ovina* var. *saximontana*), *Fragaria virginiana*, and *Sibbaldiopsis tridentata* (= *Potentilla tridentata*). Mosses and lichens occur in localized patches throughout the stand.

#### OTHER NOTEWORTHY SPECIES

##### ***Isle Royale National Park***

Information not available.

CONSERVATION RANK G?

DATABASE CODE CEGl005214

MAP UNITS 62

COMMENTS

REFERENCES