

Corylus cornuta - *Amelanchier* spp. - *Prunus virginiana* Rocky Shrubland (Boreal Hazelnut - Serviceberry Rocky Shrubland)

COMMON NAME Beaked Hazelnut - Serviceberry species - Choke Cherry Rocky Shrubland
SYNONYM Boreal Hazelnut - Serviceberry Rocky Shrubland
PHYSIOGNOMIC CLASS Shrubland (III)
PHYSIOGNOMIC SUBCLASS Deciduous shrubland (III.B)
PHYSIOGNOMIC GROUP Cold-deciduous shrubland (III.B.2)
PHYSIOGNOMIC SUBGROUP Natural/Semi-natural (III.B.2.N)
FORMATION Temperate cold-deciduous shrubland (III.B.2.N.a)
ALLIANCE CORYLUS CORNUTA - AMELANCHIER SPP. SHRUBLAND ALLIANCE

CLASSIFICATION CONFIDENCE LEVEL 3

USFWS WETLAND SYSTEM TERRESTRIAL

RANGE

Voyageurs National Park

This type occurs widely in small pockets throughout the park.

Globally

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

ENVIRONMENTAL DESCRIPTION

Voyageurs National Park

The Boreal Hazelnut-Serviceberry Rocky Shrubland occurs on a wide variety of slopes, soils, topographic positions and moisture regimes. This community typically arises because of natural or human disturbance, most commonly beavers, fire, logging and blowdowns. (See Natural Disturbance). This community can also occur without disturbance, usually on ridgetops. These sites, however, are usually so small that they are often included within other communities.

Globally

This type occurs on a wide variety of slopes, soils, topographic positions and moisture regimes. It typically arises because of natural or human disturbance, most commonly beavers, fire, logging and blowdowns. This community can also occur without disturbance, usually on dry rock ridgetops that have thin, acidic soils. These sites, however, are usually so small that they are often included within other communities (C. Reschke personal communication 1999, M. Smith personal communication 1999).

MOST ABUNDANT SPECIES

Voyageurs National Park

<u>Stratum</u>	<u>Species</u>
Tall shrub	<i>Acer spicatum</i> , <i>Populus tremuloides</i> , <i>Corylus cornuta</i> , <i>Abies balsamea</i>
Short shrub	<i>Rubus strigosus</i>
Forb	<i>Aster macrophyllus</i> , <i>Polygonum cilinode</i>
Fern	<i>Pteridium aquilinum</i>

Globally

<u>Stratum</u>	<u>Species</u>
Tall shrub	<i>Corylus cornuta</i> ,
Short shrub	<i>Diervilla lonicera</i> , <i>Amelanchier</i> spp.
Forb	<i>Aster macrophyllus</i> , <i>Hieracium piloselloides</i>

CHARACTERISTIC SPECIES

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Acer spicatum, *Corylus cornuta*, *Abies balsamea*, *Rubus strigosus*, *Polygonum cilinode*

Globally

Corylus cornuta, *Diervilla lonicera*, *Amelanchier* spp., *Hieracium piloselloides*

VEGETATION DESCRIPTION

Voyageurs National Park

This shrub community usually contains a dense (70-90% cover) shrub canopy of *Acer spicatum*, *Populus tremuloides*, *Corylus cornuta* and/or *Abies balsamea*. Trees may be absent or present with less than 25% cover over the shrub layer. Trees species varies depending on the site. Where the canopy of tall shrubs is more open, short shrubs such as *Rubus strigosus*, *Taxus canadensis*, *Rubus pubescens*, and *Juniperus communis* exist at low to moderate cover. Density and composition of the herbaceous strata is highly variable. The most common species include *Aster macrophyllus*, *Pteridium aquilinum* and *Polygonum cilinode*. On wetter sites, herbaceous species such as *Calamagrostis canadensis* and *Scirpus cyperinus* may dominate.

Globally

The vegetation is dominated by shrubs, with a strong graminoid layer. Dominant shrubs include *Amelanchier* spp., *Corylus cornuta*, and *Prunus virginiana*. Other shrubs include *Acer spicatum*, *Juniperus communis*, *Rosa acicularis*, and *Rhus typhina*. Associated herbs include *Danthonia spicata*, *Hieracium* spp., and *Poa compressa*. At Isle Royale NP, this boreal rocky shrubland is a deciduous shrubland with variable physiognomy and composition. This community often has a sparse tree layer, with about 5 to 20% cover of trees over 5 m tall. The species are quite variable, but the most common trees are *Picea glauca* and *Populus tremuloides*. The tall shrub layer varies from 0 to 70% cover. On Isle Royale, the most abundant tall shrubs are *Corylus cornuta*, *Crataegus douglasii*, *Picea glauca*, *Prunus pensylvanica*, and *Sorbus decora*; the short shrub layer (including dwarf-shrubs) varies from about 10 to 80% cover, with the most abundant short shrubs being *Diervilla lonicera*, *Amelanchier* sp., *Rubus parviflorus*, *Juniperus communis*, *Rubus idaeus*, *Rosa acicularis*, and *Arctostaphylos uva-ursi*. At Voyageurs NP the tall shrub layer contains *Acer spicatum*, *Populus tremuloides*, *Corylus cornuta* and/or *Abies balsamea*; where the canopy of tall shrubs is more open, short shrubs such as *Rubus strigosus*, *Rubus pubescens*, *Taxus canadensis* and *Juniperus communis* exist at low to moderate cover. On Isle Royale the herb layer varies from 5 to 80% cover; the most abundant herbs are *Aster macrophyllus*, *Hieracium piloselloides*, *Clinopodium vulgare*, *Poa compressa*, *Danthonia spicata*, and *Pteridium aquilinum*. The cover of nonvascular plants varies from about 5 to 60% cover, with lichens (including *Cladina* spp.), and mosses. At Voyageurs, the density and composition of the herbaceous strata is highly variable. The most common species include *Aster macrophyllus*, *Pteridium aquilinum* and *Polygonum cilinode*. On wetter sites, herbaceous species such as *Calamagrostis canadensis* and *Scirpus cyperinus* may dominate. (C. Reschke personal communication 1999, M. Smith personal communication 1999).

CONSERVATION RANK G?.

DATABASE CODE CEGL005197

COMMENTS

Voyageurs National Park

Diagnostic features of the type are the upland deciduous shrubs with over 25% cover and trees with less than 25% cover. These stands generally classify best with the types that match the previous tree canopy that existed on the site. When trees approach 25% cover, the Boreal Hazelnut-Serviceberry Rocky Shrubland can grade into whatever community is appropriate for the tree canopy. This type can have patches of exposed bedrock but tree canopy closure is not prevented by it.

This community typically arises because of a wide variety of disturbances. Outside the park (and in some locations within the park) this shrub community arises after logging has removed the tree canopy. In these circumstances, the shrubs are typically dense *Populus tremuloides* saplings. This community is also common on slopes above beaver ponds where beaver have removed all or most of the tree canopy. In these situations, the shrubs are usually dense *Corylus cornuta* and *Acer spicatum*. The Boreal Hazelnut-Serviceberry Rocky Shrubland can also occur on ridge tops, high slopes and other places where high winds have blown down the trees in the canopy. Finally, this community also arises after fire has killed the trees in the canopy.

Globally

This community often has evidence of past fires; it can be a successional stage following a severe burn. It seems to be an intermediate successional stage after Poverty grass barrens that may gradually develop into a woodland. Soils are often very shallow, and successional development is very slow on the exposed rocky summits where this community is found; so the community may be a fairly long-lived and stable successional stage (C. Reschke personal communication 1999). This type can also arise after logging has removed the tree canopy. In these circumstances, the shrubs are typically dense *Populus tremuloides* saplings. This community is also common on slopes above beaver ponds where beaver have removed all or most of the tree canopy. In these situations, the shrubs

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REFERENCES