

USGS-NPS Vegetation Mapping Program

Isle Royale National Park

Acer rubrum - Fraxinus spp. - Betula papyrifera / Cornus canadensis Forest

COMMON NAME	Red Maple - Ash species - Paper Birch / Canadian Bunchberry Forest
SYNONYM	Red Maple - Ash - Birch Swamp Forest
PHYSIOGNOMIC CLASS	Forest (I)
PHYSIOGNOMIC SUBCLASS	Deciduous forest (I.B)
PHYSIOGNOMIC GROUP	Cold-deciduous forest (I.B.2)
PHYSIOGNOMIC SUBGROUP	Natural/Semi-natural (I.B.2.N)
FORMATION	Saturated cold-deciduous forest (I.B.2.N.g)
ALLIANCE	FRAXINUS NIGRA - ACER RUBRUM SATURATED FOREST ALLIANCE
CLASSIFICATION CONFIDENCE LEVEL	2
USFWS WETLAND SYSTEM	TERRESTRIAL

RANGE

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This community is rare, apparently restricted to a few wet depressions on the southeast-facing upper slopes of the Greenstone Ridge.

Globally

This association occurs in northern Minnesota, northern Michigan, Ontario, and possible northern Wisconsin.

ENVIRONMENTAL DESCRIPTION

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This community occupies sites with poorly drained wetland depressions at relatively high elevations (ca 1000 ft) near top of Greenstone Ridge, on the south side of ridge, in a shallow depression with muck soils.

Globally

Stands are typically found on muck and shallow peat on lake plains and floodplains (MN NHP 1993).

MOST ABUNDANT SPECIES

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<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Acer rubrum</i> , <i>Betula papyrifera</i>
Tall shrub	<i>Alnus viridis</i> , <i>Alnus incana</i>
Forb	<i>Aster macrophyllus</i> , <i>Aralia nudicaulis</i>
Graminoid	<i>Calamagrostis canadensis</i> , <i>Carex rostrata</i>

Globally

<u>Stratum</u>	<u>Species</u>
Tree canopy	<i>Acer rubrum</i> , <i>Betula papyrifera</i> , <i>Fraxinus nigra</i> , <i>Fraxinus pennsylvanica</i>
Tall shrub	<i>Alnus incana</i>
Fern	<i>Onoclea sensibilis</i> , <i>Osmunda cinnamomea</i> , <i>Osmunda claytonia</i>
Forb	<i>Aster macrophyllus</i> , <i>Aralia nudicaulis</i> , <i>Impatiens capensis</i>
Graminoid	<i>Calamagrostis canadensis</i> , <i>Carex rostrata</i>

CHARACTERISTIC SPECIES

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Acer rubrum, *Betula papyrifera*, *Alnus viridis*, *Alnus incana*

Globally

Acer rubrum, *Betula papyrifera*, *Fraxinus nigra*, *Alnus incana*

VEGETATION DESCRIPTION

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This maple-ash swamp community is an open canopy, deciduous wooded swamp. Canopy cover varies from 50 to 60%; the most abundant tree is either *Acer rubrum* or *Betula papyrifera* (25 to 60% cover). Tall shrub cover is about 20 to 30%; the most abundant shrub is either *Alnus viridis* or *Alnus incana*. Cover of herbs varies from 60 to 90%; the most abundant herbs are *Calamagrostis canadensis*, *Carex rostrata*, *Aster macrophyllus*, and *Aralia nudicaulis*.

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Globally

The canopy structure is variable, with cover ranging from open (25-60%) to closed (60-100%). Common canopy dominants include *Acer rubrum*, *Betula alleghaniensis*, *Betula papyrifera*, *Fraxinus nigra*, *Fraxinus pennsylvanica*, and occasional *Larix laricina*, *Pinus strobus*, and *Ulmus americana*. *Pinus strobus* may form a patchy supercanopy above the hardwood canopy. Common shrubs include *Abnus incana* and *Rhus vernix*. Other associates include *Ilex verticillata*, *Ribes* spp., and *Rubus strigosus*. Dwarf-shrubs may include *Cornus canadensis*. The herbaceous layer contains *Calamagrostis canadensis*, *Carex stipata*, *Impatiens capensis*, *Mitella nuda*, *Onoclea sensibilis*, *Osmunda cinnamomea*, *Osmunda claytoniana*, *Saxifraga pensylvanica*, and others (MN NHP 1993, Wovcha *et al.* 1995). A seepage swamp subtype can occur where steep sandy slopes and gravelly slopes merge with a river or stream terrace. The groundlayer can be exceptionally diverse, with characteristic seepage species including *Angelica atropurpurea*, *Carex bromoides*, *Hydrocotyle americana*, *Poa paludigena*, *Saxifraga pensylvanica*, and *Symplocarpus foetidus* (MN NHP 1993, Wovcha *et al.* 1995).

OTHER NOTEWORTHY SPECIES

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Information not available

CONSERVATION RANK G4.

DATABASE CODE CEGL002071

MAP UNITS 27

COMMENTS

REFERENCES

- 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.
- Wovcha, D.S., B.C. Delaney, and G. Nordquist. 1995. Minnesota's St. Croix Valley and Anoka sandplain: a guide to native habitats. University of Minnesota Press, Minneapolis, MN. 234 p.