

Evergreen Seepage Forest

State Rank S4

Community Description

Northern white cedar and other conifers form a moderate to dense canopy cover (70-95%), allowing only patchy light to penetrate to the forest floor. Northern white cedar is the dominant tree, though red spruce, white spruce, or black spruce may be co-dominant on some sites. Balsam fir, red maple, or yellow birch may be present but not dominant. Shrubs and dwarf shrubs are typically sparse but may be more abundant in canopy gaps caused by harvesting or natural disturbance. The herb layer may be extensive, typically >50% cover, and comprised mostly of non-woody species with northern affinities such as bunchberry, twinflower, or creeping snowberry. The forest floor is characterized by a rich growth of mosses; generally, feather-mosses and liverworts are more abundant than peat mosses.

Soil and Site Characteristics

The substrate is shallow peat or organic material over mineral soil, generally saturated with cold groundwater. Water may emerge to form rivulets or small spring fed brooks, or it may remain under the thick layer of mosses. These forests are typically found on gentle, saturated slopes with groundwater seepage, often at the base of slopes near drainage outlets.

Diagnostics

These closed canopy (>70%) forests are dominated by northern white cedar on mineral soil (may have a thin organic layer on top, but not deep peat). The bryophyte layer is dominated by feather-mosses and leafy liverworts rather than by peat mosses. Groundwater seeps may be visible.

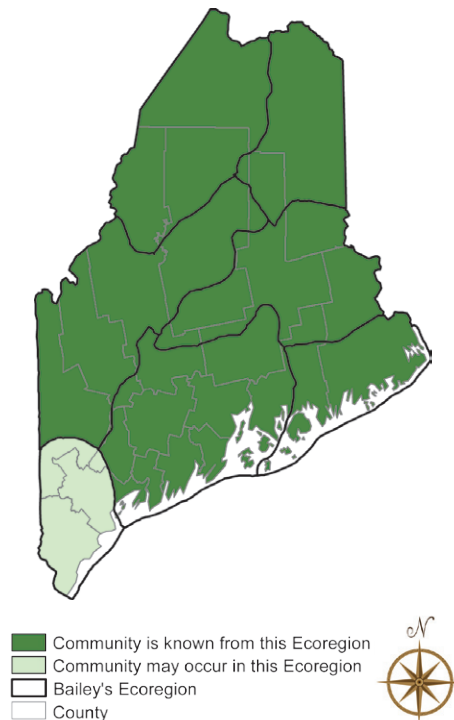
Similar Types

Most similar to and often grade into Northern White Cedar Swamps, which occur in saturated, level basins on organic rather than mineral soils with extensive cover of peat mosses. Northern White Cedar Woodland Fens are partially forested peatlands with a patchy canopy of cedar and a substantial cover of heath or other dwarf shrubs (usually >15% cover), on moderate to deep peat soils. Cedar - Spruce Seepage Forests with a substantial amount of red spruce could grade into Spruce - Fir - Cinnamon Fern Forests, which usually occur on flats.

Conservation, Wildlife, and Management Considerations

Most known occurrences of this community type in Maine have been harvested in the

Location Map



Northern White Cedar Branch

past, often targeting removal of spruce. Forest management generally does not result in permanent conversion of this type, although questions remain about how to most successfully regenerate cedar. Some high quality examples exist on public and private conservation lands.

Cedar - spruce seepage forests support numerous orchid species, including some that are rare. This community type may be used as nesting habitat by a number of coniferous forest specialist bird species, including black-backed woodpecker, palm warbler, yellow-bellied flycatcher, gray jay, boreal chickadee, Swainson's thrush, and northern waterthrush. Dead trees provide ideal habitat for three-toed woodpecker. Cool, well-oxygenated forested seeps provide habitat for the northern spring salamander.

Distribution

Primarily northern in distribution, extending westward and into Canada.

Landscape Pattern: Large Patch. Sites tend to be large (hundreds of acres) in northern Maine and smaller in central and southern Maine.

Examples on Conservation Lands You Can Visit

- Big Reed Pond Preserve - Piscataquis Co.
- Chamberlain Lake Public Lands - Piscataquis Co.

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Canopy

Balsam fir
Northern white cedar*
Red spruce*

Sapling/shrub

Fly honeysuckle

Herb

Bunchberry
Creeping snowberry
Dewdrop
Goldthread
Northern wood-sorrel
Oak fern
Three-seeded sedge
Twinflower

Bryoid

Mountain fern moss
Sphagnum mosses
Three-lobed bazzania

Associated Rare Plants

Giant rattlesnake-plantain
Showy lady's-slipper
Small yellow water crowfoot
Swamp fly honeysuckle

Associated Rare Animals

Northern spring salamander

- Deboullie Ponds Public Lands - Aroostook Co.
- North Branch Inlet, Squa Pan Public Lands - Aroostook Co.
- Pollywog Gorge, Nahmakanta Public Lands - Piscataquis Co.
- Salmon Brook Lake Bog Public Lands - Aroostook Co.
- Sunhaze Meadows National Wildlife Refuge - Penobscot Co.