

# Spruce - Northern Hardwoods Forest

**State Rank S5**

## Community Description

This mixed forest type is characterized by red spruce and yellow birch, or less often another hardwood (sugar maple, red maple, or beech). Scattered large supercanopy white pine trees are occasional. Balsam fir and paper birch are common, typically as smaller trees, and hemlock may be an associate at some sites. The sapling/shrub layer may be fairly well developed (20-40% cover), with striped maple and saplings of canopy species; shrub species vary among sites. The herb layer ranges from sparse to dense but is usually >15% cover, divided between forbs, ferns, and regenerating trees, with dwarf shrubs virtually absent. The bryoid layer is patchy and locally well developed, with bryophytes far more abundant than lichens. As is typical in mesic forests in Maine, three-lobed bazzania is a frequent bryophyte.

## Soil and Site Characteristics

These forests occur on cooler microsites from near sea level to 2200'. They are usually on hillslopes, ranging from lower to upper slopes and from gentle to steep (up to 50%). The soils are typically well drained, sometimes somewhat excessively drained, sandy to loamy in texture, with pH 5.0-5.4.



Balsam Fir

## Diagnostics

Sites are distinguished by a mixture of red spruce and northern hardwoods (most often yellow birch) in the canopy; conifer and deciduous components exceed 25% cover each.

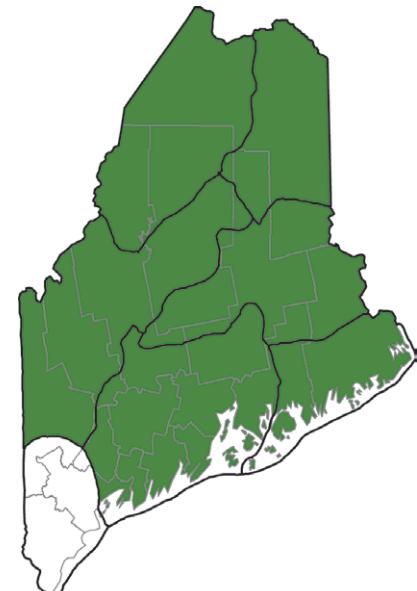
## Similar Types

Beech - Birch - Maple Forests are more strongly deciduous. Spruce - fir forest types can be similar but have <25% cover of northern hardwood species. Both of these types can be contiguous with this type and may intergrade with it.

## Conservation, Wildlife, and Management Considerations

Nearly all forests of this type have been harvested in the past, and at many sites the

## Location Map



Community is known from this Ecoregion  
Community may occur in this Ecoregion  
Bailey's Ecoregion  
County



Three-lobed Bazzania

spruce has been selectively removed. As a result, the canopies of such sites are more often indicative of Beech - Birch - Maple Forests, with spruce and fir more common in the understory than in the canopy. Sites with relatively little human disturbance are rare but are moderately well represented on conservation lands.

This type provides nesting habitat for a large number of passerine bird species, including sharp-shinned hawk, Cape May warbler, black-throated blue warbler, black-throated green warbler, Blackburnian warbler, scarlet tanager, spruce grouse, Swainson's thrush, northern parula, and ovenbird. The globally uncommon early hairstreak butterfly uses beech as its larval host plant.

## Distribution

Most characteristic of the New England - Adirondack Province, and extending westward from Maine; found to a lesser extent in the Laurentian Mixed Forest Province.

Landscape Pattern: Matrix. This type is intended to represent forests that are truly 'mixed' at a stand scale, rather than large blocks containing a mosaic of distinct conifer and hardwood stands. For the latter example, the 'Spruce - Northern Hardwood Forest Ecosystem' is a more appropriate mapping unit.

## Characteristic Plants

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

### Canopy

Balsam fir\*  
Red spruce\*  
White pine\*  
Yellow birch\*

### Sapling/shrub

American beech  
Balsam fir\*  
Hobblebush\*  
Mountain maple\*  
Red maple  
Red spruce\*  
Striped maple\*  
Yellow birch

### Herb

Northern wood-sorrel  
Spinulose wood fern\*  
Starflower

### Bryoid

Dicranum moss  
Flat-tufted feather-moss  
Pincushion moss  
Three-lobed bazzania

## Associated Rare Plants

Giant rattlesnake-plantain

## Associated Rare Animals

Early hairstreak

## Examples on Conservation Lands You Can Visit

- Big Reed Pond Preserve - Piscataquis Co.
- Black Mountain, Mahoosuc Public Lands - Oxford Co.
- Chamberlain Lake Public Lands - Piscataquis Co.
- Cranberry Brook, Moosehorn National Wildlife - Washington Co.
- Western Mountain, Acadia National Park - Hancock Co.