

## T10.6 TREES

Nova Scotia has about forty species of native trees.<sup>1</sup> Some (e.g., cherry, mountain ash, Staghorn Sumac, Witch Hazel, Striped and Mountain Maples, Shadbush, hawthorn, willow and alder) are large shrubs that often reach tree status. Numerous exotics have been introduced as ornamentals and fruit trees and for reforestation.

Traditionally, people have grouped temperate forest trees as softwood or hardwood. While forest-

ers also use this grouping, they consider the terms coniferous (or evergreen) and deciduous (shedding leaves yearly) more useful. However, these terms do present some problems. Larch or tamarack, though cone-bearing, sheds its needles annually; by contrast, all other native conifers lose their needle-leaves over a three- to five-year period and replace them each spring with new needles formed at the growing tips. The aspens and Balsam Poplar are

Species	Shade Tolerance	Moisture Status	Topography	Common Reproductive Method	Successional Status	Life Span*
<b>Hardwoods</b>						
Red Maple	Low/moderate	Wet-dry	Swamps to uplands	Seed/Vegetative	Early-mid	2a
Yellow Birch	Moderate	Moist/dry	Slopes and uplands	Seed	Mid-to-near climax	3
Sugar Maple	High	Moist/dry	Deep soils on slopes and uplands	Seed	Climax	3
White Birch	Low	Moist/dry	Steep slopes; Burned lowlands	Seed	Early	2a
Mountain Paper Birch	Low	Moist/dry	Cooler maritime areas; High elevations	Seed	Early	2a
Large-toothed Aspen	Low	Moist/dry	Rolling topography after burns	Seed/Vegetative	Early	1
Trembling Aspen	Low	Moist/dry	Rolling topography after burns	Seed/Vegetative	Early	1
Balsam Poplar	Low	Dry	River floodplains in Cape Breton	Seed/Vegetative	Pioneer	1
Beech	High	Moist/dry	Hills	Seed/Vegetative	Climax	3
Red Oak	Moderate	Moist/dry	Hills	Seed	Early-to-mid	3
White Ash	Moderate	Wet/moist	Seepage hills; Swamps	Seed	Mid	2b
Grey Birch	Low	Moist/dry	Hills after fire	Seed	Early	1
American Elm	Low	Moist	River floodplains; Occasional uplands	Seed	Early-mid	2b
Black Ash	Moderate	Wet/moist	Swamps and river intervals	Seed	Mid	2b
Ironwood	High	Moist/dry	River floodplains; Uplands	Seed	Near climax	2b

**Table T10.6.1a:** Characteristics and site preferences of native Nova Scotian trees — Hardwoods. **Note:** The symbol (-) indicates a range from one status to another; the symbol (/) indicates separate preferences. \*Life Span: 1 – 50 to 100 years • 2a –100 to 150 years • 2b –100 to 350 years • 3 –250 to 450 years

Species	Shade Tolerance	Moisture Status	Topography	Common Reproductive Method	Successional Status	Life Span*
<b>Softwoods</b>						
Balsam Fir	High	Moist/dry	Highlands; Rolling lowlands; Exposed coastal headlands	Seed	Early pioneer/Climax	1
Red Spruce	High	Moist	Rolling lowlands	Seed	Near climax	3
White Spruce	Low	Moist/dry	Abandoned fields; Exposed coastal headlands	Seed	Early/pioneer	2a
Black Spruce	Moderate	Wet/dry	Shallow organic, flat lowlands	Seed/ Vegetative	Early	2a
White Pine	Moderate	Moist/dry	Sandy to rocky lowlands	Seed	Early-mid oldfields and post-fire	3
Hemlock	High	Moist	Ravines and slopes; Lowlands	Seed	Climax	3
Red Pine	Moderate	Dry/moist	Sandy lowlands	Seed	Early post-fire	2b
Larch	Low	Wet	Swamps/Bogs; Moist oldfields	Seed	Early	2a
Jack Pine	Low	Dry	Shallow, rocky fire barrens	Seed	Early post-fire	2a
Cedar	Low	Wet/moist	Swamps	Seed	Early	2a

**Table T10.6.1b:** Characteristics and site preferences of native Nova Scotian trees — Softwoods. **Note:** The symbol (-) indicates a range from one status to another; the symbol (/) indicates separate preferences. \*Life Span: 1 –50 to 100 years • 2a –100 to 150 years • 2b –100 to 350 years • 3 –250 to 450 years

other exceptions: although they are grouped with hardwoods because they are deciduous, their wood is softer than that of any native softwood except cedar.

Table T10.6.1 shows the major characteristics of the most conspicuous of Nova Scotia’s native trees.

Coniferous and deciduous species are further divided into two broad groups on the basis of ability to tolerate shade in youth. Yellow Birch, Sugar Maple, beech, and Ironwood are classed as shade-tolerant, while White and Grey Birch, Large-toothed and Trembling Aspen and Balsam Poplar are considered shade-intolerant. Among native conifers, the most shade-tolerant are Red Spruce, Hemlock and Balsam Fir; White Spruce, Jack Pine and Larch are shade-intolerant; Red Maple, ash, Red Oak, American Elm, White Pine, and Black Spruce are intermediate in shade tolerance.

Most hardwood species prefer the better-drained sites. Shade-tolerant hardwoods constitute the climax species on the slopes and well-drained hilltops throughout the province. Softwoods are more typical of the imperfectly and poorly drained sites in Nova Scotia. Red Spruce, White Pine and hemlock

form the climax forest type in flatter, moderately well-drained to very dry sites. When the topography is mixed and rolling, the climax vegetation types approach the regional climatic climax, the “Eastern Hemlock, White Pine Northern Hardwood” forest of Nichols.<sup>2</sup> Certain species of hardwood and softwood are typical of old forests. These trees and their relative ages are listed in Table H61.1 in Introduction to Forest Habitats.



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Trees**

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**Associated Topics**

T9 Soils, T10 Plants,

**Associated Habitats**

H2.6 Dune System, H4 Freshwater Wetlands, H5.1 Barren, H5.2 Oldfield, H5.4 Talus Slope, H6 Forests

**References**

- 1 Saunders, G. (1985) *Trees of Nova Scotia*. N.S. Dept. of Natural Resources, Lands and Forests Division.
- 2 Nichols, G.E. (1935) "The Hemlock-White Pine-Northern Hardwood Region of Eastern North America." *Ecology* 16(3).

**Additional Reading**

- Braun, L.E. (1950) *Deciduous Forests of Eastern North America*. Hafner, New York.
- Greenidge, K.N.H. (1987) "Compositional-structural relations in old-growth forests, Cape Breton Island." *Rhodora* 89(859).
- Hosie, R.C. (1969) *Native Trees of Canada*. Queen Printer, Ottawa.
- Loucks, O.L. (1962) "A forest classification for the Maritime Provinces." *Proc. N.S. Inst. Sci.* 25(2).
- Roland, A.E. and E.C. Smith (1969) "The Flora of Nova Scotia." Nova Scotia Museum, Halifax. (Currently under revision).
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