

Old-Growth Forest Initiative

Old-Growth in the Northwoods of Wisconsin

Only about 1% of Wisconsin's old-growth forests remain intact, according to the Wisconsin Department of Natural Resources (WDNR). Old-growth forests are generally identified as unharvested or minimally harvested woodland with the presence of large trees older than a 125-year average age (*depending on the species, it can be 120 to 150-year average age*). Essentially, the trees that have been growing since the first clearing of the forests in the northwoods.

Other defining features of old-growth forests include a diversity of characteristic plant and animal species, multi-layered vegetation (not just old trees!), canopy gaps (sunlight to reach the forest floor), large snags and cavity trees (standing dead trees and trees with holes in them), and coarse woody habitat (large fallen logs and limbs).

Types Old-Growth Forest

The old-growth forest communities most commonly found in the northwoods include:

- 1. Hemlock-hardwood:** This type of old-growth forest is most abundant, and is dominated by the shade-tolerant eastern hemlock. *However, only about 0.2% of this forest type remains compared to pre-settlement forest cover.*

The soils are acidic and forests damp and shaded. The understories are generally open, and are typically devoid of wind. Most hemlocks here survive to be about 140 – 170 years of age, but can live to over 400 years.

Other tree species in these forests typically include sugar maple, yellow birch and small numbers of super-canopy white pines that rise above the other trees.

The understories are sparse, but where gaps in the canopy let sunlight in, you may find beaked hazelnut, red elderberry, American fly-honeysuckle and thimbleberry, with an herb layer of bracken and lady fern, Canada mayflower, wild sarsaparilla, rosy twisted stalk and sweet cicely. Wildlife species that prefer these forests include the blackburnian warbler, black-throated green warbler, ovenbird and American marten.



Hemlock – hardwood forest
By Ron Eckstein



Cathedral Pines
Courtesy of USDA Forest
Service.

2. Pine: In the northwoods the pine forests were historically concentrated in areas with sandy soils such as the headwaters lake region in Vilas and Oneida Counties.

Most white pine here survive to be about 150 years of age, but can live to over 400 years. Old white and red pine that have survived logging and forest fires are typically found on the shores and peninsulas of lakes, and along the edges of streams and wetlands.

These multi-layered forests, with mixed shade and sun reaching the floor, typically include red oak, red maple, aspen, paper birch, black cherry, balsam fir and northern pin oak. The understory typically includes bush honeysuckle, maple-leaved viburnum, hazelbrush,

trailing arbutus, Canada mayflower, wild sarsaparilla, big-leaved aster, starflower, blueberry, bracken fern and wintergreen.

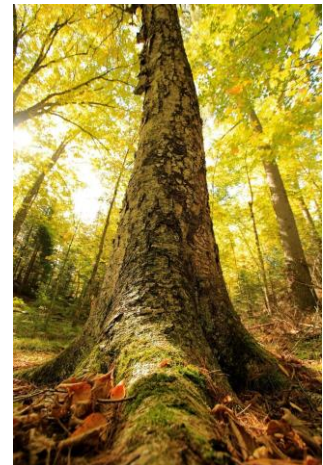
Wildlife species that prefer older pine forests include the pine warbler, bald eagle, pine siskin, purple finch and crossbill.

3. Northern hardwood: Historically these northern hardwood old-growth stands are found in north eastern Wisconsin where soils are loamy.

These forests are dominated by the shade-tolerant sugar maple, with basswood, beech, white ash and yellow birch mixed in. Since the forests were cut over in the late 1800s and early 1900s, aspen, white birch and red maple are more commonly found.

Most sugar maple survive to about 140 – 170 years of age, but can live to be over 300 – 400 years. These forests have more than twice the average amount of coarse woody debris compared to younger, managed forests, and offer far greater structural complexity, being multi-layered in height. Typical dense understories are filled with shrubs and wildflowers.

Wildlife species that prefer older northern hardwood forests include the American marten, porcupine, woodpecker, black-throated blue warbler, Acadian flycatcher, chimney swift, winter wren and ovenbird.



Old-growth hardwood
By Anne Small



Tamarack & black spruce forest
By Ron Eckstein

4. Swamp/Wetland Conifers: The more acid bog forests include black spruce, and are carpeted in sphagnum moss, with understories of leatherleaf, Labrador tea, creeping snowberry and small cranberry. Since sphagnum mosses limit tree growth, existing black spruce trees that are only 10 feet tall may be a century or more old.

In less acidic bog forests, tamarack dominate. These wetlands can support more species diversity, with speckled alder, alder-leaved buckthorn, bog holly and winterberry holly. Tamarack tend to grow taller than black spruce, although not to any significant

heights in a wetland environment.

In cedar swamps, cedars can be very old but appear to be young. In these swamps a wide array of orchids can be found.

Protected Old-Growth in the Northwoods

Government agencies and nonprofit organizations are protecting some of these rare forest resources. The federally-designated Headwaters Wilderness Area, Blackjack Springs Wilderness Area and Whisker Lake Wilderness Area on the Nicolet side of the [Chequamegon-Nicolet National Forest](#) are sites with some protected old-growth forest. [Cathedral Pines](#) is a 40-acre grove of white pine, hemlock and red pine that escaped cutting, located in the National Forest'

The northwoods region also features State Natural Areas (SNAs) designated by the [Wisconsin Department of Natural Resources' Bureau of Endangered Resources](#) as tracts of land in a natural or near-natural state. A number of these SNAs have old-growth forest components – including those that are privately owned. Some great examples include the Plum Lake Hemlock SNA; Van Vliet Hemlocks SNA; Franklin & Butternut Lakes SNA and Cathedral Pines SNA.

The Nature Conservancy owns the [Guido Rahr, Sr. Tenderfoot Forest Reserve](#), 500 acres of old-growth hemlock-hardwood forest - a critical link in a network of public and private forest lands that make up the Border Lakes Area.



Sylvania Wilderness Area
By Carrie Rasmussen

The [Sylvania Wilderness Area](#) in nearby Watersmeet, Michigan is a part of the National Wilderness Preservation System and a great area to view old-growth forest. Additional stands of old-growth forest exist on [Wisconsin Board of Commissioners of Public Lands \(BCPL\) property](#). BCPL in particular holds a number of tracts of land that were never logged. NWLT has been collaborating with BCPL to protect a handful of these properties, including #2-4 below.

Discover Other Old-Growth Sites in Wisconsin

[“Our Living Ancestors: The History and Ecology of Old-growth Forests in Wisconsin and Where to Find Them”](#) by John Bates includes many more fascinating old-growth sites located throughout Wisconsin.

The [Menominee Forest](#) includes impressive and significant mature and old-growth stands. The Forest is a 235,000-acre working forest on the Menominee Reservation in northeastern Wisconsin.

NWLT-Owned Old-Growth Forest Sites

1. The [Holmboe Conifer Forest](#) (Oneida County) is owned by the Northwoods Land Trust (NWLT), while designated as a State Natural Area. It includes old-growth hemlock stands and features hiking trails to the Pelican River.
2. The [Dan Wisniewski Deerskin River Preserve](#) (Vilas County) includes a stand of old-growth white cedar. This property is accessible by canoe and kayak.
3. The [Beaver Creek Hemlocks Conservation Area](#) (Iron County) includes mature and old-growth hemlock-hardwood forest, with a network of hiking trails that pass through it.
4. The [Sack Lake Hemlocks Conservation Area](#) (Iron County) includes old-growth hemlock-hardwood forest and has been identified as particularly important habitat for the American marten, a Wisconsin Endangered Species. The property is difficult to access, and there are no trails.



American marten peeking out of an old, down yellow birch cavity
By Zach Wilson

Visit our [Conserved Lands page](#) to learn more about these sites and for directions to visit them.

Old-Growth on Private Lands

Remaining pockets of old-growth habitat types do exist on private lands, typically in small, isolated parcels or along shorelines. These stands have not been comprehensively identified or mapped.

If you own property with mature to old-growth forest, or know of people that do, you are encouraged to contact us, or make a referral, to discuss conservation options. Read our other educational resource, "[Learn How You Can Protect Your Mature or Old-Growth Forest](#)" on this page, and visit our [Protect Your Land page](#) for more information.



The Northwoods Land Trust's (NWLTT) [Old-Growth Forest Initiative](#) identifies and protects old-growth forest habitat in the northwoods of Wisconsin in partnership with landowners and other organizations and provides educational materials to encourage private landowners to manage for old-growth forest habitat and protect some of these last remaining relics.