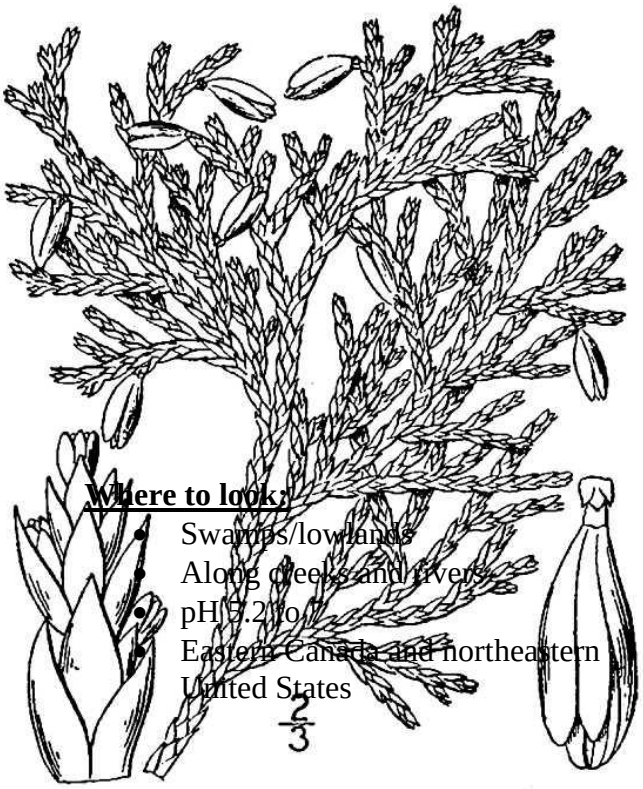
Northern White Cedar- *Thuja Occidentalis*, *Nookomis Giizhik*- "Grandmother Cedar"

How to use it:

- Fire
- Building structures
- Leaves used for tea, rich in Vitamin C
- Leaves commonly used for smudging
- Medicinal tea
- Harvest oil from bark for cleanser, disinfectant, hair conditioner,
- Inner bark used as twine/lashing
- Inner bark tea
- Inner bark for basket weaving and other crafts
- Outer bark as covering
- Outer bark for basket making
- Outer bark as fire starter
- Logs for homes/ furniture
- Twig teas to relieve constipation/ headache
- Medicinal oil treats warts and ringworm
- pH indicator

What to look for:

- Red/brown, vertically split bark
- Short, scaly, needle-like leaves
- Scaly, cylindrical seed cones
- Spring pollen cones, yellow with black scales
- Seed and pollen cones grow in spring as a yellow green color and ripen to brown in the fall.



Where to look:

- Swamps/lowlands
- Along creeks and rivers
- pH 5.2 to 7
- Eastern Canada and northeastern United States

Naming:

The Northern White Cedar is classified as *Thuja occidentalis* in the Cupressaceae family along with 19 other cypress Genera. It shares the Genus *Thuja* with the Western Red cedar, *Thuja plicata,* a larger cedar of western North America. The Northern White Cedar is sometimes called the Eastern White Cedar.

The Aanishinaabe name for *Thuja occidentalis* is *nookomis Giizhik,* meaning Grandmother Cedar. The Grandmother Cedar is very important to the Aanishinaabe culture. *nookomis Giishik* is used as a symbol for the southern direction on the medicine wheel, which is said to represent summer and youth. It is also seen as the umbilical cord that connects the Earth Mother to the Sky Father. Because of It's significance to the Anishinaabek it is used to communicate with god through prayer, during which it is often burned for smudging and drank as tea. Cedar is also hung in homes for protection and good health (Herron, 2002).

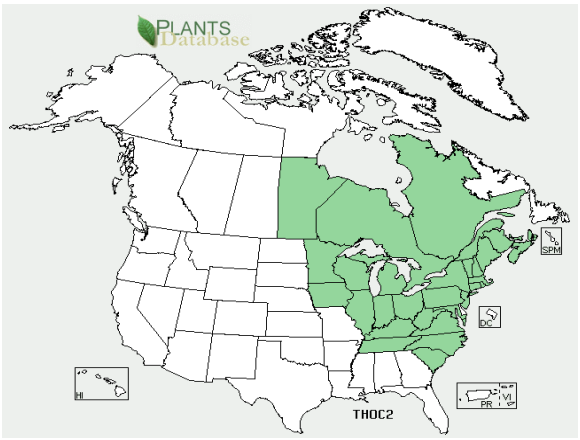
Identification:

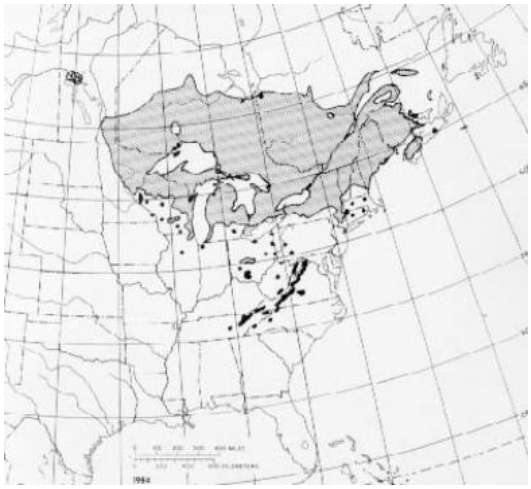
At a glance, a cedar has flat, yellowish green leaves with a hidden stem. The seed cones are small, oblong with brown scales. The bark of the tree is a brown-red color that appears shredded in vertical strips. The White Cedar is typically found in swamps or next to running water and typically stands 30-50 ft (10-15 m) high and is 12-24 in (30-60 cm) in diameter at maturity USDA NRCS, 2012).

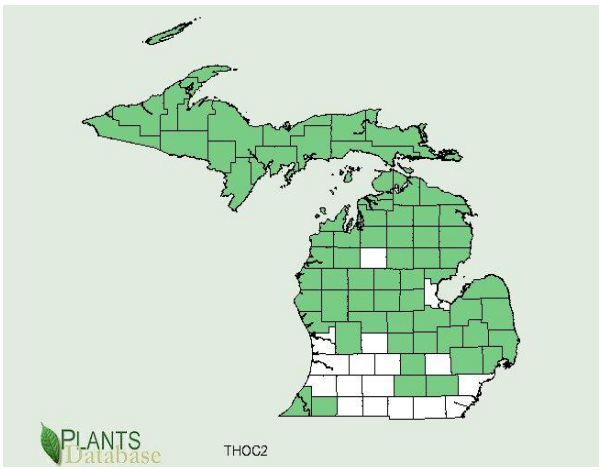
- **Bark**: Thin, brown-red, vertical strips (Barnes and Wagner, 1981).
- **Leaves**: scale like in 2 pairs that cover the stem. The leaves are yellow-green and are strongly aromatic (Barnes and Wagner, 1981).
- **Twigs**: slender, yellow-green, flat, arranged in fernlike sprays (Barnes and Wagner, 1981).
- **Winter Buds**: appear naked, minute (Barnes and Wagner, 1981).
- **Pollen Cones:** At the ends of new shoots, yellowish with black scales found in April-May (Barnes and Wagner, 1981).
- **Seed Cones**: Small oblong-cylindrical, reddish with 8-12 seed scales. They appear in April-May and are rip in early autumn (Barnes and Wagner, 1981).
- **Wood Characteristics:** Light, soft, brittle, straight-grained, durable, fragrant, pale yellow-brown (Barnes and Wagner, 1981, 2004).

Distribution: Northern White Cedar is a Cypress that is native to eastern North America. It is found in Canada from Manitoba east to Québec. In the United States the Northern

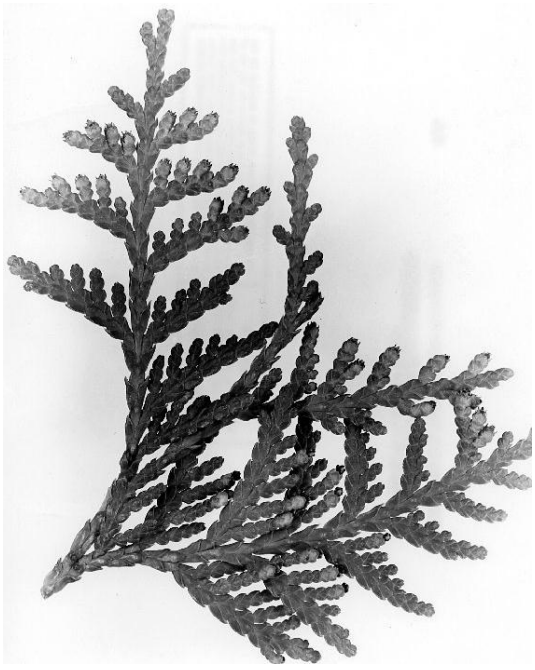
White Cedar is found from the Midwestern states of Minnesota and Iowa all the way through the Great Lakes to Maine and down the east cost to South Carolina (USDA, NRCS, 2012).







Where to look: White Cedar is primarily found in boreal forests of southeastern Canada and throughout the Great Lakes. In the state of Michigan it grows in the majority of counties excluding the southern most counties.



The White Cedar is most abundant in coniferous, poorly drained swamps with neutral or basic soil and places with reduced competition from fast growing trees. It is most abundantly found in soils with a pH between 5.2 and 7. Low Drought and fire tolerance make it a perfect lowland tree (USDA NRCS, 2012).

What to look for: The Northern White Cedar is a small evergreen (10-20 m) tall that has scaly, needle-like leaves (3-5 mm) and red/brown bark. The light green cones (10-15mm) ripen to brown and are also scaled. The White Cedar will not re-sprout; however, the branches may take root (USDA NRCS, 2012).

Threats and Strengths:

Fire: White Cedar is not resistant to fire. As the result of the thickness and characteristics of the bark it is easily damaged by fire. In contrast, wildfires can sometimes open up land for the cedars to start a new stand(Johnston).

Competition: *Thuja occidentalis* is shade tolerant, but the degree to which it is tolerant is dependant upon were the tree is in its life cycle. Seedlings are significantly less tolerant than adults. Northern White Cedar reproduction has been shown to be greatest after clear cutting in the Upper Peninsula of Michigan (Johnston).

Animal Browse: Young cedars can be damaged or killed by browse pressure, particularly from White-tailed deer. Mature trees may loose some lower branches, however are typically not harmed by deer browse.

Swamps: White Cedars can grow in wet conditions in areas with neutral pH, which makes them a very competitive in these areas, since many tree species struggle in these environments (USDA NRCS, 2012).

Bibliography:

Barnes, B.V. and Wagner H.W., Michigan Trees: a guide to the trees of the Great Lakes Region. The University of Michigan 1981, 2004

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