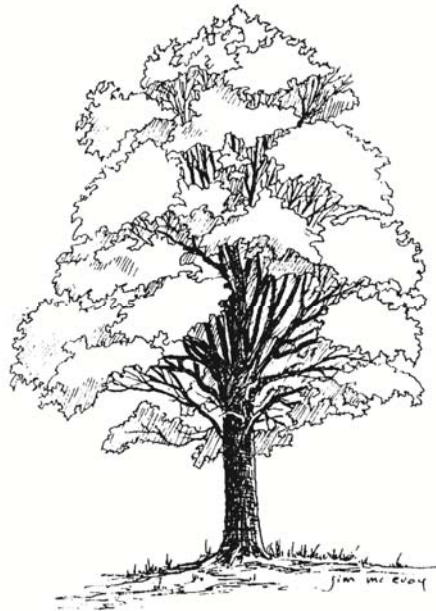


Moraine Nature Trail



This trail booklet corresponds to numbered posts along the 3/4 mile loop trail. Use it to identify some of the Kettle Moraine State Forest-Northern Unit's common trees and to discover their human uses from the past and present.



Wisconsin Department of Natural Resources
Kettle Moraine State Forest - Northern Unit
N1765 Hwy G
Campbellsport, WI 53010
Phone: (262) 626-2116

Henry S. Reuss Ice Age Visitor Center
Phone: (920) 533-8322

Tree Terms

What is a tree? Trees have hard woody stems, unlike smaller, leafy plants. They are usually over 25 feet tall at maturity and generally have a single trunk.

Deciduous trees drop their leaves each fall.

Coniferous trees, also called evergreens, bear cones and most hold their leaves, called needles, year round.

Alternating versus Opposite Branching



Opposite



Alternate

Simple versus Compound Leaves



Simple



Compound

Lobed versus Toothed Leaves



Lobed



Toothed

1 Eastern Red Cedar (*Juniperus virginiana*)

Although planted, these red cedar trees represent the most widely distributed conifer in the eastern United States. Its wood is fine textured, even grained, and well known for its pleasant fragrance and ability to repel moths. Storage chests, closets and wardrobes are often made of red cedar. Native Americans used cedar oils for medicine.

Size: shrub size to 50 feet tall, seldom exceeds one foot in diameter

Leaves: older leaves: smooth, shiny, dark green and glandular; younger leaves: somewhat needle-like, pointed and prickly

Fruit: dark, blueberry-like cones

Bark: thin, reddish-brown



2 Ironwood (*Ostrya virginiana*)

The buds of this tree are eaten by many species of wildlife including pheasants, grouse, deer, and rabbits. The wood of this tree is extremely hard and tough, hence its common name. Ironwood is used to make tool handles, small wooden articles, and fence posts. Since it does not grow to be very large, ironwood is not used commercially. In the past, the bark was used to relieve toothaches and sore muscles.

Size: 20 to 40 feet tall, 5 to 12 inches in diameter

Branching: alternate

Leaves: 2 to 3 inches long, finely double-toothed, oblong with narrow tips, dark yellow-green above and light yellow-green below

Fruit: in clusters of leafy bracts that resemble hops, 1/3 inch long by 1/8 inch wide

Bark: light gray-brown, finely divided into narrow, thin strips



3 **White Ash** (*Fraxinus americana*)

This double-trunked tree is a white ash. Its wood is valued because it is heavy, hard, strong, stiff, and has excellent bending qualities. Bentwood furniture, tool handles, and most baseball bats are made of white ash. Historically, Native Americans drank a tea made from the inner bark as a laxative, as a “tonic” after childbirth, and to relieve stomach cramps and fever.

Size: 70 to 90 feet tall, 1 to 2 feet in diameter

Branching: opposite

Leaves: compound, 8 to 12 inches long, composed of 5 to 9 leaflets each one 3 to 5 inches long.

Fruit: samaras, about 1/4 inch wide by 1 inch long

Bark: grayish brown, with narrow ridges



4 **White Oak** (*Quercus alba*)

Years ago, Woodland Indians dried and ground acorns from white oak into flour which they used to make bread, pancakes and pudding, and to thicken soups. To remove the bitter and toxic tannin from acorns, they rinsed the acorn meal with water until the meal tasted sweet. Today, white oak timber makes fine cabinets, millwork, and flooring because the wood is heavy and

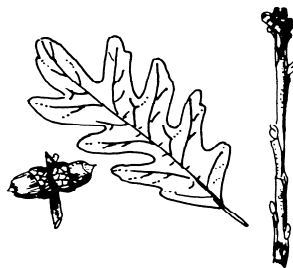
Size: 60 to 100 feet tall, 2 to 3 feet in diameter

Branching: alternate

Leaves: 5 to 9 inches long, divided into 5 to 9 rounded lobes

Fruit: light brown, capped acorns

Bark: pale gray and scaly



5 Quaking Aspen (*Populus tremuloides*)

Aspen, also called popple, grows quickly and produces very soft wood. These qualities make aspen the number one tree used for pulp, the ingredient in papermaking. Aspen does not make good furniture because it is so soft. Native Americans made tea from its bark to relieve a variety of ailments including colds and stomachaches. Because of their flat stems, the leaves appear to “quake” in the wind.

Size: 60 to 70 feet tall, 1 to 2 feet in diameter

Branching: alternate

Leaves: 1 to 2 inches long, broadly oval, finely-toothed margins

Fruit: 4 to 6 inch long catkins of fluffy, wind-blown, tiny seeds

Bark: Young trees: smooth, gray-green; older trees: furrowed and gray



6 Shagbark Hickory (*Carya ovata*)

In fall, people and squirrels compete for the sweet tasting nuts from this tree. Hickory wood is heavy, hard, strong and stiff, and is most often turned into tool handles. Hickory is thought to be the best wood for smoking meats. Native Americans used sweet hickory milk for cooking corn cakes and made a yellow dye from the inner bark.

Size: 60 to 100 feet tall, 1 to 2 feet in diameter

Branching: alternate

Leaves: compound, 8 to 15 inches long, composed of 5 (rarely 7) leaflets

Fruit: single nuts covered in thick green husks

Bark: shaggy strips that curl outward at both ends



7 Basswood (*Tilia americana*)

Next to sugar maple, basswood is the most common tree in the Kettle Moraine. Native Americans used flexible basswood saplings as poles to make houses and ropes, and wove mats from the inner bark. Today, the very light and soft wood is made into food boxes, yardsticks, and furniture. Many wood carvers highly prize basswood lumber.

Size: 60 to 100 feet tall, 1 to 3 feet in diameter

Branching: alternate

Leaves: heart-shaped, toothed, thick, shiny green above, paler underneath

Fruit: clusters of round, hard, nut-like seeds

Bark: gray with scaly ridges



8 Northern Red Oak (*Quercus rubra*)

The northern red oak to the right is valued for its light reddish-brown, beautifully grained wood. Red oak lumber is made into cabinets, furniture, and flooring. The best oak trees are manufactured into veneer. Native Americans used a tea made from the inner bark of red oak to relieve diarrhea, chronic mucous discharge, bleeding, and sore throats. Red oak acorns contain tannic acid, a potentially toxic chemical.

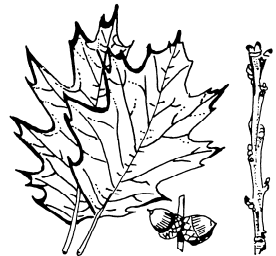
Size: 70 to 90 feet tall, 2 to 3 feet in diameter

Branching: alternate

Leaves: 5 to 9 inches long, divided into 7 to 9 pointed lobes, coarsely toothed

Fruit: capped acorns

Bark: dark gray to dark brown in color; younger trees: smooth; older trees: vertical plates like Roman columns



9

Sugar Maple (*Acer saccharum*)

This is Wisconsin's state tree. Sugar maple lumber makes fine furniture and woodenware and is used almost exclusively for the construction of bowling alleys and dance floors. People tap sugar maples each spring for their sweet sap. The sap, when cooked down, makes delicious maple syrup and sugar. The first European settlers learned this skill from local Native Americans.

Size: 80 to 100 feet tall, 2 to 3 feet in diameter

Branching: opposite

Leaves: 3 to 5 inches long, divided into 5 pointed lobes, coarsely toothed

Fruit: pairs of fused samaras

Bark: younger trees: light gray/brown and semi-smooth; older trees: gray, almost black, and scaly



10

Black Cherry (*Prunus serotina*)

Black cherry is the largest native cherry in Wisconsin. This wood is valued for making furniture, paneling, professional and scientific instruments, handles and toys. In the past, cough syrup was made from the bark, and wine and jelly from the fruit.

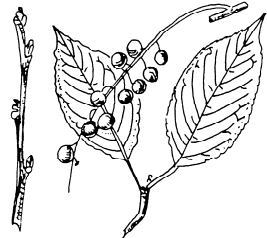
Size: 50 to 70 feet tall, 8 to 24 inches in diameter

Branching: alternate

Leaves: oval, shiny above, paler below, edged with fine-curved teeth

Fruit: clusters of dull purplish-black drupes containing a single seed

Bark: younger trees: smooth, bright, reddish brown; older trees: dark brown to nearly black and rough, like potato chips



Thanks for Coming!

We hope you enjoyed your visit. We encourage you to hike another trail in the Kettle Moraine State Forest - Northern Unit.

Nature Trails (No pets are allowed on Nature Trails.)

- **Tamarack Trail:** a 2 mile loop with a natural communities theme
Circles Mauthe Lake
- **Summit Trail:** a 1.25 mile loop with a glacial geology theme
Within the Long Lake Recreation Area on Dundee Mountain
An audio tour is available on the web at: wiparks.net

Loop Trails

- **New Fane Trails:** a combination of loops totaling 5.5 miles
On County Line Road, half mile east of Kettle Moraine Drive
- **Zillmer Trails:** combination of loops totaling 8 miles
On Highway SS, quarter mile west of Highway G
- **Butler Lake Trail:** a 3.1 mile loop
On Butler Lake Rd, 1.5 miles east of the Long Lake Recreation Area
- **Parnell Tower Trail:** 3.5 mile loop, including an observation tower
On Highway U, quarter mile west of Highway A
- **Greenbush Trails:** a combination of loops totaling 9 miles
On Kettle Moraine Drive, 2.5 miles north of Highway 67

Ice Age National Scenic Trail

This linear trail winds 31 miles through the Kettle Moraine State Forest - Northern Unit. Backpacking shelters are available along the trail by permit.

Help us save resources. If you no longer have a use for this booklet, please return it to the box



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