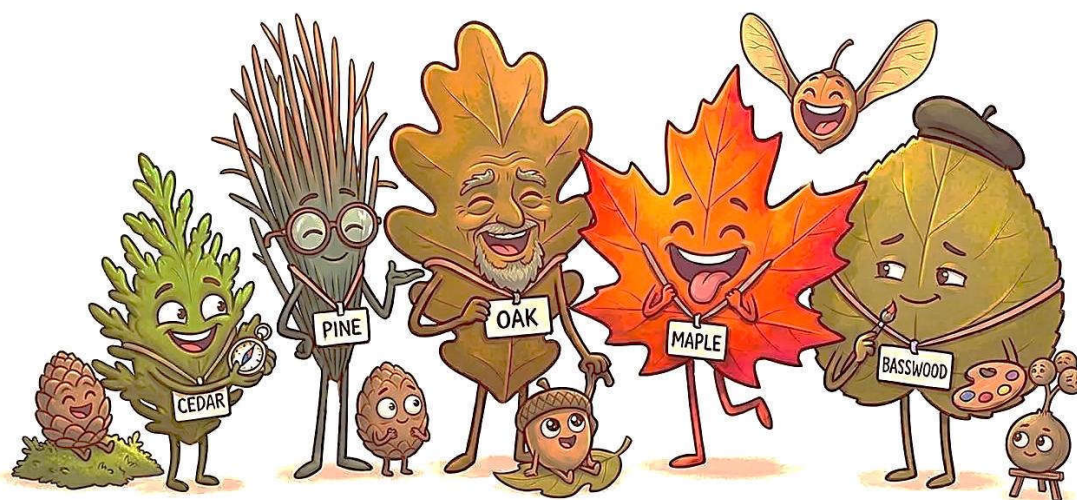


The Tree Identification Detective Book



Find Clues- Collect Tree Evidence!

Your Name: _____

Detective tips

Look for CLUES: the leaf shape, the leaf edge, the underside, the bark, and buds, the leaf stalk, the bark, the catkins, the keys, flowers, nuts, or seeds; and the twigs and its inside. How are the leaves, veins and branches spaced= opposite or alternating? (all lot to see!)

Be kind: never peel bark off a living tree. It can hurt the tree. Pick up fallen leaves, branches, and seeds instead of pulling them off living trees, if you can. This is especially important if you are in a provincial park.

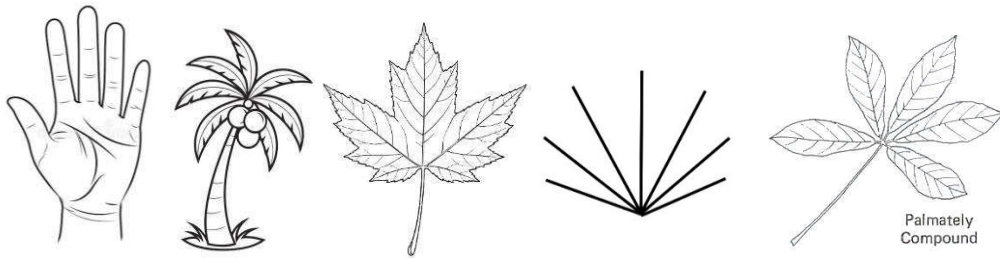
Stay safe: wash your hands after touching plants and never taste them. Smelling can be a good clue sometimes though

When you are investigating, make sure someone always knows where you are, and you have permission to go on the land you are exploring.

NEVER STOP SEARCHING FOR ANSWERS!!!!

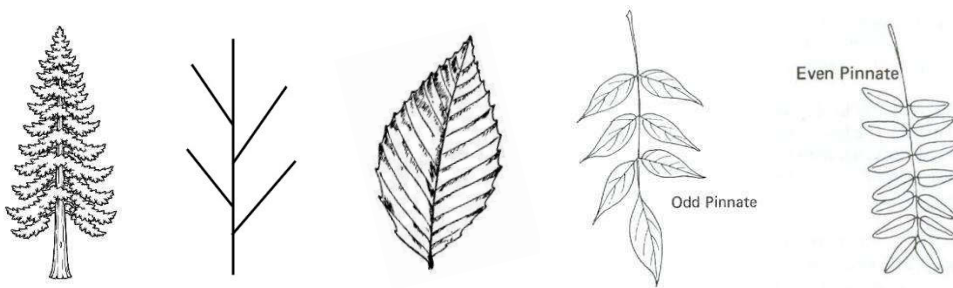
Created By

Important vocabulary:



Palmate- veins, or leaf arrangement

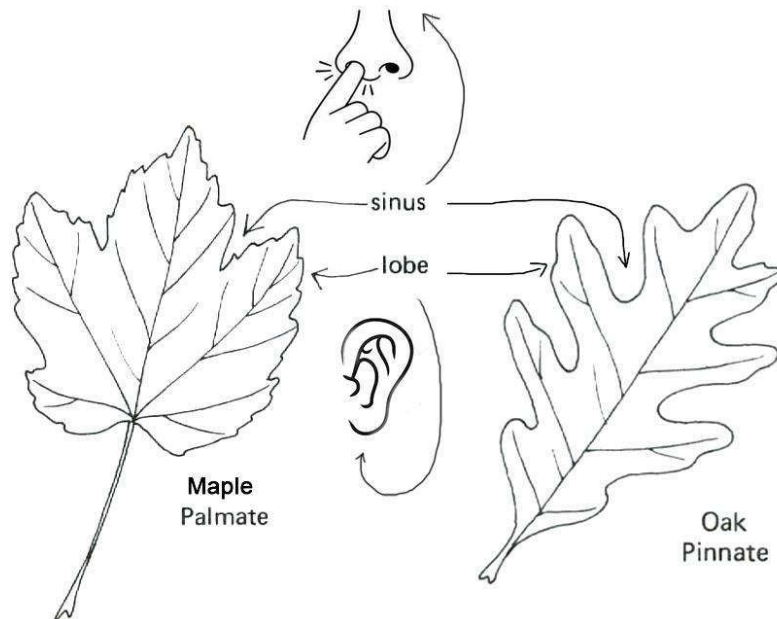
Compound= more than 1



Pinnate (Pine)- veins or leaf arrangement

Leaf Edges

**Lobes and
Sinuses**



Serrated



Is it a maple?

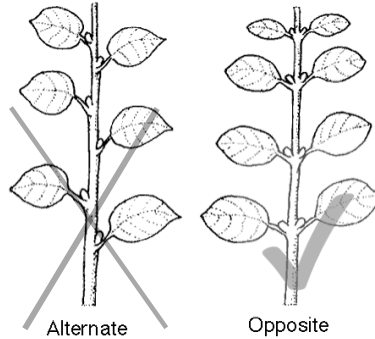


Be a tree detective! Maples have three big clues. Look for all of them.



1. Leaves grow in pairs, across from each other

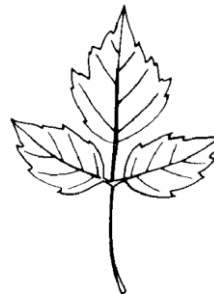
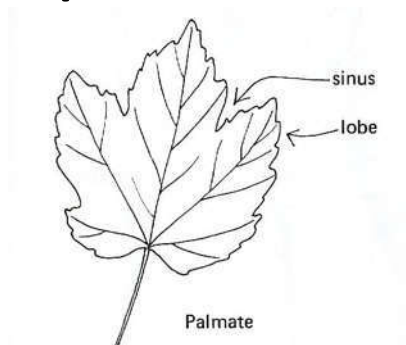
ALTERNATE
(not maples)



OPPOSITE (Maples!)

*Remember "MAD Horse":
Maple, Ash, Dogwood and
Horse-chestnut all have
opposite leaves, buds,
and branches.*

2. Most maple leaves have lobes, like a hand



Manitoba Maple- Leaflets

The lobes spread out from one spot, like fingers on a hand. The gaps between the lobes are called sinuses. One maple is different: Manitoba maple has leaves made of separate leaflets.

3. Seeds are spinning helicopters

Maple seeds are called **keys** or **samaras**. They grow in pairs with a wing on each one. When a key falls, it spins like a helicopter, and the wind carries it far from the tree. Using the angle and timing of the keys can help identify the kind of maple it came from.

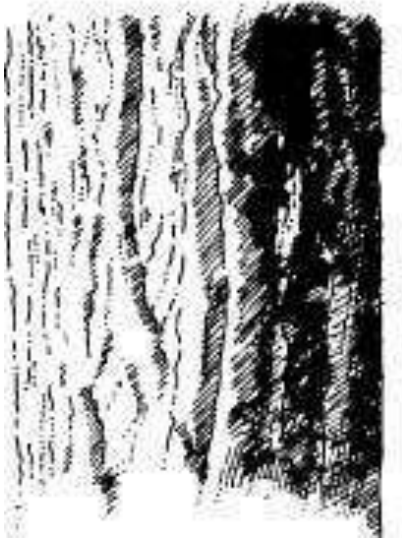
Sugar Maple

Acer saccharum

Native



Oval

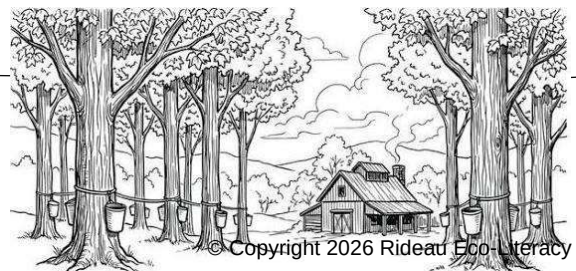


CLUES:

- ☐ **Leaf:** 5 lobes with rounded, U-shaped gaps between them.
- ☐ **Edge:** Mostly smooth, with just a few pointed teeth. The underside is pale green, not silvery.
- ☐ **Buds:** Brown and sharp-pointed, like a sharpened pencil.
- ☐ **Bark:** Gray-brown with deep ridges. On old trees it peels in long, rough plates.
- ☐ **Seeds:** Winged seeds come in pairs, with wings that spread only a little

Did you know?

Maple syrup comes from sugar maple sap. It takes about 40 litres of sap, boiled down, to make 1 litre of syrup!

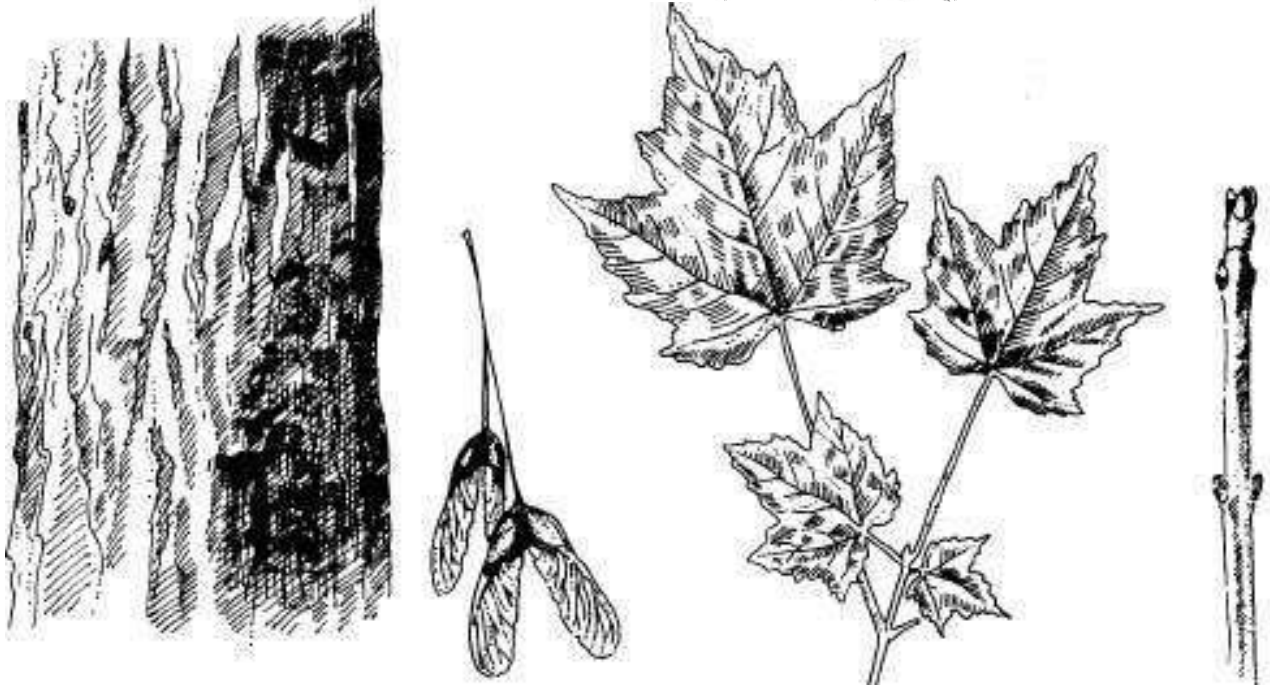


Red Maple

Acer rubrum

Native

Oval



CLUES :

- ☐ **Red clues:** Red leaf stalk, red twigs, red buds, red spring flowers and red keys.
- ☐ **Leaf:** 3 lobes (sometimes 5) with sharp, V-shaped gaps between them.
- ☐ **Edge:** Jagged, with lots of small, sharp teeth. The underside is whitish-green.
- ☐ **Keys:** Winged seeds in pairs, with the wings making a V-shape.
- ☐ **Bark:** Smooth and light gray when young; dark, ridged and flaky when old.

Did you know?

Red maples grow in both swamps and on dry hills. Their leaves are often the first to turn bright red in autumn.

Black Maple

Acer nigrum

Native



Oval



CLUES :

- ☐ **Leaf:** Usually 3 lobes (sometimes 5). The leaf droops and its edges curl downward.
- ☐ **Underside:** Soft and a little fuzzy to touch, because of tiny hairs.
- ☐ **Stalk:** Look for two tiny leaf-like "ears" where the leaf stalk joins the twig.
- ☐ **Bark:** Very dark gray with deep furrows. That is how it got the name "black".
- ☐ **Where:** Rich, moist soil near rivers. It is uncommon in eastern Ontario.

Did you know?

Black maple looks so much like sugar maple that some scientists think it just is just a form of it. Its sap makes syrup too!

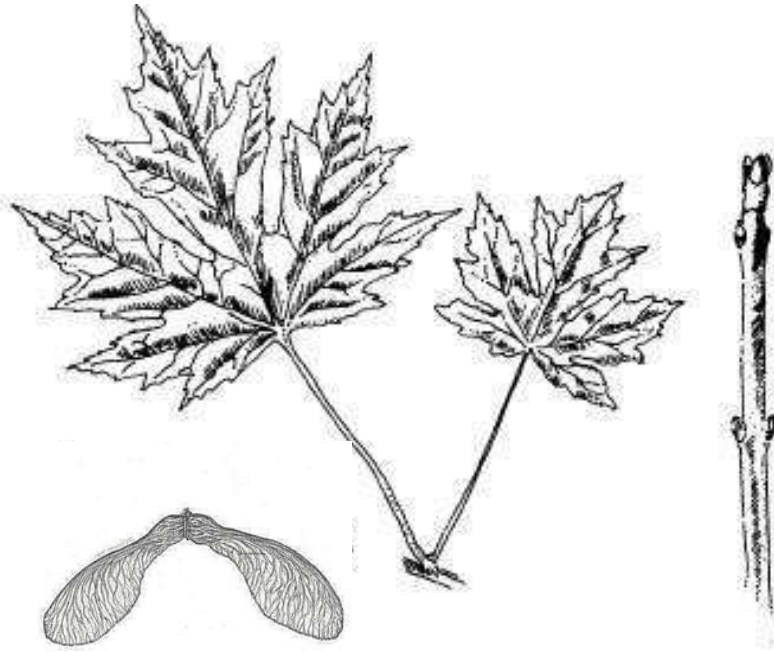
Silver Maple

Acer saccharinum

Native



Oval



CLUES:

- ☐ **Leaf:** 5-pointed lobes with very deep gaps between them, and rough, toothed edges.
- ☐ **Underside:** Silvery white. When the wind flips the leaves, the whole tree flashes silver.
- ☐ **Keys:** The biggest of our maple keys (about 5 cm), with wings spread wide apart. They ripen in late spring.
- ☐ **Bark:** Gray, peeling off in long, shaggy strips.
- ☐ **Where:** Likes wet ground along rivers and lakes. Its branches are brittle and often break in storms.

Did you know?

Crush a silver maple twig and sniff it. It has a strong smell that most people find unpleasant!

Manitoba Maple

Acer negundo

NATIVE



often grows many stalks like a bush



CLUES:

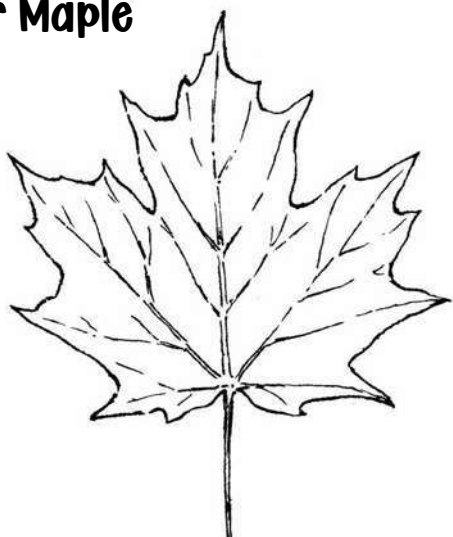
- ☐ **Leaf:** Compound! Each leaf has 3 to 7 leaflets on one stalk, with coarse teeth and sometimes lobes.
- ☐ **Careful:** It can look like poison ivy. Maple leaves grow in pairs across from each other; poison ivy leaves are staggered.
- ☐ **Twigs:** Smooth, green or purplish, with a whitish waxy coating.
- ☐ **Keys:** V-shaped pairs hang in bunches, and many stay on the tree through winter.
- ☐ **Where:** Fast-growing. Common along rivers, ditches, fence lines and in city lots

Did you know?

It is a maple, but it is sometimes called box elder.

Maple Leaf Line-Up

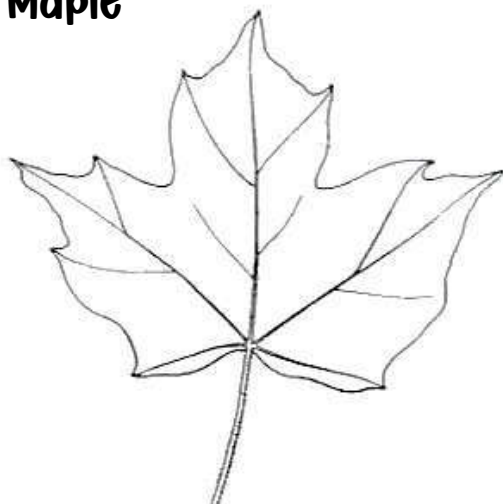
Sugar Maple



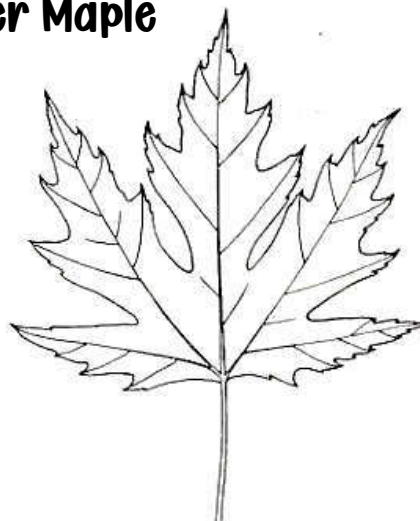
Red Maple



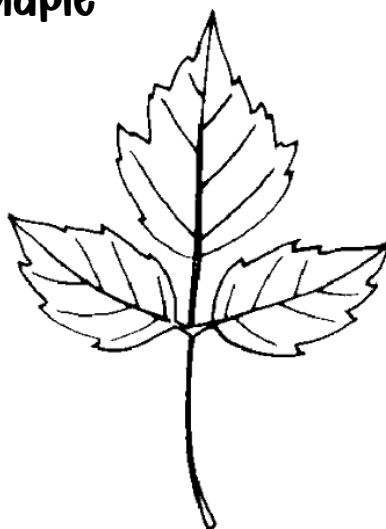
Black Maple



Silver Maple



Manitoba Maple



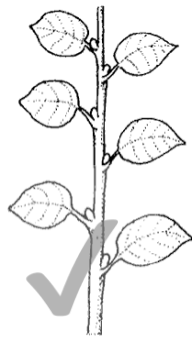
Is it an Oak?



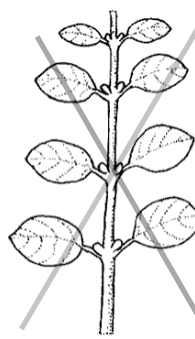
Be a tree detective! Oaks have three big clues. Look for all of them.

1. Leaves grow one at a time, staggered

ALTERNATE
Oaks!



Alternate



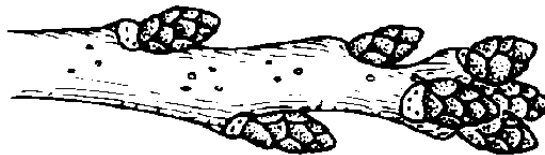
Opposite

OPPOSITE
Maples



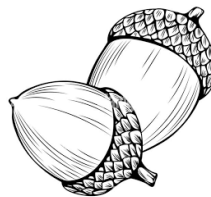
Oak leaves are usually lobed, but there is one oak that has toothed leaves, with no lobes at all. (not shown in this book though)

2. Buds bunch together at the tip of a twig



3. The seed is an acorn

Every oak makes acorns. Each acorn is a nut that sits in a little cap. The shape of the cap tells you which oak it came from. Squirrels are very fast to hide them, so look around the base of the tree in grass.



Two Oak Families

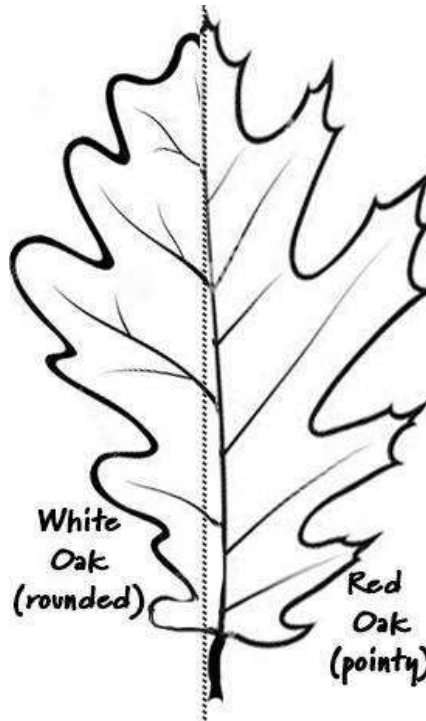
Oaks come in two groups. Learn to tell them apart and you are halfway there!

WHITE OAKS

Lobes: rounded, with no points

Acorns: ripen in one summer and taste sweeter

Bark: scaly or flaky



RED OAKS

Lobes: pointed, with a tiny bristle at each tip

Acorns: take two summers to ripen and taste bitter

Bark: ridged, often with shiny stripes

The Veins and Lobes

Pinnate

Veins extend from midrib to edges of the leaf



Black oak

Palmate

Veins radiate outstretched from leaf petiole



Red maple

**(How to Remember? Red Oaks and Red Maples are pointy and sharp-
Red Means DANGER!)**

White Oaks

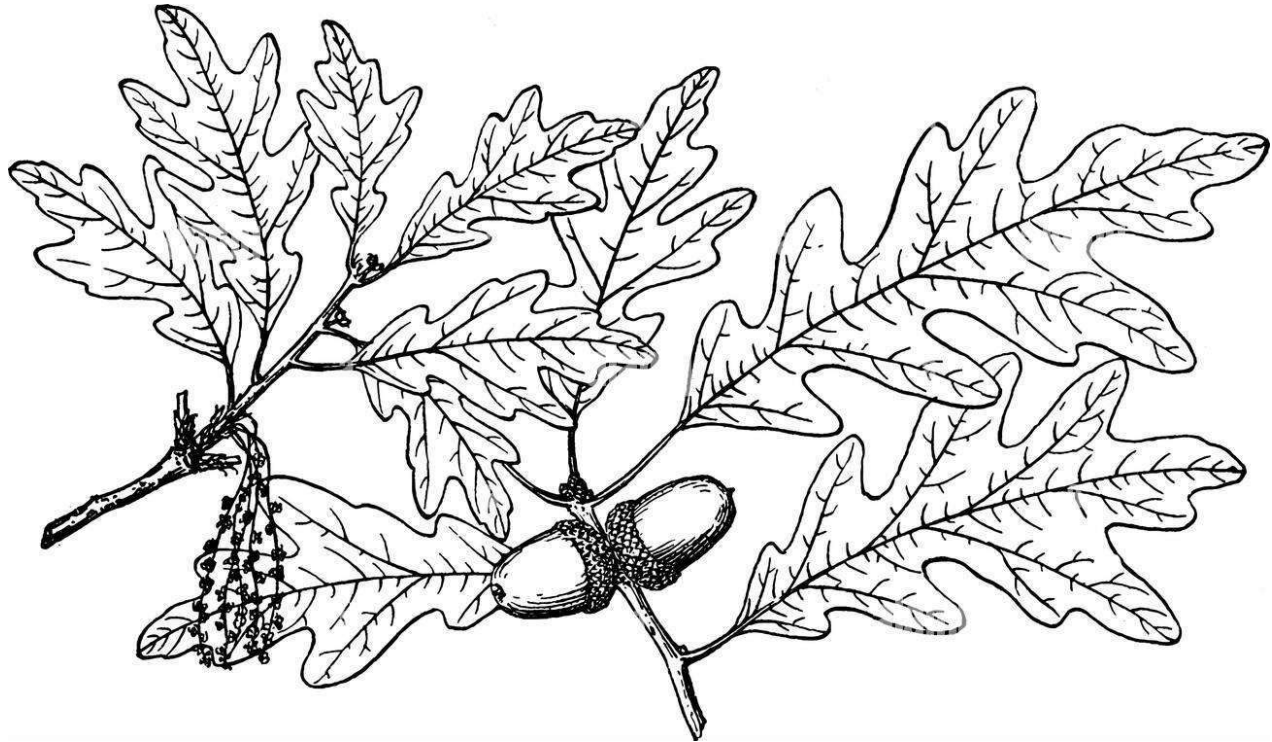
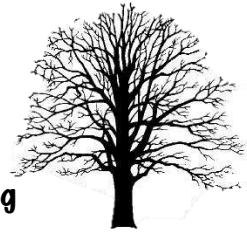
NATIVE

Chêne blanc

Quercus alba



Spreading



CLUES:

- ☐ **Leaf:** 7 to 9 rounded lobes with deep, rounded gaps. No bristles anywhere!
- ☐ **Underside:** Paler, whitish-green. Turns wine-red to brown in fall, and many leaves cling on over winter.
- ☐ **Acorn:** Oval, about 2 cm long, in a bumpy, bowl-shaped cap. It ripens in one summer and tastes sweeter than red oak acorns.
- ☐ **Bark:** Light gray and scaly, flaking off in rough plates.
- ☐ **Where:** Forests across southern and eastern Ontario.

Did you know?

Ontario's oldest known white oak, growing near Peterborough, is thought to be about 450 years old!

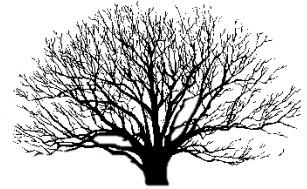


Northern Red Oak

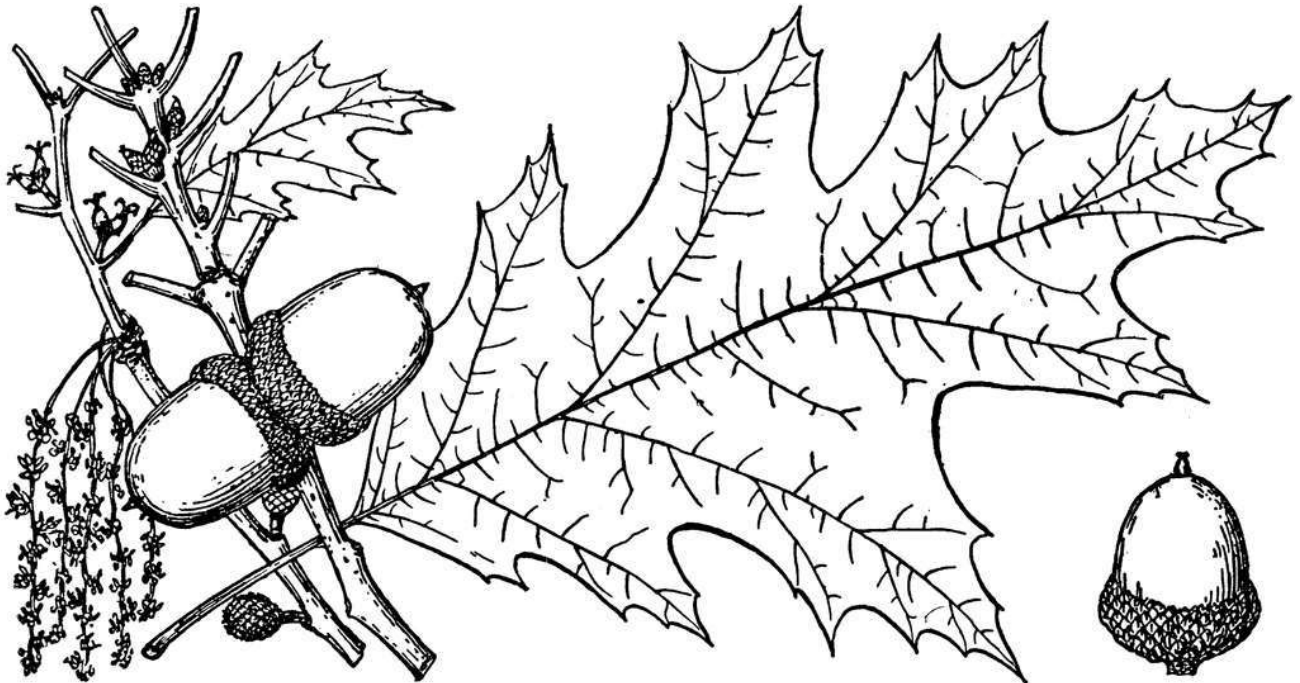
Chêne rouge

Quercus rubra

NATIVE



Spreading



CLUES:

- ☐ **Leaf:** 7 to 11 pointed lobes, each ending in a tiny bristle. The gaps (sinuses) reach about halfway to the middle.
- ☐ **Colour:** Dark green on top, paler underneath. Turns red to russet-brown in fall.
- ☐ **Acorn:** Big and plump, in a flat, saucer-shaped cap that covers only the top. It takes two summers to ripen.
- ☐ **Bark:** Gray, with flat-topped ridges. Shiny pale stripes run down them like ski tracks.
- ☐ **Where:** Common in forests all over eastern Ontario.

Did you know?

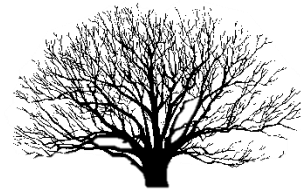
Northern red oak is the most common oak in eastern Ontario, and it grows faster than most other oaks.

Bur Oak

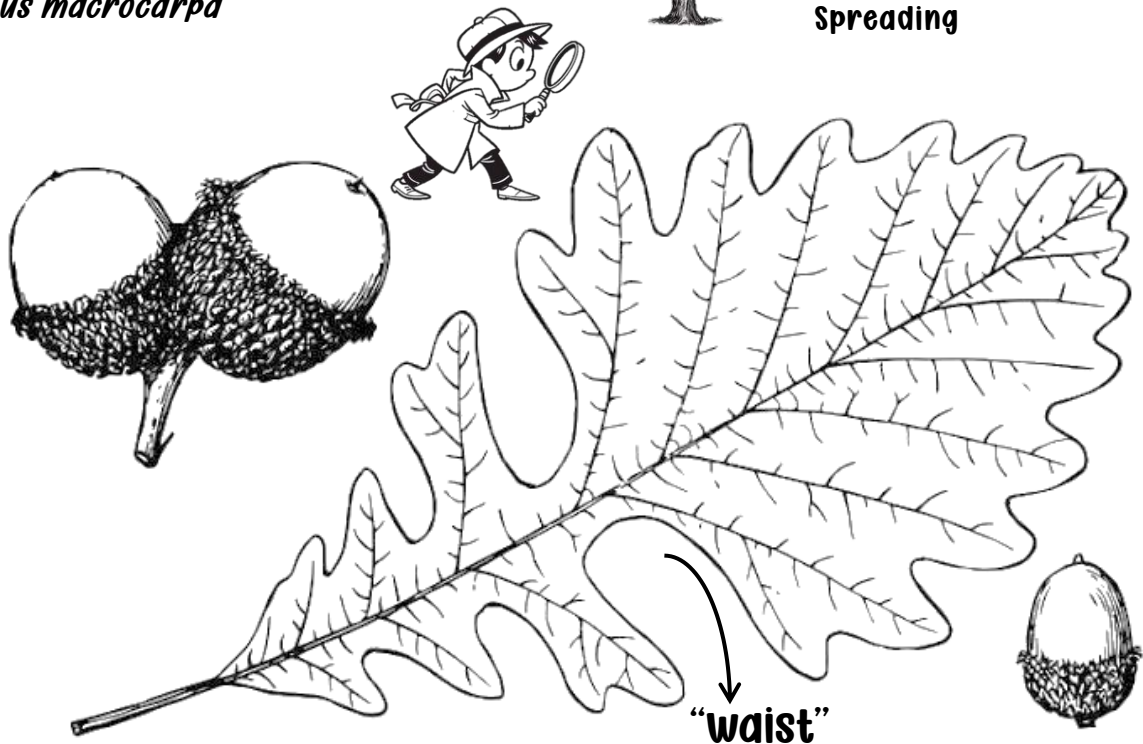
NATIVE

Chêne à gros fruits

Quercus macrocarpa



Spreading



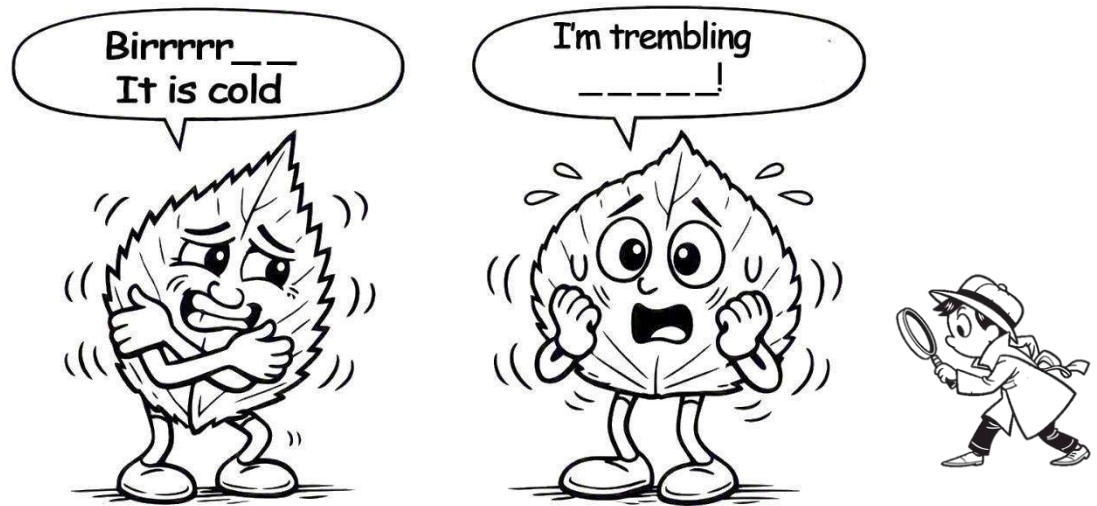
CLUES:

- ☐ **Leaf:** Big, up to about 25 cm long. Very deep gaps in the middle make a narrow "waist", with a large, rounded end lobe.
- ☐ **Underside:** Pale and fuzzy. The top is dark green.
- ☐ **Acorn:** The biggest of our oak acorns. The deep cap covers half or more and has a shaggy fringe, so it is also called "mossy cup oak".
- ☐ **Bark:** Thick, gray-brown and deeply furrowed. Twigs can have corky ridges.
- ☐ **Where:** Open woods, fields and river valleys.

Did you know?

Bur oaks grow from Saskatchewan all the way to Prince Edward Island. Its thick bark helps it survive fires.

The Trembling Leaf Family



Can you guess the names of these shaking and quaking leaves?
(Hint: They are pretty 'poplar')

We are going to divide them by Families:

Salicaceae: The Willow, Cottonwood, Poplar and Aspen Family

(Sa'lick-casey-eye)

And

Betulaceae: The Birch, Hornbeam and Alder Family

(Bet'chu-lacey-eye)

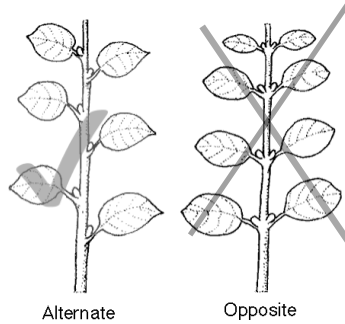
Both Families have many common characteristics- but identifying the individual trees is easier if we separate the two groups.

The Willow/ Poplar family (Salicaceae)

Be a tree detective! This family have three big clues. Look for all of them.

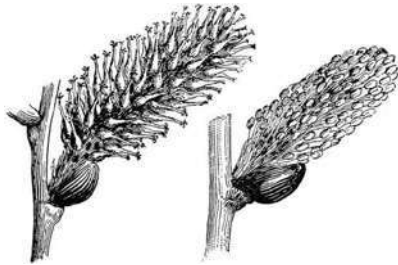
1. **Leaves:** simple (one piece, not divided into leaflets) and growing alternately along the twig.

ALTERNATE

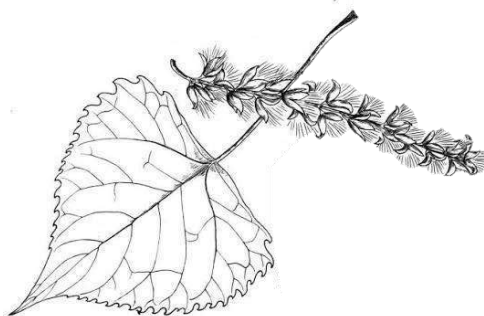


OPPOSITE

2. **Catkins:** fuzzy, dangling flower clusters appear in early spring, often before the leaves. (Think Pussy willows!) Male (Yellow=Fellow) and female catkins (Green=Girl) grow on separate trees. They have many styles.



3. **Seeds:** tiny seeds with cottony fluff that drift on the wind in early summer. Cottonwoods are named for this.



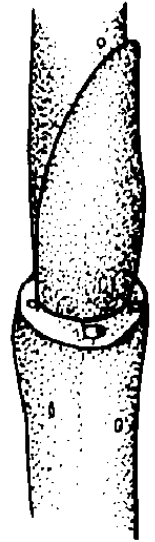
Black Willow

Salix nigra

NATIVE



Spreading



CLUES:

- ❑ **Leaf:** long and narrow, 8 to 14 cm, finely toothed, with a long, curved tip. Green above and paler below.
- ❑ **Detective clue:** look for tiny ear-shaped flaps at the base of the leafstalk.
- ❑ **Twig:** slender and brown, and it snaps off easily at the base.
- ❑ **Buds:** narrow, shiny and pressed against the twig, each covered by a single cap-like scale. The twig has no true bud at its tip.
- ❑ **Bark:** dark gray to blackish and deeply furrowed.
- ❑ **Where:** moist soil along streams and in swamps. It needs steady moisture.

Did you know?

Willow bark has been used for thousands of years to treat pain and inflammation. In the 19th century, salicin was extracted from willow bark and refined to produce acetylsalicylic acid – later named “aspirin”.



Weeping Willow

Saule pleureur

Salix babylonica

Introduced
from China



Unique Shape



CLUES:

- ☐ **Branches:** long, thin and hanging down, often touching the ground.
- ☐ **Leaf:** narrow, lance-shaped, light green and finely toothed.
- ☐ **Bark:** gray-brown and furrowed.
- ☐ **Wood and Branches :** Its soft wood breaks easily in ice storms.
- ☐ **Where:** planted in parks and yards, often beside ponds. It is not native.

Did you know?

There are many, many willow bushes and trees near wetlands and along streams and rivers. Their identifying features are not well defined. Best way to know it's a willow, find their furry kitten pussy willow buds in the spring.



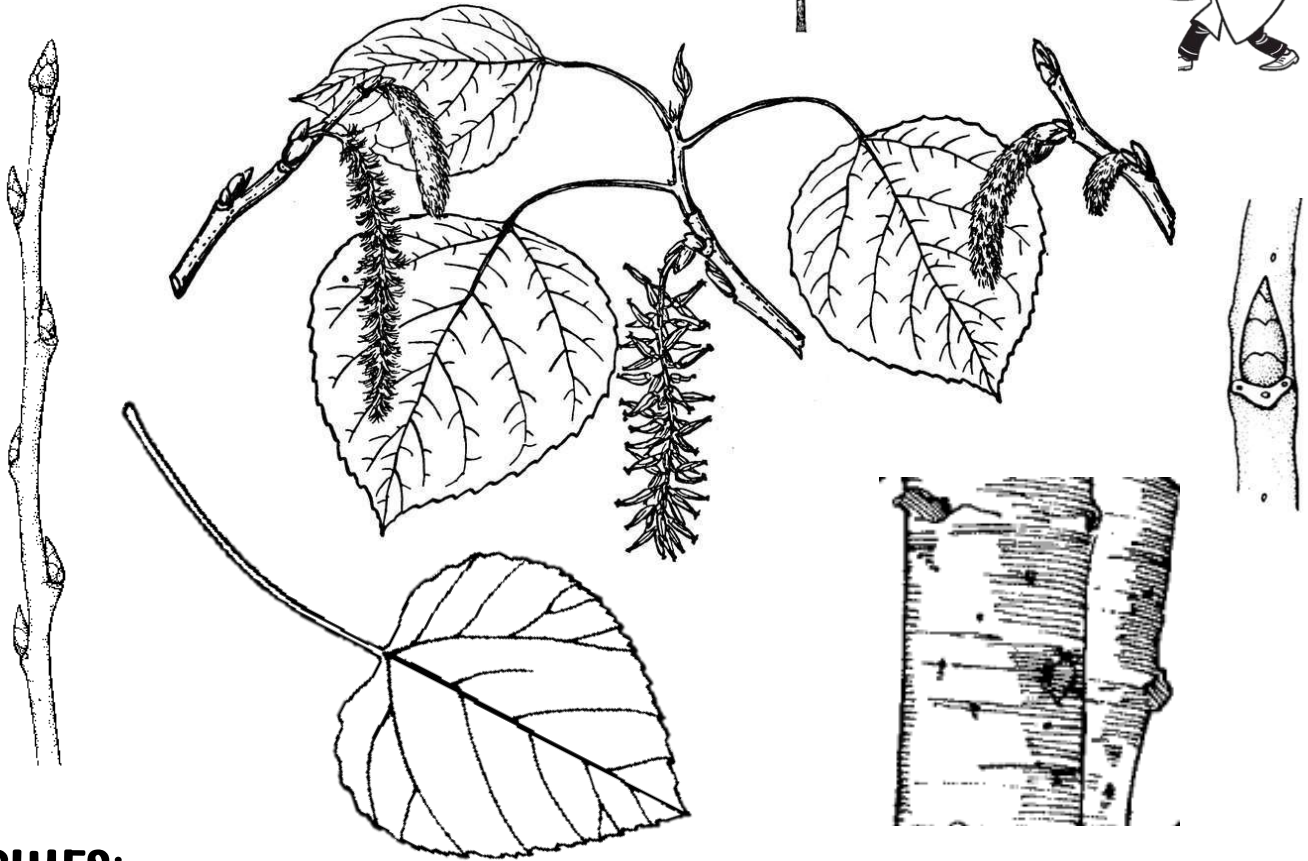
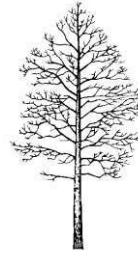
Trembling Aspen

Peuplier faux-tremble

Populus tremuloides

Native

Rounded or Oval



CLUES:

- ☐ **Leaf:** Round with a tiny point at the tip and fine, rounded teeth.
- ☐ **Flutter:** The leaf stalk is flat, so the leaves flutter in the weakest breeze. That is how it got its name!
- ☐ **Bark:** Smooth, pale greenish-white, with dark scars. It has a chalky powder that rubs off on your fingers.
- ☐ **Fall:** Glowing yellow leaves.
- ☐ **Where:** Very common in forests and old fields.

Did you know?

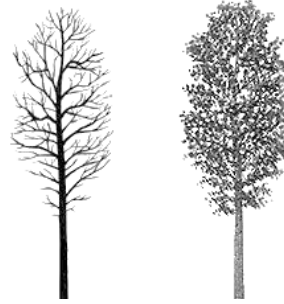
Aspens grow in groves where new trees sprout from shared roots, so a whole grove can be one connected living thing.

Big Tooth Aspen

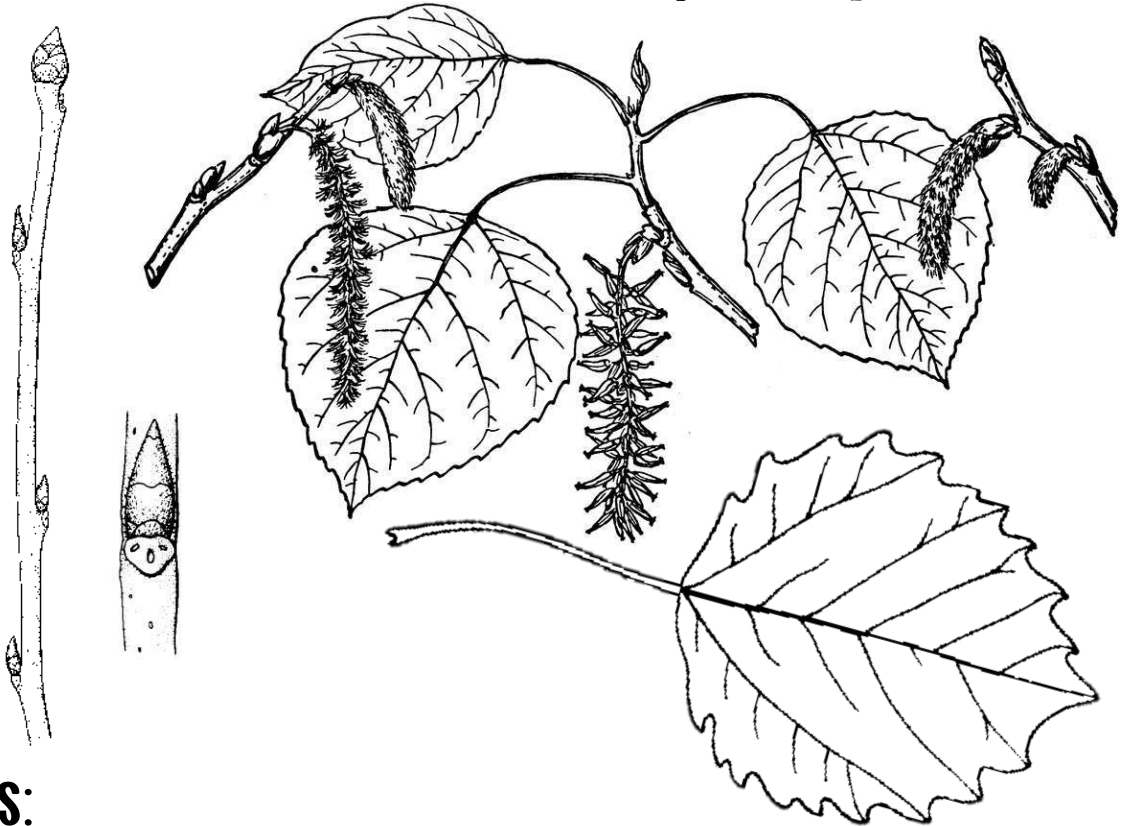
Peuplier à grandes dents

Populus grandidentata

Native



Oval and Open



CLUES:

- ☐ **Leaf:** Rounded-oval, with big, coarse teeth, about 6 to 12 on each side. Bigger than trembling aspen leaves.
- ☐ **Flutter:** The leaf stalk is flat, so these leaves tremble in the breeze too.
- ☐ **Young leaves:** Covered in soft white hairs.
- ☐ **Bark:** Smooth and gray-green when young. Dark gray with flat ridges and furrows low on old trunks.
- ☐ **Where:** Dry, sandy or gravelly soils, often growing with trembling aspen.

Did you know?

The green inner bark of large tooth aspen can photosynthesize to feed the tree before the leaves emerge in spring.



Balsam Poplar

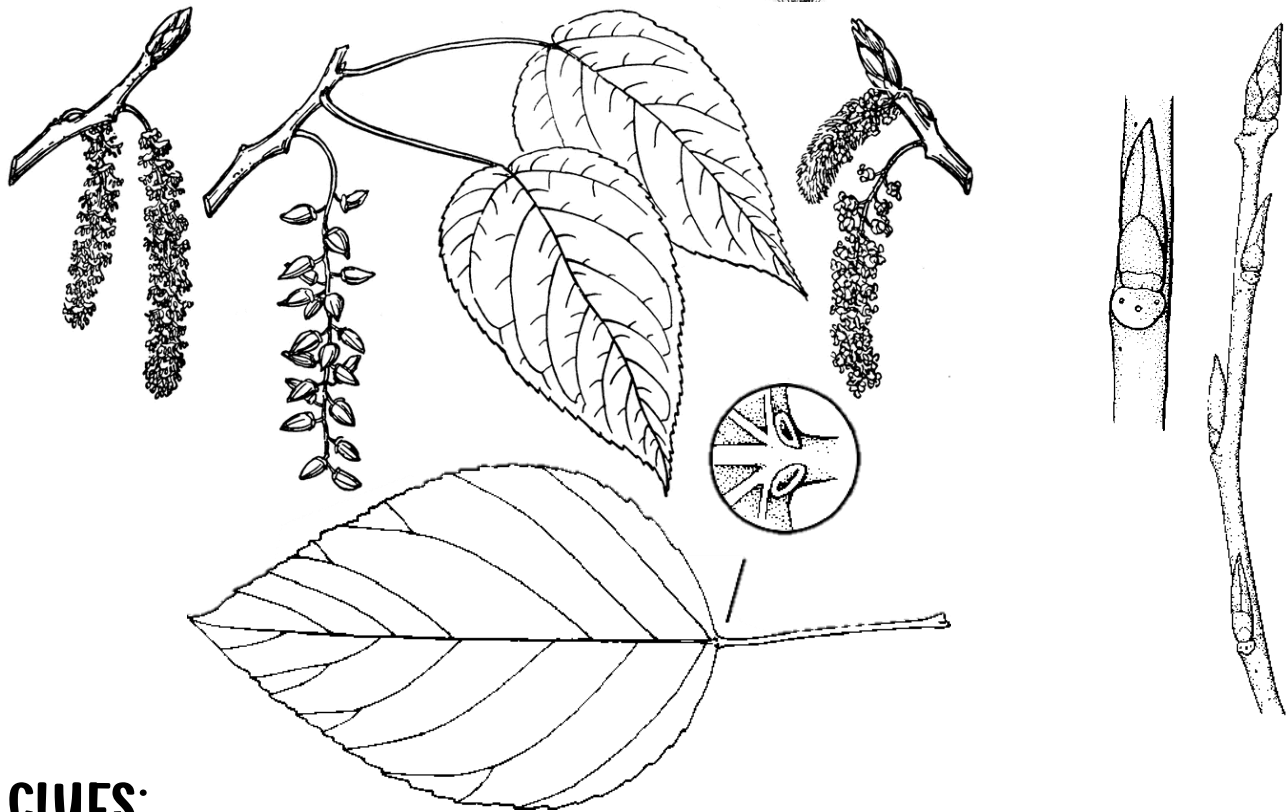
Peuplier baumier

Populus balsamifera

Native



Oval and Open



CLUES:

- ☐ **Leaf:** Rounded-oval, with big, coarse teeth, about 6 to 12 on each side. Bigger than trembling aspen leaves.
- ☐ **Flutter:** The leaf stalk is flat, so these leaves tremble in the breeze too.
- ☐ **Young leaves:** Covered in soft white hairs.
- ☐ **Buds:** large, very sticky and sweet-smelling. Rub one and sniff!
- ☐ **Bark:** Smooth and gray-green when young. Dark gray with flat ridges and furrows low on old trunks.
- ☐ **Where:** Dry, sandy or gravelly soils, often growing with trembling aspen.

Did you know?

Honey bees collect the sticky resin from poplar buds and use it as "bee glue" (propolis) in their hives.

Eastern Cottonwood

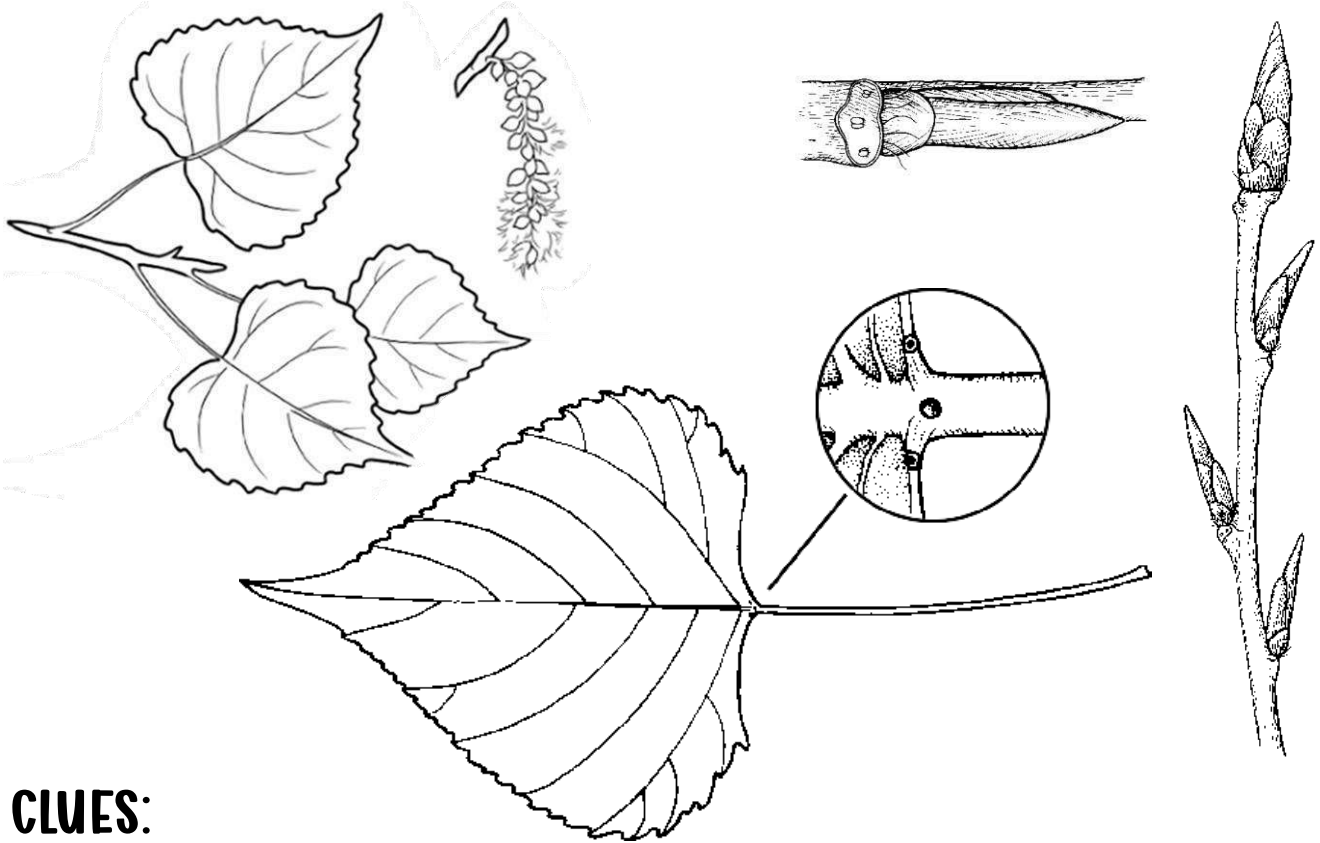
Peuplier deltoïde

Populus deltoides

Native



Oval and Open



CLUES:

- ☐ **Leaf:** A big triangle with a flat base, a pointed tip and coarse, curved teeth. Two tiny bumps sit at the base of the blade.
- ☐ **Stalk:** Long and flat, so the leaves rattle and flutter in the wind.
- ☐ **Bark:** Smooth and yellowish-green when young. Thick and light gray, with deep, broad furrows when old.
- ☐ **Size:** One of our biggest and fastest-growing trees.
- ☐ **Trunk:** Short, massive, Often divided near the ground into a few large, wide-spreading limbs

Did you know?

In early summer, cottonwoods release seeds with white fluff. The drifting fluff looks like cotton, and that is how the tree got its name. It makes some people sneeze! Is used to make the healing salve "Balm of Gilead".

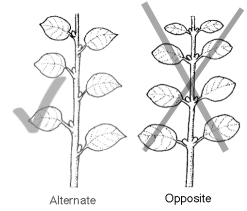


The Birch family (Betulaceae)

Be a tree detective!

Here are the similarities to the Poplar family:

1. **Leaves:** simple (one piece, not divided into leaflets) and growing alternately along the twig.
2. **Catkins:** fuzzy, dangling flower clusters appear in early spring, often before the leaves.

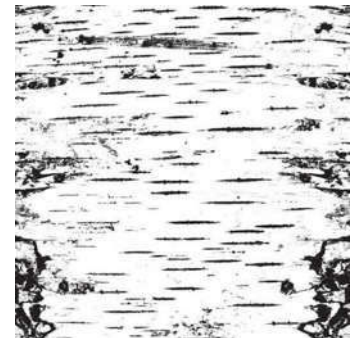


But the Birch Catkins are different and both female and male seeds are on one tree.

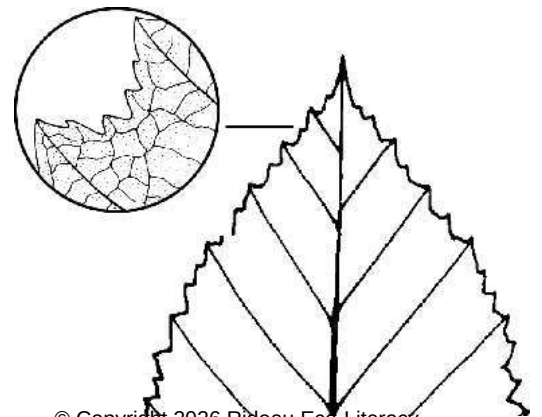
The male ones dangle and the female ones stand upright. In fall they break apart and release tiny seeds with two papery wings.

Here are 2 other clues to look for in the BIRCH FAMILY

Bark: marked with short, horizontal dashes, which are tiny breathing pores. On most birches the bark peels off in thin, papery strips. (BUT DON'T Peel live trees- it hurts them!)



Leaves: simple (one piece, not divided into leaflets) and growing alternately along the twig. The edges are “double-serrated,” with small teeth on top of bigger teeth.



White Birch

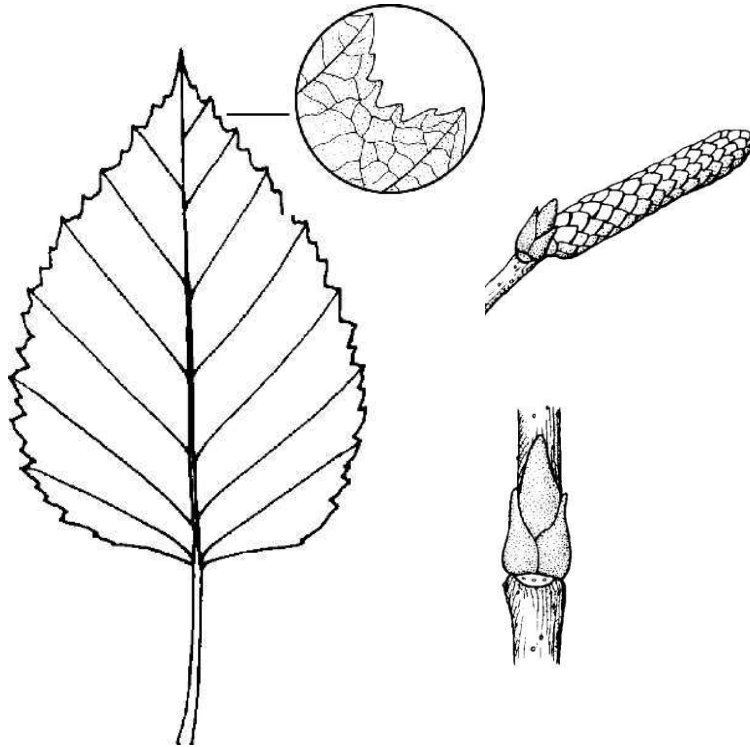
Bouleau à papier

Betula papyrifera

NATIVE



Narrowly oval, open



CLUES:

- ☐ **Leaf:** Egg-shaped with a pointed tip and a rounded base. The edge has double teeth: small teeth between bigger ones.
- ☐ **Colour:** Dark green on top, paler underneath. Turns golden yellow in fall.
- ☐ **Bark:** Bright white, and it peels off in thin, papery sheets. Look for the dark sideways lines.
- ☐ **Where:** Sunny forest edges, rocky ground and cool, moist woods.

Did you know?

Indigenous peoples made canoes from white birch bark. Please never peel bark off a living tree, because it can hurt the tree.

Yellow Birch

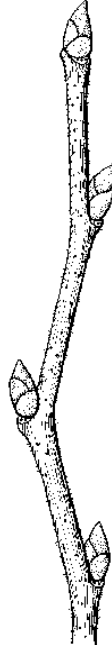
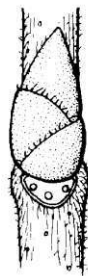
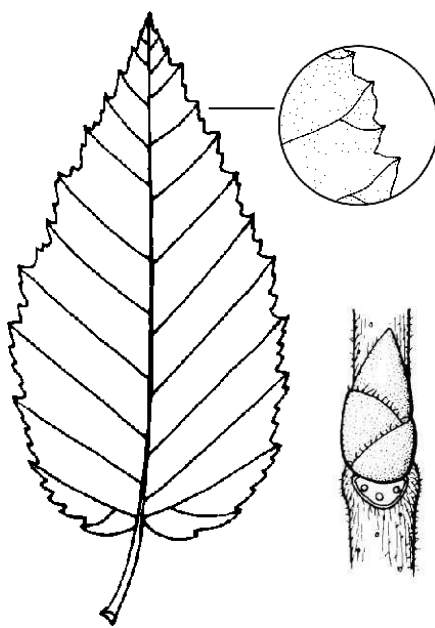
Bouleau jaune

Betula alleghaniensis

NATIVE



wide-spreading,
with drooping tips



CLUES:

- ☐ **Leaf:** Oval to egg-shaped, with a pointed tip and fine double teeth. Straight veins run to the edge.
- ☐ **Smell test:** Scratch a twig and sniff. It smells like wintergreen!
- ☐ **Twigs:** Slender, usually slightly hairy
- ☐ **Bark:** Shiny silvery-yellow, peeling in thin, curly strips like shavings. Old trees turn dark yellowy grey and plated.
- ☐ **Fall:** Leaves turn bright yellow.

Did you know?

- Trees live for about 150 years.
- Although yellow birch does turn yellow in the fall, the tree gets its name from its bark, which is a golden yellow for much of its life.
- Yellow birch is the largest birch native to Ontario.



Other Single Leaf Trees Common in Southeastern Ontario and the forests along the Rideau River

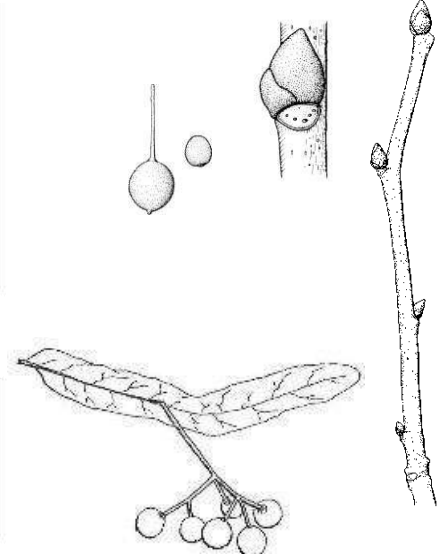
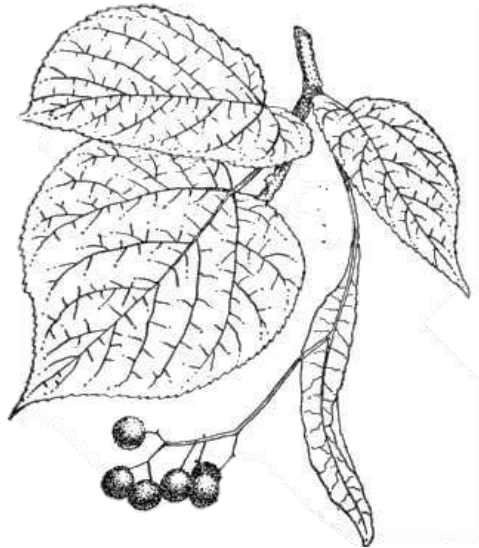
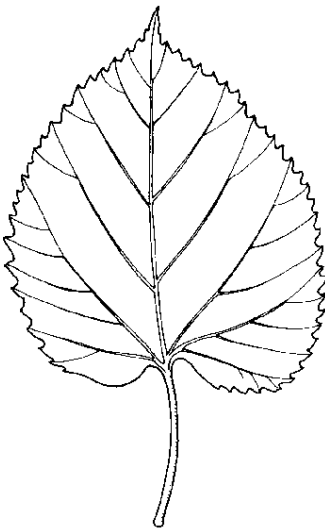
Basswood

Tilia americana

NATIVE



Broad and Spreading



CLUES:

- ☐ **Leaf:** big and heart-shaped, 10 to 15 cm long, with a lopsided base (one side hangs lower than the other). The edge has coarse, pointed teeth. The top is dark green and the underside is paler, with tiny tufts of hair where the veins meet.
- ☐ **Detective clue:** each cluster of nutlets of flowers dangle from a long, pale green, strap-shaped leaf (a bract). No other tree here has this.
- ☐ **The bract** acts like a wing and spins the seeds away from the tree. They often stay on into winter.
- ☐ **Twig and buds:** the twig zigzags and is reddish-brown to greenish. The buds are plump, with 2 or 3 visible scales and usually a reddish colour.
- ☐ **Bark:** young trees have smooth, gray-green bark. Older trees have long, flat-topped ridges separated by deep furrows.

Did you know?

Look-alike: little-leaf linden, a European tree planted along streets and in parks. Its leaves are much smaller, about 5 to 8 cm. Makes good tea!

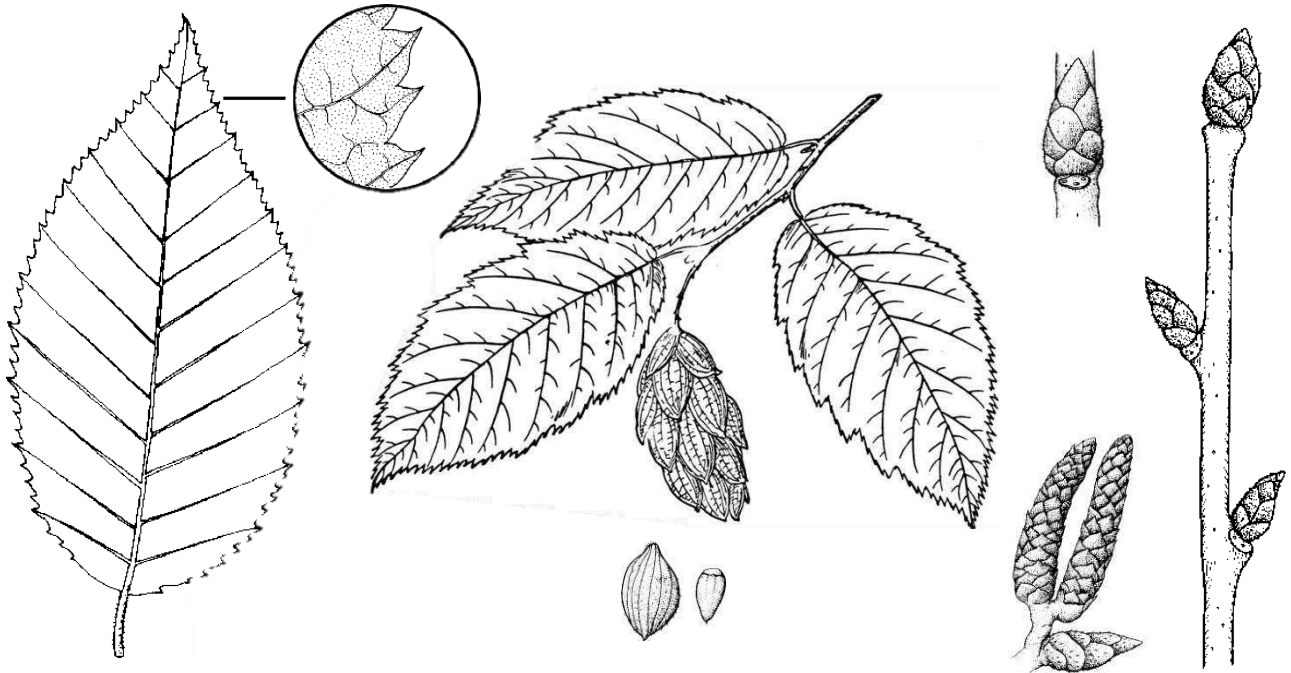
Ironwood/ Hop Hornbeam

Ostrya virginiana

NATIVE



Spreading



CLUES:

- ☐ **Leaf:** Oval, with a pointed tip, double teeth and straight veins.
- ☐ **Bark:** Light brown, shredding into thin, narrow strips that stick out at the ends.
- ☐ **Fruit:** Hanging clusters of papery sacs that look like hops, each with a small nutlet inside. (Where it gets the name hop-hornbeam)
- ☐ **Member of the Birch Family:** Has Catkins in the winter
- ☐ **Winter:** Male catkins hang from the twig tips all winter.
- ☐ **Size:** A small tree of the forest understory.
- ☐ **Wood:** Very hard and heavy, so it is called ironwood...

Did you know?

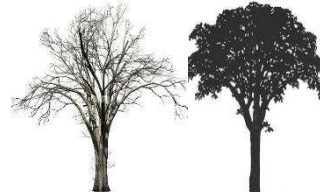
Ironwood trees have the hardest and densest wood of any Canadian species. It is so hard and tough that it has long been used for tool handles and fence posts. It dulls the chainsaw blade if you cut one down.

American Elm

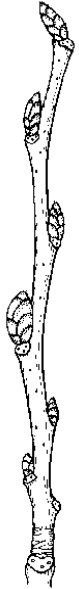
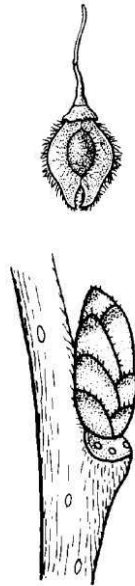
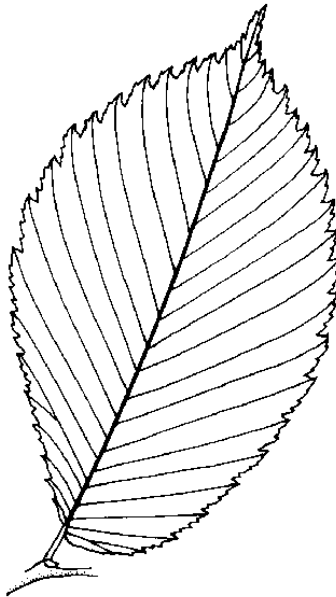
Orme d'Amérique

Ulmus americana

NATIVE



Vase Shaped



CLUES:

- ☐ **Shape:** A tall tree shaped like a vase or a fountain, with arching branches.
- ☐ **Leaf:** Oval with double teeth, a pointed tip and a lopsided base.
- ☐ **Bark:** Gray, with long, flat-topped ridges. A cut shows layers of white and brown.
- ☐ **Seeds:** Flat, round discs with a notch at the tip and a hairy edge.
- ☐ **Twig:** Smooth and a bit zigzag, with no corky wings.
- ☐ **Where:** Moist soil in forests and river valleys, alone in between farmer's fields

Did you know?

American elm was once a popular street tree. Dutch elm disease killed millions, and some survivors still stand today. The Species is beginning to bounce back

American Beech

Fagus grandifolia

NATIVE



Round and spreading



CLUES:

- ☐ **Leaf:** Oval, with straight, parallel veins that each end in a sharp tooth.
- ☐ **Bark:** Smooth and silvery gray, like elephant skin. Please never carve into it. Very valuable in Indigenous medicine
- ☐ **Winter:** Golden-bronze leaves turn papery and many cling to the tree all winter.
- ☐ **Buds:** Long, slim and pointed, like tiny cigars.
- ☐ **Nuts:** Small, three-sided nuts inside prickly burs that split into four parts.
- ☐ **Where:** Rich, moist hardwood forests. Beech bark disease is common.

Did you know?

Beech trees send up new shoots from their roots, so a grove of beech can be a family of connected trees.

American beech has silver-gray bark that resembles an elephant's skin!

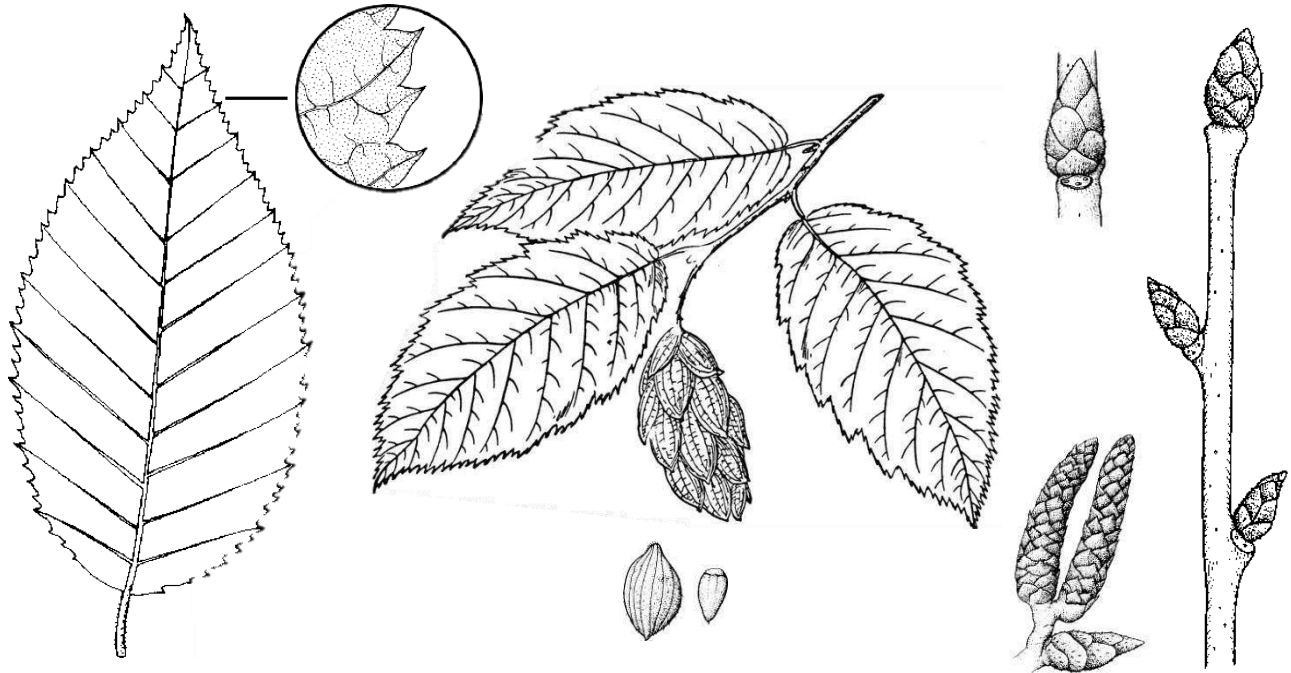
Ironwood/ Hop Hornbeam

Ostrya virginiana

NATIVE



Spreading



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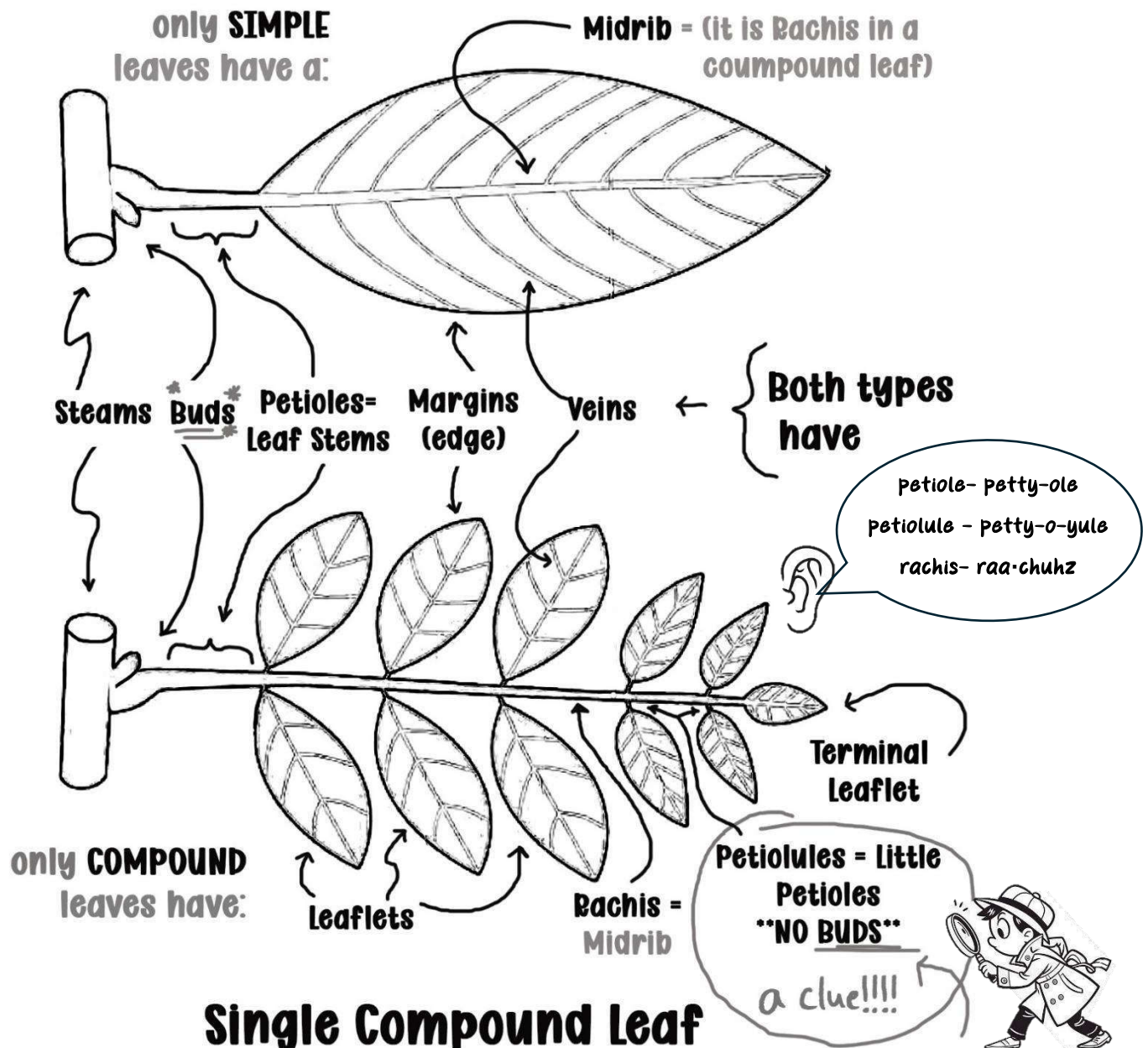


Compound Leaf (or Leaflets) Trees

Ashes, Walnuts, Hickories and Locust Trees all have
Compound Leaves

What is a Compound Leaf? Each compound leaf is made of many leaflets. One “leaf” has a long stalk with many leaflets along both sides.

Single Simple Leaf



Single Compound Leaf

Is it an Ash, a Walnut, a Hickory or a Locust Tree?...

White Ash

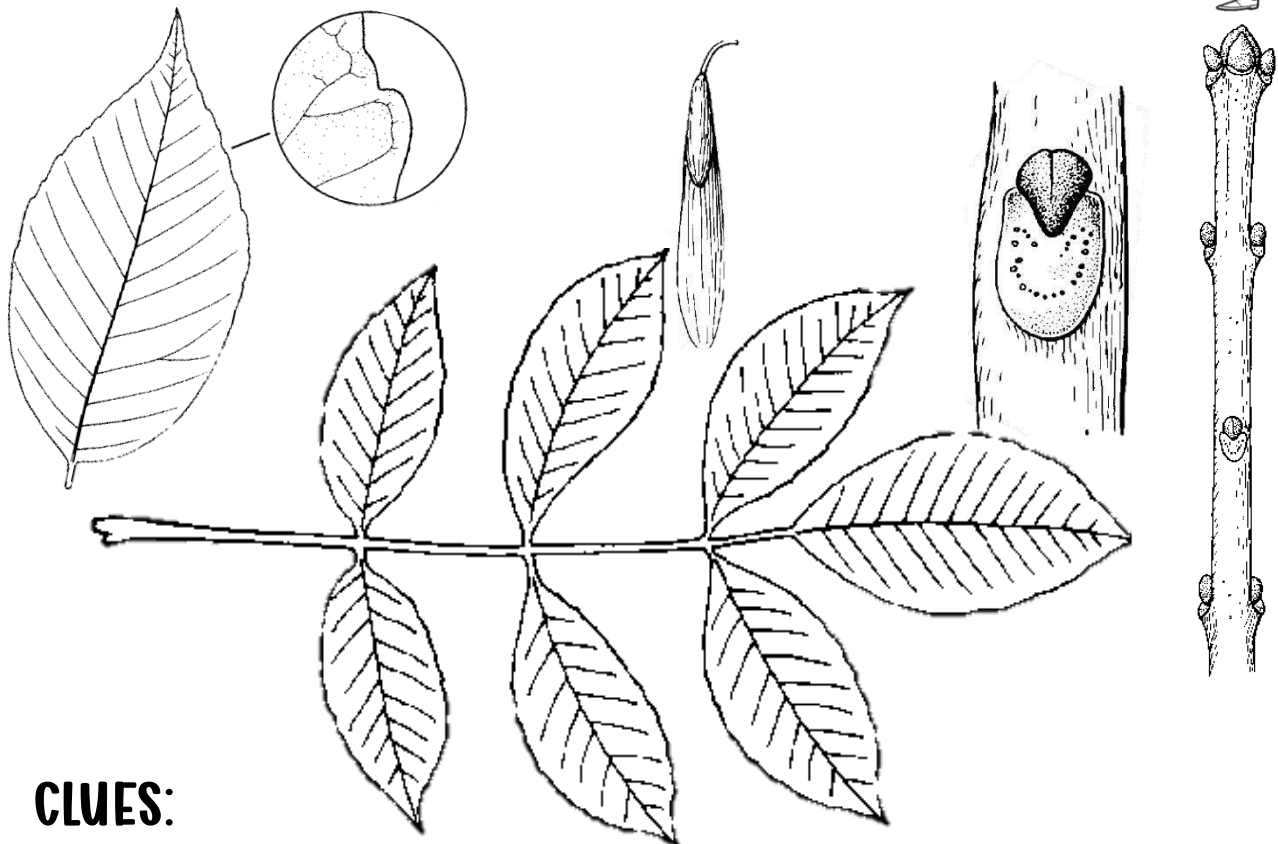
NATIVE

Frêne blanc

Fraxinus americana



Oval- Branches grow
Opposite each other



CLUES:

- ☐ Leaf: Compound, usually 5 to 9 leaflets with smooth or slightly toothed edges. Paler, whitish-green underneath.
- ☐ Bark: Gray, with tight ridges that cross to make diamonds on older trees.
- ☐ Seeds: A single wing like a paddle, hanging off the end of a plump seed.
- ☐ Twig: Opposite buds sit inside/ above a notched, C-shaped leaf scar.
- ☐ Fall: Leaves turn yellow, purple or maroon.
- ☐ Where: Moist, rich woods. It is the most common ash in much of Ontario and can grow over 30 metres tall.

Did you know?

White ash wood is strong and springy. It is used to make baseball bats, snowshoes and hockey sticks.

Black Ash

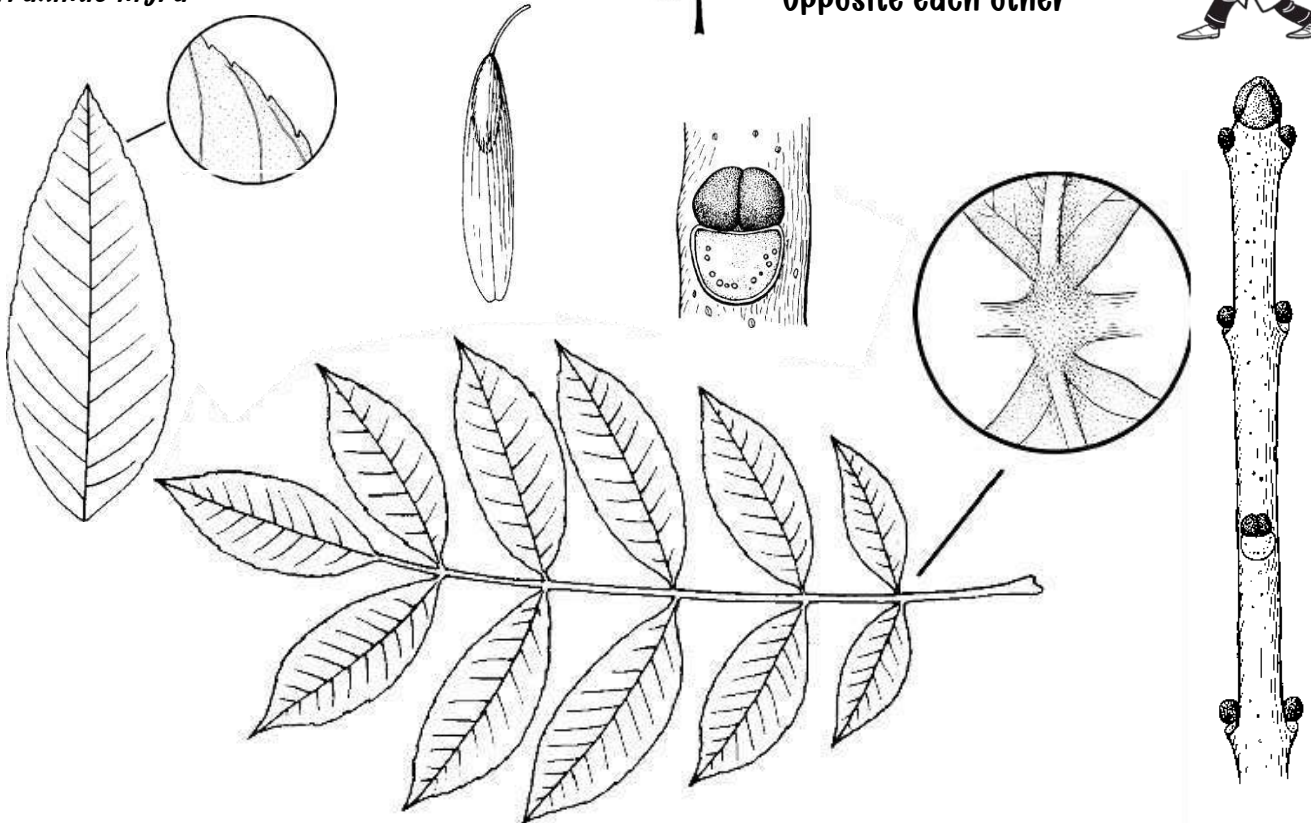
NATIVE

Frêne noir

Fraxinus nigra



Oval- Branches grow
Opposite each other



CLUES:

- ☐ Leaf: Compound, with 7 to 11 finely toothed leaflets that have no stalks of their own. Look for rusty-brown fuzz where they join the stem.
- ☐ Bark: Gray, soft and corky. It flakes off in scales instead of forming hard ridges.
- ☐ Seeds: A flat wing wraps all the way around the seed.
- ☐ Buds: Dark, almost black, and velvety.
- ☐ Where: Swamps, wet forests and stream edges.

At risk: Emerald ash borer threatens black ash. If you find one, tell an adult..

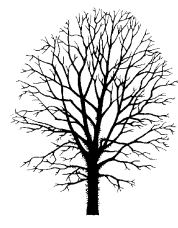
Did you know?

Black ash is very important to many Indigenous peoples. Pounding a log makes the wood split into thin layers that are used to weave baskets.

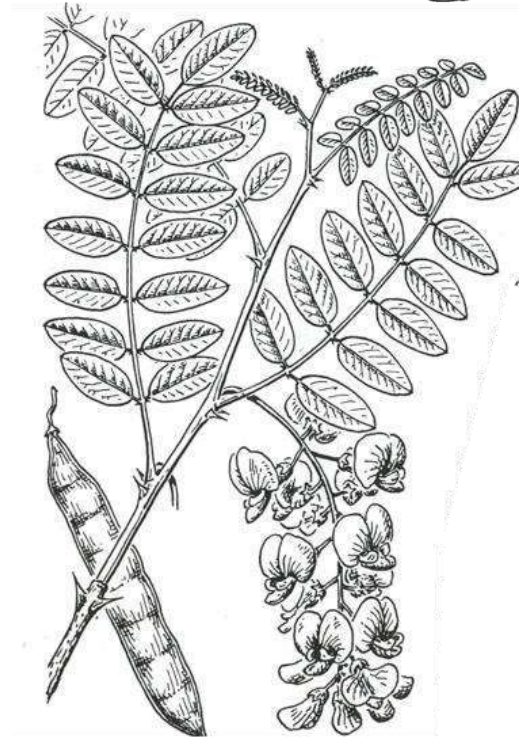
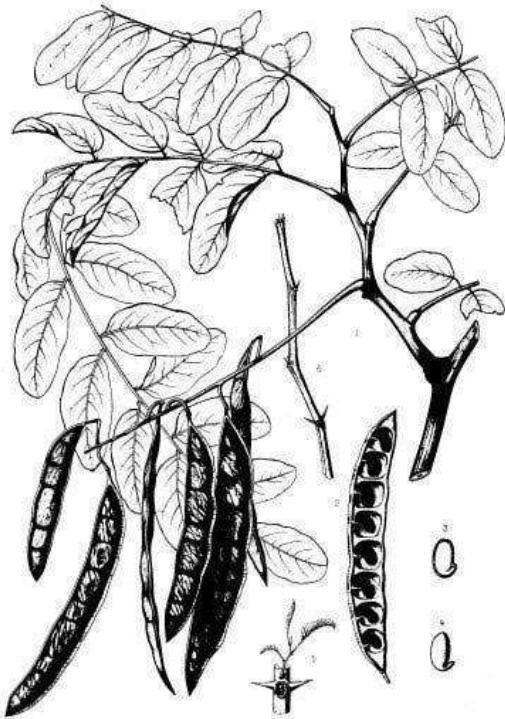
Black Locust

Robinia pseudoacacia

Naturalized



Oval
and Open



CLUES:

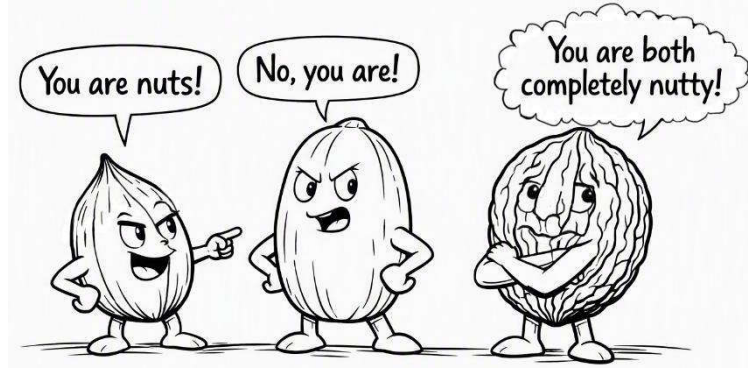
- ☐ Leaves: compound, with 7 to 19 small, smooth-edged, oval leaflets that fold up at night- COOL!
- ☐ Thorns: pairs of short, sharp thorns at the base of each leaf
- ☐ Flowers: hanging clusters of white, sweet-smelling, pea-like flowers in late spring
- ☐ Fruit: flat brown seed pods, 5 to 10 cm long, that stay on the tree through winter
- ☐ Bark: dark gray-brown, with deep, rope-like ridges that crisscross
- ☐ Twigs: zigzag, reddish-brown, with thorns
- ☐ Size: grows 12 to 20 m tall, with a crooked, open crown

Did you know?

Safety: the seeds, bark, and leaves are toxic if eaten.
Was introduced to Ontario, and lives along fencelines mostly.

Walnuts, Butternuts and Hickories

Who is who?



All 3 have compound leaves like feathers, and all bear nut in the fall.

HICKORIES

Leaflets: 5 to 11

Nuts: crop almost every year

Husk: splits open into 4 parts

Twig pith: solid, not chambered

Smell: Nut is slightly citrusy smelling

WALNUTS

Leaflets: 11 to 23

Nuts: crops every second year

Husk: stays closed

Twig pith: divided into chambers

Smell: crushed leaves and nut smell spicy

BUTTERNUTS

Leaflets: 11 to 17

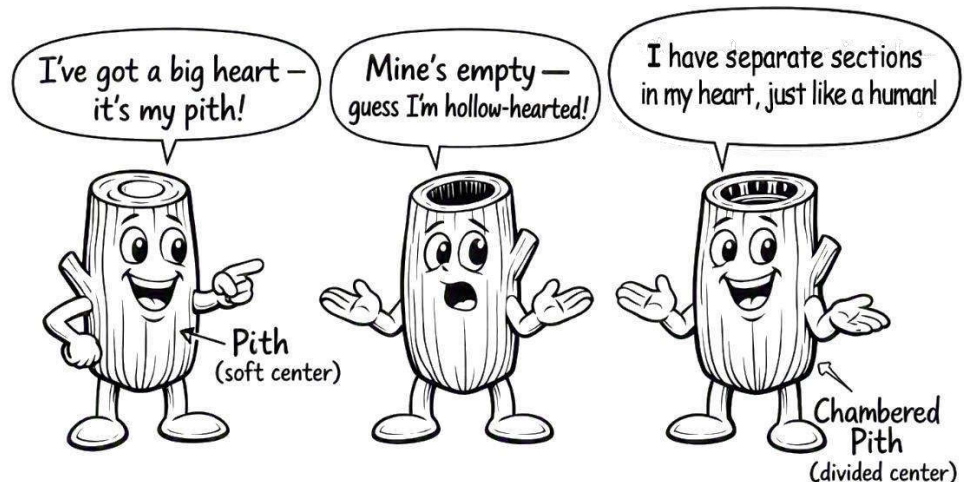
Nuts: crops every 2-3 years

Husk: stays closed, oblong and sticky

Twig pith: divided into chambers, dark chocolate brown

Smell: crushed leaves smell spicy

The Inside of Tree Twigs Have a Pithy Discussion . . .



Bitternut Hickory

Caryer cordiforme

Carya cordiformis

NATIVE



Round and spreading



CLUES:

- ☐ Leaf: Compound, with 7 to 11 narrow, curved (scythe-shaped) leaflets that are hairy underneath.
- ☐ Buds: Flat and bright yellow. This is the best clue!
- ☐ Bark: Greenish-gray and smooth when young, then shallow, scaly ridges. It does not peel in strips.
- ☐ Nut: Round, in a thin husk with ridges near the top. It is so bitter that squirrels eat it only as a last resort.
- ☐ Where: Moist, rich soil and lowlands.

Did you know?

There is another kind of hickory in Ontario called "Shagbark hickory". Its bark is gray, peeling in long, curling plates that stick out at the ends. That is the "shag"! Its nuts are much better to eat. The squirrels think so too!



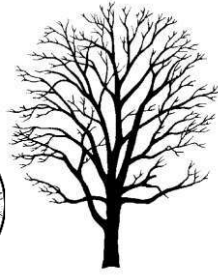
Butternut

or white walnut

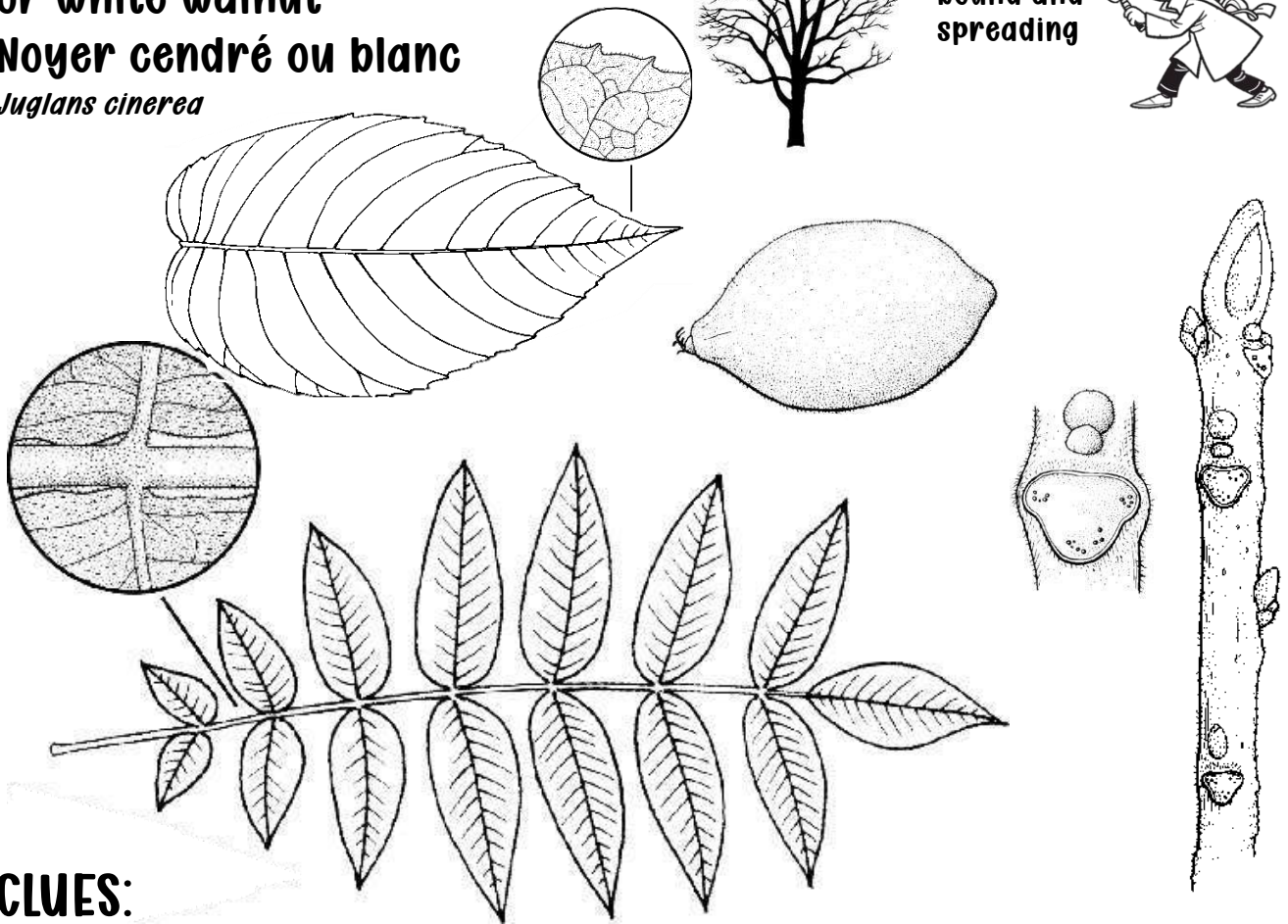
Noyer cendré ou blanc

Juglans cinerea

NATIVE



Round and spreading



CLUES:

- ☐ Leaf: Long compound leaf with 11 to 17 oblong leaflets, hairy underneath, and one at the tip.
- ☐ Nut: Oblong, in sticky, hairy yellow-green husks that hang in clusters.
- ☐ The sweet nut has deep, jagged ridges.
- ☐ Bark: Light gray, with flat-topped ridges between dark furrows.
- ☐ Twig: Look for a fuzzy pad above each leaf scar, like an eyebrow.
- ☐ Where: Rich, moist soil, stream banks and forest edges.

ENDANGERED: A disease called butternut canker has killed about a third of the trees. If you find a healthy one, tell an adult who can report it.



Did you know?

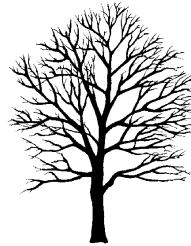
Conservation authorities in eastern Ontario collect seeds from healthy butternuts and give seedlings to landowners to help bring the tree back. It is illegal to cut one down without permission in our area.

Black Walnut

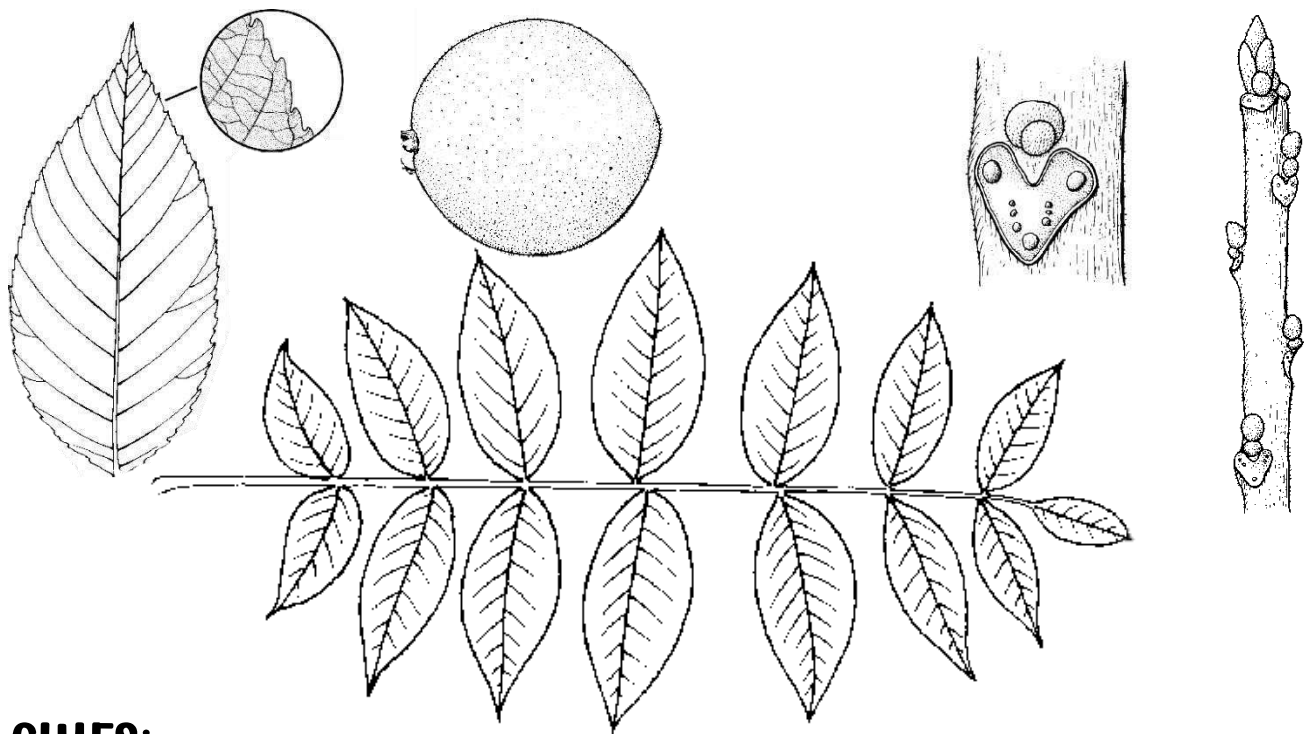
Noyer noir

Juglans nigra

NATIVE- Often
Planted



Round and
spreading



CLUES:

- ☐ **Leaf:** Long compound leaf with 15 to 23 narrow, pointed leaflets. The one at the very tip is often missing or tiny.
- ☐ **Smell:** Crush a leaf and sniff. It smells spicy, a bit like citrus.
- ☐ **Nut:** A round green husk, bigger than a golf ball, that does not split open. It stains hands brown. The shell is very hard.
- ☐ **Bark:** Dark brown to blackish, with deep furrows in a diamond pattern.
- ☐ **Twig:** Slice a twig lengthwise. The pith inside is divided into tiny chambers.

- ☐ **Where:** Native to southern Ontario. In eastern Ontario it is often planted and sometimes spreads on its own.

Did you know?

Black walnut roots and leaves release a chemical that stops some plants, like tomatoes, from growing nearby.

PLANTING YOUR TREE IS PART OF YOUR MISSION - Be a climate change stopper!

How to plant your Tree

- 1. Pick a good day. Plant in spring or fall, when the ground is soft and the weather is cool.**
- 2. Find a good spot. Think about how big the tree will get. Look up and check that there are no wires, and keep it away from buildings.**
- 3. Keep the roots wet. Roots dry out fast. Keep them in damp (sitting in a shallow dish) until you are ready.**
- 4. Dig a hole. Make it wide, about as wide as your arms can reach, but not too deep. Just as deep as the roots are long. Some roots spread wide (Coniferous) and some have long tap roots (Deciduous)**
- 5. Set your tree in. Look for the place where the trunk gets wider near the bottom. Where it was buried when you got it. Keep that part at ground level and don't bury it.**
- 6. Spread out the roots. Gently straighten them so they aren't tangled or curled up.**
- 7. Fill the hole. Put the dirt back and press it down gently with your hands.**
- 8. Give it a big drink. Pour lots of water around the tree.**
- 9. Keep watching. Water your tree every week or two, especially when it's dry, and check that it's growing.**

Did you know? A tiny seedling can grow into a tree that lives for a hundred years or more, and its roots stay busy underground even when it's winter.

Image sources

- ✓ **Sargent, Charles Sprague *Manual of the Trees of North America* (Boston, MA: Houghton Mifflin Company, 1905), <https://etc.usf.edu/clipart/>**
- ✓ **Ministry of Natural Resources, Government of Canada: <https://tidcf.nrcan.gc.ca/en/trees/index>**
- ✓ **Ontario Tree Atlas, Government of Ontario: <https://www.ontario.ca/page/tree-atlas>**
- ✓ **List of 50 Trees, Cornell University: <http://bhort.bh.cornell.edu/tree/list.htm>**
- ✓ **USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An Illustrated flora***