Native Trees from the Pinnacles

Hello and Welcome.

We consider this zine a first edition as it only gives a brief glimpse into a vast world of trees, their relationships, and their many names. It is designed to contribute to an educational initiative that offers visitors to the Pinnacles in Berea, KY more ways to understand the surrounding forests and the humans, animals, insects, fungi and others who have cared for it. This is an interactive booklet: color it! Draw in it! Write in it! Whatever helps you engage. Future editions are being planned so that we may include stories about the forest and QR codes that will allow you to hear things being told in languages that may or may not be your own first language. Ultimately we offer this zine as inspiration for you to discover your kinship with others.

Suggestions for using this zine:

☀️ In the following pages, you will find illustrations that show the silhouettes, bark, leaves, seeds and buds of some of the forest's common trees. These elements can help you to know which tree you are looking at. Please don't be discouraged if it takes some practice - trees are complex, variable and intricate, and that is part of their beauty. As you take time to notice a trees details, you might find little tricks or games to help you remember them. The pages of this zine are the perfect place for you to jot down your own ways of learning and seeing! Before long, you will find a growing knowledge and appreciation of the trees.

☀️ Trees have many names in many different languages. This zine only contains a few. If you know other names for these trees, some space has been left for them on the naming page for each tree. Preserving and esteeming the many names of trees helps us to see them in new eyes and appreciate all the different people who named them. Here's an example of how this could look:

English: REDBUD
saawanwaatoweewe:
Cherokee:
Latin: *Cercis canadensis*
ESPAÑOL: árboles de Judas

☀️ Finally, if you love trees and would like to expand this zine, please reach out! We might find common ground and many hands make light work. Maybe one day this will be a book with 100 authors and 100 ways to listen to different languages and stories of these trees. Wouldn‘t that be beautiful?!

saawanwaatoweewe

saawanwaatoweewe is the Shawnee word for the Shawnee language. The word "Shawnee" is simply the English version of that word.

A long perpetuated myth alleges that no one lived in the area now known as Kentucky when Europeans and other non-native people arrived. In fact, the pinnacles sprout from land stewarded for many generations by the Shawnee and Cherokee nations. We invite you to position yourself as a visitor on these lands by embracing the Shawnee language. Languages contain and communicate worldviews. While English is a useful and widespread language, some words can lose the richness of their meaning when translated into English. Understanding the world only in English can lead to a loss of nuance and - more tragically - the loss of cultures.

We hope that the saawanwaatoweewe words in this zine will serve as a gateway into the worldview of the Shawnee people and a richer connection to the forest.

saawanwaatoweewe is the language of an oral tradition. For future editions we will be working to have QR codes that will allow you to engage in the oral tradition by hearing the saawanwaatoweewe words spoken. We hope someday to have each page translated into saawanwaatoweewe in such a way that it supports contemporary use of the language. We also hope to include Cherokee language in future editions, and are currently working to connect with a Cherokee language speaker who supports this work.

Scientific Names

If you study botany you will find that plants are often described by both Scientific names, usually Latin or Greek and a variety of "common names". These can be both helpful - some very different plants have the same common name - and confusing at times, especially since botanists have been known to change their minds about these 'official' names, leading to things like...

'the plant formerly known as...xxx'.

Jokes aside, the scientific names are often quite descriptive and can sometimes lead to a particular understanding of the plants. To hopefully help demystify some of this, the following pages will attempt to provide a language pronunciation key and some rough translation about the trees in this zine.

Cornus florica (kor.nuhs flaw.ruh.duh): Flower horn

Fraxinus americana (frak.s i.nuhs): Latin, fraxinus: ashen spear, americana: american, 'american ashen spear'

Juniperus virginiana: juniper of virginia

Assimina triloba: Algonquin: assimina, 'min': berry or fruit, Latin, triloba: three lobes. '3-lobed fruit'

Cercis canadensis: Greek, cercis: weavers shuttle, canadensis: of Canada
'weavers shuttle of Canada'

Sassafras albidum: Latin, saxifragus or 'stone breaker', the Missouri Botanical Gardens website states that the name comes from an unspecified Indigenous nation in current Florida. Latin: albidum: 'whitish' referring to the underside of the leaves. so 'whitish stone-breaker'?

Carya ovata: Greek, Carya: walnut specifically the name of one of the Greek god Dionysus human lovers whom he memorialized as a plentiful walnut tree upon her death. Ovata: egg-shaped. So.. 'egg shaped god-blessed walnut'.

Liquidambar styraciflua: Latin, liquid: fluid, Arabic, ambar: amber colored styraciflua: flowing with resin.. so name is a little redundant, 'fluid amber colored resin that is flowing with resin'

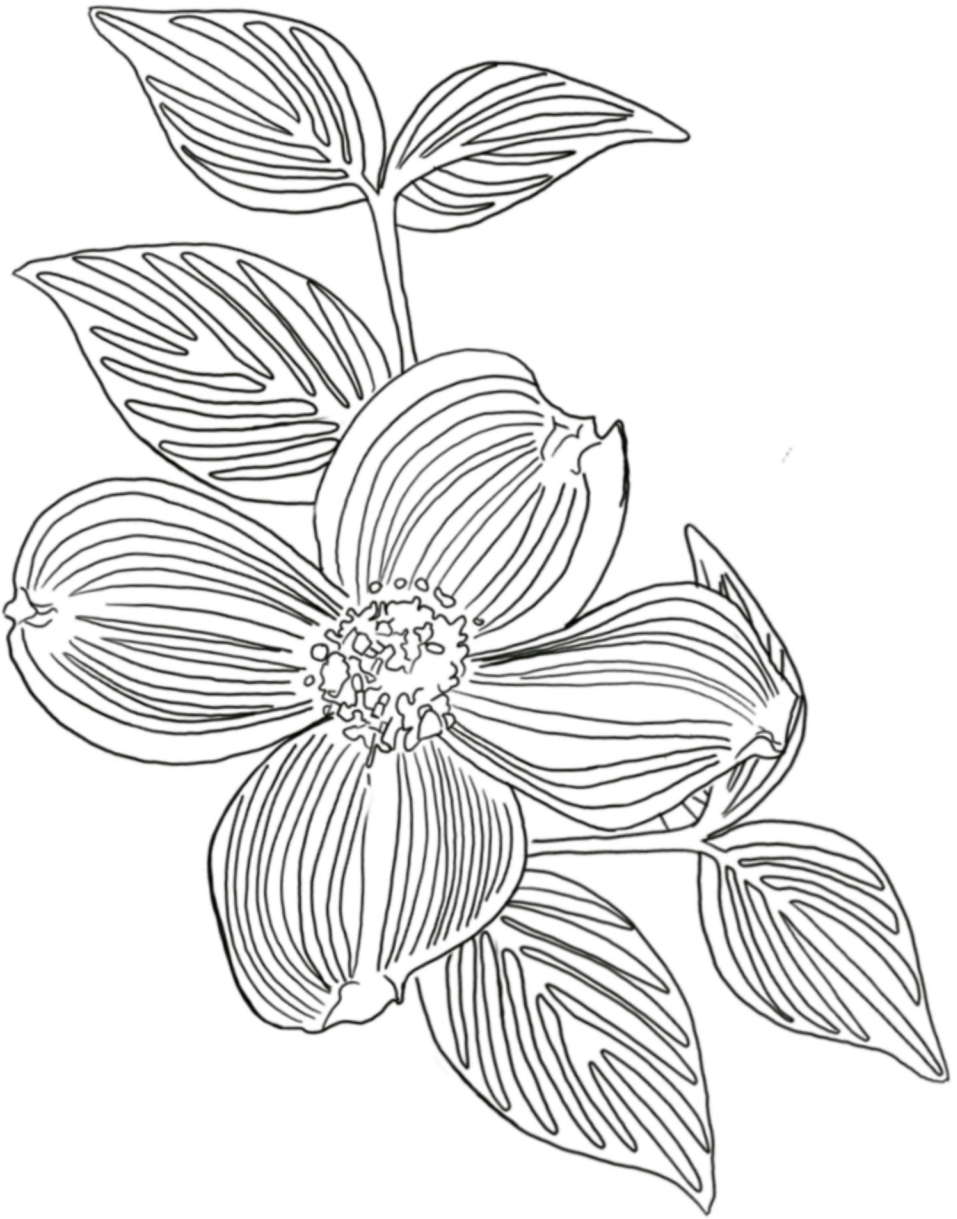
Liriodendron tulipfera: Greek Lirio: lily, dendron: tree, tulipfera: tulip bearing, so 'tulip bearing lily tree'.

Quercus alba: Latin *quercus*: oak, *alba*: whitish, so 'whitish oak'.

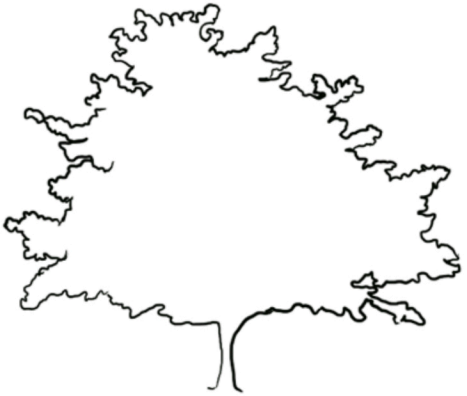
Quercus rubra: Latin *quercus*: oak, *rubra*: red, 'red oak'.

Platanus occidentalis: Greek, *platanus*: plane, wide, broad *occidentalis*: western hemisphere. ' the western hemisphere plane tree'

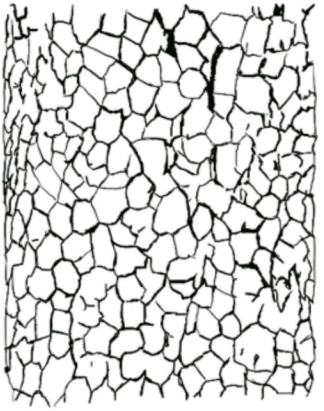
Notes, sketches, etc.



Silhouette



Bark



Flower, Leaf, Seed

Bud

English: DOGWOOD
saawanwaatoweewe: hame'kwemiisi
Cherokee:
Latin: *Cornus florida*

Community Connections: DOGWOODS THRIVE IN THE FORESTS UNDERSTORY, USUALLY ALONG STREAM BANKS AND AT FOREST EDGES. THEY PROVIDE IMPORTANT FOOD FOR NATIVE BEES AND OTHER POLLINATORS. MANY ANIMALS, INCLUDING BIRDS, DEER AND SMALL MAMMALS, RELY ON ITS FRUIT. THESE TREES KEEP FORESTS HEALTHY BY PROVIDING NESTING HABITAT AND HELPING THE SOIL RETAIN WATER. PEOPLE USE THE BARK AS MEDICINE AND THE ROOTS AND BARK MAKE RED DYE.

Notes, sketches, etc.

Silhouette

Bark

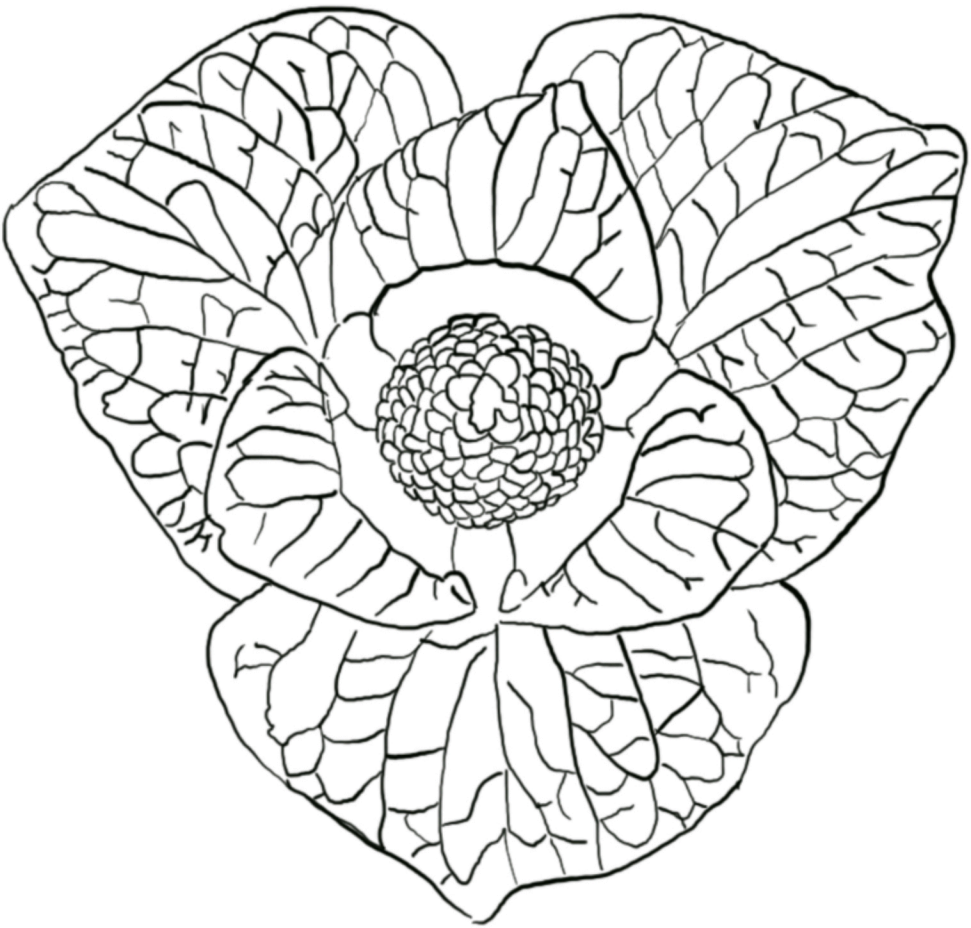
Leaf + Seed

Bud

English: Eastern Red Cedar
saawanwaatoweewe: meskwiikifita
Cherokee:
Latin: *Juniperus virginianica*

Community Connections: EASTERN RED CEDAR GROWS EASILY AND OFTEN REPOPULATES DAMAGED AREAS. CONTROLLED BURNS HELP KEEP THEM FROM OVERPOPULATING A FOREST. BIRDS, ESPECIALLY HAWKS AND OWLS, DEER AND OTHER ANIMALS SHELTER IN THEIR DENSE THICKETS. PEOPLE PLANT THESE TREES AS WINDBREAKS, AND USE THEIR BERRIES IN FOODS AND MEDICINE. THE WOOD AND THE LEAVES SMELL AMAZING, CEDAR IS USED TO MAKE CHESTS AND CLOSETS TO STORE CLOTHES AS IT KEEPS AWAY MOTHS AND ANTS. THESE TREES ARE OLD SOULS, THEY CAN LIVE TO BE 850 YEARS OLD!

Notes, sketches, etc.



Silhouette

Bark

Leaf + Seed

Bud

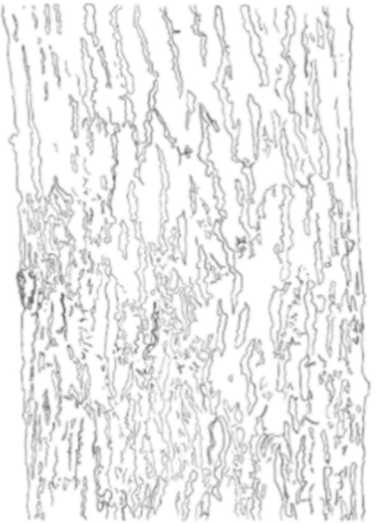
English: PAW PAW
saawanwaatoweewe: haʻsimiisi
Cherokee:
Latin: *Assimina triloba*

Community Connections: PEOPLE AND RACOONS, O'POSSUMS, SQUIRRELS AND BIRDS EAT PAW PAW'S, THEY ARE KENTUCKY'S LARGEST FRUIT. SOME PEOPLE SAY THEY TASTE LIKE A CROSS BETWEEN A MANGO AND A BANANA. PAW PAW LEAVES ARE THE ONLY FOOD SOURCE FOR THE LARVAE OF THE ZEBRA SWALLOWTAIL BUTTERFLY AND THE SPHYNX MOTH. PEOPLE MAKE BREAD AND OTHER BAKED GOODS FROM PAW PAWS, AND THE FRUIT IS BEING RESEARCHED AS A CHEMO-RESISTANT CANCER MEDICINE. THE INNER BARK IS USED AS CORDAGE FOR ROPE OR WOVEN OBJECTS.

Notes, sketches, etc.

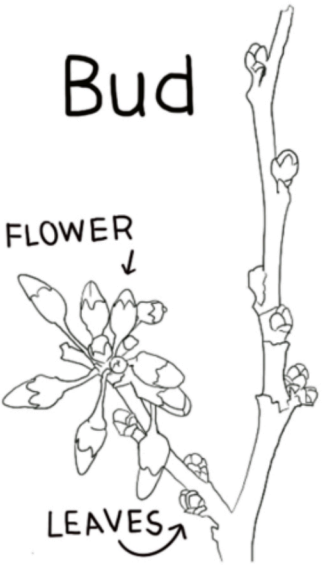
Silhouette

Bark



Flower
Leaf + Seed

Bud



English: REDBUD
saawanwaatoweewe:
Cherokee:
Latin: *Cercis canadensis*

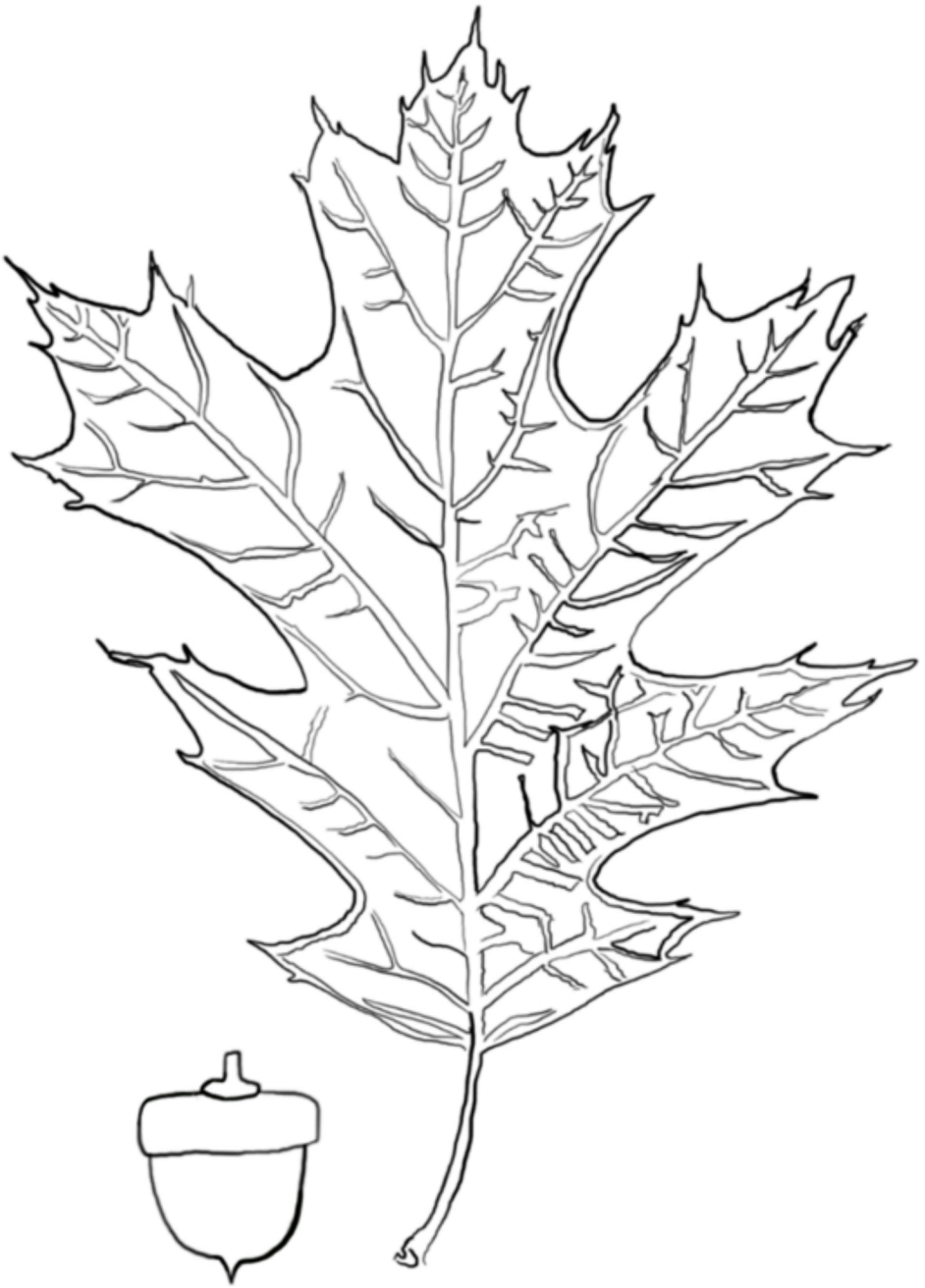
Community Connections: REDBUDS

ARE FIRE TOLERANT UNDERSTORY TREES THAT GROW IN ALMOST ANY TYPE OF SOIL. REDBUDS ARE RELATED TO PEAS AND THEIR FLOWERS AND SEEDS ARE EATEN BY FOREST ANIMALS + PEOPLE. QUAIL AND DEER LOVE THEM AND EVEN CATTLE WILL EAT THEM! BIRDS SPREAD THEIR SEEDS THROUGHOUT THE LAND. PEOPLE PICKLE REDBUD FLOWERS OR ADD THEM TO SALADS.
REDBUD'S PINK FLOWERS EMERGE BEFORE THEIR LEAVES IN EARLY SPRING.

PICKLED REDBUD BLOSSOMS:

PICK THE BLOSSOMS BEFORE THEY ARE FULLY OPEN.
FOR A PINT JAR - GATHER ONE PINT OF BLOSSOMS.
8OZ. (1 cup) WATER
8OZ. (1 cup) WHITE WINE VINEGAR
1/2 TSP OF KOSHER SALT PER CUP LIQUID - COMBINE!

Notes, sketches, etc.



Silhouette

Bark

Leaf + Seed

Bud

English: RED OAK
saawanwaatoweewe:
Cherokee:
Latin: *Quercus rubra*

Community Connections: RED OAKS STABILIZE AND FERTILIZE SOIL AND PROTECT GROUND WATER. THEY ARE SOMETIMES CALLED A KEYSTONE SPECIES OR HUB TREE BECAUSE THEY PROVIDE FOOD AND SHELTER FOR ANIMALS INCLUDING DEER, SQUIRRELS, RABBITS, POSSUMS, QUAIL, MICE, CROWS AND BLUE JAYS. LICHENS GROW ON THEIR TRUNKS WHICH HUMMINGBIRDS USE TO CAMOUFLAGE THEIR NESTS, ATTACHING THEM WITH STICKY SPIDERWEBS. PEOPLE USE RED OAK FOR MAKING CABINETS, FLOORING AND BARRELS, FOR TANNING LEATHER, AS MEDICINE AND FOR FOOD.

Notes, sketches, etc.

Silhouette

Bark

Leaf + Seed

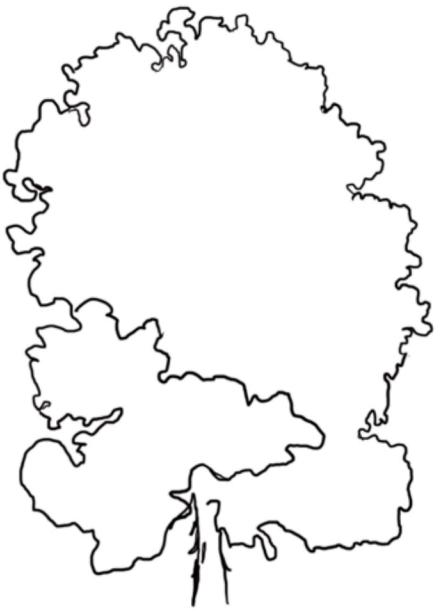
Bud

English: SASSAFRAS
saawanwaatoweewe: pa'kwaanimiisi
Cherokee:
Latin: *Sassafras albidum*

Community Connections: SASSAFRAS TENDS TO GROW IN STANDS IN PLACES THAT GET A MIX OF SHADE AND SUN. DEPENDING ON THE CONDITIONS THEY CAN GROW AS TALL AS A TREE OR AS SMALL AS A SHRUB. SASSAFRAS LEAVES, TWIGS AND ROOTS TASTE LIKE ROOTBEER. JUST ABOUT EVERY FOREST CREATURE EATS ITS LEAVES AND WILL EAT OTHER PARTS TOO WHEN FOOD IS SCARCE. PEOPLE USE SASSAFRAS FOR MAKING BUCKETS, BARRELS, CANOES AND FURNITURE. ITS LEAVES ARE USED IN GUMBO AND IN YUMMY MEDICINAL TEA AS IS THE ROOT BARK.

Notes, sketches, etc.

Silhouette



Bark

Leaf + Seed

Bud

English: SHAGBARK HICKORY
saawanwaatoweewe: skwataamiisi
Cherokee:
Latin: *Carya ovata*

Community Connections: SHAGBARK HICKORIES GROW SLOWLY ALONGSIDE OAKS IN KY FORESTS. THEY GROW BEST IN RICH, MOIST SOIL. SHAGBARKS PRODUCE THEIR NUTS UNTIL THEY ARE 300 YEARS OLD, PROVIDING FOOD FOR HUMANS AND ANIMALS FOR HUNDREDS OF YEARS! BATS MAKE HOMES UNDER THE SHAGGY BARK. PEOPLE ADD MILK OR WATER TO THE NUTS AS A TEA OR TO USE IN COOKING. THE WOOD IS PRIZED BECAUSE IT IS BOTH STRONG AND SPRINGY, AND ITS WOODCHIPS ARE USED FOR SMOKING FOOD. THE WORD 'HICKORY', COMES FROM THE ALGONQUIN WORD, PAWOHICCORA OR PAWHICCORI WHICH IS THE NAME FOR THE TRADITIONAL STEW MADE FROM THIS TREES NUTS.

Notes, sketches, etc.

Silhouette

Bark

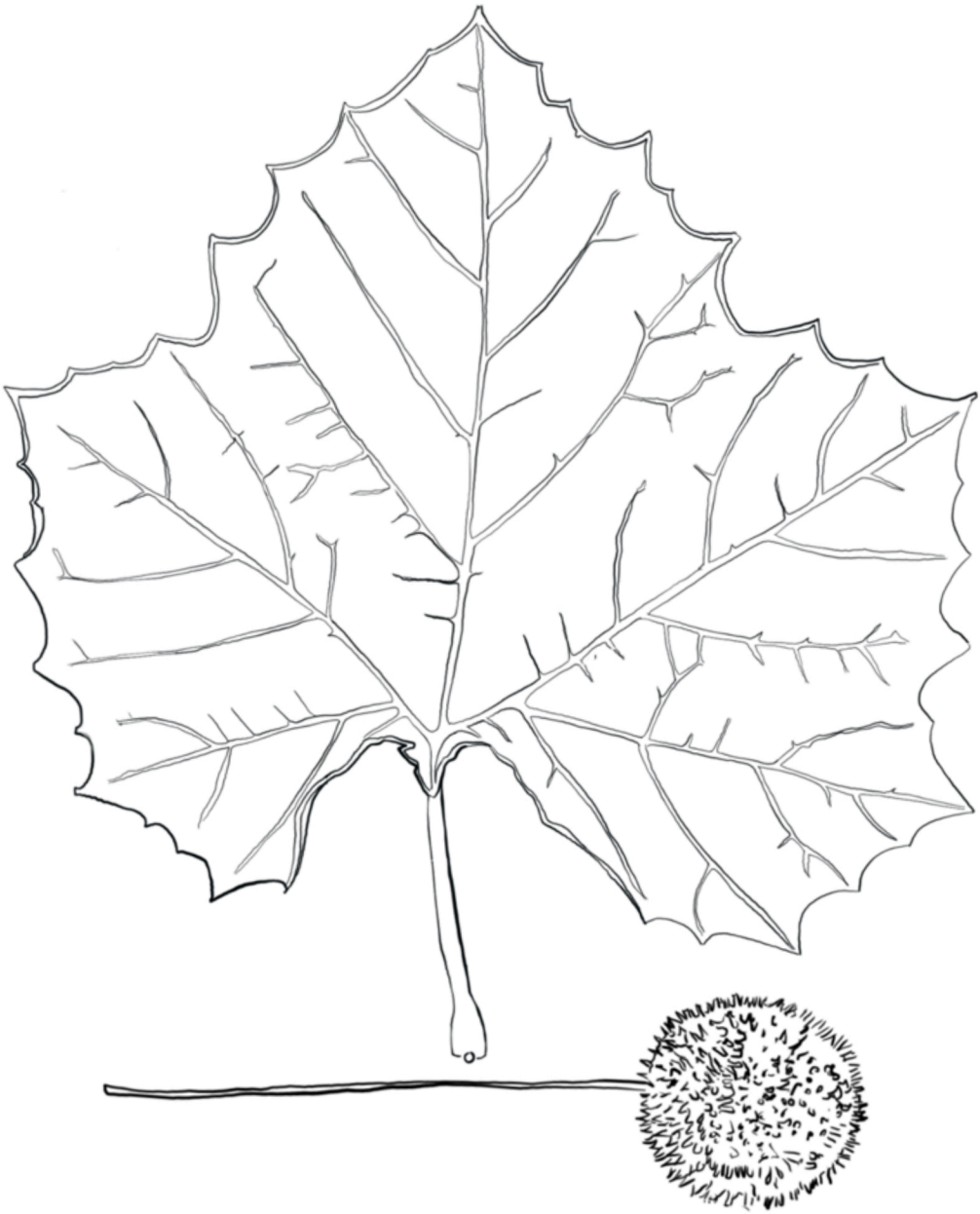
Leaf + Seed

Bud

English: SWEET GUM
saawanwaatoweewe:
Cherokee:
Latin: *Liquidambar styraciflua*

Community Connections: SWEET GUMS PREFER TO GROW IN FULL SUN AND ARE INTOLERANT OF POLLUTION. THE TREES FIX NITROGEN AND QUICKLY FORM TALL WIDE STANDS, SO THEY ARE USED TO RESTORE AND REMEDIATE HABITAT, INCLUDING ZINC AND PHOSPHORUS MINES. SWEET GUMS HOST LUNA MOTH LARVAE AND CHIPMUNKS, FINCHES, SQUIRRELS AND WILD TURKEYS EAT THEIR SEEDS. PEOPLE USE SWEETGUM AS TIMBER, MEDICINES, SOAPS, COSMETICS AND INCENSE. THE SAP HAS BEEN USED TO MAKE CHEWING GUM - BUT IT'S BITTER NOT SWEET!

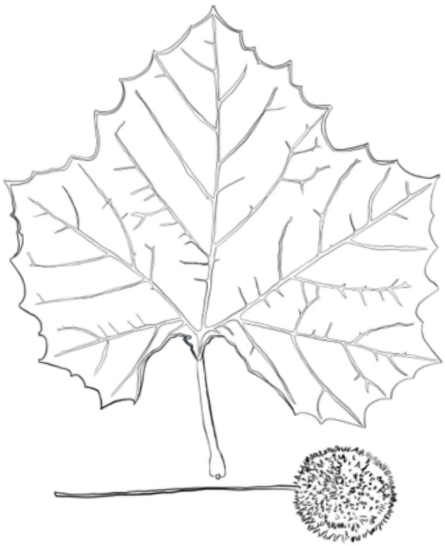
Notes, sketches, etc.



Silhouette

Bark

Leaf + Seed



Bud

English: SYCAMORE
saawanwaatoweewe: kiisoowa'kwatwa
Cherokee:
Latin: *platanus occidentalis*

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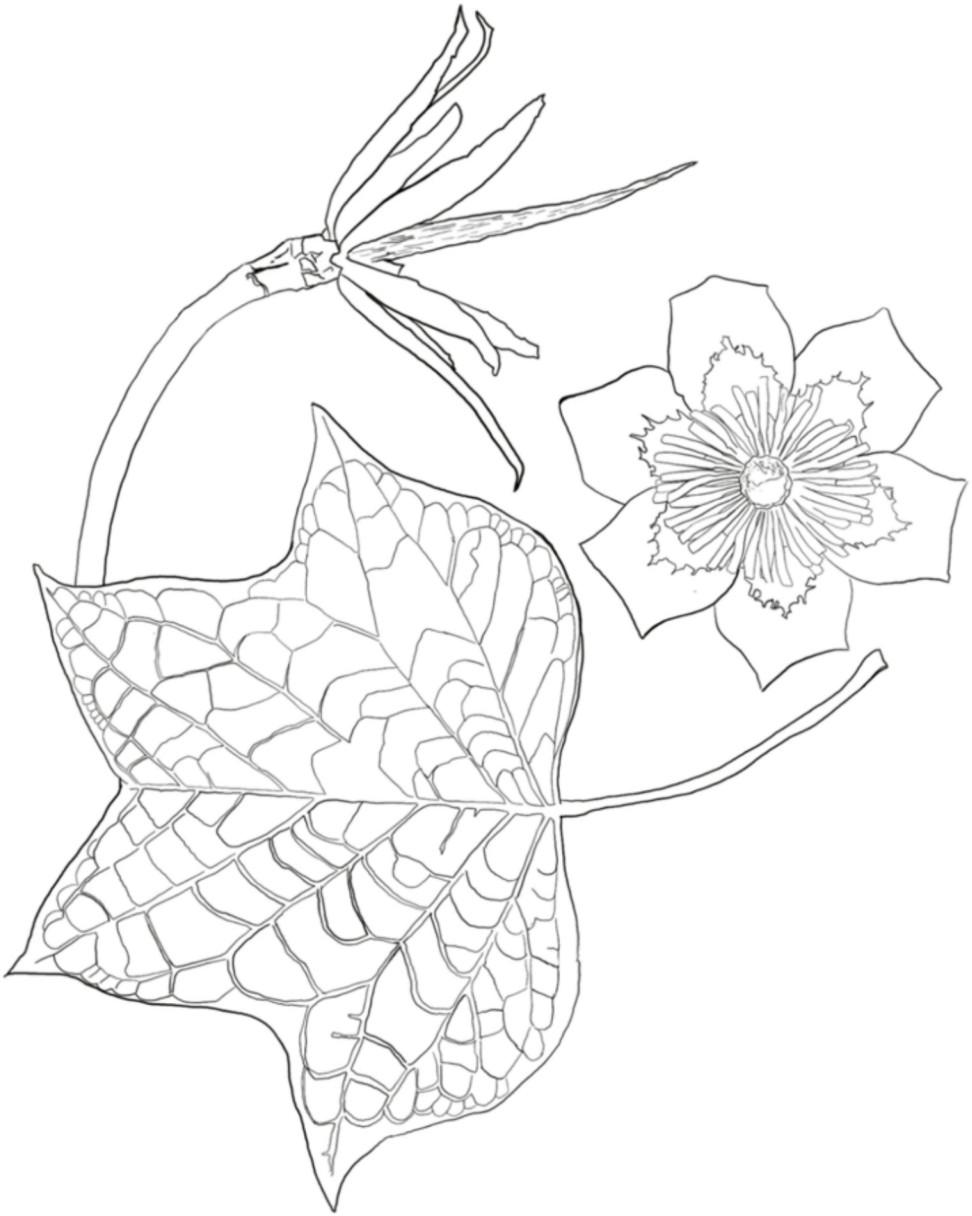
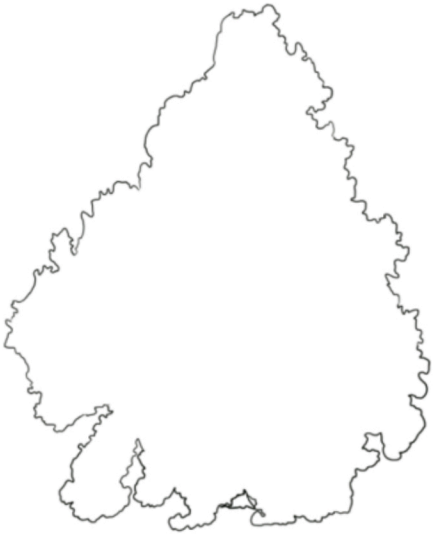
Community Connections: SYCAMORES LIKE TO HAVE THEIR FEET WET, SO THEY OFTEN GROW ALONG WATERWAYS. SYCAMORE SEEDS FEED BIRDS AND SMALL FOREST ANIMALS LIKE CHIPMUNKS AND SQUIRRELS. HOLLOWS IN THE TREE'S TRUNK CAN SOMETIMES BE LARGE ENOUGH FOR A BEAR TO USE AS A WINTER DEN AND PEOPLE SOMETIMES USE THESE HOLLOWS AS SMOKEHOUSES. IF YOU LOOK UP AT THE BARK PATTERNS OF SYCAMORE, YOU'LL SEE PATTERNS THAT LOOK LIKE CAMOUFLAGE, LOOK HIGHER STILL AND THE BRANCHES ARE STARKLY WHITE!

Notes, sketches, etc.



Silhouette



Bark

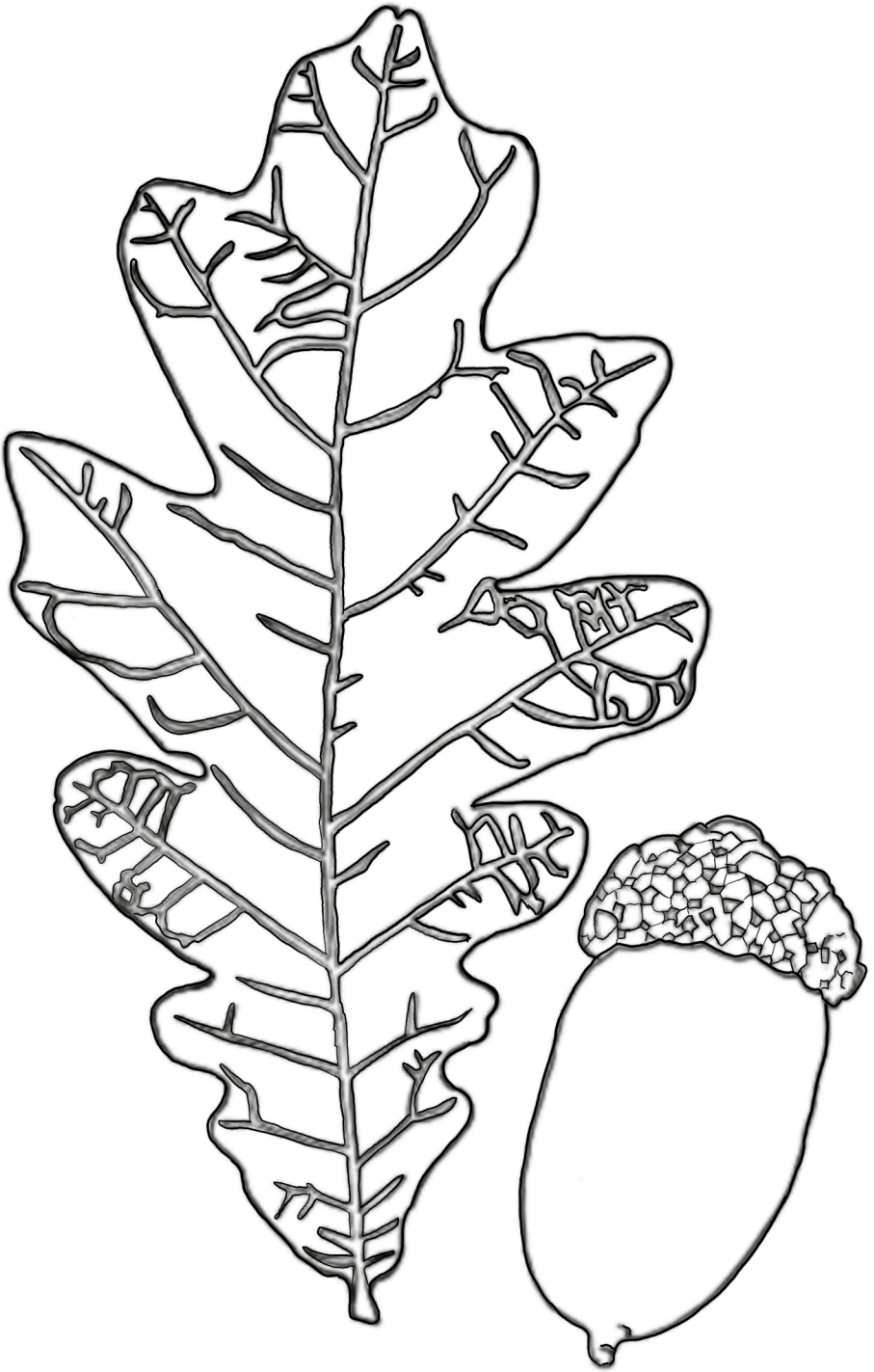
Leaf + Seed

Bud

English: TULIP POPLAR
saawanwaatoweewe:
Cherokee:
Latin: *Liriodendron tulipfera*

Community Connections: TULIP POPLARS PREFER LOAMY , MOIST SOILS IN MIXED HARDWOOD FORESTS. IT'S DEEP ROOTS HOLD THE SOIL WELL AND PREVENT EROSION. THESE FAST GROWING TREES GROW STRAIGHT AND TALL, MAKING SHADE FOR MOSSES, LICHENS AND FERNS. IT'S LEAVES ARE FOOD FOR SWALLOWTAIL BUTTERFLY LARVAE, WHILE RABBITS AND DEER CHEW ON THE TENDER SPROUTS OF ITS NEW GROWTH. PEOPLE USE THE WOOD FOR CANOES, BASKETS, BOWLS AND FURNITURE. THE LATE WINTER BUDS ARE USED AS MEDICINE. THE NAME TULIP POPLAR COMES FROM ITS BEAUTIFUL FLOWERS, BUT THE TREE IS NEITHER TULIP NOR POPLAR!

Notes, sketches, etc.



Silhouette

Bark

Leaf + Seed

Bud

English: WHITE OAK
saawanwaatoweewe: waapaʻkwemiisi
Cherokee:
Latin: *Quercus alba*

Community Connections: WHITE OAKS GROW IN FULL SUN AND ACIDIC WELL-DRAINED SOIL. THEY ARE VERY SENSITIVE TO ANY CHANGES IN THESE CONDITIONS. OAKS ARE LONG LIVED AND SEQUESTER HUGE AMOUNTS OF CARBON. THEIR MASSIVE LEAF COVER PROVIDES STABLE HABITAT FOR UNDERSTORY PLANTS AND ANIMALS. HABITAT THAT CAN THRIVE FOR HUNDREDS OF YEARS. OAKS ACORNS ARE FOOD FOR MANY CREATURES AND ITS TRUNK PROVIDES NESTING FOR BIRDS, BATS, RACCOONS AND MORE! WHITE OAK IS RESISTANT TO WATER, DECAY, AND ROT SO IT IS USED FOR BUILDING SHIPS AND FOR MAKING BARRELS FOR BOURBON AND WINE.

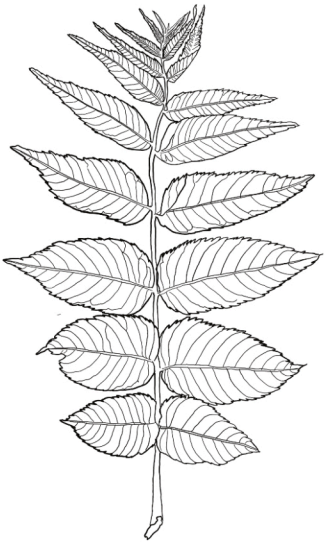
Notes, sketches, etc.

Looking at things next to each other.

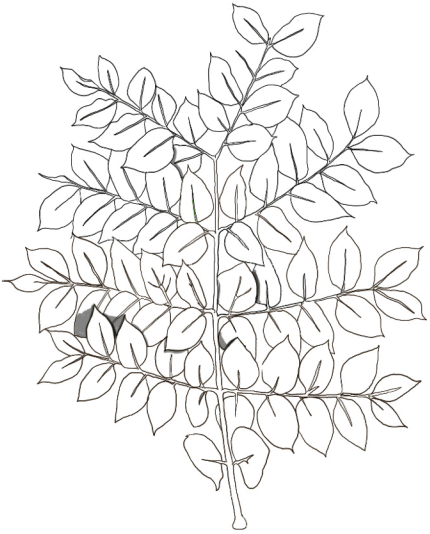
Let's face it, sometimes identifying plants comes down to some pretty subtle details, the following pages show some leaves and barks next to each other to help you begin to distinguish them. Wherever possible i've written in a couple helpful hints.

Compound Leaves
or
Leaves made up of leaflets

This is an interesting and unique type of leaf, the leaf is the overall shape made up of leaflets that take a particular and recognizable pattern. There are many trees that have this type of leaf structure, here are a few that you will find locally.



Black Walnut



KY Coffee Tree

Shagbark Hickory

Black Locust

Leafy-Shaped Leaves

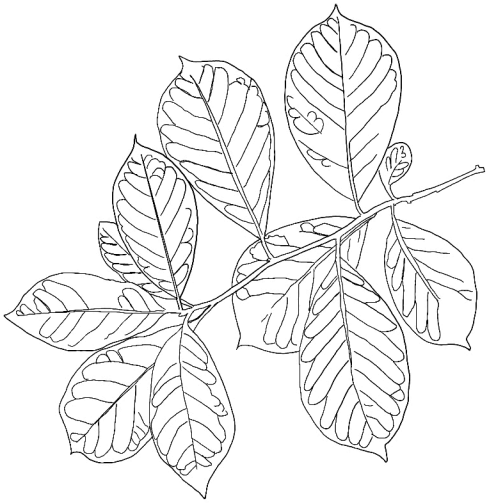
John Abrams, The FOC's esteemed naturalist, describes these leaves as leafy-shaped. The leafy-shaped leaves are more or less oval and can be difficult to tell apart from one another. With this group of trees you may have to take in a few more details, beyond just the leaf, to ensure the tree you are observing is in fact who you think it is.

Black Gums are a common tree and if the tree you are observing fails all the other tests (listed below) you might be looking at a Black Gum.

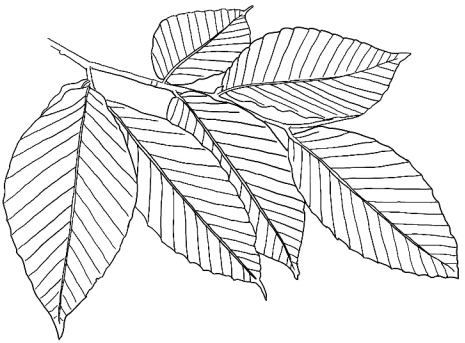
Sourwood trees have highly fragrant smelling and sour tasting leaves, there is no mistaking it! These leaves make a delicious lemonade during hot weather.

Beech trees have smooth grey bark and their roots often look like knuckles grabbing the earth.

Paw Paws leaves tend to droop down in a very particular way that you can become used to seeing. They also don't get very big as they are not a canopy tree.

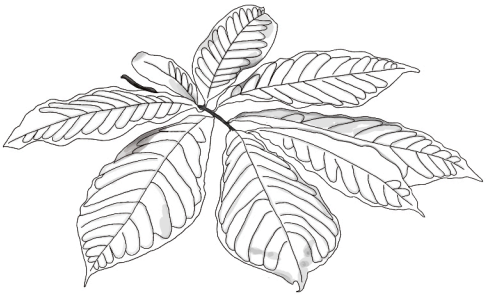


Black Gum



Beech

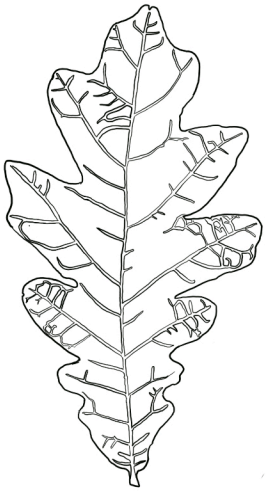
Sourwood



Paw Paw

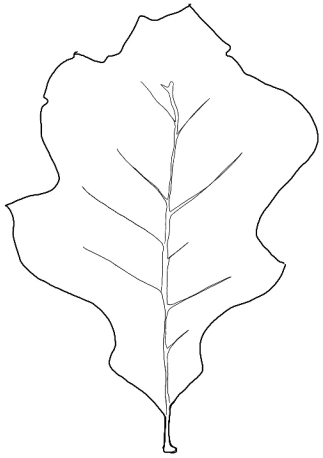
Oak Leaves

There are so many different varieties of Oak! The following page shows a few varieties that are common to the Pinnacles area. Oaks can really test your powers of observation. Are you looking at a variation within one species , or is it a different species entirely?! With some practice you will be able to identify some of the differences distinct between different species of oak, even with some individual variation.

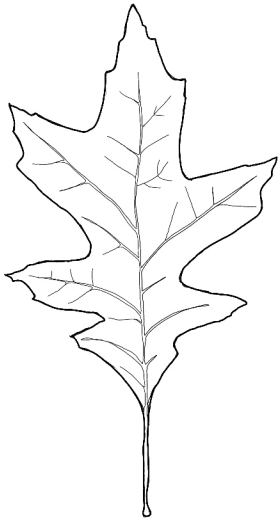


White Oak

Northern Red Oak



Black Oak



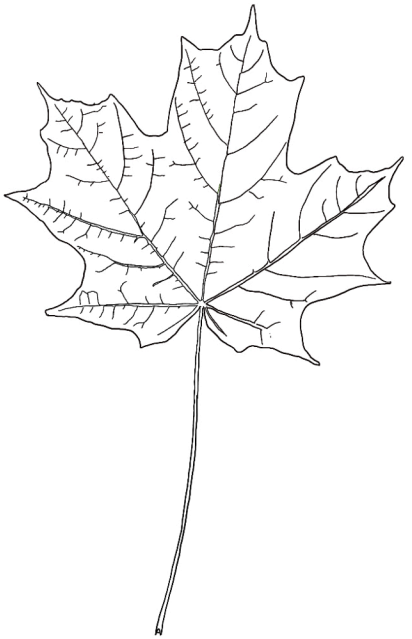
Southern Red Oak

Maple and Maple-like leaves

Here is another variety of leaves that are common to see around the Pinnacles. One of the trickiest differences to tell can be between Red Maple and Sugar Maple. Below is John Abrams' trick that can really help you see the difference!

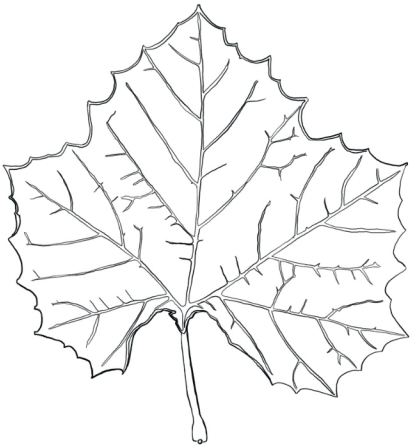
Sugar Maple, 'S' is for Smooth, the edge of the leaf is smooth all the way around the leafs edge.
Red Maple, 'R' is for Rough, the edge of the leaf is rough all the way around the leafs edge.

A side by side comparison of the leaves makes it easy to see the differences and hopefully the drawing on the next page gives you a good starting point.



Sugar Maple

Red Maple

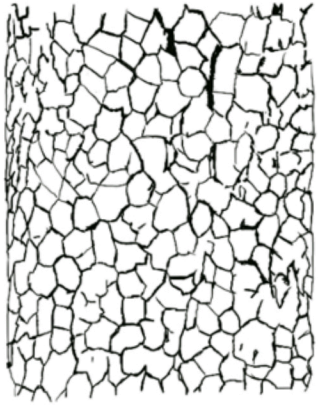


Sycamore

Sweet Gum

Name That Bark!

In the space provided write the name of the tree by looking closely at its bark, include a couple of reasons why you notice the difference between one or the other. Extra credit if you can use more than one name for each tree!



The Mighty Ash
vs.
The Emerald Ash Borer

We are losing another one of the great trees from the forests, The Mighty Ash. The Ash tree has cousins all over the world and Ash trees play a significant role in more than one traditional cosmology (belief system). If i was to start to work on a folk tale about trees that speaks to a lesson that we may need to learn in contemporary society, i think it would involve the small things that take down giants, such as the Emerald Ash Borer larvae taking down the mighty Ash trees all across the land. This story is not a David and Goliath story, not a story of overcoming massive hardships against all odds, and it's not a story of conquering through malice, but instead, through the enactment of mindless daily consumption. The Emerald Ash Borer is not a cackling maniac out to destroy all Ash trees, in fact there is a chance that through such unbridled consumption it is assuring its own destruction.

Can we learn anything from this story? Is there a lesson in this that we can apply to ourselves?

White Ash
Fraxinus americana

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copy respectfully