# Black Cherry
*Prunus serotine*

**Identification features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE; LANCE to OVATE shaped; finely TOOTHED margins; 2”-6” long; dark green above and paler below; orangish brown hairs on midrib; red or yellow in autumn
- Flowers: small and white hanging in 4”-6” long clusters called racemes; bloom in spring
- Fruit: purplish round DRUPE containing a single round, stony seed; ½” in diameter; arranged in hanging clusters; ripen in late summer-early autumn
- Bark: young bark is covered with horizontal lenticels; older bark is covered with dark scales or plates
- Medium size tree reaching 50-75 feet tall; grows in an OVAL shape

**Habitat:**

- NATIVE to Pennsylvania
- Widespread

**Wildlife Value:**

- Game birds and songbirds eat the fruit.
- Mammals such as the black bears, white-tailed deer, squirrels, moles and mice also eat the fruit.
- Honeybees collect pollen and nectar from the flowers.
- Leaves, twigs and bark contain cyanide (poison). Livestock eating wilted leaves can become sick and even die. White-tailed deer are not affected by the poison.

**Human Value:**

- **The reddish- brown hardwood is highly prized. It is used to make veneer.** The wood and veneer are used to make quality furniture, cabinets, paneling, flooring, and trim.
- **Fruit is used to make jelly, jams, and pies as well as a syrup to flavor drinks.**
- Bark has medicinal properties and historically was used in cough medicine and sedatives.
- All parts of the tree, except the pitted fruit, contain a toxic, poisonous substance and should not be eaten.

# Black Walnut
*Juglans nigra*

**LEAF**

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: PINNATELY COMPOUND; 12”-24” long; 14-24 LANCE shaped leaflets; leaflets with finely TOOTHED margins and 2”-4” long; terminal (end) leaflet is often absent or very small; crushed leaves have a spicey scent; turn yellow in autumn
- Flowers: green CATKINS; 3”-4” long; blown in spring
- Fruit: round nut-like DRUPES; 1”-2” in diameter; seeds are encased in a rough black shell that is covered by a thick, green, spongy husk; seeds are oily & sweet; green husk turns black after dropping; ripen in autumn
- Bark: dark brown with narrow, diamond-shaped ridges
- The tree releases a chemical that prevents certain plants from growing around it.
- Large tree up to 80 feet tall; grows in a ROUND shape

**CATKINS**

**BARK**

**Habitat:**

- NATIVE to Pennsylvania
- Forests and floodplains

**DRUPES**

**Wildlife Value:**

- Nuts are eaten by squirrels.
- Yellow-bellied sapsuckers drill holes in the bark to eat sap.
- Twigs are eaten by white-tailed deer, mice, and Eastern cottontails.
- Leaves are food for caterpillars and many other types of insects.

**Human Value:**

- The **hardwood** is dark chocolate brown in color and used to make veneer, quality furniture, musical instruments, and guns.
- Shells are ground for use in many products including jet engine cleaners, filler in dynamite, and an ingredient in car tires.
- **Drupes are used in baked goods, ice cream, and confections.**
- Drupes also used for ink and dyes.

# Black Willow
*Salix nigra*

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE; LANCE-shaped; finely TOOTHED margins; stipules (small leafy parts) are located at the base of the petiole and surround twig; 3”-6” long; greenish yellow in autumn
- Flowers: yellow-green CATKINS; 2’ long; bloom in late winter/early spring
- Fruit: reddish brown cone-shaped capsules containing many small, cottony seeds; ¼” long; ripen in late spring/early summer
- Bark: dark brown to black; deep groves and rough texture; twigs are drooping
- Medium size tree reaching 69 feet tall; grows in an OVAL or ROUND shape

BARK

**Habitat:**

- NATIVE to Pennsylvania
- Streambanks and wet meadows

**Wildlife Value:**

- White-tailed deer eat the twigs and shoots.
- One of the first flowers in Spring that provides honey and pollen for honeybees.
- Elk and beaver eat willow leaves in Summer and twigs in the winter.
- Leaves are food for caterpillars and many other insects.

**Human Value:**

- **The hardwood is grayish brown in color and is used to make wicker furniture.**
- **The young, flexible stems are used for basketmaking.**
- Lumber is used for shipping boxes.
- Black willow tea was used historically for pain relief. Chemists made a synthetic version of the compounds in black willow to create aspirin.
- Once used to make artificial limbs.
- Growing along the banks of streams black willow roots hold onto the soil preventing erosion.

# Eastern Hemlock
*Tsuga canadensis*

**NEEDLES**

**Identification Features:**

- EVERGREEN.
- Leaves: flattened NEEDLES attached singly to branches; ½" long; needles have 2 white lines on the underside.
- Fruits: egg-shaped CONES; ¾" long; 2 small-winged seeds are found under each cone scale.
- Bark: deeply furrowed and scaly; broad, flat-topped ridges; color ranges from cinnamon-red to gray-brown or purplish-brown.
- Large, long-lived tree, reaching heights of 70 feet tall. Some old-growth forests have hemlocks that are up to 400 years old! Grows in a PYRAMIDAL shape.

**CONES**

**Habitat:**

- NATIVE to Pennsylvania.
- Cool, moist forests.
- State tree of Pennsylvania.

**BARK**

**Wildlife Value:**

- Ruffed grouse, wild turkey, and songbirds eat the seeds.
- Many birds find shelter on the branches.
- Provides an excellent cover for white-tailed deer.
- The deep shade that Hemlock trees provide helps keep forest streams cool.

**Human Value:**

- Used in landscaping. It can be shaped into rectangular hedges.
- **Tannic acid harvested from tree bark is used for tanning leather.**
- The light reddish-brown **softwood** is used in boxes, plywood, and construction.
- Native Americans used Hemlock wood as an ingredient in bread and soups. Tea was made from leaves which have high vitamin C content.

# Eastern Redcedar

*Juniperus virginiana*

**Identification Features:**

- EVERGREEN
- Leaves: can be 2 types; young trees ¾" sharp pointed NEEDLES; older trees < ¼" and SCALY; scaly leaves are most common
- Flowers: male flowers are yellowish-brown and female flowers are light bluish green; bloom in spring
- Fruit: blue, berry-like CONES; cones have a white, waxy coating; ¼" in diameter; each cone contains 1-2 seeds; ripen in autumn
- Bark: reddish-brown and peeling off in flaky strips
- Medium tree reaching 40 feet tall; grows in a columnar or pyramidal shape

**Habitat:**

- NATIVE to Pennsylvania
- Fields, roadsides, forest understory
- Open areas

**Wildlife Value:**

- Host plant for over 35 species of butterfly and moth larva.
- Young trees are eaten by white-tailed deer, mice, and Eastern cottontails.
- Cones are eaten by many birds and mammals including cedar waxwings, American robins, woodpeckers, skunks, and raccoons.
- Trees are important cover for small mammals and make great nesting sites for birds.

**Human Value:**

- **Wood is reddish in color and has a sweet scent.**
- The **softwood** is used for fence posts, poles, paneling, furniture, pencils, pet bedding, and chests.
- Planted in backyards and parks to attract wildlife.
- The wood is rot resistant.
- **The wood has insect-repelling properties, so it is used to help repel clothing moths by putting wood blocks or shavings in closets and chests.**
- Tree is also used for medicines to prevent cough, joint pain, and aid in digestion. Also used to treat fungal infections.

# Eastern White Pine
*Pinus strobes*

**NEEDLES**

**Identification Features:**

- EVERGREEN.
- Leaves: soft, flexible NEEDLES in clusters of 5. Each needle is 2½" - 5" long; bluish green in color; needles are 3-sided.
- Fruits: elongated CONES; 5"-8" long; cones do not have prickles but are resinous (sticky); cones are slightly curved; each cone scale holds 2 winged seeds.
- Bark: dark brown; grooved and scaly.
- Large size tree reaching 50-90 feet high; grows in a PYRAMIDAL shape.

**NEEDLE CLUSTER**

**Habitat:**

- NATIVE to Pennsylvania.
- Forests.
- Parks and Neighborhoods.

**CONES**

**Wildlife Value:**

- Seeds and needles are eaten by birds, black bears, squirrels, chipmunks, and mice.
- Beavers and porcupines eat the inner bark.
- White-tailed deer eat the young twigs.
- Needles are food for caterpillars.
- Provides a great nesting site for birds. Bald eagles build nests in living trees, usually at a main branch located below the crown top.

**Human Value:**

- **Softwood is light brown in color and is one of the most common and widely used for construction lumber.**
- Wood is valuable and used for furniture, cabinets, house construction, and woodwork.
- **Planted as Christmas trees.**
- Planted as windbreaks.
- Historically used for ship masts.

**BARK**

# Northern Red Oak
*Quercus rubra*

**LEAVES**

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE with 7-11 LOBES with BRISTLE-TIPPED TEETH; smooth, dull green above and paler with tufts of hair beneath; 4”-9” long; turn red in autumn
- Flowers: male flowers are yellow-green CATKINS; female flowers are spikes; bloom in spring
- Fruits: ACORNS; ¾” – 1 ¼” long; caps are shallow and saucer-shaped, covering ¼ of the nut; cup scales reddish-brown and fuzzy; ripen in autumn after two growing seasons
- Bark: dark gray or nearly black; divided into rounded ridges between smooth gray streaks
- Large size tree growing up to 75 feet tall; grows in a ROUND shape

**BARK**

**CATKINS**

**Habitat:**

- NATIVE to Pennsylvania
- Forests
- Parks and neighborhoods

**Wildlife Value:**

- Acorns eaten by a variety of birds and mammals, such as Northern bobwhite quail, red-headed woodpeckers, flying squirrels, and black bear.
- Leaves are food for butterflies and moth larva.
- Twigs and leaves are eaten by white-tailed deer, elk, and Eastern cottontail rabbits.
- Many red oak trees hold on to their brown leaves in the winter, making them good shelter for a variety of animals.

**Human Value:**

- **The hardwood is red brown in color and hard and strong. The wood is used for high-quality furniture, flooring, veneer, and coffins.**
- **The wood cuts, glues, stains, and finishes well.**
- Planted as an ornamental because of its beautiful red foliage in Autumn.
- Red oaks have a rapid growth rate, provide shade, and tolerate pollution.
- They can be planted in polluted areas such as old coal mines spoils to restore a natural habitat.
- Native Americans used the acorns as a food and medicine source.

**ACORN**

# Sassafras
*Sassafras albidum*

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE; OVAL shaped; there are 3 different shaped leaf margins on the same tree - ENTIRE, TWO LOBED, THREE LOBED; 4”-6” long; yellow-orange-scarlet-purple in autumn
- Flowers: yellow; in clusters; 1”-2” long; bloom in spring
- Fruits: dark blue, shiny DRUPES; ½” long on 2” long red stalks; grow in clusters; ripen in autumn
- Bark: reddish-brown; deeply ridged; branches are crooked
- All parts of tree smell fragrant when crushed or ripped. Some describe the smell like Fruit Loops.
- Small to medium size tree 30-60 feet tall; grows in a ROUND shape

**Habitat:**

- NATIVE to Pennsylvania
- Sassafras is a pioneer tree on disturbed sites. Pioneer plants are the first plants to grow in an open space
- Forest, fields, roadsides, and fence rows

**Wildlife Value:**

- Drupes are eaten by quails, turkeys, mockingbirds, woodpeckers, and other birds.
- Black bears, beaver, rabbits, and squirrels eat the drupes, bark and wood.
- White-tailed Deer eat the twigs and leaves.

**Human Value:**

- The color of the **hardwood** is brown with orange hues. It is light in weight and used for firewood, fence posts, and furniture.
- **Roots used to make tea, root beer, and scent soap.**
- **Roots also used as a spice in Cajun food.**
- Planted for their fragrant flowers and beautiful autumn leaves.
- Native Americans used parts of the tree to make medicines and spices for food.

**BARK**

# Scots Pine
*Pinus sylvestris*

**LEAVES**

**Identification Features:**

- EVERGREEN
- Leaves: stiff NEEDLES in clusters of 2. Each needle is 2”- 4” long; bluish green in color; twisted; circular in cross-section
- Fruits: CONES; 1”-3” long; oval; brownish or reddish color; scales are flat and pyramidal with small blunt spines; each cone scale holds 2 winged seeds
- Bark: lower trunk rough and gray; upper trunk flaky and orange red
- Large tree reaching 70 feet high; young trees grow in a PYRAMIDAL shape and mature trees have a ROUND shape

**NEEDLE CLUSTER**

**Habitat:**

- INTRODUCED to Pennsylvania; native to Europe
- Parks and neighborhoods

**Wildlife Value:**

- Seeds are eaten by a variety of birds and mammals.
- The bark is a food source for porcupines.
- Provides a great nesting site for birds, especially owls.

**Human Value:**

- The **softwood** is used for pulpwood, poles, veneer, and construction.
- The resin can be used to make turpentine, rope can be made from the inner bark, a dye can be made from the cones, and tar can be made from the roots.
- **Planted as a Christmas Tree because of its shape, stiff branches that will hold heavy ornaments, and the fact that the tree will not drop its needles when dry.**
- The tree can also be planted as a windbreak.

**CONES**

**YOUNG TREE**

**MATURE TREE**

**BARK**

# Shagbark Hickory
*Carya ovata*

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: PINNATELY COMPOUND; 8”-14” long; 5-7 ELLIPTICAL shaped leaflets; leaflets with finely toothed margins and 4”-7” long; upper 3 leaflets are larger than lower leaflets; yellow brown in autumn
- Flowers: 3”-4” long green male CATKINS; 1/3” long spiked female flowers; bloom in spring
- Fruit: oval to round nut-like DRUPES; 1”-2 ½” in diameter; seeds are encased in a thick green husk that splits into 4 pieces when ripe; seed is pointed at one end and light brown to white in color; seed is sweet; green husk turns reddish brown after dropping; ripen in autumn
- Bark: young bark is gray & smooth; older bark breaks into long peeling strips giving the trunk a shaggy appearance
- Large tree reaching 80 feet tall; grows in an OVAL shape

**CATKINS**

**Habitat:**

- NATIVE to Pennsylvania
- Forests, hillsides

**Wildlife Value:**

- Hickory nuts are food for squirrels, chipmunks, black bears, gray and red foxes, rabbits, mallards, wood ducks, bobwhites, and wild turkey.
- Hickory leaves are food for caterpillars.
- Many animals take shelter in the branches and cavities of hickories.

**DRUPES**

**Human Value:**

- The reddish-brown **hardwood** is heavy, hard, and strong. It is used for tool handles, furniture, ladders, cabinets, and athletic equipment.
- **It is used for firewood and charcoal due to its density and heat output.**
- **The wood has a rich aroma and is used to smoke meats, like bacon and ham.**
- Historically, hickory wood has been used to make bows (bow and arrow) and wheel spokes for carriages.
- Native Americans crushed the nuts to make cooking oil and bread flour.

**BARK**

# Sugar Maple
*Acer saccharum*

**LEAF**

**Identification Features:**

- DECIDUOUS
- OPPOSITE branching pattern
- Leaves: SIMPLE; ROUND shape with five pointed LOBES; lobes are coarsely toothed margins; 3”-6” long; red, orange, or yellow in autumn
- Flowers: tiny (1/8” long), yellow green; hang in clusters; bloom in spring
- Fruit: SAMARAS; “U”-shaped with the wings almost parallel to right-angled; 1”-1 ½” long; ripen in autumn
- Bark: young bark is gray and smooth; older bark has long, narrow bark flaps
- Large tree reaching 90 feet tall; grows in a ROUND or OVAL shape

**SAMARAS**

**Habitat:**

- NATIVE to Pennsylvania
- Moist woods and yards

**BARK**

**Wildlife Value:**

- Birds, gray squirrels, and flying squirrels eat the seeds.
- White-tailed deer, squirrels, porcupine, and other animals eat the twigs, buds, and bark.
- Woodpeckers and other cavity nesters build nests in sugar maple.
- Bees and other insects collect pollen from the flowers.

**Human Value:**

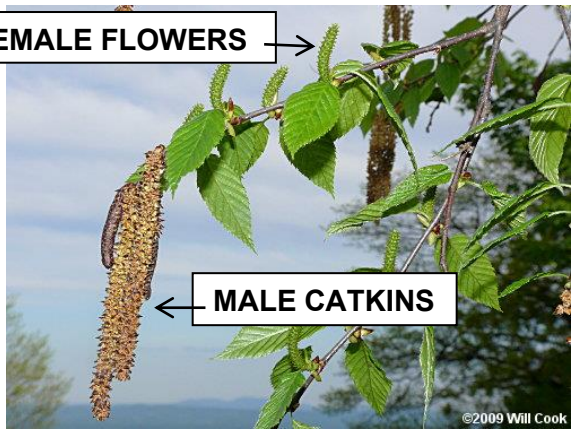
- The light-colored **hardwood** is used to make veneer, furniture, musical instruments, hardwood floors, and bowling alleys & pins.
- **Sugar maple sap is collected and boiled into maple syrup and many other maple products.**
- Native Americans used maple sap for sugar, candy, as a beverage, fermented into beer, and soured into vinegar.

**FLOWERS**

# Sweet Birch
*Betula lenta*

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE; OVATE shaped; UNEVENLY TOOTHED margins; HEART shaped leaf base; 2 ½”-5” long; bright yellow in autumn
- Flowers: male flowers are 3”-4” green CATKINS; female flowers are ½”-1” & upright; bloom in spring
- Fruits: small, winged nuts that are grouped together to form a cone-like structure called a STROBILE; 1 ½” long; ripen in autumn
- Bark: young bark is dark reddish-brown with horizontal lenticels; older bark breaks into large, plates
- All parts of the tree have a strong wintergreen scent
- Medium size tree reaching 50-60 feet tall; grows in an OVAL or PYRAMIDAL shape




**Habitat:**

- NATIVE to Pennsylvania
- Found in a variety of habitats from moist soils to rocky slopes

**Wildlife Value:**

- Leaves are food for many species of caterpillars.
- Ruffed grouse feed on buds and seeds.
- White-tailed deer and Eastern cottontails browse on twigs.

**Human Value:**

- The **hardwood** is reddish brown in color, heavy and strong, and is used for furniture, boxes, and fuelwood.
- Sweet birch trees can be tapped like Sugar maples to make syrup.
- **The sap is also fermented to make birch beer and vinegar.**
- The twigs make great “wilderness toothbrushes” because of its scent.
- Historically, the oil found in the bark and twigs was sold as “oil of Wintergreen” which was used to flavor candy and medicines.

# White Ash
*Fraxinus Americana*

**LEAF**

**Identification Features:**

- DECIDUOUS.
- OPPOSITE branching pattern.
- Leaves: PINNATELY COMPOUND; 7”-12” long; 5-9 ELLIPTICAL to LANCE shaped. leaflets; ENTIRE margin; autumn colors range from yellow to deep purple and maroon.
- Dioecious, meaning there are male and female trees. Only female trees bear fruit.
- Flowers: small; green; grow in clusters; bloom in spring.
- Fruits: SAMARAS; 1”-2” long; resemble canoe paddles; ripen in late summer.
- Bark: covered with diamond shaped furrows.
- A large tree that can reach 80 feet tall. Grows in an OVAL or PYRAMIDAL shape.

**FLOWERS**

**Habitat:**

- NATIVE to Pennsylvania.
- Forests, school campuses, lawns, and parks.

**Wildlife Value:**

- White-tailed deer, beaver, porcupine, and rabbits eat the bark and twigs of young trees.
- Samaras are eaten by wood ducks, bobwhite quail, turkey, grouse, squirrels, mice, and many other animals.
- Cavity nesting animals often find good nesting sites in white ash trees.

**Clusters of SAMARAS**

**Human Value:**

- Gets its name from its white colored **hardwood**, which is **strong, heavy, and shock resistant.**
- **Used for baseball bats, hockey sticks, furniture, doors, railroad ties, canoe paddles, snowshoes, boats, and tool handles.**
- Used as a shade tree in public places.
- Used to reforest disturbed areas.
- Native Americans used the wood for tools and had many medicinal uses for white ash, including to stop inching from mosquito bites.

**Single SAMARA**

**BARK**

# White Oak
*Quercus alba*

LEAVES

**Identification Features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE with 5-9 ROUNDED LOBES without bristles; 4”-9” long; bright green above and paler green below; red to deep purple in autumn
- Flowers: male flowers are 2”-4” long green CATKINS that dangle from the branch; female flowers are reddish and appear as single spikes; bloom in spring
- Fruits: ACORNS that are ¾:” -1” long; light brown in color; acorn cup is bowl-like, hairy inside and covers ¼ of the nut; cup scales warty at base; ripen in autumn after one season
- Bark: light grey or whitish, scaly, and often flaky
- Large tree reaching over 100 feet tall; grows in an OVAL or ROUND shape

**Habitat:**

- NATIVE to Pennsylvania
- Widespread

CATKINS

**Wildlife Value:**

- Acorns are eaten by squirrels, blue jays, crows, red-headed woodpeckers, deer, turkey, quail, mice, chipmunks, and raccoons.
- Over 500 different caterpillar species and many other insects including walkingsticks and gall-forming insects eat the leaves.

**Human Value:**

- The **hardwood** is light brown to gray brown in color. It is strong and durable.
- **Wood is resistant to decay and impervious to liquids making it perfect for outdoor applications, including boat building.**
- **The famous Revolutionary War frigate, USS Constitution, "Old Ironsides", was made of White oak.**

BARK

ACORNS

- Wood has also been used for veneer, hardwood flooring, barrels, lumber, and furniture.
- White Oak is planted in parks and neighborhoods because of its beautiful leaves and red to purple autumn colors.
- Native Americans used acorns to make flour.

# Witchhazel
*Hamamelis virginiana*

**LEAF**

**Identification features:**

- DECIDUOUS
- ALTERNATE branching pattern
- Leaves: SIMPLE; OVAL to OVATE shaped; WAVY margin; dark green above and dull gray underneath; UNEVEN leaf base; 2 ½ - 6" long; golden yellow in autumn
- Flowers: bright yellow; 4 slender petals; fragrant; 1- 1 ½ inch in diameter; blooms in late autumn through early winter
- Fruit: hard, woody, light brown to gray capsule; ½" in length; each capsule contains 2 shiny black seeds; the fruit takes an entire year to mature and appears on the tree at the same time as new flower blooms in autumn; when the mature capsule splits open, it shoots the seeds up to 30 feet away
- Bark: gray and smooth
- A large shrub or small tree reaching 20 feet tall; grows in an IRREGULAR VASE shape

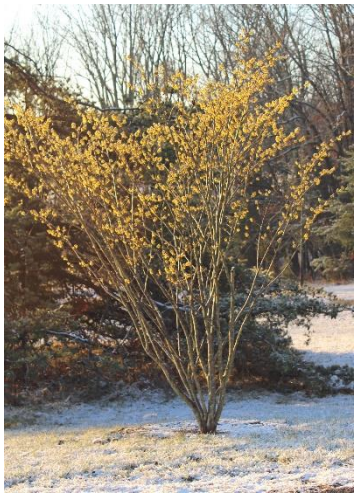
**FLOWERS**

**BARK**

**Habitat:**

- NATIVE to Pennsylvania
- Grows in shady understory of moist woodlands and along stream banks

**Wildlife Value:**



- Flowers provide a late nectar and pollen source for native bees, wasps, flies, and moths when other flowers are gone
- It is a larval host plant for a variety of caterpillars, including the witch hazel dagger moth
- Seeds are an important food source for ground-foraging game birds like wild turkeys, ruffed grouse, and northern bobwhites
- Dense branching provides low nesting sites for some songbirds
- White-tailed deer, beavers, and small mammals feed on its twigs, leaves, and fallen seed capsules
- Two native aphid species, the witchhazel cone gall aphid and the spiny witch hazel gall aphid, can create galls on leaves or seed pods. They do not harm the plant.

**Human Value:**

- Early European settlers and Native Americans used the limbs of witchhazel as dowsing rods to find sources of underground water
- Planted as an ornamental due to its fragrant flowers that last into winter
- An extract from the leaves, bark, and twigs of this **hardwood** have been used for medicinal and cosmetic purposes
- **Used cosmetically in soaps and lotions to remove oil in skin and tighten pores**
- **Used medicinally to soothe insect bites, poison ivy, razor burn, and minor rashes**