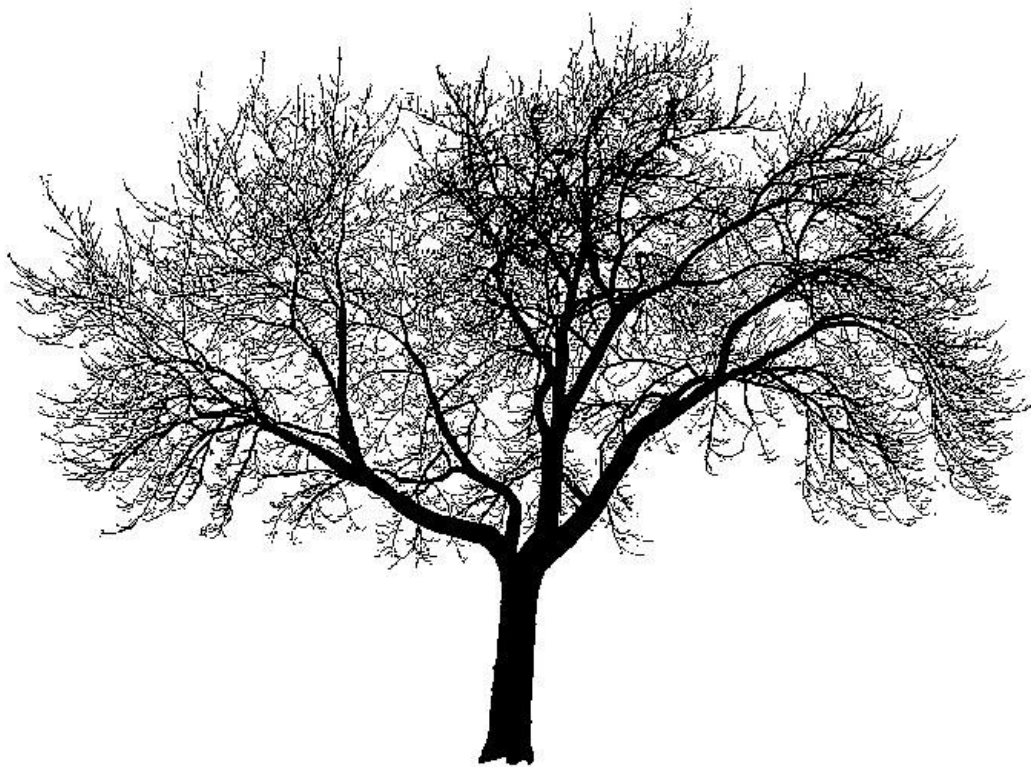


Tree ID Book

Southwestern Ontario



Patrick Masterson
March 25, 2008

Table of Contents

Hardwoods

Manitoba Maple	5
Norway Maple	6
Red Maple	7
Silver Maple	8
Sugar Maple	9
Horsechestnut.....	10
Tree of Heaven.....	11
River Birch.....	12
White Birch (Paper Birch)	13
Shagbark Hickory	14
Catalpa	15
Eastern Redbud	16
Russian Olive	17
American Beech.....	18
European Beech	19
White Ash	20
Green Ash	21
Ginkgo.....	22
Honey Locust	23
Kentucky Coffee Tree.....	24
Black Walnut	25
Tulip Tree.....	26
London Planetree	27
Eastern Cottonwood.....	28
Trembling Aspen	29
Ornamental Pear.....	30
White Oak	31
Pyramidal English Oak	32
Red Oak	33
Staghorn Sumac	34
Weeping Willow	35
European Mountainash	36
Common Lilac	37
Linden	38
American Elm	39

Softwoods

White Fir	41
Weeping Cypress	42
Juniper	43
Larch (Tamarack).....	44
Dawn Redwood.....	45
Norway Spruce.....	46
White Spruce.....	47
Blue Spruce.....	48
Mugo Pine	49
Austrian Pine.....	50
White Pine.....	51
Cedar	52
Hemlock.....	53

Hardwoods

Manitoba Maple

Latin Name: *Acer negundo*

Status: Native species

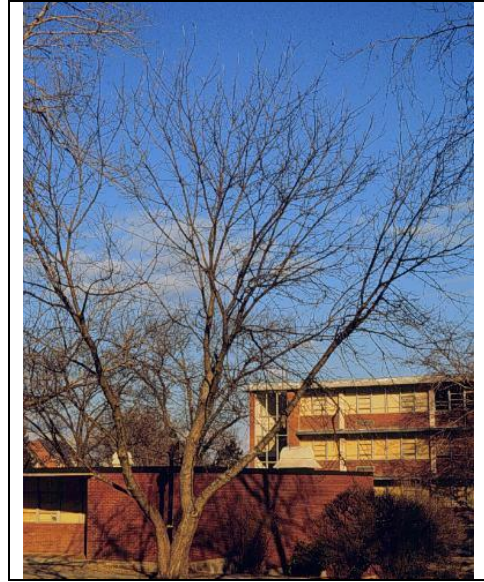
Habit & Form: Irregular, often multistemmed, ragged in appearance, very fast growing, 30-50 ft

Leaves: Opposite branching, pinnately compound leaf, usually 3-5 ovate leaflets

Buds and stems: Buds clustered with little tiny hairs, greenish white or yellow, turning reddish in winter. New growth dark green to bluish-purple, white waxy-chalky coating on stems, rubs off easily

Flowers / fruit: Flowers almost unnoticeable, tiny flowers that hang on yellow filaments, found in large clumps. Keys occur at approximately 80 degree angles. Green in summer, turning brown and persisting over winter. Smaller than most maples but heavy. Female trees produce more keys.

Form



Leaves

Bark: furrowed grey-brown

Quick ID: Green to bluish-purple new growth with white chalky coating; opposite branching with pinnately compound leaves with 3 leaflets; buds often fuzzy; usually multistemmed with poor form.

Notes: Fast growing and short lived, invasive, weedy tree with low aesthetic value. Known to sucker and watersprout heavily, the poor form and open, scattered foliage make it an ugly and undesirable tree. Wood is weak and brittle, prone to break in storms. Makes poor firewood due to high moisture content. Attracts many insects which eat the soft leaves, especially boxelder bugs.



Norway Maple

Latin Name: Acer platanoides

Status: Introduced species

Habit & Form: round crown, very dense foliage, 35-50 ft

Leaves: opposite, simple, very large for maple, 5 lobed and pointed, milky sap on petiole tip when leaf removed

Buds and stems: very large, bloated buds go from lime green to maroon; new growth olive-brown with white lenticels

Flowers / fruit: Flowers bloom in spring before much else, cover trees in yellow/green flower clusters which stain when they fall off. Keys occur in clusters with brittle stems that are prone to fall in the wind. Keys will fall throughout season, sprouting countless, tiny saplings (80-90% germination rate in nature!)

Bark: Shallow ridges and furrows, grey to greyish-black, usually has lichen/algae on the north side.

Quick ID: opposite branching; leaves larger and broader than Acer saccharum; large plump buds; exudes a milky sap from petiole when leaves are removed in summer

Notes: large leaves mean this species transpires a tremendous amount of water. Tolerant of urban conditions, this tree is easy to transplant and has been overused in many urban areas. It has a shallow root system which competes with turf, concrete, septic systems, etc.

Common cultivars:

Cleveland, Columnar, Crimson King, Deborah, Drummondii, Schwedleri

Form



Leaves



Red Maple

Latin Name: Acer rubrum

Status: Native species

Habit & Form: crown is nice and round, branches grow up – not drooping; 60-75 ft tall

Leaves: opposite, simple, 3 or 5 lobed; dark green above, silver-green underside. This species leaf is known to have a lot of variability.

Buds and stems: new growth red with white lenticels. Terminal bud is 1/8" long, blunt; flower buds are rounded and clumped, red with yellow margins, very visible in late winter and spring.

Flowers / fruit: red flower clusters that stain when they fall. Keys usually 1" long arranged 50-65 degrees apart.

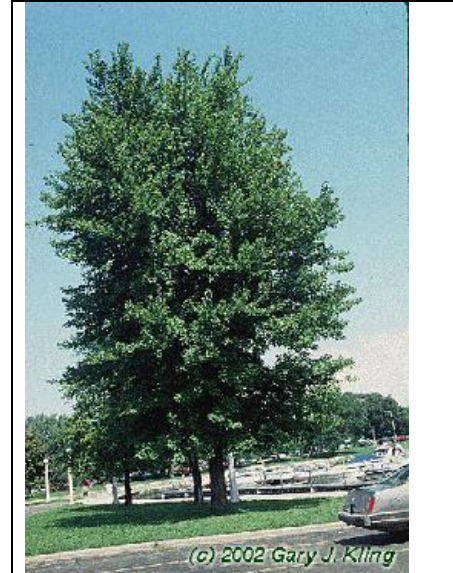
Bark: young trunk is smooth silver-grey (like beech); turns scaly grey-brown with age.

Quick ID: opposite branching; 3 or 5 lobed leaves; large globular clusters of flowering buds; young bark is very smooth and silver-grey like beech; branch tips not upturned like Acer saccharinum; keys significantly shorter than Acer saccharinum. NOT COMMON IN OUR AREA.

Notes: known for its beautiful red to orange fall colour; non-invasive high root system is perfect for growing grass beneath tree.

Common cultivars:
Bowhall, October Glory, Red Sunset, Autumn Blaze

Form



Leaves (3 lobed form)



Silver Maple

Latin Name: Acer saccharinum

Status: Native species

Habit & Form: large ovate crown, 80-100 ft tall

Leaves: : opposite, simple, lobes are sharp & pointed, usually 5 lobes; bright green above, very silver underneath; smaller than Acer rubrum and Acer platanoides;

Buds and stems: terminal bud oval, blunt. Large globular flower buds are very noticeable, similar but slightly larger than Acer rubrum. New growth stems turn upward; more orange than red, with white lenticels; very fast growing; when broken produce a strong odour

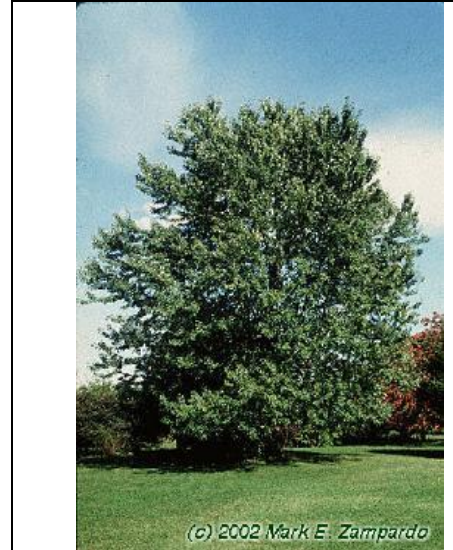
Flowers / fruit: flowers in red clusters, lighter than Acer rubrum. Fairly large keys (1.5" - 2.5") are produced in great quantities in spring, begin bright green, turning brown by mid-summer and falling in clusters.

Bark: silver-grey bark; trunk bark is shredded and peeling in plates with orangish bark beneath.

Quick ID: opposite branching, characteristic leaf with bright silver underside, sharply pointed; twigs more orange than red; twigs produce strong odour when broken; branch tips usually upswept; older bark is shredded and peeling with orangish bark beneath.

Notes: Very fast growing tree. As they get older they get weaker. Not a really long lived tree. Will lift sidewalks and clog drain pipes. Good for poor soil but suffers from leaf chlorosis if soil is too alkaline. Very good with wet soil. Produces a lot of weed seedlings.

Form



Leaves



Sugar Maple

Latin Name: *Acer saccharum*

Status: Native species

Habit & Form: crown more ovate than round with ascending branches; 60-75 ft tall

Leaves: opposite, simple, 5 lobed, pointed with curled edges

Buds and stems: 1/4" conical grey-brown, sharp pointed triple bud (Pope's hat). New growth red/brown with white lenticels.

Flowers / fruit: small yellow-green flowers hanging on filaments, evenly throughout tree in spring. Small keys in pairs make horseshoe shape.

Bark: smooth grey brown turning to thick, irregular curving plates with deep grooves in old age.

Quick ID: classic maple leaf shape with curled edges; prominent terminal bud (Pope's hat); sap from broken petiole is clear, not milky like Norway Maple.

Notes: commercial source of maple syrup, does not do well in urban sites with adverse conditions such as salt and compacted soil. Susceptible to leaf scorch under drought conditions.

Form



Leaves



Horsechestnut

Latin Name: Aesculus hippocastanum

Status: Introduced species

Habit & Form: upright-oval crown; 50-75 ft tall

Leaves: opposite, distinctly shaped, very large palmately compound leaf; 7 leaflets, each with serrated edges.

Buds and stems: extra-large, sticky, resinous buds, ovate and pointed, dark reddish brown. New growth is stout and reddish-brown with triangular leaf scars.

Flowers / fruit: showy white flowers grow in large “candlestick” panicles above foliage in spring, each 5” – 12” tall; Fruit is 2” round and spiky with 1 or 2 inedible seeds inside.

Form



Bark: grey-brown with exfoliating plates that reveal orange bark beneath.

Leaves and fruit

Quick ID: opposite branching; unique leaf shape; very large, brown, sticky buds with scales; recognizable spiky fruit; very showy flowers in springtime.



Notes: needs well drained soil, avoid extra dry conditions.

Cultivars:

Baumannii – showy double flowers and does not produce fruit.

Tree of Heaven

Latin Name: *Ailanthus altissima*

Status: Introduced species

Habit & Form: rounded to oval crown, 40-60 ft tall

Leaves: very long (16"-24") pinnately compound leaf with 10-15 pairs of leaflets plus a terminal leaflet. Very "tropical" looking.

Buds and stems: new growth stout with raised lenticels, short, reddish-brown stems have large leaf scars with small, 2-scaled, round buds.

Form



Flowers / fruit: yellow-white to greenish-white flowers grow in panicles, not very showy, usually masked by foliage; male flowers are malodorous. Female plants produce a green and white samara – flat, narrow, elliptical seed pod with a single seed in the centre, samara is usually twisted. Samaras usually stay over winter.

Bark: grey and smooth with lighter, vertical lines or spots.

Leaves

Quick ID: very large, tropical looking compound leaves; noticeable red and green seed pods on female plants; large leaf scars on stout, short stems with raised lenticels;

Notes: Fast growing but weak wood; highly invasive tree – prolific seeder, very weedy, overruns native vegetation; extremely pollution tolerant.



River Birch

Latin Name: Betula nigra

Status: Native species

Habit & Form: rounded to irregular crown, scruffy, often multi-stemmed, 40-50 ft tall

Leaves: alternate, simple, 2"-4" long with doubly serrate margin, wedge-shaped base.

Buds and stems: new growth slightly hairy, orange-red with white lenticels. Buds are very small, light brown, pointed, slightly hairy.

Form



Flowers / fruit: male catkins in bunches of 3, pendulous, 2"-3" long, female catkins much smaller, 1/2" long, upright.

Bark: young bark is very showy, exfoliated and peeling right to the ground, very easy to peel, a mixture of tan, dark red, orange, and brown. Turning more grey with age.

Leaves

Quick ID: showy, exfoliating bark is very noticeable; catkins of 3; stems and buds slightly hairy; doubly serrate leaves.

Notes: a tough and adaptable tree, more resistant to birch borer than Betula papyrifera;



Common cultivars: Heritage/Cully

White Birch (Paper Birch)

Latin Name: Betula papyrifera

Status: Native species

Habit & Form: often multistemmed, oval crown, 30-40 ft tall.

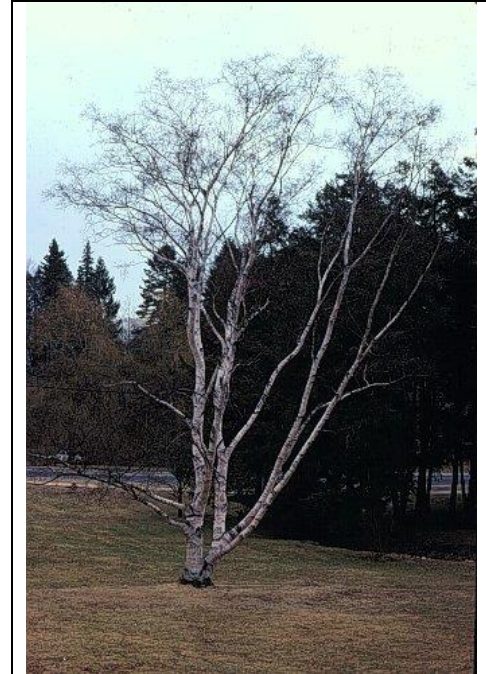
Leaves: alternate, simple, ovate with long apex, serrate.

Buds and stems: new growth shiny, reddish-brown with white lenticels; buds brown-black and green 1/4" to 1/2" long, pointed but blunt, with scales.

Flowers / fruit: male catkins are 2" to 4" long and in 2's or 3's on stems. The upright female catkins emerge in the spring before the foliage.

Bark: showy white, exfoliating bark with elongated horizontal lenticels, peeling in thin layers

Form

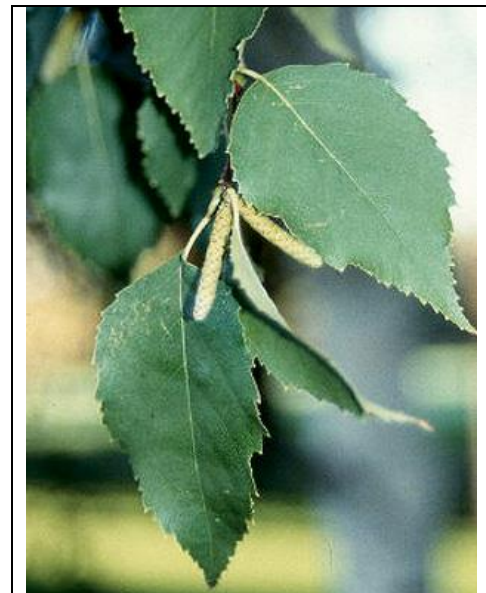


Leaves

Quick ID: showy white, peeling bark is unmistakable; catkins in 3's

Notes: traditionally used for birch-bark canoes, the bark is also known to be great as tinder to start campfires. Susceptible to aphids and birch borer.

Common cultivars:
Snowy



Shagbark Hickory

Latin Name: Carya ovata

Status: Native species

Habit & Form: large ovate crown, 60-80 ft tall

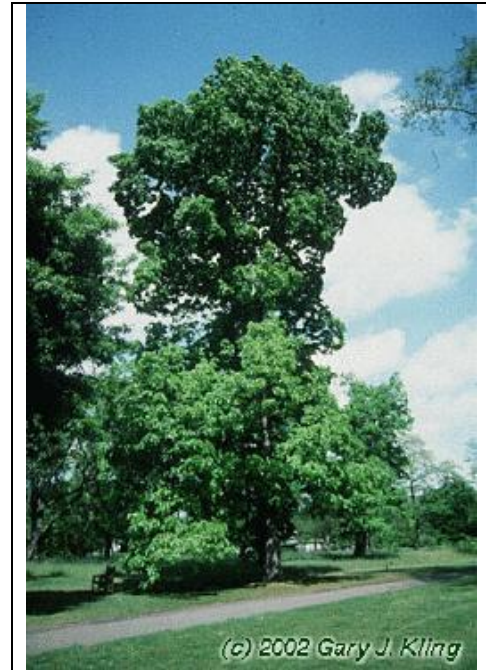
Leaves: alternate, pinnately compound, usually 5 leaflets, bottom 2 leaflets are smaller, leaflets have serrated margins

Buds and stems: green to grey-brown ovate buds with loosely overlapping, curved outer scales, looks like a rosebud; buds may be fuzzy. New growth is yellow-brown and stout with elongated white lenticels.

Flowers / fruit: drooping catkins 4"-5" long. Produce an edible round nut in a casing that splits into 4 equal quarters.

Bark: mature bark broken into long curving vertical plates attached at the middle, exfoliating, "shaggy" looking

Form



Quick ID: very noticeable shaggy bark; compound leaf with 5 leaflets; nuts with 4-quartered casing; recognizable terminal buds look like rosebuds; leaves smell like apples when crushed.

Leaf and fruit

Notes: long taproot, difficult to transplant. Edible fruits are eaten by people as well as wildlife.



Catalpa

Latin Name: *Catalpa speciosa*

Status: Native species

Habit & Form: irregular oval crown, 40-60 ft tall

Leaves: large (6"-10" long) broad cordate leaves are opposite in arrangement but whorled towards stem tip, leaf spade shaped with heavy veins on underside, leaf is rubbery/pliable

Buds and stems: small brown teardrop shaped buds with scales sit above large round leaf scars. New growth is stout, yellow-brown to reddish-brown with white lenticels and large, round, concave leaf scars.

Flowers / fruit: in spring, covered in showy, white, bell-shaped flowers formed in long terminal panicles 4"-8". Produce long seed pods that look like beans, bluish-grey to burgundy in colour, up to 40 cm long, stay over winter.

Bark: grey-brown with ridges and furrows, peeling on young trunk wood.

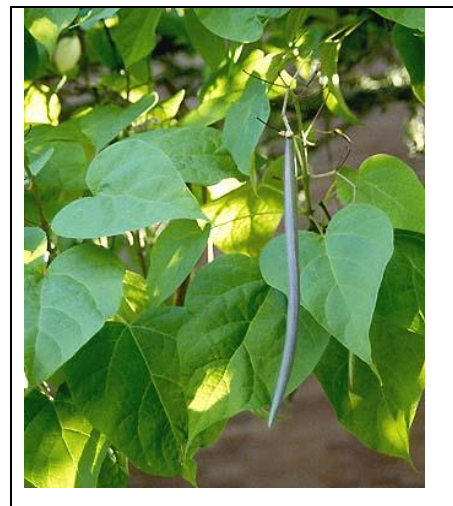
Form



Leaves

Quick ID: opposite leaf arrangement; very large spade shaped leaves; large round leaf scars on stout stems; showy white flowers in spring; long bean pod fruits persist over winter.

Notes: tolerant of many soils, this species has softer wood which scars easily – very selective pruning required. This is a short lived tree – 50 years is above average.



Eastern Redbud

Latin Name: Cercis canadensis

Status: Native species

Habit & Form: often multistemmed, rounded, flattened crown with short main trunk, 20-30 ft tall

Leaves: alternate, simple, cordate (heart shaped), swelling where petiole attaches to leaf.

Buds and stems: dark reddish-brown new growth with finely dotted grey lenticels. Stems grow in zigzag pattern. Vegetative and flowering buds clumped together, small, dark purplish-red.

Form (springtime - flowering)



Flowers / fruit: very showy purple-pink flowers cover entire tree in springtime, last about 3 weeks. Produce flat seed pods 2"-3" long, emerge purple, then turn green to brown, persisting over winter – look like pea pods.

Bark: scaly brown bark, slightly exfoliating in short strips to reveal orangish bark underneath.

Leaves

Quick ID: zig-zag pattern of branches; heart shaped leaves; showy pink flowers in spring; persistent pea-pod like fruit; exfoliating bark with orange beneath

Notes: avoid very dry and hot conditions.



Common cultivars:

Forest Pansy – ornamental, burgundy leaves

Russian Olive

Latin Name: *Elaeagnus angustifolia*

Status: Introduced species

Habit & Form: round, loose crown, 15-20 ft tall

Leaves: alternate, simple, 1"-3" long, silver-grey to bluish tinge.

Buds and stems: buds are 1/8" long with 4 yellowish scales, covered in silver fuzz. New growth olive-green and silvery with brown lenticels. Older stems often thorny.

Flowers / fruit: inconspicuous white and yellow flowers, small and fragrant, hidden by foliage. Produce small olives 1/2" long, yellow with silver fuzz, turning red.

Bark: grey-brown, vertical strips and scales, thorns sometimes present.

Form



Leaves



Quick ID: silvery look to foliage, fruit, and flowers; often thorny; small 1/2" yellow olives; watersprouts heavily; brown lenticels on every part of plant.

Notes: pollution tolerant tree good for industrial areas. Fast growing, with weak wood. Susceptible to Verticillium wilt, blight, and cankers. May look like willow in winter – branching pattern, bark, and even leaves. Bark scars easily.

American Beech

Latin Name: *Fagus grandifolia*

Status: Native species

Habit & Form: tall stately tree with round crown, 50-70 ft tall

Leaves: alternate, simple, deep veins each terminate at a serration

Buds and stems: large buds are conical, scaled, sharply pointed, and brown, up to 1" long. The tip of each bud scale is grey. New growth is slender, smooth and shiny brown with white lenticels, turning to silver grey in the second or third year.

Flowers / fruit: small greenish-white flowers are not showy. Produce a 3-sided edible nut enclosed in a prickly casing.

Bark: very smooth light grey bark looks like freshly poured cement – this bark is the primary ornamental feature of this species.

Form



Leaves and fruit

Quick ID: smooth silvery-grey bark; deeply veined leaves with serrated edges; recognizable long pointed bud; 3 sided nut; dead leaves persist through winter.



Notes: Beautiful yellow-bronze fall colour. Tough & strong wood that is slow growing, with a shallow root system that is intolerant of soil compaction.

European Beech

Latin Name: *Fagus sylvatica*

Status: Introduced species

Habit & Form: oval to round, uniform crown; 30-60 ft tall

Leaves: alternate, simple, glossy dark green, deeply veined leaves with curled, wavy edges and fine cilia hairs on edges. Dead leaves persist in winter.

Buds and stems: similar to *Fagus grandifolia*; long, pointed, scaled buds, up to 1" long, brown. New growth olive green-brown with white lenticels.

Flowers / fruit: greenish-white, insignificant. Produce a triangular brown nut in a prickly casing.

Bark: medium-light grey and very wrinkly, looks like elephant hide. Most wrinkly at lateral branch points, generally more wrinkly than *Fagus grandifolia*.

Quick ID: grey, wrinkly, "elephant-hide" bark; stems olive green (compared to *Fagus grandifolia* which turns silver-grey in the 2nd or 3rd year); wavy leaves with fine cilia; 3 sided nut; noticeable long pointed buds; leaves grow closer to each other on twig than *grandifolia*.

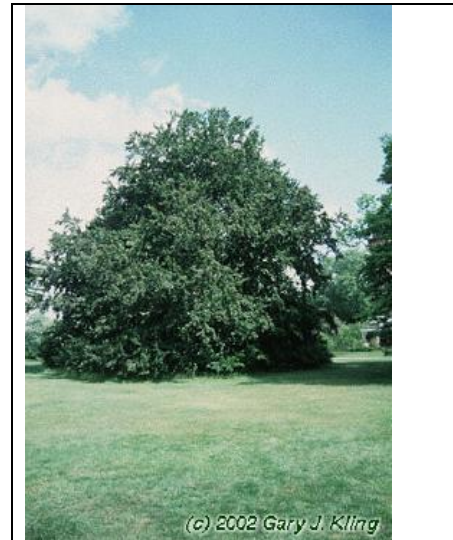
Notes: Does not like wet soils. Grass does not grow well underneath this tree. Can sucker a lot.

Common cultivars:

Copper Beech



Form



Leaves



Pendula



White Ash

Latin Name: *Fraxinus americana*

Status: Native species

Habit & Form: round, irregular crown, as wide as it is tall; 50-80 ft tall

Leaves: opposite, pinnately compound with 5-9 ovate leaflets, serrated margins.

Buds and stems: buds are rounded, blunt, dark brown, fuzzy; terminal bud has 2 scales covering it; new growth stems are stout, shiny greenish-brown with tan lenticels; leaf scars are sickle shaped and wrap around lateral buds on 3 sides.

Flowers / fruit: greenish-red flower clusters appear in April, not ornamentally significant. Produce cluster of single paddle-shaped keys (samaras) going from green to brown and falling in clumps.

Bark: grey-brown with deeply furrowed diamond pattern.

Form



Leaves

Quick ID: opposite branching; large pinnately compound leaves; paddle-shaped keys in clusters on female trees; diamond shaped pattern of ridges and furrows on bark; brown, fuzzy buds - blunt at tip; lateral buds enclosed on 3 sides by leaf scar



Notes: not as hardy north as *Fraxinus pennsylvanica*. This species is being wiped out in our area by the Emerald Ash Borer which destroys the tree's vascular system and eventually kills it from the top down.

Green Ash

Latin Name: *Fraxinus pennsylvanica*

Status: Native species

Habit & Form: oval, spreading crown; 50-60 ft tall

Leaves: opposite, pinnately compound leaf with 5-9 sharp-ovate serrated leaflets

Buds and stems: terminal bud looks like chocolate chip, dark brown, sharp pointed, fuzzy. Lateral buds same look, but very small and round, sitting in large, flat topped, shield-shaped leaf scar.. New growth stout, green-grey with white lenticels, flattened at the nodes.

Form



Flowers / fruit: flowers small, clumpy, not showy, green to reddish-purple. Produce large clumps of single keys (samaras) 1"-2" long, green turning brown.

Bark: deeply ridged and furrowed in diamond pattern often with lichen

Leaves

Quick ID: opposite branching; pinnately compound leaf with 5-9 finely serrated leaflets; terminal buds dark brown, fuzzy, sharp pointed; clusters of keys in distinctive "paddle" shape; purple clumpy flowers; bark in diamond pattern



Notes: One of the most widespread species in North America both in natural and urban settings, valued for aesthetics and its hardwood.. This species is being wiped out in our area by the Emerald Ash Borer which destroys the tree's vascular system and eventually kills it from the top down.

Common cultivars:

Patmore seedless

Ginkgo

Latin Name: Ginkgo biloba

Status: Introduced species

Habit & Form: round-pyramidal to irregular, unusual branch angles are common, often as wide as it is tall; 40-70ft tall

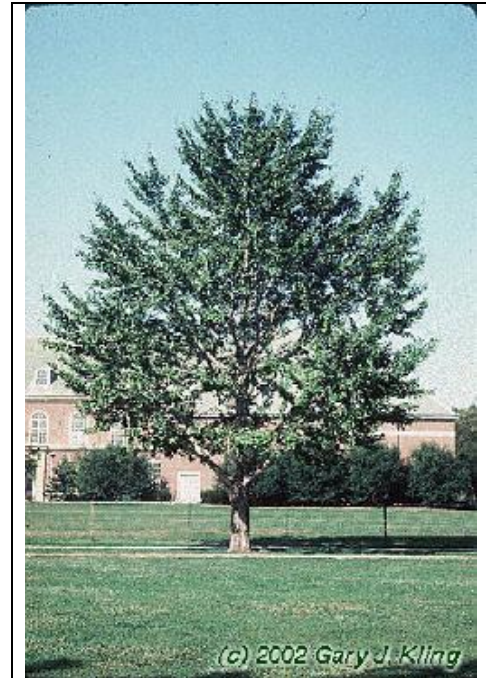
Leaves: alternate & simple, unique fan-shaped leaf in clusters of 3-5 growing from spurs

Buds and stems: buds small, brown, imbricate, initially borne singly on stems, later on spurs; new growth light brown, becoming grey with a slightly hairy, peeling skin

Flowers / fruit: greenish flowers, not showy, male flowers on 1" catkins, female flowers on 1-2" long stems; female trees produce yellow-orange "fruit" with foul-smelling fleshy pulp, described as smelling like "raw dog vomit"

Bark: silvery, cork-like and spongy, ridged and furrowed

Form



Leaves

Quick ID: fan-shaped leaves in clusters of 3-5 from very visible spurs all along branches; female trees produce foul-smelling "fruit"; corky, spongy bark



Notes: An ancient tree from China, very hardy and adaptable. Good in nearly any soil and pollution tolerant, the Ginkgo is free of insect and disease pests.

Honey Locust

Latin Name: *Gleditsia triacanthos*

Status: Native species

Habit & Form: round, open, spreading crown with a short main trunk, 30-70 ft tall

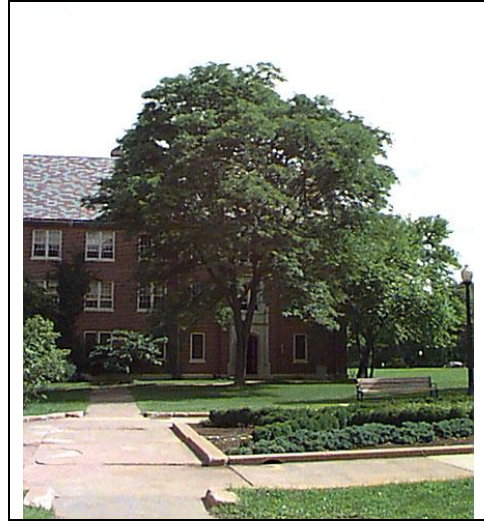
Leaves: alternate, pinnately and bipinnately compound with many leaflets, fairly willow-like

Buds and stems: buds often embedded and difficult to see, on older stems they are inside of a clumpy, non-protruding spur, no terminal winter bud; stems smooth and green turning red-brown, with knobby nodes, may have thorns on bark and branches (even large multi-stemmed thorns)

Flowers / fruit: flowers not showy, greenish-yellow, hang in small clusters; produce dark reddish-brown seed pods, 6-16" long, twisted

Bark: greyish-brown, in sharp plates, hard to remove

Form



Leaves

Quick ID: large compound leaf with many leaflets; short main trunk; large thorns on bark and branches; large, flat reddish-brown seed pods; embedded buds on shiny stems with knobby, zigzag pattern, buds on older stems in spurs

Notes: a good urban tree with very hard wood, able to withstand a wide variety of conditions. Susceptible to webworm and aphids.



Common cultivars:

Inermis – Thornless variety
Sunburst, Shademaster

Kentucky Coffee Tree

Latin Name: *Gymnocladus dioica*

Status: Native species

Habit & Form: oval crown with coarse, picturesque branching, 40-50 ft tall

Leaves: alternate, very large bipinnately compound leaves with 6-14 pinnae each containing 6-14 leaflets

Buds and stems: missing terminal bud, the buds are sunken into the stem above very large, heart-shaped leaf scars, each bud is encircled by a ring of bronze hairs, a “belly-button”. Stems very stout, brown, covered in raised grey lenticels.

Flowers / fruit: small greenish-white flowers, male plants panicles of 3-4”, female plants panicles of 8-12”; female trees produce seed pods like lima-beans, 5-10” long, green turning dark reddish-brown with hard $\frac{3}{4}$ ” beans inside (toxic to animals).

Bark: scaly, greyish-brown, peeling in recurved strips, tough & hard

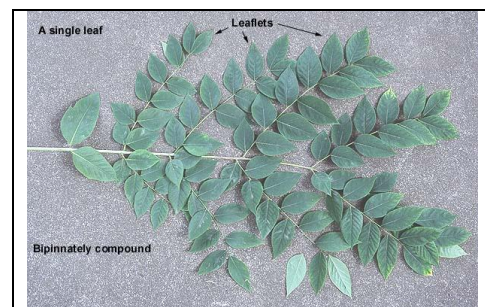
Form



Leaves

Quick ID: stout, coarse branching; very large bipinnately compound leaf with large, heart-shaped leaf scars; large fruit pods on female trees; rough, grey bark

Notes: tolerant of drought and pollution, this species exhibits little arterial branch growth, growing mostly outward from terminal bud.



Black Walnut

Latin Name: *Juglans nigra*

Status: Native species

Habit & Form: round to oval crown with relatively sparse branching; 50-75 ft tall

Leaves: alternate, large pinnately compound leaf with 15-23 leaflets, emit odour when crushed

Buds and stems: buds pale grey; stems stout, greenish-brown to reddish-brown with large, shield-shaped leaf scars

Flowers / fruit: male flowers on small, scaly catkins with cone-like buds, female flowers are up to 8 flower spikes; produce walnuts, an edible fruit with a semi-flesh covering, green turning to black, fall off before winter.

Bark: dark grey, deeply ridge and furrowed in a distinct diamond-like pattern

Form



Leaves

Quick ID: large pinnately compound leaves with 15-23 leaflets that emit odour when crushed; stout stems; downy terminal bud; fruit is a walnut in a green fleshy covering turning black and falling; bark deeply furrowed with diamond pattern

Notes: highly valued for lumber, messy around the yard with falling walnuts that turn black and stain. The roots secrete juglone, a natural pesticide which inhibits the growth of other plants.



Tulip Tree

Latin Name: *Liriodendron tulipifera*

Status: Native species

Habit & Form: oval/round crown with strong central leader; 50-70 ft tall

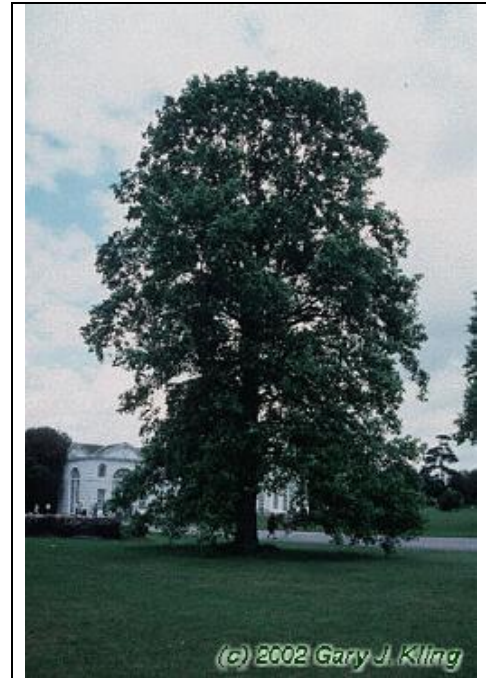
Leaves: alternate, simple, “tulip-shaped”, distinctive leaves

Buds and stems: buds shaped like a duckbill, easy to recognize. New growth green to green-brown to reddish-brown with grey lenticels and large rounded leaf scars.

Flowers / fruit: lots of nice whitish flowers at top of crown from terminal growth, not always easy to see, not very showy; Fruit is a collection of thin samaras in a cone-like structure that persists over winter. The cone will turn white, split open, and look like a flower by late winter, with most samaras already having fallen off.

Bark: greyish/brown, deeply ridged and furrowed, diamond-like pattern.

Form



Leaves

Quick ID: distinctive tulip-shaped leaf; nice white flowers in crown; “duckbill” buds; seed pods persist over winter.

Notes: best in full sun with well-drained soil.



London Planetree

Latin Name: *Platanus acerifolia*

Status: a cross between *Platanus occidentalis* (native) and *Platanus orientalis* (introduced)

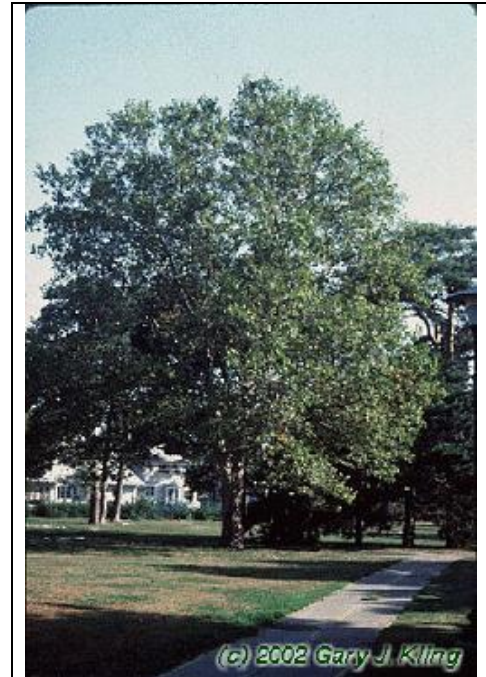
Form

Habit & Form: rounded crown, wide spreading branches; 70-100 ft tall

Leaves: alternate and simple, with 3 or 5 serrated lobes, wide but not long, similar in shape to members of the *Acer* genus. Base of petiole completely encloses bud on the stem.

Buds and stems: buds conical, shiny reddish-brown with a single scale, sit inside of the leaf scar. New growth in zig-zag pattern with shiny, yellow-orange-brown stems.

Flowers / fruit: very small yellow and red rounded, clustered flowers. Spherical golf-ball size fruits in clusters of 2-3 that hang on long stalks like cherries, develop fine spikiness all over. Fruits persist over winter.



Bark: exfoliating camouflage-like bark with light brown, olive, cream colours, very identifiable.

Leaves

Quick ID: maple-like leaves with alternate branching; shiny buds enclosed by leaf petiole; hanging fruits are easy to spot in winter; exfoliating camouflage bark.

Notes: a very pollution tolerant species that does well in cities and can withstand heavy pruning.



Eastern Cottonwood

Latin Name: *Populus deltoides*

Status: Native species

Habit & Form: rounded to irregular with age; 75-100 ft tall

Leaves: alternate, simple, large leaves 4"-5", delta shaped and pointed with serrations, glossy dark green

Buds and stems: large, imbricate, conical, shiny resinous buds, with pine scent, green turning red-brown. New growth stout and knobby, yellow-green to grey-green. Raised leaf scars and a swelling at the bud scale scars.

Flowers / fruit: flowers are pendulous catkins. Fruit on female trees is small capsules that release a cottony seed of white fluff that fills the air when they fall.

Bark: grey, diamond pattern with flat topped ridges

Form



Leaf

Quick ID: triangular serrated leaf; flowers in pendulous catkins; fruit capsules release white cottony fluff that fills the air; sticky, conical buds have a pine scent; mature bark with diamond pattern and large flat topped ridges.



Notes: a weak, soft wooded tree, very messy. Fast growing and adaptable, this species is a water hog and its roots are invasive to septic systems, etc.

Trembling Aspen

Latin Name: *Populus tremuloides*

Status: Native species

Habit & Form: usually a straight, single leader without major branching until 20ft or higher, rounded crown; 40-50 ft tall

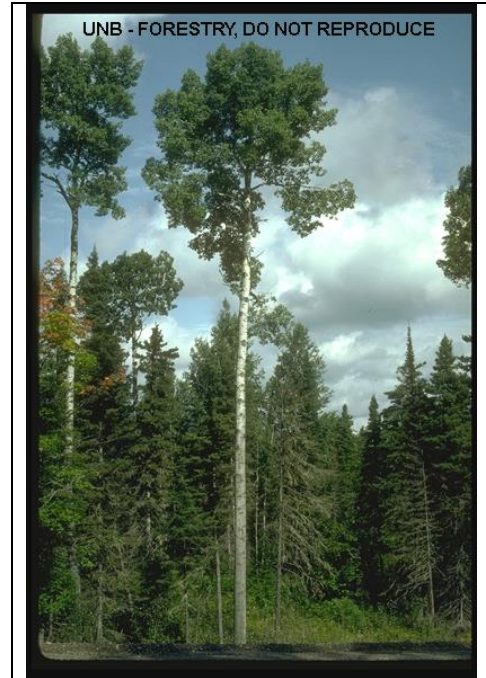
Leaves: alternate, simple, medium green above, pale green beneath, rounded-ovate shaped with a short apex and serrated margins. Laterally flattened petioles allow leaves to flutter in the slightest breeze.

Buds and stems: buds dark brown, scaled, glossy, narrow conical, pointed, resinous, and close to stem. New growth glossy grey-green turning reddish-brown with orange lenticels. Forms a knob at the end of each year's growth.

Flowers / fruit: small flower catkins, produce seed capsules that release cottony masses of seeds into the air.

Bark: whitish bark with irregular black patches, often mistaken for *Betula papyrifera* at a distance

Form



Leaves

Quick ID: imbricate, conical, sharp pointed buds close to stem; very upright habit with tall central leader and absence of major branching until further into the crown; seed capsules release cotton fluff into the air; whitish bark resembles birch from a distance



Notes: the most widely distributed plant in North America. A short lived tree with weak wood and prone to sucker, the Trembling Aspen is one of the first trees to sprout in the wild after a forest fire.

Ornamental Pear

Latin Name: *Pyrus calleryana* “Chanticleer”

Status: Introduced species

Habit & Form: narrow pyramidal, round, uniform crown, multiple leaders; 20-30 ft tall

Leaves: alternate & simple, ovate to elliptic, glossy dark green with rounded base and curled edges. Often persist into winter.

Buds and stems: buds grey-brown and woolly, ½” long, ovate, with whitish bloom. New growth reddish-brown.

Flowers / fruit: in spring, trees are covered with white flowers that look like snow from a distance. Produces tiny brown, spotted pears.

Bark: dark grey, scaly.

Form



Quick ID: dense form with too many leaders; showy white flowers in spring; fuzzy buds with whitish bloom; glossy dark green leaves with curled edges that often persist into winter; tiny brown fruits.

Notes: adaptable to different soils, tolerate pollution well, a very fast growing tree.



White Oak

Latin Name: *Quercus alba*

Status: Native species

Habit & Form: round, spreading crown. Large major branching gives tree a picturesque look; 50-80 ft tall

Leaves: alternate, simple, with deep, rounded lobes. Base of leaf is wedge-shaped.

Buds and stems: buds small, reddish-brown, scaled, look like little pine cones, alternate on stem, whorled at stem tip. New growth green to reddish-brown to purple, often with a white waxy bloom.

Flowers / fruit: 2"-3" yellow-green catkins, insignificant. Produce small brown acorns with a cup that covers $\frac{1}{4}$ the length.

Bark: light grey and scaly, may be exfoliating.

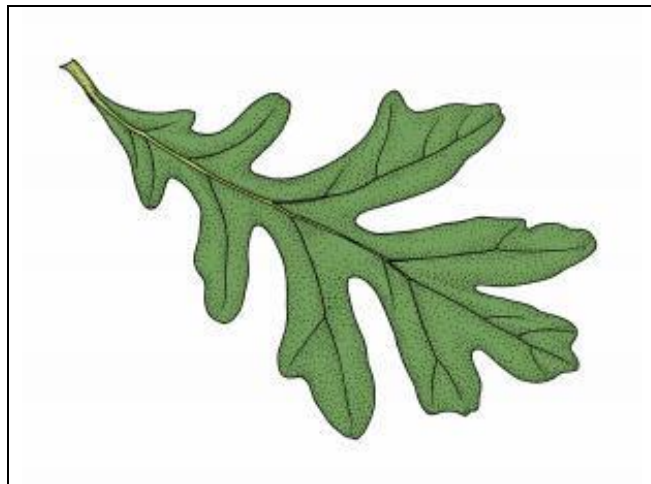
Form



Leaves

Quick ID: picturesque form with thick major branching; distinct leaf shape with rounded lobes and wedge-shaped base; small brown acorns with cup that covers $\frac{1}{4}$ the length; ashy grey bark

Notes: a large, stately native tree. Difficult to transport due to long tap-root. Very sensitive to soil compaction – will kill the tree.



Pyramidal English Oak

Latin Name: *Quercus robur* “Fastigiata”

Status: Introduced species

Habit & Form: columnar with strongly ascending branches; 30-60 ft tall

Leaves: alternate and simple, resembling *Quercus alba* except the lobes are shallower and there are little “earlobes” at the base of the leaf. Persist in winter.

Buds and stems: buds like little pine cones, scaled, reddish-brown and wider than all the other oaks. New growth reddish-brown with grey lenticels.

Flowers / fruit: small catkin flowers insignificant. Elongated, slender acorn on long stalk.

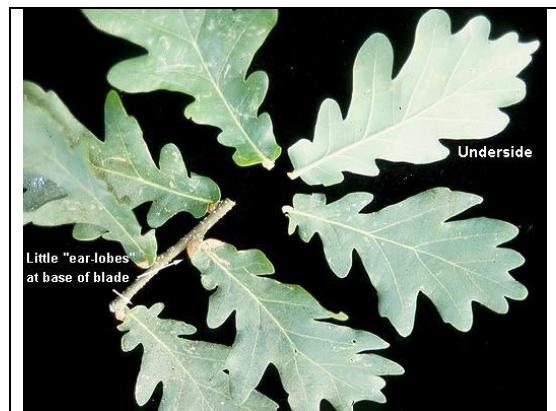
Bark: dark grey, ridged and furrowed.

Form



Leaves

Quick ID: columnar, fastigate form is unmistakable; oak leaf with rounded lobes and “earlobes” at base; elongated acorns on long stalk.



Red Oak

Latin Name: *Quercus rubra*

Status: Native species

Habit & Form: large, rounded crown;
60-80 ft tall

Leaves: alternate, simple, sharp lobes,
glossy dark green.

Buds and stems: buds oval, pointed,
imbricate, like small pine cones,
reddish-brown. New growth distinctly
red-brown with light lenticels.

Flowers / fruit: flowers in catkins,
yellow-green, insignificant. Acorns medium brown, 1", with flat, saucer-like cups

Bark: light and dark grey, ridges and furrows in vertical striping pattern

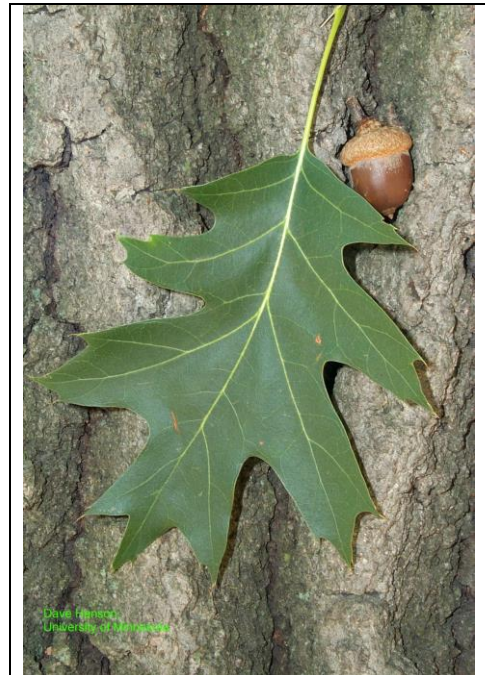
Form



Leaf and fruit

Quick ID: large tree with coarse, significant
branching; large brown acorns with a flat,
saucer-like cap; stems red with light lenticels;
lobes sharply pointed.

Notes: a beautiful specimen tree. Prone to oak
wilt.



Staghorn Sumac

Latin Name: *Rhus typhina*

Status: Native species

Habit & Form: loose, often shrubby form, knarled, twisted branches, usually an understory plant; 15-20 ft tall

Leaves: alternate, large pinnately compound leaf with 13-27 serrate leaflets. Petioles very hairy.

Buds and stems: buds rounded with yellow-brown hairs. Red stems distinctly hairy, resembling deer antlers (stag-horn)



Form

Flowers / fruit: flowers in large panicles on stem tips. Become an upwards facing clump of berry-like fruit, bright red and very noticeable, they persist in winter.

Bark: smooth and grey.

Quick ID: large pinnately compound leaves; loose, shrubby form, twisted; stems very hairy, like deer antlers; large clumping fruit on stem tips that sticks up and persists in winter.

Notes: well adapted to poor sites, prefers full sun.



Leaves

Weeping Willow

Latin Name: *Salix alba* “*Tristis*”

Status: Introduced species

Habit & Form: rounded with drooping branches that hang to the ground; 50-75 ft tall

Leaves: skinny, pointed, finely serrated leaf with long, tapered apex

Buds and stems: small light green buds on slender, droopy light green-yellow stems

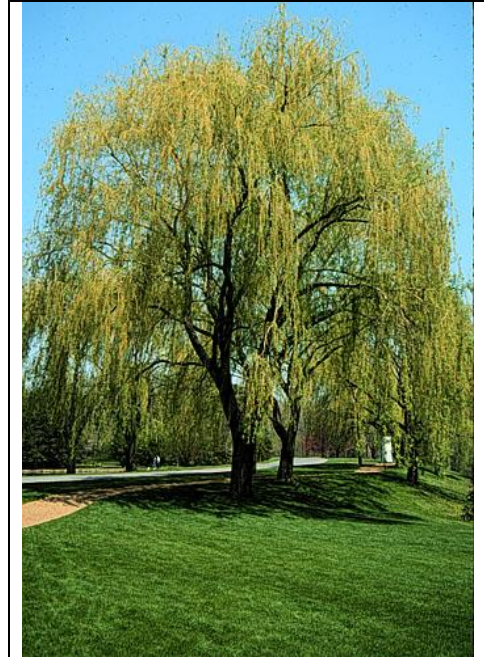
Flowers / fruit: small catkins, insignificant

Bark: grey and deeply ridged

Quick ID: unmistakable drooping form with branches to the ground; skinny leaf with long apex; deeply ridged mature bark

Notes: always very messy beneath tree with leaf and stem litter. Fast growing and weak wooded, they are water hogs and will invade sewer pipes. Often found near water, along streambanks, creeks, beside ponds, etc.

Form



Leaves



European Mountainash

Latin Name: *Sorbus aucuparia*

Status: Introduced species

Form

Habit & Form: oval crown with short main trunk; 20-40 ft tall

Leaves: alternate, pinnately compound with 9-15 elliptical leaflets, serrate at the apex. A dark band beneath each leaf scar.

Buds and stems: large, reddish-brown buds with coarse, white fuzz. New growth hairy, grey-brown with white lenticels



Flowers / fruit: creamy yellow flower clusters in spring produce red berry clusters.

Bark: smooth grey bark with horizontal light grey lenticels.

Leaves

Quick ID: pinnately compound leaf, leaflets elliptical and serrated toward end; large, fuzzy terminal buds; dark band beneath each leaf scar; noticeable white flowers and red berries; short main trunk.



Notes: not good with compacted soil or pollution

Common cultivars:

Cardinal Royal

Lilac

Latin Name: *Syringa vulgaris*

Status: Native species

Habit & Form: upright and heavily suckering, a dense, wild and bushy shrub, irregular form; 10-15 ft tall

Leaves: opposite, ovate, spade shaped, curling up

Buds and stems: 1/4" light brown buds, scaled. New growth very green. Smaller branches turning light grey and stout with raised lenticels and leaf scars.

Form



Flowers / fruit: flowers grow in large panicles 4"-8" long from terminal branch growth, very fragrant, white to purple to pink. Fruit is a small brown seed capsule, only visible after flowers have fallen, they should be removed each winter to encourage flower growth in the spring.

Bark: light grey and smooth

Leaves

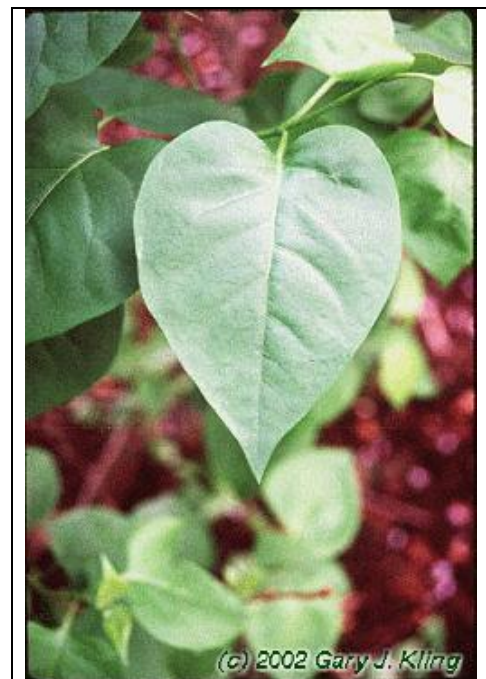
Quick ID: wild & bushy form; large fragrant flower panicles; small brown seed capsules in panicles persist over winter.

Notes: . Strong wood but brittle, stumps can be very hard to remove.

Common cultivars:

“Sensation” – very popular, purple flowers with white edges

There are 100's of cultivars



Linden

Latin Name: *Tilia cordata*

Status: Introduced species

Habit & Form: formal and full, pyramidal

Leaves: alternate, simple, cordate, small heart-shaped leaves with serrated margins

Buds and stems: small, glossy buds, yellow-brown turning red over winter, on yellow-brown to red new growth with white lenticels

Flowers / fruit: small, slightly showy white flowers on unique 'floral bract'. Fruit small, round, green turning brown, borne on long stalk from leaf bract, pendulous.

Bark: grey-brown with ridges and furrows

Form



Leaves

Quick ID: dense, formal, pyramidal habit; small, heart-shaped leaves; flowers and fruits on unique bract structure

Notes: slow grower, adaptable, good for transplanting.



Common cultivars:

Greenspire – uniform branching, dark green leaves, tolerant of difficult conditions

American Elm

Latin Name: *Ulmus americana*

Status: Native species

Habit & Form: vase shaped, arching crown; 50-75 ft tall

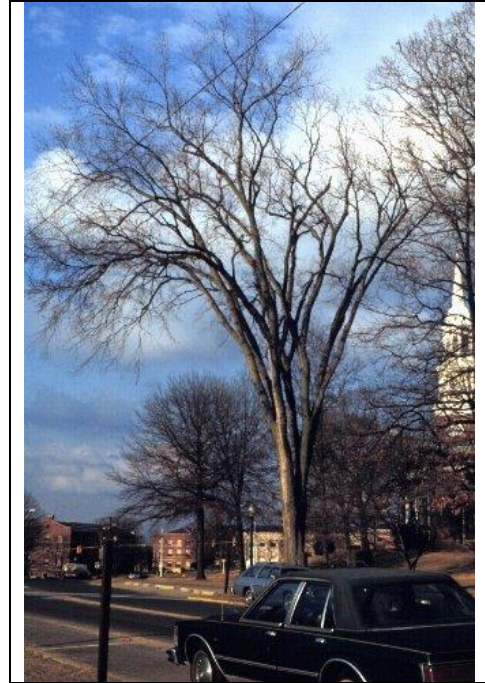
Leaves: alternate, simple, glossy dark green, doubly serrated, heavy veins, rough texture

Buds and stems: buds imbricate, red-brown, pointed, off-centre from leaf scar. No terminal buds. New growth yellow-brown/green turning red-brown, in a zigzag pattern.

Flowers / fruit: small flowers, not showy. Produce oval, flat pods with a single seed in the centre.

Bark: dark grey, deeply ridged, criss-cross pattern

Form



Leaves

Quick ID: striking vase-shaped crown at maturity; rough textured, glossy leaf, doubly serrated with deep veins; unique flat seed pods with single seed inside; deeply ridged bark with criss-cross pattern.

Notes: formerly a very common urban shade tree because of its dramatic, arching crown, has nearly been wiped out by Dutch Elm Disease.



Common cultivars:

Valley Forge – resistant to Dutch Elm Disease

Softwoods

White Fir

Latin Name: Abies concolor

Status: Native species

Habit & Form: Pyramidal conifer, 30 – 50 ft tall

Foliage: flat needles 2-3" long, curve up and out, slightly blue tinge, with 2 white lines on underside. Base of needle looks like suction cup.

Buds and stems: new growth grey-green to yellow-green, stems covered in circular leaf scars (look like suction cups), buds ¼" long, yellowish brown with overlapping scales, resinous, terminal bud is triplet

Flowers / fruit: flowers are inconspicuous, cones beehive-like with many folds, 3-6" long, found on upper 1/3 of tree

Bark: when young, bark is smooth and grey with resin blisters. With age becomes deeply furrowed with flattened ridges.

Quick ID: needles distinctive in shape and colour; leaf scars look like suction cups; terminal bud is triplet; interesting cones.

Notes: Easily transplanted, tolerant of most city conditions. Needs heavy drainage and cannot stay wet - poor in heavy clay. Good through drought and cold – stores lots of energy. Makes great Christmas tree.

Form



Foliage



Weeping Cypress

Latin Name: Chamaecyparis nootkatensis "Pendula"

Status: native to British Columbia, naturalized in Ontario

Form

Habit & Form: pyramidal, evergreen, tertiary branches are excessively drooping; 30-40 ft tall

Leaves: similar to cedar but scales are round rather than flat, unpleasant odour when bruised.

Flowers / fruit: noticeable round green and brown cones.



Bark: reddish-brown and shredding.

Quick ID: drooping branches create unmistakable silhouette; round brown and green cones; foul odour when needles are crushed; red-brown bark is shredding.

Foliage

Notes: Prefers well drained soil. Requires adequate moisture through first year to get established.



Juniper

Latin Name: Juniperus virginiana

Status: Native species

Habit & Form: informal pyramidal, quite variable in form, 25-50 ft tall

Leaves: evergreen, 2 types of foliage – juvenile (awl shaped) and adult (scale-like). Juvenile foliage is very spiny and picky, adult foliage is much less spiny. Juvenile foliage more likely to occur on shaded parts of tree.

Stems: new growth reddish-brown, distinct cedar smell

Flowers / fruit: flowers on male plants – tiny, round cones. Fruit is a small, globular berry, starting light green, turning dark blue with waxy coating at maturity.

Bark: red-brown with vertical strips

Quick ID: scaled, spiny foliage; small blue berries with waxy coating; branches have a strong cedar scent

Notes: commonly kept as a shrub.

Common cultivars:

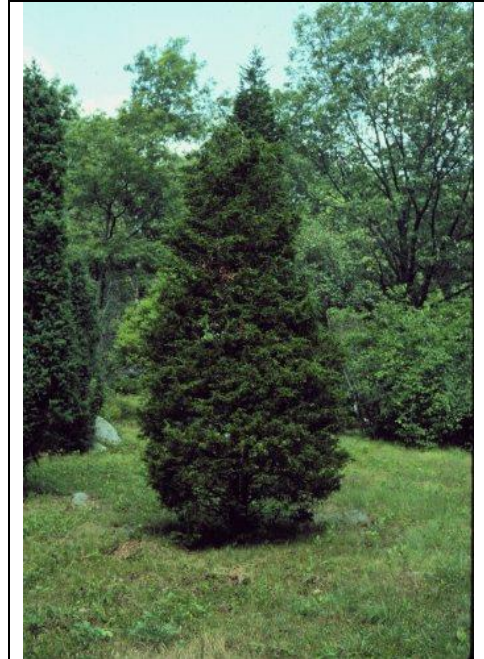
Glauca

Hillspire

Pendula

Grey Owl

Form



Foliage



Larch (Tamarack)

Latin Name: Larix decidua

Status: Introduced species

Habit & Form: pyramidal to irregular with age, often scruffy and ugly in appearance; 30-60 ft tall

Leaves: deciduous evergreen, soft needles in clusters of 30-40 growing from spurs, needles shed in winter.

Buds and stems: buds on terminal shoots are small, brown, and spherical, with a point on one side. Buds on spurs are barely visible. Stems yellow-brown/grey with visible single-needle attachment points. Older stems covered in very visible spurs growing all around branches.

Flowers / fruit: small, upright red-brown cones, tight to branch. Cones stay on over winter.

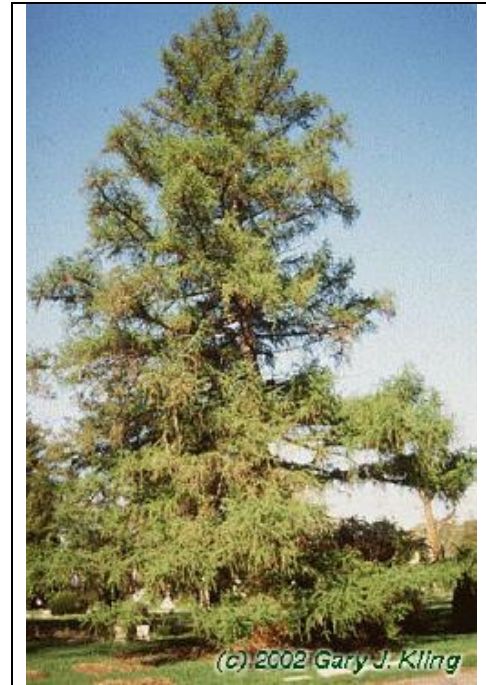
Bark: large, reddish-brown scales with grey edges

Quick ID: needles growing in large bundles of 30-40 from spurs; small, upright cones; in winter look like dead evergreens with no needles, just cones and very visible spurs on branches.

Notes: prefers well-drained soil especially mounded areas as well as sunny conditions.

Common cultivars:
Pendula

Form



Foliage



Dawn Redwood

Latin Name: Metasequoia glyptostroboides

Status: Introduced species

Habit & Form: pyramidal and formal, with a single straight trunk, noticeably tapering from base to tip, branches grow right to ground; 30-50 ft tall

Foliage: deciduous conifer, opposite, flat needles, light green and soft to the touch. In the fall, the needles turn orange/red-brown and fall off.

Buds and stems: buds are opposite, small, imbricate, yellowish brown. Buds face 180 degrees away from each other on stem. Two types of branches on this tree – persistent and deciduous. Persistent (terminal growth) stems are reddish-brown turning grey-brown. Deciduous stems are green and grow the foliage. These stems fall off the tree with the foliage.

Flowers / fruit: dark brown cones, round, pendulous, on long stalks.

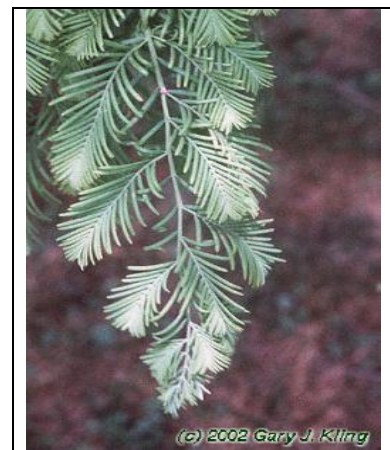
Bark: young bark reddish-brown, shredded with long thin strips. Turning darker and more grey with age. Trunk is often buttressed at the root flare.

Form



Foliage

Quick ID: straight, tapered, central leader with branches to the ground and uniform habit; opposite branching; deciduous conifer, loses needles and stems in winter; small, round cones, peeling, red bark with buttressed trunk.



Norway Spruce

Latin Name: Picea abies

Status: Introduced species

Habit & Form: pyramidal with somewhat sparse branching; 40-60 ft tall

Foliage: evergreen, dark-green needles on top of stem point forward while needles on bottom spread left and right to expose stem. The needles leave a tiny petiole on the stem when removed.

Buds and stems: buds orange-brown and rosette shaped. New growth light orange turning grey. Stem emits an odour when bruised. Old tertiary branches pendulous, easy to spot from a distance.

Flowers / fruit: large, 4" – 6" cones, typically found high in the tree. Begin as light brown, purple, or green, turning brown.

Bark: grey, scaly, flaky.

Form



Quick ID: large evergreen with fairly sparse branching & ratty appearance; pendulous branches; large cones; needles leave a petiole on stem when removed; stiff, pointed needles.

Foliage



Notes: popular as a windbreak, this introduced species has been overused in Ontario due to its fast growing nature.

Cultivars:

Nidiformis – dwarfed, small bush, “Nest Spruce”

Pendula – weeping, branch tips curl upwards

White Spruce

Latin Name: Picea glauca

Status: Native species

Habit & Form: pyramidal and conical, 50-80 ft tall

Foliage: evergreen, needles short and straight, green, often with waxy bloom (glaucous). Needles grow all the way around stem and have a skunky odour when crushed.

Buds and stems: tiny brown buds on stem tips. New growth is rough, tan coloured (not orangish).

Flowers / fruit: small 1.5" – 2.5" cones borne high in the tree.

Bark: grey-brown and flaky.

Form



Foliage

Quick ID: short needles that grow all around stem; small cones at top of tree; needles have skunky odour when crushed; stems tan coloured, not orange.

Notes: very adaptable and hardy tree.



Common cultivars:

Conica – dwarf shrub, very pyramidal without pruning e.g. Dwarf Alberta Spruce

Pendula – nice ornamental, tall & skinny

Blue Spruce

Latin Name: Picea pungens

Status: Native to western North America

Habit & Form: pyramidal and conical, 30-60 ft tall

Foliage: evergreen; firm, sharp needles are longer than Picea glauca and bushier, green to blue-green to blue. Needles are crowded along the top of the stem, distinctly flattened along bottom of stem, do not grow all the way around like Picea glauca. Needles covered in waxy bloom that contributes to blue colour.

Buds and stems: tiny brown buds, rosette-like. Stems are stout, brownish orange, rough.

Flowers / fruit: cones 2-4" in length, hang down, green turning yellow-brown. Often resinous.

Bark: grey and scaly in youth, turning reddish-brown with age and becoming deeply furrowed.

Form



Foliage

Quick ID: blue-green foliage; needles longer and bushier than Picea glauca; needles grow more on top of stem, bottom of stem is flattened; fairly large cones.

Notes: can be difficult to distinguish from Picea glauca if foliage is more green than blue. More drought tolerant than most spruces.



Mugo Pine

Latin Name: Pinus mugo

Status: Introduced species

Habit & Form: a dwarf variety, small bushy tree rarely over 5 ft tall, broad-rounded, dense and slow growing

Foliage: evergreen, stiff and slightly twisted needles in bundles of 2, dark green

Buds and stems: buds small, reddish-brown with a resinous coating that gives them a whitish tinge. Stems light green becoming yellow-brown.

Flowers / fruit: small ovate cones, yellow-brown turning grey-black with maturity with dark ring around cone tip.

Bark: grey-brown, scaly and plated but not exfoliating.

Form



Foliage

Quick ID: small shrub, bushy tree; stiff and curved needles in bundles of 2; dark ring around cone tip.

Notes: used in landscaping, this tiny spruce shrub is pruned by “candling” – pinching off the new growth shoots to encourage denser growth.

Susceptible to scale lichens (produce white powder on foliage) and green caterpillars.



Austrian Pine

Latin Name: Pinus nigra

Status: Introduced species

Habit & Form: pyramidal in youth becoming broad, flat-topped, spreading in maturity; 25-50 ft tall

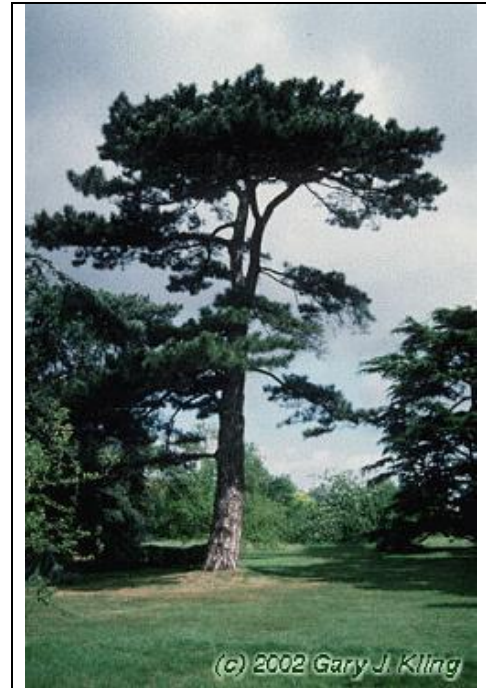
Foliage: evergreen, long needles in bundles of 2, dark green, flexible

Buds and stems: buds may appear white from a distance, small with brown scales and silvery-white margins. New growth rough, yellow-brown.

Flowers / fruit: cones grow at right angles to branch in circular pattern around the branch

Bark: large grey and black plates in maturity, easy to identify.

Form



Foliage

Quick ID: long, flexible needles in bundles of 2; mature trees flat topped with umbrella crown; terminal buds have white margins; cones grow at 90 degrees to branch, all the way around; plated grey and black bark. My most hated tree! (besides Mulberry); No redeeming qualities!



Notes: hardy and pollution tolerant, this tree withstands urban conditions better than most pines. Susceptible to Diplodia tip blight which kills the tree from the inside out.

White Pine

Latin Name: Pinus strobus

Status: Native species

Habit & Form: symmetric and pyramidal in youth, becoming irregular and wind-swept with horizontal lateral branches, losing all lower branches eventually; 30-60 ft tall, growing well over 100 ft in some areas

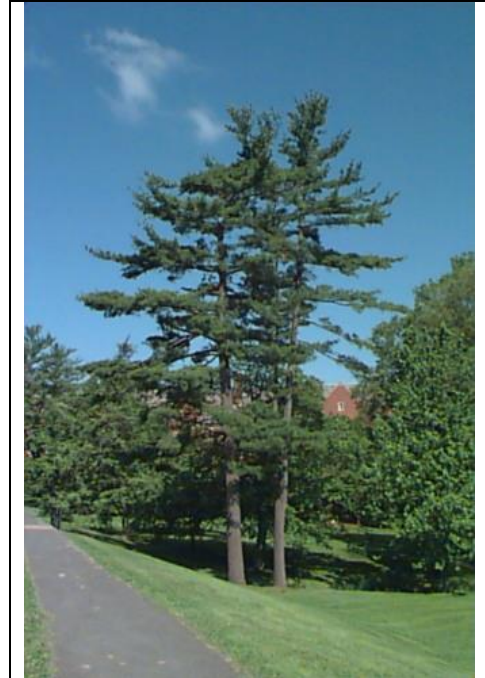
Foliage: long, soft, thin, drooping needles in bundles of 5, often have a “feathered” appearance on stem tips. Heavy internal needle drop.

Buds and stems: tiny orange brown, scaled buds on stem tips. New growth light green-brown, becoming grey

Flowers / fruit: large 6”-8” cones, light brown, clustered in top 1/3 of tree

Bark: grey, furrowed and scaly in maturity

Form



Foliage

Quick ID: only native 5-needled pine in this area; “feathered” appearance of needles on stem tips; irregular, wind-swept form without lower branches



Notes: a fast growing species, chlorosis or yellowing may occur on alkaline sites.

Common cultivars:

Fastigiata – pyramidal shape

Nana – dwarf shrub

Pendula – weeping habit

Cedar

Latin Name: Thuja occidentalis

Status: Native species

Habit & Form: conical, often with multiple trunks; 25-40 ft tall

Foliage: flat scales, dark green. Emits distinctive sweet smell when bruised

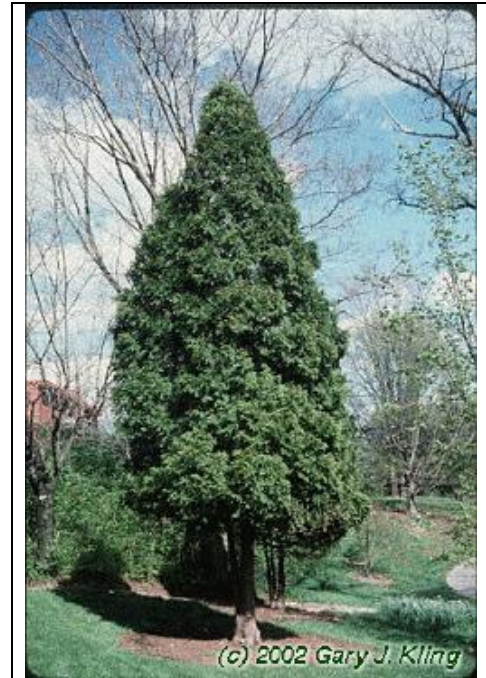
Buds and stems: tiny buds on the end of each stem. New growth completely covered by scales.

Flowers / fruit: very tiny, insignificant. Fruit tiny brown cones.

Bark: brownish-grey in long vertical, shaggy strips

Quick ID: conical form in nature, often with multiple trunks; flattened scale-covered stems, sweet smell when crushed; tiny brown cones; brown-grey bark in narrow, vertical strips

Form



Foliage

Notes: full sun, quite adaptable once established. Tolerant of shearing, used for hedging.

Common cultivars:

Upright forms are better for shrubbery



Hemlock

Latin Name: Tsuga canadensis

Status: Native species

Habit & Form: pyramidal, 20-40 ft tall

Foliage: soft, flattened needles, protrude in 2 ranks, 180 degrees from each other with a 3rd row of flattened needles along top of stem. Deep green on top, silver lines underneath. Base of needle has small petiole.

Buds and stems: very small, brown, imbricate buds. New growth slender, slightly fuzzy, yellow-brown. Twigs rough from needle petioles that remain.

Flowers / fruit: small brown cones with cupped, rounded scales

Bark: reddish-brown and flaky becoming grey-brown, ridged and furrowed

Form



Foliage

Quick ID: pyramidal evergreen form; soft, flat needles in 2 ranks on stem; small brown cones with cupped scales; new growth slight fuzzy.

Notes: cannot sit in wet soil, dead branches often persist on tree

