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A Key to Some

Common



of Pennsylvania

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

BUREAU OF FORESTRY

[www.dcnr.state.pa.us/forestry](http://www.dcnr.state.pa.us/forestry)

# Key To Some Common Trees of Pennsylvania

- 1a. Leaves needle or scale-like ..... Coniferous Trees – 2
- 1b. Leaves broad and flat ..... Broad-leaved Trees – 12

## CONIFEROUS TREES

- 2a. Leaves scale-like ..... 3
- 2b. Leaves needle-like ..... 4
  - 3a. Scales pointed, twigs not flat ..... Eastern red-cedar (*Juniperus virginiana*)
  - 3b. Scales blunt, twigs flat ..... Arbor-vitae (*Thuja occidentalis*)
- 4a. Needles (leaves) single on twigs ..... 5
- 4b. Needles (leaves) in bundles, tufts, or rosettes ..... 7
  - 5a. Needles flat, blunt ..... 6
  - 5b. Needles four-sided and sharp-pointed ..... Spruce (*Picea* species)

- Spruce (*Picea* species)
- a. Needles 1/3 to 3/4 in., cones 1-4 in., twigs hairless, cultivated ..... White spruce (*Picea glauca*)
  - b. Needles 1/2 - 1 in., cones 3 1/2-8 in., twigs hairless and drooping, cultivated ..... Norway spruce (*Picea abies*)
  - c. Needles 1/4 to 3/4 in., cones 2 1/2-4 1/2 in., twigs hairy, grows in bogs ..... Black spruce (*Picea mariana*)
  - d. Needles 1/2 - 1 in., cones 1-2 in., twigs hairy, moist forest and swamps ..... Red spruce (*Picea rubens*)

- 6a. Needles with small stalks attaching needles to twig ..... Eastern hemlock (*Tsuga canadensis*)
- 6b. Needles without stalks ..... Balsam fir (*Abies balsamea*)
  - 7a. Needles in bundles with sheaths at base ..... 8
  - 7b. Needles in tufts or rosettes ..... Tamarack (*Larix laricina*) or cultivated Larch (*Larix* spp.)
- 8a. Needles in bundles of 5 ..... White pine (*Pinus strobus*)
- 8b. Needles not in bundles of 5 ..... 9
  - 9a. Needles in bundles of 3 ..... Pitch pine (*Pinus rigida*)
  - 9b. Needles in bundles of 2 ..... 10
- 10a. Needles 4-6 inches, brittle-snap cleanly when bent ..... Red pine (*Pinus resinosa*)
- 10b. Needles 1-3 inches long, twisted ..... 11
  - 11a. Cone scales with prickles, bark gray-brown ..... Virginia pine (*Pinus virginiana*)
  - 11b. Cone scales without prickles, bark of upper trunk distinctly orange-red ..... Scots pine (*Pinus sylvestris*)

## BROAD-LEAVED TREES

- 12a. Leaves opposite or whorled ..... 13
- 12b. Leaves alternate ..... 18
  - 13a. Leaves opposite ..... 14
  - 13b. Leaves whorled ..... Catalpa, Indian bean (*Catalpa* species)
- 14a. Leaves simple ..... 15
- 14b. Leaves compound (leaf made up of leaflets) ..... 16
  - 15a. Margins entire ..... Flowering dogwood (*Cornus florida*)
  - 15b. Margins lobed ..... Maple (*Acer* spp.)

- Maple (*Acer* species)
- a. Leaf 5-7 lobed, wider than long, broken leaf stalks show milky sap ..... Norway maple, (*Acer platanoides*)
  - b. Leaf 5 lobed, margins smooth, sap clear ..... Sugar maple (*Acer saccharum*)
  - c. Leaf 5 lobed with deep notches, margins toothed ..... Silver maple (*Acer saccharinum*)
  - d. Leaf mostly 3 some 5 lobed. shallow notches. leaf stalks often red ..... Red maple (*Acer rubrum*)

# Key To Some Common Trees of Pennsylvania

16a. Pinnately-compound.....	17
16b. Palmately-compound.....	Buckeye or Horse-chestnut ( <i>Aesculus</i> species)
17a. Leaf divided into 3 to 5 leaflets.....	Box-elder ( <i>Acer negundo</i> )
17b. Leaf divided into 5-11 leaflets.....	Ash ( <i>Fraxinus</i> spp.)
Ash ( <i>Fraxinus</i> spp.)	
a. 9 to 11 leaflets without stalks, leaf scars crescent-shaped, in wet woods, swamps.....	Black ash ( <i>F. nigra</i> )
b. 5 to 9 stalked leaflets, leaf scar U-shaped, twigs smooth, upland sites.....	White ash ( <i>F. americana</i> )
c. 5 to 9 leaflets with winged stalks, twigs velvet-hairy, bottomlands.....	Green ash ( <i>F. pennsylvanica</i> )
18a. Leaves alternate, simple.....	19
18b. Leaves alternate, compound (leaf made up of leaflets).....	39
19a. Margins entire.....	20
19b. Margins deeply cut, lobed, or toothed.....	22
20a. Leaf base heart-shaped.....	Eastern redbud ( <i>Cercis canadensis</i> )
20b. Leaf base tapering.....	21
21a. Leaves 2 to 5 inches long, leathery.....	Blackgum ( <i>Nyssa sylvatica</i> )
21b. Leaves 5 to 10 inches long, thin.....	Cucumber-tree ( <i>Magnolia acuminata</i> )
22a. Margins deeply cut or lobed, with or without additional teeth.....	23
22b. Margins coarsely or finely toothed but not lobed.....	28
23a. Leaves with five deeply cut lobes, star-shaped leaf.....	Sweetgum ( <i>Liquidambar styraciflua</i> )
23b. Leaves not star-shaped.....	24
24a. Leaves square or notched at top.....	Tuliptree, Yellow-poplar ( <i>Liriodendron tulipifera</i> )
24b. Leaves not square or notched.....	25
25a. Leaves entire, one and two-lobed on each tree; aromatic.....	Sassafras ( <i>Sassafras albidum</i> )
25b. Leaves with more than two lobes, not aromatic.....	26
26a. Leaf lobes pinnate, bark various.....	27
26b. Leaf lobes palmate, bark white under exfoliating brown flakes.....	Sycamore ( <i>Platanus occidentalis</i> )
27a. Lobes or large teeth rounded.....	White oak group ( <i>Quercus</i> species)
White oak group ( <i>Quercus</i> species)	
a. 3-4 deep lobes and sinuses on each side, leaves hairless.....	White oak ( <i>Quercus alba</i> )
b. 8 or more large rounded teeth on each side, leaf underside hairy.....	Chestnut oak ( <i>Quercus montana</i> )
c. Large terminal, coarsely toothed lobe and 2-3 additional lobes on each side, small star-shaped hairs on underside of leaves.....	Bur oak ( <i>Quercus macrocarpa</i> )
d. Very shallow lobes or teeth, leaf broadest near middle, narrowing to the base, leaf undersides white with star-shaped, straight and branched hairs.....	Swamp white oak ( <i>Quercus bicolor</i> )
27b. Lobes sharp-pointed with a hair-like bristle on end of each lobe.....	Red oak group ( <i>Quercus</i> species)
Red (or black) oak group ( <i>Quercus</i> species)	
a. Sinuses often less than ½ way to mid-vein, leaf underside hairless except tufts in vein angles, bark with broad, smooth, vertical ridges and narrow fissures, acorn ¾ - 1¼ in. long with shallow cap.....	Red oak ( <i>Quercus rubra</i> )
b. Depth of sinuses variable, young leaves rusty-hairy beneath, persisting in vein axils, bark dark, rough plates with vertical and horizontal fissures, acorn ½ - ¾ in. long with deep cap.....	Black Oak ( <i>Quercus velutina</i> )
c. Sinuses deeply U-shaped, extend ¾ of the way to mid-vein, leaves hairless, bark with broad, shallow fissures, acorn ½ in. long, cap shallow.....	Pin oak ( <i>Quercus palustris</i> )

# Key To Some Common Trees of Pennsylvania

28a. Teeth coarse, one at end of each lateral vein .....	29
28b. Teeth fine, several for each main lateral vein.....	30
29a. Leaves slender, 3 times as long as broad .....	American chestnut ( <i>Castanea dentata</i> )
29b. Leaves not more than 2 times as long as wide .....	American beech ( <i>Fagus grandifolia</i> )
30a. Leaves very narrow, 4 or 5 times as long as wide .....	Willow ( <i>Salix</i> spp.)
30b. Leaves broad .....	31
31a. Leaves not over 1.5 times as long as broad.....	32
31b. Leaves about twice as long as broad .....	33
32a. Leaf base unequal, heart-shaped, petiole round .....	Basswood ( <i>Tilia americana</i> )
32b. Leaf base not heart-shaped, sides equal, petiole flattened .....	Aspen ( <i>Populus species</i> )
Aspen ( <i>Populus species</i> )	
a. Leaves have small, fine teeth less than 1/16 inch .....	Trembling aspen ( <i>Populus tremuloides</i> )
b. Leaves have large teeth.....	Big-toothed aspen ( <i>Populus grandidentata</i> )
33a. Leaves smooth, single serrate, fine teeth.....	34
33b. Leaves rough or smooth and double-serrate .....	35
34a. Leaf stalk with 1-2 small glands (small bumps).....	Cherry ( <i>Prunus</i> spp.)
34b. Leaf stalk without glands .....	Shadbush, Serviceberry ( <i>Amelanchier</i> spp.)
35a. Rough leaves with uneven bases, single or double-toothed.....	36
35b. Smooth leaves with even bases, finely double-toothed .....	37
36a. Leaf margins double-serrate from base, vein extend into the teeth .....	Elm ( <i>Ulmus</i> spp.)
36b. Leaf margins single-serrate above base, veins branch before reaching the teeth .....	Hackberry ( <i>Celtis occidentalis</i> )
37a. Leaf base tapered or rounded, bark without obvious lenticels .....	38
37b. Leaf base blunt to slightly heart-shaped, bark lenticels obvious .....	Birch ( <i>Betula</i> species)
Birch ( <i>Betula</i> species)	
a. Young bark smooth shiny gray with dark horizontal lenticels, aging to dark peeling plates .....	Black birch, Sweet birch, Cherry birch ( <i>Betula lenta</i> )
b. Young bark yellow-bronze slightly peeling, aging to broad gray plates .....	Yellow birch ( <i>Betula alleghaniensis</i> )
c. Young bark light-orange, peeling in ragged sheets .....	River birch ( <i>Betula nigra</i> )
38a. Trunk gray and smooth, with muscle-like ridges .....	Ironwood, Musclewood ( <i>Carpinus caroliniana</i> )
38b. Trunk brownish, bark in narrow, loose flakes .....	Hop-hornbeam ( <i>Ostrya virginiana</i> )
Leaves alternate, compound	
39a. Twigs armed with a pair of spines at each node .....	Black locust ( <i>Robinia pseudoacacia</i> )
39b. Twigs unarmed (trunk armed in honey-locust).....	40
40a. Terminal leaflet equal-sized or smaller than other leaflets, or lacking.....	41
40b. Terminal leaflet usually larger than lowermost leaflets.....	Hickory ( <i>Carya</i> species)
Hickory ( <i>Carya</i> species)	
a. Most leaves <10 in. long, with 7-11 leaflets, buds yellow, bark shallow-ridged .....	Bitternut ( <i>C. cordiformis</i> )
b. Most leaves with 5 leaflets-some 7, hairless, bark ridged.....	Pignut ( <i>C. glabra</i> )
c. Most leaves with 7 leaflets-some 9, lower surface and petiole very hairy, bark ridged .....	Mockernut ( <i>C. tomentosa</i> )
d. Most leaves with 5 leaflets, hairs on leaf margins, bark peeling, shaggy, throughout PA.....	Shagbark ( <i>C. ovata</i> )
e. Most leaves >12 in. long with 7 leaflets, bark peeling, grows in southern PA lowlands .....	Shellbark ( <i>C. laciniosa</i> )

# Key To Some Common Trees of Pennsylvania

- 41a. Leaflets round-tipped, some leaves twice-compound ..... Honey-locust (*Gleditsia triacanthos*)
- 41b. Leaflets pointed ..... 42
  - 42a. Twigs and leaf stalks densely long-hairy, buds encircled by deep, U-shaped to circular leaf scars ..... Staghorn sumac (*Rhus typhina*)
  - 42b. Twigs hairless or only somewhat hairy, leaf scars heart-shaped ..... 43
- 43a. Leaflets mostly entire, a few coarse glandular teeth at the base ..... Tree-of-heaven (*Ailanthus altissima*)
- 43b. Leaflets evenly and finely toothed along the margins, pith of branchlets chambered ..... 44
  - 44a. Terminal leaflet well developed, pith dark brown, nuts oblong, pointed ..... Butternut (*Juglans cinerea*)
  - 44b. Terminal leaflet small or lacking, pith tan, nuts round, not pointed ..... Black walnut (*Juglans nigra*)

## Parts, Types, And Positions Of Leaves

