

A Chicago Region key to broadleaf trees and some tree-like shrubs

Key A: Leaves COMPOUND and OPPOSITE

1. Leaflets with palmate arrangement ... 2.
 1. Leaflets with pinnate arrangement, or only 3 leaflets ... 3.
2. Leaflets mostly 5; buds not sticky ... Ohio Buckeye (*Aesculus glabra*)
2. Leaflets mostly 7; buds sticky ... Horse Chestnut (*Aesculus hippocastanum*)
 3. Leaflets usually 7 or more, sometimes 5 ... Ash (*Fraxinus*)
 3. Leaflets usually 3, sometimes 5 ... 4.
4. Side leaflets with stalks; irregular teeth; fruit is a winged maple seed ... Boxelder (*Acer negundo*)
4. Side leaflets nearly stalkless; small teeth; 3-lobed capsule ... American Bladdernut (*Staphylea trifoliata*)

Key B: Leaves COMPOUND and ALTERNATE

1. Leaves doubly compound; leaflets themselves alternately attached ... 2.
 1. Leaves only once compound ... 3
2. Having 14 – 30 elliptical leaflets with fine-toothed margins ... Honey-Locust (*Gleditsia triancanthos*)
2. Having up to 70 leaflets with smooth margins ... Kentucky Coffeetree (*Gymnocladus dioicus*)
 3. Leaflets 3; fruit a flat round winged seed ... Common Hoptree, Wafer Ash (*Ptelea trifoliata*)
 3. Leaflets 5 or more ... 4.
4. Most leaves with an even number of leaflets ... 5.
4. Most leaves with an odd number of leaflets, having a terminal leaflet ... 6.
 5. Leaflets with fine-toothed margins; twigs may have thorns ... Honey-Locust (*Gleditsia triancanthos*)
 5. Leaflets with a few teeth; unpleasant odor when crushed ... Tree-of-heaven (*Ailanthus altissima*)
6. Margins of leaflets entire and leaf base with pair of thorns ... 7.
6. Margins of leaflets toothed or thorns and spines absent ... 8.
 7. Large tree; leaflets 7 – 19; fruit is a pod ... Black Locust (*Robinia pseudoacacia*)
 7. Small tree; leaflets 5 – 11; fruit berry-like ... Common Prickly-ash (*Zanthoxylum americanum*)
8. Some or all leaves with less than 11 leaflets ... Hickory (*Carya*)
8. All leaves with 11 or more leaflets ... 9.
 9. Large tree, single trunk; pith of twig chambered when cut lengthwise ... Walnut (*Juglans*)
 9. Small tree, often shrub-like with multiple trunks or in a colony; pith not chambered ... 10.
10. Leaflets 11 – 31, each leaflet 5-12 cm inches long ... Sumac (*Rhus*)
10. Leaflets 9 – 17, each leaflet 2.5-5 cm long ... Mountain-ash (*Sorbus*)

Key C: Leaves SIMPLE and OPPOSITE

1. Leaves palmately lobed ... 2.
 1. Leaves not lobed ... 3.
2. Shrub; leaf stalks with stipules and glands or lower leaf surface densely pubescent ... Viburnum (*Viburnum*)
2. Tree; leaf stalks without stipules and glands or lower leaf surface not densely hairy ... Maple (*Acer*)
 3. Leaves entire (no teeth along margin) ... 4.
 3. Leaves not entire, usually with toothed margin ... 7.
4. Tree; leaves opposite or in a whorl of 3; leaves large, heart-shaped; fruit a long capsule ... Catalpa (*Catalpa*)
4. Not as above ... 5.
 5. Bark of stems loose, peeling off in long shreddy pieces ... Honeysuckle (*Lonicera*)
 5. Bark not as above ... 6.
6. Leaves with side veins curving toward the leaf tip ... Dogwood (*Cornus*)
6. Leaves with side veins ending near the margin and not running to the apex ... Viburnum and other shrubs
 7. Some twigs tipped with a thorn; not all leaves opposite ... Common Buckthorn (*Rhamnus cathartica*)
 7. Not as above ... Viburnum and other shrubs

Key D: Leaves SIMPLE and ALTERNATE

1. Twigs with thorns; leaves toothed; leaves lobed or not ... Hawthorn (*Crataegus*), Crabapple (*Malus*)
 1. Twigs lacking thorns; leaves with or without teeth; leaves lobed or not ... 2.
2. Leaves lobed (all or some of them) ... 3.
2. Leaves not lobed or deeply cut (some teeth might be larger like lobes) ... 7.
 3. Leafstalks with milky sap when broken ... Mulberry (*Morus*)
 3. Leafstalks without milky sap when broken ... 4.
4. Leaves 2-3 lobed or entire, some mitten-shaped ... Sassafras (*Sassafras albidum*)
4. Leaves 4-lobed, smooth on both surfaces ... Tulip Tree, Yellow Poplar (*Liriodendron tulipifera*)
4. Leaves more than 4-lobed, hairy on one or both surfaces ... 5.
 5. Leaves densely coated with white felt on the undersurface ... White Poplar (*Populus alba*)
 5. Not as above ... 6.
6. Leaves pinnately lobed and veined; fruit is an acorn ... Oak (*Quercus*)
6. Leaves palmately lobed and veined; fruit is a long-stalked ball of seeds ... Sycamore (*Platanus occidentalis*)
 7. Leaves entire, without teeth on margins ... 8.
 7. Leaves toothed or with low rounded teeth or wavy ... 12.
8. Most or all of the leaves more than 15 cm (6 inches) long ... Pawpaw (*Asimina triloba*)
8. Most leaves less than 15 cm long ... 9.
 9. Leaves heart-shaped, about as broad as long ... Eastern Redbud (*Cercis canadensis*)
 9. Leaves rounded or tapering to the base, mostly longer than broad ... 10.
10. Leaf veins impressed, strongly arching toward leaf tip ... Alternate-leaved Dogwood (*Cornus alternifolia*)
10. Leaf veins impressed, weakly arching toward leaf tip ... Glossy Buckthorn (*Rhamnus frangula*)
10. Leaf veins not impressed ... 11.
 11. Leaves abruptly short-pointed at the tip; fruit berry-like ... Blackgum (*Nyssa sylvatica*)
 11. Not as above; fruit is an acorn ... Oak, possibly Shingle Oak (*Quercus imbricaria*)
12. Edge of leaf coarsely round-toothed or with low rounded teeth or wavy ... 13.
12. Edge of leaf sharply or finely toothed ... 15.
 13. Leaves densely coated with white felt on the undersurface ... White Poplar (*Populus alba*)
 13. Not as above ... 14.
14. Small tree; buds long, narrow, not clustered; fruit a capsule ... Witch Hazel (*Hamamelis virginiana*)
14. Large tree; buds rounded, clustered at end of twig; fruit an acorn ... Swamp White Oak (*Quercus bicolor*)
 15. Leaf stalks more than 2.5 cm (1 inch) long ... 16.
 15. Most leaf stalks less than 2.5 cm (1 inch) long ... 17.
16. Leaf base asymmetrical, heart-shaped; leaf stalks round ... American Basswood (*Tilia Americana*)
16. Leaf base symmetrical, rounded or triangular; leaf stalks flat ... Aspen, Cottonwood, Poplar (*Populus*)
 17. Leaf base asymmetrical with 3 main veins; leaves long-pointed ... Hackberry (*Celtis occidentalis*)
 17. Leaf base with 1 main vein arising at base; leaves at least 4 times as long as wide ... Willow (*Salix*)
 17. Leaf base with 1 main vein arising at base; leaves less than 4 times as long as wide ... 18.
18. Bark with furrows; leaf base may be asymmetrical; fruit is a winged seed ... Elm (*Ulmus*)
18. Bark with small scaly rectangles; leaf base symmetrical ... Ironwood, E. Hophornbeam (*Ostrya virginiana*)
18. Bark streaked, then furrowed or scaly; 1 or more glands on stalk near leaf base ... Cherry, Plum (*Prunus*)
18. Small tree or shrub; bark smooth, becoming scaly; white flowers ... Juneberry, Serviceberry (*Amelanchier*)
18. Small tree; bark smooth, ridged like muscles ... American Hornbeam, Blue Beech (*Carpinus caroliniana*)
18. Large tree; bark smooth, old bark rough; leaves coarsely toothed ... American Beech (*Fagus grandifolia*)
18. Small to large tree, at times clumped; bark papery or curling; fruit a catkin ... Birch (*Betula*)
18. Shrub (native) or tree (introduced); bark may become fissured; fruit a cone-like catkin ... Alder (*Alnus*)