

TREE IDENTIFICATION KEY - CONIFER

BEGIN HERE:

Tree has needles.....GO TO CONIFER KEY (✎ 4A)
Tree has broad leaves..... GO TO BROADLEAF KEY (✎ 4B-C)

1. Needles in bundles or groups (2)
1. Needles single or flattened and scaly (3)
 2. Needles in clusters of more than 5 needles..... **tamarack* (*Larix laricina*)**
 2. Needles 2 to 5 per bundle: Pine species (see a-c below)

- a. Five needles per bundle.....**white pine (*Pinus strobus*)**
- b. Needles in pairs, 3 to 4 inches long.....**red pine (*Pinus resinosa*)**
- c. Needles in pairs, under 2 inches long,
bark dark gray**jack pine (*Pinus banksiana*)**

3. Needles scaly and flattened (4)
3. Needles single (5)
 4. Has cones, scales flat, branches fan-like..... **northern white cedar (*Thuja occidentalis*)**
 4. Has berries, may have scaly and prickly needles on same
tree, scales rounded..... **eastern red cedar (*Juniperus virginiana*)**
5. Needles flat (6)
5. Needles square, 4-sided, stiff, sharp: Spruce species (see a-b below)

- a. Needles $\frac{1}{3}$ to $\frac{3}{4}$ inch long, twigs hairless.....**white spruce (*Picea glauca*)**
- b. Needles $\frac{1}{3}$ to $\frac{3}{4}$ inch long, twigs have
hair, grows in wet areas **black spruce (*Picea mariana*)**

6. Needles $\frac{1}{2}$ inch long with short petiole **eastern hemlock (*Tsuga canadensis*)**
6. Needles $\frac{3}{4}$ inch to $1\frac{1}{4}$ inches long, no petiole,
bubbles in bark..... **balsam fir (*Abies balsamea*)**

* NOTE: A tamarack is a deciduous conifer.

TREE IDENTIFICATION KEY - BROADLEAF

1. Opposite branching (2)
1. Alternate branching (4)
 2. Compound leaves (3)
 2. Simple leaves: Maple species (see a-c below)

- a. Leaf margin entire, 5 lobes..... **sugar maple (*Acer saccharum*)**
 - b. Leaf margin double-toothed, 3 to 5 lobes **red maple (*Acer rubrum*)**
 - c. Leaf margin single-toothed, 3 to 5 lobes, lobes separated by deep, angular openings..... **silver maple (*Acer saccharinum*)**
3. 3 (rarely 5) leaflets **boxelder (*Acer negundo*)**
3. 5 to 11 leaflets: Ash species (see a-c below)

- a. 7 to 13 leaflets, leaflets do not have petiole..... **black ash (*Fraxinus nigra*)**
 - b. 5 to 9 leaflets, leaflets have petiole, smile-shaped leaf scar extending up sides of new bud..... **white ash (*Fraxinus americana*)**
 - c. 7 to 9 leaflets, leaflets have petiole, leaf scar ends at base of new bud..... **green ash (*Fraxinus pennsylvanica*)**
4. Compound leaves (5)
4. Simple leaves (8)
5. 7 or fewer (usually 5) leaflets, egg-shaped nut..... **shagbark hickory (*Carya ovata*)**
5. 7 or more leaflets (6)
 6. Leaflets rounded..... **black locust (*Robinia pseudoacacia*)**
 6. Leaflets pointed (7)
7. Leaf 6 to 8 inches long..... **mountain ash (*Sorbus americana*)**
7. Leaf 8 to 24 inches long..... **black walnut (*Juglans nigra*)**
 8. Leaves not lobed (9)
 8. Leaves lobed: Oak species (see a-f below)

- a. Rounded lobes, 5 to 9 deep even lobes and sinuses, leaves hairless..... **white oak (*Quercus alba*)**
 - b. Rounded lobes, pair of deep sinuses near middle of leaf, hairy underside of leaves **bur oak (*Quercus macrocarpa*)**
 - c. Rounded lobes, leaf narrow at base and broad near middle, hairy underside of leaves **swamp white oak (*Quercus bicolor*)**
 - d. Pointed lobes, sinuses extend halfway to mid-vein, leaves hairless, dull green..... **red oak (*Quercus rubra*)**
 - e. Pointed lobes, deep sinuses extend $\frac{3}{4}$ of the way to mid-vein, leaves hairless, bright green and shiny **northern pin oak (*Quercus ellipsoidalis*)**
 - f. Pointed lobes, deep sinuses, young leaves hairy underneath, dark green and shiny, leathery **black oak (*Quercus velutina*)**

TREE IDENTIFICATION KEY - BROADLEAF

- 9. Bark not papery (10)
- 9. Bark papery: Birch species (see a-c below)

- a. Leaf margin single-toothed, white peeling bark **white birch (*Betula papyrifera*)**
- b. Leaf margin double-toothed, dull green
leaves, yellow or bronzed bark.....**yellow birch (*Betula alleghaniensis*)**
- c. Leaf margin double-toothed, shiny green leaves,
reddish-brown to silvery-gray bark **river birch (*Betula nigra*)**

- 10. Leaf petioles flat (11)
- 10. Leaf petiole round (12)
- 11. Leaf triangular-shaped with coarse teeth..... **eastern cottonwood (*Populus deltoides*)**
- 11. Leaf oval: Aspen species (see a-b below)

- a. Leaves have small, fine teeth less than
 $\frac{1}{16}$ inch..... **trembling aspen (*Populus tremuloides*)**
- b. Leaves have large teeth.....**bigtooth aspen (*Populus grandidentata*)**

- 12. Leaves nearly as wide as long (13)
- 12. Leaves longer than wide (14)
- 13. Leaf margin finely toothed.....**balsam poplar (*Populus balsamifera*)**
- 13. Leaf margin coarsely toothed.....**basswood (*Tilia americana*)**
- 14. Leaf less than 3 times as long as wide (15)
- 14. Leaf at least 3 times as long as wide..... **willow species (common species include weeping willow and black willow)**
- 15. Leaf veins thin and branch often (16)
- 15. Leaf veins thick and run from center to edge of leaf without branching (17)
- 16. Fine blunt teeth, leaves 2 to 6 inches long,
bark dark.....**black cherry (*Prunus serotina*)**
- 16. Sharp pointed teeth, leaves 2 to 4 inches long
and hairy, leaf base asymmetrical**hackberry (*Celtis occidentalis*)**
- 17. Leaf shiny and leathery (thick), coarse sharp teeth..... **beech (*Fagus grandifolia*)**
- 17. Leaf dull and rough (18)
- 18. Most leaf bases even, seed in elongated clusters**ironwood (*Ostrya virginiana*)**
- 18. Leaf base uneven, seeds flat and papery**elm species (common species include American elm, rock elm, and slippery elm)**