TREE IDENTIFICATION KEY

BEGIN HERE:
Tree has needles.......................................................... CONIFER KEY
Tree has broad leaves .................................................. BROADLEAF KEY

CONIFER KEY

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 redcedar (Juniperus virginiana)
   5. Needles flat (6)
   5. Needles square, 4-sided, stiff, sharp: Spruce species (see a-b below)
      a. Needles 1/3 to 3/4 inch long, twigs hairless...............white spruce (Picea glauca)
      b. Needles 1/3 to 3/4 inch long, twigs have
         hair, grows in wet areas......................................black spruce (Picea mariana)

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

*Note: A tamarack is a deciduous conifer.
### TREE IDENTIFICATION KEY

#### BROADLEAF KEY

1. Opposite branching (2)
2. Alternate branching (4)
3. Compound leaves (3)
4. 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)**
4. Simple leaves (8)
5. Compound leaves (5)
6. Simple leaves (9)
7. Leaves not lobed (10)

#### LEAF Guide

- 7-8 UNIT

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**The Forest Park Arboretum**  
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**Field Enhancement 1: Tree Identification**

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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 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)