Glossary

Terminal Bud: The bud formed at the tip of the twig

False Terminal Bud: A lateral bud that assumes the function of the terminal bud. When the growing tip withers or falls away, the closest lateral bud to the twig tip substitutes as a terminal bud

Bud Scales: Small scale-like structures that are modified leaves covering the bud during its winter dormancy

Lateral Bud: The buds formed on the side of a twig, not the bud at the end of the twig

Leaf Scar: A scar left on the twig when the leaf falls

Vascular Bundle Scar: A small mark on a leaf scar indicating a point where a vein from the leaf was once connected with the stem

Lenticel: A small corky area or speck serving as a breathing pore

Catkin: A dense, cylindrical, often drooping cluster of flowers

Winter Tree Identification Key

KEY TO TERMS

1. Leaf scars opposite...Got to 2  OR  1. Leaf scars alternate...Go to 3

START HERE

NEXT
Vascular bundle scars are very numerous and joined in a line; buds are broadly rounded; twigs are fairly stout

**Fraxinus Ash**

see 2a-c below

2a. Terminal bud cone-shaped; first pair of lateral buds below the terminal bud are slightly below it on the branch; leaf scar is nearly oval
   *Fraxinus nigra*
   black ash

2b. Terminal bud is slightly cone-shaped; first pair of lateral buds below the terminal bud touch the bottom of the terminal bud; leaf scar is U-shaped and the lateral bud sits in the "notch" of the leaf scar
   *Fraxinus americana*
   white ash

2c. Terminal bud is rounded; first pair of lateral buds below the terminal bud touch the bottom of the terminal bud; the leaf scar is oval
   *Fraxinus pennsylvanica*
   green ash

Vascular bundle scars 3-7, separate and distinct; Leaf scars narrow and crescent-shaped; twigs fairly slender

**Acer Maple**

see 2d-g below

2d. Terminal bud quite pointy and brown; twigs gray or brown, slender and shiny with lighter lenticels
   *Acer saccharum*
   sugar maple

2e. Terminal bud reddish and blunt; leaf scars V-shaped; Twigs dark red with small lenticels
   *Acer rubrum*
   red maple

2f. Terminal bud brownish to reddish and blunt;
   *Acer saccharinum*
   silver maple

2g. Terminal bud blunt and rounded; buds are fuzzy and white; Twigs green to purplish, often with a gray or bluish coating on the surface
   *Acer negundo*
   boxelder

Betula Birch

See 15 a-c below

15a. Not hairy twig, lenticels prominent; Buds brownish, acute; twigs straight; catkins often present; bark is reddish-brown with light lenticels on younger stems, later turning chalky to creamy white peeling in horizontal papery strips
   *Betula papyrifera*
   white birch

15b. Young twigs are hairy, older twigs smooth, shiny; catkins often present; bark often with wintergreen smell; bark is shiny bronze on younger stems peeling into thin papery strips
   *Betula alleghaniensis*
   yellow birch

15c. Twig is slender and orangish-brown; bark is salmon to rust-colored on young stems, developing papery scales peeling with several colors visible
   *Betula nigra*
   river birch

15 Many bud scales

Go to 16

16 Bud scales in two vertical rows; floral buds distinctly larger and rounder than foliage buds; no catkins
   *Ulmus sp.*
   elm species

16 Bud scales not in two rows; buds fairly uniform in size; bud tips point away from the twig; catkin usually present; seeds hang in clusters from branches and often stay on through winter
   *Ostrya virginiana*
   ironwood (hop hornbeam)
11a. Gummy buds that are very pointy; buds about ¼ inch long; lenticels visible; twig is somewhat yellowish
   *Populus deltoides*
cottonwood

11b. Not gummy buds and they may be somewhat fuzzy; no lenticels noticeable, bud scales are hairy; leaf scars are heart-shaped; twigs are gray-brown
   *Populus grandidentata*
big-toothed aspen

11c. Buds may or may not be gummy and are reddish-brown; twigs are reddish-brown and may have gray waxy film
   *Populus tremuloides*
trembling aspen

11d. Gummy buds that are 1 inch long; reddish-brown twigs; lenticels visible and somewhat orange in color; buds have fragrant odor
   *Populus balsamifera*
balsam poplar

12 Bud tips pressed against twig; twig light red-brown, zigzag, and have numerous light lenticels
   *Celtis occidentalis*
hackberry

12 Bud tips not pressed against the twig

13 1 or 2 visible bud scales
   Go to 14

13 3 or more visible bud scales
   Go to 15

14 2 visible bud scales; buds smooth, rounded, reddish; twigs smooth, reddish or greenish gray, and zigzag
   *Tilia americana*
American basswood

14 One hood-like bud scale; twigs often slender and flexible
   *Salix sp.*
willow species

3 Twigs zigzag, red-brown, and armed with paired spines near the leaf scar
   *Robinia pseudoacacia*
black locust

3 Twigs without spines

4 Leaf scars are densely clustered on very short peg-like spur branches; twigs slender and light brown
   *Larix laricina*
tamarack

4 Leaf scars scattered along more or less elongate twigs
   Go to 5

5 Terminal bud present
   Go to 6

5 Terminal bud absent (false terminal bud)
   Go to 12

6 Buds crowded near tip of twig
   *Quercus*
See 6a-f

6a. Short rounded buds; hairless; acorns are oblong and cap covers ¼ of the nut
   *Quercus alba*
white oak

6b. Twig is quite stout, yellow-brown and may have corky ridges; buds are small and rounded and may be a bit fuzzy; acorns are large and cap covers ⅗ of the nut and have fringe around the edges
   *Quercus macrocarpa*
bur oak

6c. Twig is light brown; buds are short and rounded; acorn is 1 inch long and cap covers 1/3 of the nut
   *Quercus bicolor*
swamp white oak

1or 2 visible bud scales

2 visible bud scales; buds smooth, rounded, reddish; twigs smooth, reddish or greenish gray, and zigzag
   *Tilia americana*
American basswood

One hood-like bud scale; twigs often slender and flexible
   *Salix sp.*
willow species

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6d. Twig is red-brown; buds are tall and somewhat pointed; acorn is nearly round with a flat cap that covers less than ¼ of the nut

*Quercus rubra*
red oak

6e. Twigs slender red-brown and shiny; buds are pointed; acorns have caps that enclose 1/3 to ½ of the nut

*Quercus ellipsoidalis*
northern pin oak

6f. Twig is stout and red-brown to grey-green; buds are large, buff-colored, pointed and fuzzy; acorns have cap that covers ½ to 1/3 of the nut and the edges of the scales on the cap appear loose

*Quercus velutina*
black oak

6a. Buds not crowded near tip of twig

6b. White oak

6c. *Quercus macroura*
swamp white oak

6d. Red oak

6e. *Quercus bicolor*
bur oak

6f. *Quercus rubra*

7 Leaf scars heart shaped

8 Twigs stout with numerous light lenticels; buds large, conspicuous; large terminal bud slightly hairy; fruit has a tan husk that is distinctly 4-ribbed; bark “shaggy”

*Carya ovata*
shagbark hickory

8 Twigs stout and light brown; Buds gray and fuzzy; leaf scar described as “monkey face”; Pith chambered; fruit has green husk that contains a round, black nut

*Juglans nigra*
black walnut

9 Leaf scar inconspicuous, buds narrow, acute, ¾ to 1 inch long, lance-shaped; Many bud scales and they overlap; twigs slender and zigzag

*Fagus grandifolia*
beech

9 Leaf scars visible although not all large

10 More than 3 vascular bundle scars; Buds dark red and sticky

*Sorbus americana*
American mountain-ash

11 Vascular bundle scars often not distinct; leaf scars small and semi-circular; buds are small with glossy scales; twigs reddish brown to gray usually with short spur shoots on older growth; twigs sometimes bitter-almond taste

*Prunus serotina*
black cherry

11 Vascular bundle scars 3 distinct dots; Leaf scars nearly semi-circular; Bud scales finely hairy, buds sometimes sticky; twigs without flavor

*Populus see 11a-d*

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