

WINTER KEY TO MINNESOTA'S TREES

1. Leaves persistent and green throughout the winter, needle shaped, awl shaped or scale like (see Summer Key—Conifers).
1. Leaves not remaining on trees throughout winter.
 2. Twigs with small, wart-like branches. *Tamarack*
 2. Twigs without small, wart-like branches.
 3. Buds and leaf-scars opposite each other on twigs.
 4. Twigs slender, red to brown or green to purple; buds red or brown.
 5. Buds narrow, brown, sharp pointed. *Sugar maple*
 5. Buds broad, reddish, usually blunt pointed. *Boxelder*
 6. Buds with silvery fuzz; twigs green to purple. *Silver maple*
 6. Buds smooth; twigs red to brown. *Red maple*
 7. Buds brown and pointed; twigs brown.
 7. Buds red and rounded; twigs red.
 4. Twigs stout, gray to brown; buds brown or black.
 8. Buds black; older bark grayish, scaly, rubs off easily. *Black ash*
 8. Buds dark brown; older bark furrowed or ridged.
 9. Twigs often fuzzy; leaf scar usually straight on upper edge. *Green ash*
 9. Twigs smooth; leaf scar usually deep notched on upper edge. *White ash*
 3. Buds and leaf scars alternate on twigs.
 10. Fruit a pod; persists on tree over winter.
 11. Fruit a long twisted pod, thin skinned with many small black seeds. *Honeylocust*
 11. Fruit a stout pod, thick skinned with three to six large brown seeds. *Kentucky coffeetree*
 10. Fruit not a pod.
 12. Pith of twig chambered.
 13. Pith chocolate color; fuzzy "mustache" above leaf scar. *Butternut*
 13. Pith light brown color; leaf scar deeply notched. *Black walnut*
 12. Pith of twig solid.
 14. One or three bud scales covering bud.
 15. One cup-like scale covering bud. *Black willow*
 15. Three greenish to reddish bud scales. *Basswood*
 14. More than five bud scales covering bud.
 16. Buds covered with dense yellow fuzz obscuring scales. *Bitternut hickory*
 16. Bud scales plainly visible.
 17. Bud scales loose and shaggy, grayish brown. *Shagbark hickory*
 17. Bud scales tight and overlapping.
 18. Lowest bud scale of side buds directly over leaf scar.
 19. Buds are very sticky when squeezed.
 20. Buds with very sweet aromatic odor. *Balsam poplar*
 20. Buds odorless. *Eastern cottonwood*
 19. Buds slightly sticky.
 21. Buds appear varnished. *Quaking aspen*
 21. Buds covered with sparse white down. *Bigtooth aspen*
 18. Lowest bud scale of side buds not centered over leaf scar.

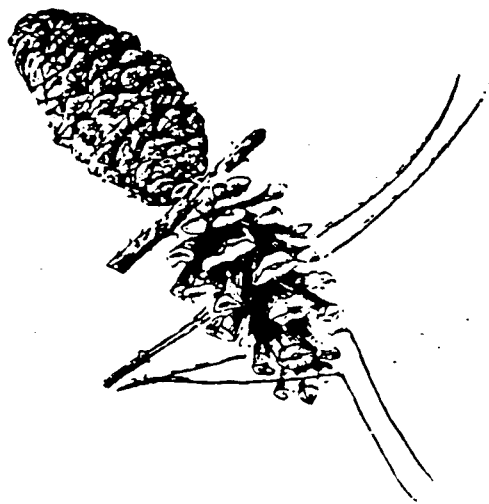
- 22. Several buds clustered at tip of twig.
 - 23. Buds pointed, light brown.
 - 24. No cork on twigs, older bark in long, flat ridges.
 - 24. Older twigs corky, older bark in coarse, scaly ridges.
 - 23. Buds not pointed, reddish brown.
 - 25. Buds broadly oval, upper half woolly; twigs light red.
 - 25. Buds rounded; twigs greenish red to gray.
 - 22. Only one bud at tip of twig.
 - 26. Twigs with strong odor.
 - 27. Crushed twig with pleasant wintergreen odor.
 - 27. Crushed twig with unpleasant bitter-almond odor; no spines on trunk.
 - 27. Crushed twig with unpleasant almond taste, trunk armed with spines.
 - 26. Twigs odorless.
 - 28. Older bark white and papery.
 - 28. Older bark gray to brown in narrow ridges and fairly firm to spongy.
 - 29. Buds sharp pointed, older twigs corky.
 - 30. Lateral buds small and closely pressed to twig; twig slender and zigzag.
 - 30. Lateral buds larger and not appressed; twig medium and not zigzag.
 - 29. Buds dull-pointed, twigs corkless.
 - 31. Buds and twigs brown, with soft hair.
 - 31. Buds blackish, twigs gray, with bristly hair.
 - 28. Older bark gray, shreddy and loose; a small tree.
- Northern red oak*
Bur oak
Northern pin oak
White oak
Yellow birch
Black cherry
Wild plum
Paper birch

Hackberry

Rock elm

American elm
Slippery elm

Ironwood



TREE IDENTIFICATION

(cones, needles, twigs, leaves are half size except where noted)

RED PINE
(Norway pine)

Pinus resinosa

Key Features: Two long, dark-green needles that break cleanly when folded in two; scaly to platy reddish bark.