A key to some trees and shrubs of the Radford University Campus

1. Leaves broad and flat    (11)
   Leaves needle-like or awl-like    (2)

2. Leaves long and narrow, like a needle    (3)
   Leaves pressed against stem and not easily differentiated from stem    (10)

3. Needles, in clusters of 2-5, attached to each other at their base    (4)
   Needles not in clusters    (6)

4. Clusters contain five needles    Pinus strobus
   Clusters contain two needles    (5)

5. Trees; needles longer than 8 cm    Pinus resinosa
   Low Shrubs; needles 5 cm or less    Pinus mugo

6. Cross section of needle flat    (7)
   Cross section of needles angular or round    (9)

7. Two yellow lines on bottom of needles;
   seeds surrounded by a fleshy red aril    Taxus
   Two white lines on bottom of needles;
   seeds borne in cones    (8)

8. Cones 5 cm long;
   needles 2 cm long    Pseudotsuga menziesii
   Cones 1.5 cm long;
   needles 1 cm long    Tsuga canadensis

9. Scales falling off mature cones;
   cones upright on branches    Cedrus deodara
   Scales attached to mature cones,
   cones hanging from branches    Picea

10. Foliage sharp and prickly    Juniperus
    Foliage not sharp and prickly;
    branches flattened    Thuja occidentalis

11. Leaves relatively hard and tough,
    evergreen in winter    (12)
   Leaves not relatively hard and tough    (14)

12. Plants not prickly;
    Margin of leaves entire;
    leaves longer than 15 cm    Magnolia grandiflora
   Plants prickly;
    Margin of leaves lobed or serrated;
    leaves less than 10 cm    (13)

13. Thorns on stems; leaves serrated    Pyracantha
    Thorns not present on stems;
    leaves lobed with spiny margins    Ilex

14. Leaves compound    (15)
   Leaves simple    (18)

15. Leaves palmately compound    Aesculus
   Leaves pinnately compound    (16)

16. Leaves opposite    Fraxinus
   Leaves alternate    (17)

17. 5-7 leaflets per leaf    Cladrastis kentuckea
   Dozens of leaflets per leaf    Sorbus americana

18. Leaves opposite    (19)
   Leaves alternate    (23)

19. Leaves entire    (20)
   Leaves palmately lobed    (21)

20. Leaves taper gradually to a long, narrow point;
   Fruits fused into a sphere    Cornus kousa
   Leaf tip not tapered to a long, narrow point;
   Fruits clustered but spreading    Cornus florida

21. Lobes numerous and narrow
   Acer palatum
   Lobes 3 to 5, about as broad as long    (22)

22. Indentations between lobes angular    Acer rubrum
   Indentations between lobes rounded    Acer saccharum

23. Leaves wedge-shaped to semi-circular with
   a notch in the end of the leaf    Gingko biloba
   Leaves not as above    (24)

24. Margins entire    (25)
   Margins lobed or serrated, not entire    (27)

25. Leaves distinctly heart-shaped    Cercis canadensis
   Leaves not heart shaped    (26)

26. Leaves more than 10 cm long    Maclura pomifera
   Leaves less than 10 cm long    Quercus phellos

27. Leaves lobed    (28)
   Leaves not lobed    (32)

28. Leaves palmately lobed    (29)
   Leaves pinnately lobed    (30)

29. Leaf margins with many teeth    Platanus occidentalis
   Leaf margins untoothed    Liriodendron tulipifera

30. Lobes rounded at tips    Quercus alba
   Lobes pointed at tips    (31)

31. Indentations between lobes deep,
   i.e. 2/3 of the way to midvein    Quercus palustris
   Indentations between lobes shallow,
   i.e. about 1/3 of the way to midvein    Quercus rubra

32. Base of leaf, next to petiole, uneven on some leaves;
   leaves mostly longer than 15 cm    Tilia heterophylla
   Base of leaves even; leaves less than 15 cm long    (33)

33. Leaves mostly 10 cm or more long,
   with a jagged toothed margin    Crataegus
   Leaves mostly 7 cm or less long,
   with a finely toothed margin    (34)

34. Upper leaf surface waxy, shiny    Pyrus calleryana
   Upper leaf surface not shiny    (35)

35. Leaves purple    Prunus cerasifera
   Leaves green    Malus
## Illustrated Glossary of Terms Used in Dichotomous Key

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<th>Term</th>
<th>Description</th>
<th>Example Plant</th>
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<tr>
<td>1</td>
<td>Opposite leaves</td>
<td>Two leaves are attached at one node</td>
<td>Flowering Dogwood, <em>Cornus florida</em></td>
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<tr>
<td>2</td>
<td>Alternate leaves</td>
<td>Only one leaf is attached at each node</td>
<td>Wild Black Cherry, <em>Prunus serotina</em></td>
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<td>3</td>
<td>Palmately compound leaf</td>
<td>Each of the five leaflets are attached at a point</td>
<td>Yellow Buckeye, <em>Aesculus flava</em></td>
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<tr>
<td>4</td>
<td>Pinnately compound leaf</td>
<td>Each of the leaflets is attached to an axis</td>
<td>Black Locust, <em>Robinia pseudoacacia</em></td>
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<td>5</td>
<td>Palmately lobed leaf</td>
<td>Lobes extend from a central point</td>
<td>Sugar Maple, <em>Acer saccharum</em></td>
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<tr>
<td>6</td>
<td>Pinnately lobed leaf</td>
<td>Lobes extend from a central axis</td>
<td>White Oak, <em>Quercus alba</em></td>
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