



DURANT NATURE PRESERVE

Winter Tree Trail

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INSTRUCTIONS

The objective of the tree trail is to use the information below to identify numbered trees along White House Road. By using the sets of choices in the "dichotomous key" below and matching them up with characteristics you can observe on each tree, you can narrow each numbered tree down to one tree species. Each choice you make on this key leads you to another set of choices on the key (indicated by numbers on the right-hand side), or to the name of a tree species that has those characteristics. Once you finish, you can check your answer(s) using the answer key at the end.

In general, it could help to look at multiple twigs on a tree, in case the one twig you examine is not typical. It also helps to make comparisons back and forth between trees, so you can better visualize the differences you are looking for in each set of choices. Feel free to go back and forth between trees on the trail if it helps, and to use the photos included in this key to help you make those comparisons.

Note: If you are not familiar with using dichotomous keys, you might want to skip Tree # 1 on the trail and start with later trees, then come back to Tree #1 later, as this tree can be more challenging to identify using this key.

DICHOTOMOUS KEY

1a Leaves evergreen (leaves are green in winter)
..... Go to 2a and 2b

1b Leaves deciduous (no green leaves on the tree in winter)
..... Go to 3a and 3b

2a Leaves like needles **Loblolly pine** (*Pinus taeda*)



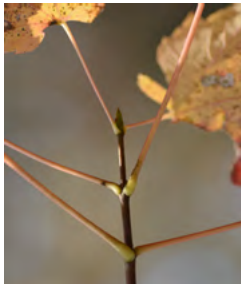
Loblolly pine (*Pinus taeda*)

2b Leaves broad (not like needles), with spines on the margins
..... **American Holly** (*Ilex opaca*)



American Holly (*Ilex opaca*)

3a Lateral (side) buds, branches, and leaf scars (places where leaves were attached to the stem—sometimes these are not easy to see) **opposite** (in pairs, one opposite the other on the stem) .. **Go to 4a and 4b**

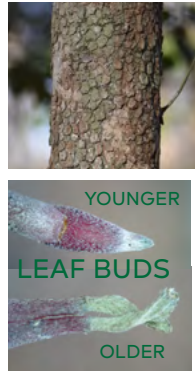
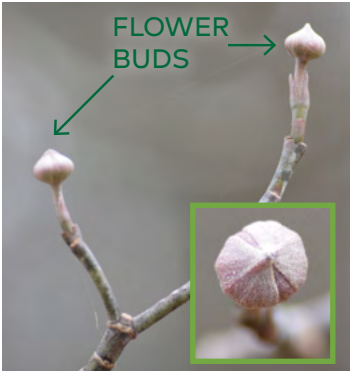


3b Lateral (side) buds, branches, and leaf scars (places where leaves were attached to the stem—sometimes these are not easy to see) **alternate** (one lateral bud/branch/leaf scar in each location on the stem, not in pairs)..... **Go to 5a and 5b**



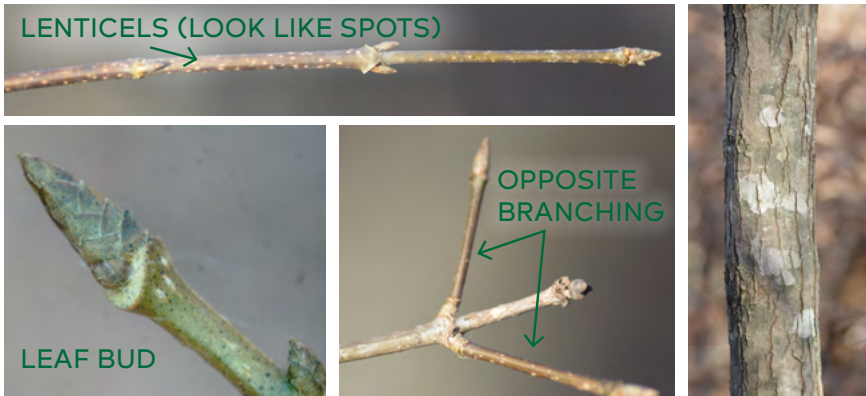
4a Newer stems often green, with small leaf buds at the ends of branches that look like two tiny smooth, pointed leaves, or tiny shriveled leaves (buds with no scales are called naked buds), and some trees have larger, upward-pointing flower-buds at the end of branches that appear almost "square", with opposite scales covering them.

..... **Flowering Dogwood (*Cornus florida*)**



Flowering Dogwood (*Cornus florida*)

4b Stems usually not bright green (sometimes they are reddish), with spots (called lenticels), buds with many (more than 4) small overlapping scales **Southern Sugar Maple** (*Acer floridanum*)



Southern Sugar Maple (*Acer floridanum*)

Note: Red Maple (*Acer rubrum*) also occurs at the preserve—this often has redder branches with red buds, although Southern Sugar Maple sometimes has reddish stems.

5a Clusters of similarly-sized, pointed buds (more than one) at the ends of the stem, bark light-colored, furrowed and almost like pieces could fall off; round-lobed leaves may still cling to the trees even when the leaves are dead **White Oak** (*Quercus alba*)

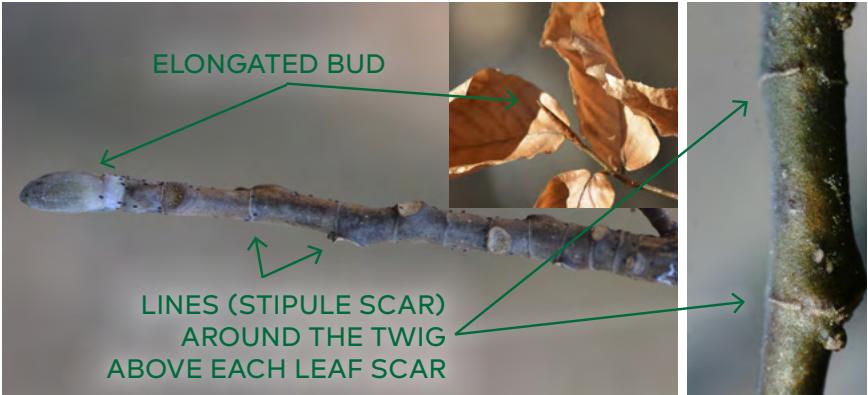


White Oak (*Quercus alba*)

Note: At least 8 other oak species occur along this road or elsewhere in the preserve.

5b 0-1 buds at the ends of the stems. Or, if more than one bud is at the end of a branch, the terminal (end) one is much larger than the side (lateral) buds around it..... **Go to 6a and 6b**

6a A line around the stem above each leaf scar, elongated buds (at least 2-4X longer than wide).
..... **Go to 7a and 7b**



6b No line around the stem above each leaf scar, buds not elongated (much less than 4X longer than wide) **Go to 8a and 8b**

7a Bud two-sided, smooth-looking (not scaly), rounded on the side; bark often looks streaked (or furrowed, in older trees)
..... **Tulip Poplar (*Liriodendron tulipifera*)**



Tulip Tree, Tulip Poplar (*Liriodendron tulipifera*)

7b Bud scaly, not two-sided, sides relatively straight, ending in a sharp elongated point (bud more than 4X longer than wide); bark looks smooth (usually without ripples or streaks) and gray, but feels rough; dead leaves often stay on the tree in winter (like in oaks, as this is in the oak family)

..... **American Beech** (*Fagus grandifolia*)



American Beech (*Fagus grandifolia*)

8a Bark looks smooth and gray (similar to American Beech, see 7b), but with ripples down the trunk, like muscles or sinew. Unlike American Beech, dead leaves on this tree do not usually stay on the tree in winter, and buds are much less than 4X as long as wide

..... **American Hornbeam, Ironwood, Musclewood, Blue Beech** (*Carpinus caroliniana*)



American Hornbeam, Ironwood, Blue Beech (*Carpinus caroliniana*)

8b Bark various colors, does not look smooth, but instead looks ridged, bumpy, or with corky wartlike structures **Go to 9a and 9b**

9a Bark on trunk of mature tree often has corky chunks on it that make it look “warty” or “spiny”, like small defined bumps, twigs thin (often 1-3 mm thick) **Sugarberry (*Celtis laevigata*)**



Sugarberry (*Celtis laevigata*)

9b Bark on trunk of mature trees not appearing warty—corky chunks usually absent, but if present, the chunks form ridges more often than warty bumps; twigs often over 3 mm thick..... **Go to 10a and 10b**

10a Young branches green, and older branches sometimes deep red with dark (or dark-ringed) spots (called lenticels), trees often arching, or at least not straight; no clear terminal buds at the ends of twigs **Sourwood (*Oxydendrum arboreum*)**



Sourwood (*Oxydendrum arboreum*)

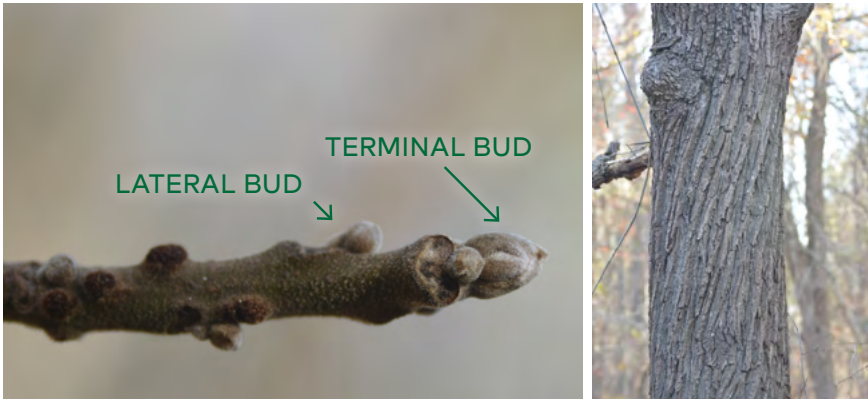
10b Young branches various colors with light-colored lenticels, trees sometimes arching, clear terminal bud (bud at the end of stem).....**Go to 11a and 11b**

11a Branches often reddish or yellowish with a scaly, hairless terminal bud, sometimes with corky "wings" (ridges).....**American Sweetgum (*Liquidambar styraciflua*)**



American Sweetgum (*Liquidambar styraciflua*)

11b Branches brown-gray, stout (0.5-1 cm), with no corky ridges. New twigs and buds are hairy (velvety). Buds are few-scaled (including the terminal one) that often have ridges running down their sides; leaf scars are heart-shaped or shaped like monkey faces, (0.5-1 cm across).....**Black Walnut (*Juglans nigra*)**



Black Walnut (*Juglans nigra*)

ANSWER KEY

The numbers below correspond to the number on labeled trees:

1. Black Walnut (*Juglans nigra*)
2. Sugarberry (*Celtis laevigata*)
3. American Hornbeam (*Carpinus caroliniana*)
4. White Oak (*Quercus alba*)
5. Flowering Dogwood (*Cornus florida*)
6. American Sweetgum (*Liquidambar styraciflua*)
7. American Holly (*Ilex opaca*)
8. Sourwood (*Oxydendrum arboreum*)
9. American Beech (*Fagus grandifolia*)
10. Tulip Tree (*Liriodendron tulipifera*)
11. Loblolly Pine (*Pinus taeda*)
12. Southern Sugar Maple (*Acer floridanum*)





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