

FIELD BOTANY TAKE-HOME PRACTICAL - 2010

BIO 2500 Lab Sec. _____

NAME _____

PROCEDURE: Follow instructions below and the map at the BIO 2500 Lab Page to find each tree or shrub, and use *Michigan Trees* to provide the information requested. You may work alone or with one or more other students as long the relationship is “mutualistic.” Make additional field notes of “distinguishing characteristics” (See Lab #2) for your own study on separate paper.

Leave ENS at the south exit (near observatory) and walk S. along E. boundary of the parking lot leading to the “Hill Dorms.” Along the boundary, recall American Basswood (*Tilia americana*) with heart-shaped leaves that are asymmetrical at the base, black locust (*Robinia pseudoacacia*), black cherry (*Prunus serotina*), and note Scots Pine (*Pinus sylvestris*) orange bark, 2 needles/cluster. Note: Tree number tags will usually be on the west side of the tree.

- This deciduous **tree (#94)** is just W. of the connecting drive between “Hill Dorm” parking and the lower ENS lot.
Common Name _____ Sci. Name _____
- Tree #15, a Silver Maple, is about 10 m S of the administrators’ parking at Founders Hall. **Tree #18** is 20-25 m S of tree #15 and grows adjacent to College St. Note the thick, corky bark even on young branches.
Common Name _____ Sci. Name _____
- Walk eastward along College St. toward Faith Hall. Identify a small oak, **tree #608** (tag on branch), in line with others like #18.
Common Name _____ Sci. Name _____
- From sidewalk at the intersection of Main St. and College Ave., walk northward toward the brick university entrance sign and find **tree #30**, a large maple with bark typical of those tapped for an important product.
> Name a commercial product of this maple _____. Sci. Name of tree _____
- Now walk northward into the parking lot and toward Founders Hall. On your left, notice a small tree and near its base, a bronze marker in memory of Dr. Joanna “Jodi” Grosh. Note oval leaves with veins parallel and the button-like flower buds. This understory species (e.g. **#69**), beautifies American forests in Spring.
Common Name _____ Sci. Name _____
Note: Face the bronze marker and then walk around the tree to your right 6 paces and to view a conifer tree called Dawn Redwood, *Metasequoia glyptostroboides*, once thought extinct until found alive in Asia!
- Now walk northward toward Collins Hall and past an Eastern White Pine, *Pinus strobus*, an important pine of the Great Lakes Region. How many needles per cluster? ____ List 2 medicinal uses of this pine by Native Americans (e.g. see <http://herb.umd.umich.edu/> and enter scientific name to search for ethnobotanical data.)

- Overshadowing the *Pinus strobus* from the north is a Norway Spruce, *Picea abies*. Besides having shorter, stiffer needles, how does *Picea abies* differ from *Pinus strobus*? [Describe this genus-level distinction of *Pinus* (pines) from *Picea* (spruces).]

- Suggest a probable cause of the loss of bark. _____ Note the healing process.
- Just N. of the Norway Spruce and E of an unusual Norway Maple (*Acer platanoides*) with its branches spreading to the ground. Sever a leaf from the twig, squeeze the petiole (leaf stem) at the end. What color is the sap? _____ This “distinguishing character” of Norway Maple separates it from other *Acers*.

9. Just E of the Norway Maple (#49) is **tree, #219**, an important “nut tree” for wildlife, although this specimen may be too young to bear fruit (nuts). Note the smooth gray bark.

Common Name _____ Sci. Name _____

10. Now, follow the sidewalk past the NE corner of Collins Hall and a Cedar of Lebanon, *Cedrus libani* (on left; native of Europe/Asia). Proceed W along the S side of Williams Hall. Along the W end of Williams, notice an evergreen shrub, Japanese Yew, *Taxus cuspidata*, with needles similar to Eastern Hemlock, *Tsuga canadensis*, but without the two white lines beneath. It's poisonous seeds are partly covered by a fleshy edible *aril*. Pacific Yew (*Taxus brevifolia*), is source of the anti-cancer drug, taxol.

11. Walk SW toward Tyler Hall, and just before the N entrance of Tyler, look to your right to find a columnar evergreen (**#165** on branch). Include the name given by French voyageurs for its power to cure scurvy. Note its tiny cones.

Common (2 names) _____ Sci. Name _____

12. Now, walk NW a few meters toward Milner to see **tree #163**, an exotic-looking tree w. fan-shaped leaves, once thought to be extinct and then discovered living in China. Sci. Name _____

13. Walk toward Milner and notice 3 spaced columnar evergreens, *Juniperus virginiana*, or Eastern Redcedar. How are the foliage and cones different from columnar tree #165 (item 12.)? _____

14. Now, go E to rejoin the sidewalk leading N from Tyler to the CBTS: Approximately 30 m NW of Williams is **tree #327** (tag on branch), planted in honor of Nathan Battaglia, former CU student whose family still lives in the area.

a. Common Name _____ Sci. Name _____

b. Distinguish leaves of this tree (#327) from #608 in item 3. _____

15. Continue N on this sidewalk, noting 3 large maples on your left, center tree is **#337** (branch tag).

Which of the 3 maple species already encountered is this one? Sci. Name _____

16. Now, enter the Library Plaza area and identify the large evergreen conifer towering above the plaza plaque:

a. Common Name _____ Sci. Name _____

b. How can one distinguish this species from *Picea abies* (#7) _____

17. Now, walk E to the Apple Tech. Center. What species are the three large trees growing just S of the Quad near Apple? Notice the base of the petiole is hollow and hides a bud until removed. These are hybrids as described in *Michigan Trees*, and a correct scientific name below should reflect the "hybrid status."

Common Name _____ Sci. Name _____

18. Follow the walk N along the E side of the CBTS. Identify one of the newly transplanted trees between the walk and CBTS: Common _____ Scientific Name _____

19. Continue N past Maddux and Cedar Lake toward Univ. Blvd. Note a series of tree legumes with very fine, dissected foliage, but generally thornless, unlike the wild type that grows in our area..

Common Name _____ Sci. Name _____

Congratulations, you are finished! Just submit this practical (minus the campus map) on the due date.