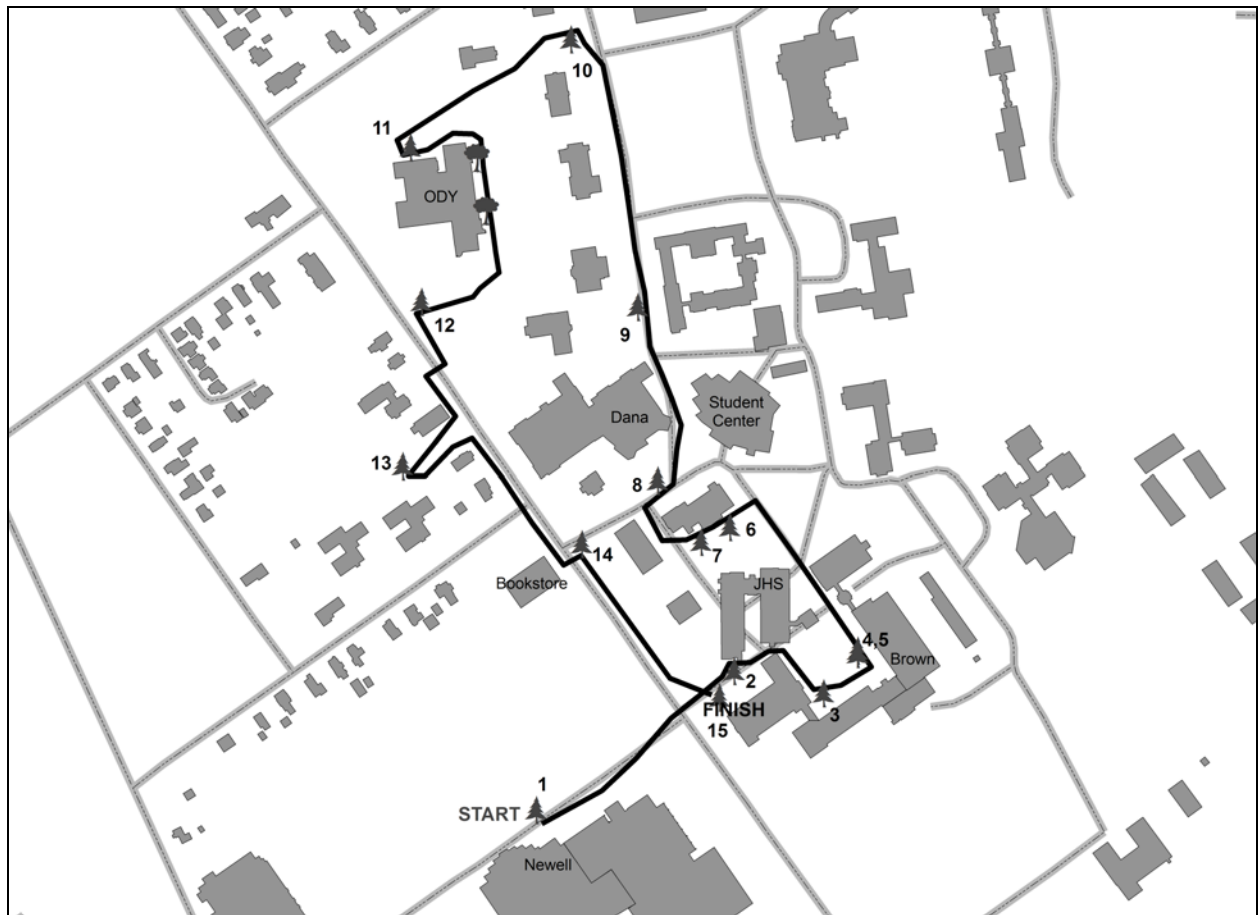


**SLU CAMPUS TREE IDENTIFICATION ASSIGNMENT**  
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One of our goals in General Biology this semester is to help you develop some ecological literacy – we want you to have basic familiarity with some of the local native trees. These are species you may find on campus or on the Kip Tract, or elsewhere, that are typical of our mixed hardwood forests in northern New York.

Working alone or with one partner from class, use the following map and key to identify the 15 trees that have been marked around campus. Turn your answers (one answer sheet per student) in to your lab instructor on or before the start of your lab the week of September 10.



## DICHOTOMOUS KEY TO A FEW SELECT NATIVE TREE SPECIES ON CAMPUS\*

Use this key to identify the 15 trees labeled with orange fluorescent cards (and also as mapped on the General Biology GIS viewer, <http://slumap.stlawu.edu/website/genbio7/viewer>). \*NOTE that this key will ONLY WORK for the selected trees. There are a number of ornamental, non-native trees growing on campus that have NOT been covered by this key.

Specifically, this key will help you to differentiate between the following 12 native species:

White ash – <i>Fraxinus americana</i>	Box elder – <i>Acer negundo</i>
Black walnut – <i>Juglans nigra</i>	Tamarack – <i>Larix laricina</i>
Red pine – <i>Pinus resinosa</i>	Paper birch – <i>Betula papyrifera</i>
Eastern white pine – <i>Pinus strobus</i>	Red oak – <i>Quercus rubra</i>
Sugar maple – <i>Acer saccharum</i>	Basswood – <i>Tilia americana</i>
Red maple – <i>Acer rubrum</i>	Eastern hemlock – <i>Tsuga canadensis</i>

Each species occurs at least once on the scavenger hunt, and some more than once.

**Directions for using a dichotomous key.** The characteristics used to identify each species are listed sequentially below. For each tree, start with characteristic #1a and ask yourself if your specimen exhibits this feature. If the answer is yes – move to the number indicated to the right of that characteristic. If your answer is no – move to the next listed characteristic (1b). Repeat this process until you reach a single species.

**START HERE:**

- 1a. Deciduous tree; broad leaves that are shed in the autumn.....2
- 1b. Evergreen tree; thin, needle-like or scaly leaves that usually remain on the tree year-round...3
  
- 2a. Branches and leaves arranged in **opposite** orientation to one another.....4
- 2b. Branches and leaves arranged in **alternate** orientation to one another .....5
  
- 3a. Needles occur in clusters with bundles of 2 – 5 needles per cluster; needles > 4 cm long .....6
- 3b. Needles do not occur in clusters but rather are attached to branches individually.....  
.....7
  
- 4a. Simple leaves (single leaf per leaf stem (= **petiole**)) .....8
- 4b. Compound leaves consisting of a leaf stalk with several leaflets (multiple leaflets per leaf stem).....9
  
- 5a. Simple leaves (single leaf per leaf stem (= **petiole**)) ..... 10
- 5b. Compound leaves consisting of a leaf stalk with several leaflets (multiple leaflets per leaf stem)..... Black walnut, *Juglans nigra*
  
- 6a. Needles occur in cluster of two needles per bundle; needles 4 – 6 inches long; needles break cleanly when bent; bark light gray to pinky-gray ..... Red pine, *Pinus resinosa*
- 6b. Needles occur in clusters of 5 needles per bundle; needles usually 3 – 5 inches long; needles soft (flexible) to the touch; bark dark gray and fairly smooth..... Eastern white pine, *Pinus strobus*

- 7a.** Needles deciduous (drop in autumn after turning yellow); needles appear “tuft-like” in groups where they attach to branches; .....Tamarack, *Larix laricina*
- 7b.** Needles evergreen; flat single needles about ½ inch long; shiny dark green above with two white “stripes” of stomata (stay tuned for the last lab to learn what stomata are) ..... Eastern hemlock, *Tsuga Canadensis*
- 8a.** Smooth leaf margins; 5 lobes to leaf with “U” shape between lobes; bark variable with tree size, tending towards smooth in small trees and furrowed in larger trees. .... Sugar maple, *Acer saccharum*
- 8b. Serrated** (toothed) leaf margins; 3 – 5 lobes with “V” shape between lobes; bark variable with tree size; leaf stems often reddish ..... Red maple, *Acer rubrum*
- 9a.** Compound leaves long (entire leaf 8 – 12 inches long) with usually 5 – 7 leaflets per leaf; leaflet margins serrated or smooth but leaflets not lobed;..... White ash, *Fraxinus americana*
- 9b.** Compound with usually 3 – 5 (sometimes 7) leaflets per leaf; leaflet margins coarsely serrate or lobed; leaflets usually light green above, pale below ..... Box elder, *Acer negundo*
- 10a.** Leaves highly lobed; lobes with points (“bristles”) at tips and “U” shaped space between lobes; large trees have bark with appearance of whiteish or silver “stripes” running vertically down trunk..... Red oak, *Quercus rubra*
- 10b.** Leaves not lobed ..... 11
- 11a.** Leaves somewhat heart shaped with serrated edges (margins); large trees often have sprouts emerging from the stump ..... Basswood, *Tilia americana*
- 11b.** Leaf oval and broadest at or below the middle; leaves have serrated edges (margins) ..... Paper birch, *Betula papyrifera*

Name: \_\_\_\_\_

Lab section: \_\_\_\_\_

Put your answers to the tree identification scavenger hunt here and then turn this page in to your lab instructor.

Tree Number	Species
1	
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