

Shrub/Sapling Measurements - Non-Standard - Student Field Guide

Shrub/Sapling Team - 2-3 people

Task

Collect data on the height and crown area (to estimate % cover) of all shrubs/sapling in the sample site in order to calculate biomass and carbon stock using allometric equations.

Definitions

- *Shrub* = a woody plant with multiple stems
- *Sapling* = a tree < 15 cm CBH

Materials

- 2-3 m stick marked by centimeter
- Clinometer (optional)
- Pencil
- Calculator (optional)
- Shrub/Sapling Data Sheet*

Procedure

1. Start at one edge of the non-standard sample site, methodically measure each shrub on the entire site, and enter data in the Non-Standard Shrub/Sapling Data Sheet below.
2. Approach the first shrub or sapling and record whether it is deciduous or evergreen in the first column of the data sheet.
3. Then use a meter stick or measuring tape to measure the length in meters of the longest side of the shrub/sapling crown. Record.
4. Repeat this method for the length of the shortest side of the shrub/sapling crown. Record.
5. For each shrub or sapling use the measuring stick to measure the **height** if it is less than 2-3m tall. Otherwise estimate the height or use a clinometer. *Note this should be a representative height of the whole shrub, so do not simply measure the highest branch.
6. Repeat steps 2-5 for all shrubs and saplings on your sample site.
7. If your teacher directs you to, use the *Shrub/Sapling Calculations Sheet* and enter your data on the GLOBE website. The number of hits of deciduous and evergreen shrubs will be converted to percent cover. Percent cover and average shrub height will be used in allometric equations to determine biomass and carbon stock of shrubs/saplings on your sample site.

What do I do if...

...the shrub or sapling is taller than the height of the meter stick?

Option 1. Set the meter stick next to the shrub as a reference, and estimate the height.

Option 2. Use a clinometer following the instructions given to you by your teacher.