**Imagej Steps for Percent Cover**

1. Open up the desired picture
2. Image -> Adjust -> color threshold
3. Play with settings to color the only the background
4. Process -> binary -> make binary
5. Should have background in black (or white) and desired “cover object” in the opposite color
6. Analyze -> histogram -> list -> save
7. Open saved list in Excel
8. 0 = white, Largest # = black
9. Highlight all middle cells with “0” as a value
10. edit -> delete -> shift up cells
11. Add white (0) value and black (largest #) for total size of image (100% cover)
12. Divide the desired cover object (opposite color of the background) by the total = % cover

**Imagej Steps for Leaf Area**

1. Open desired picture
2. set scale using line segment tool, draw on ruler/calipers, etc from one mark on ruler to the desired length (i.e 1 cm) **Use Image -> Zoom -> In , to get more accurate scale**
3. Analyze -> set scale, known distance = 1, unit = cm, check box that says global, press ok
4. Image -> Type -> 8 bit
5. Image -> Adjust -> Threshold, make so leaf area is fully one color
6. Analyze -> tools -> ROI Manager
7. Use wand tool to outline leaf by clicking wand tool, then click leaf, then wand tool again
8. once outlined, on ROI Manager press “Add [t]”
9. Then on ROI manager press measure