Imaging Vascular Plants

Updated 30 January 2025

1. Log on to the imaging laptop with the herbarium guest account.

- Username: **.\herbariumguest** ← *Include the period* **.** *and backslash* ****
- Password: (check the secret spot for password)

2. Turn on the camera; the on/off switch is located on the back of the camera, near its LCD monitor (you may want to stand on a stool). Rotate the switch once, to the on position (**Fig 1**). Turn on the light box's LED lights; the switch is mounted on the back right of the box. Make sure the dimmer switch is turned up as bright as it gets. Make sure the camera is at the height marked "Specimen Sheet."

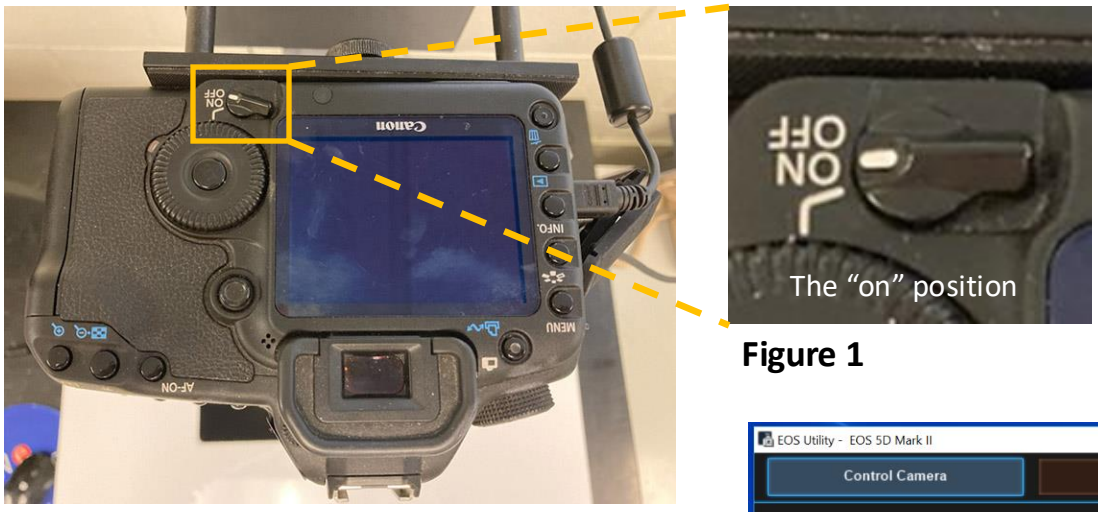


Figure 1

3. The EOS Utility software should automatically open once the camera is on, but the shortcut is on the Desktop if it doesn't.

- Select "Camera settings/Remote shooting" (**Fig 2**)

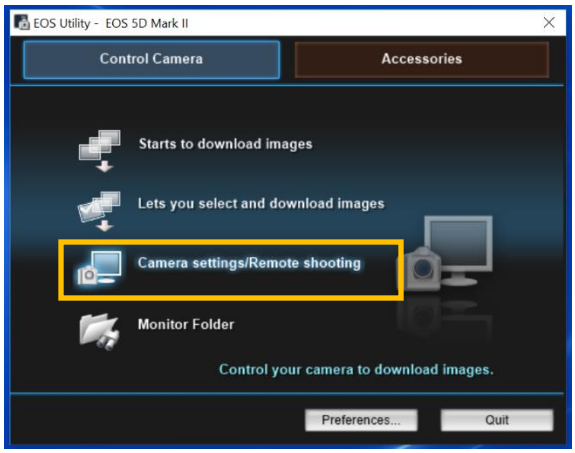


Figure 2



Figure 3

4. Click on the folder icon (**Fig 3**). Double-check that the correct destination folder is selected. Select the 'Destination Folder' tab click on "Browse" to navigate to the right folder (**Fig 4**).

- **Vascular plants:** Navigate to Pictures / Vascular / V-**Working Images**
- **There is a folder for each collection. Choose the appropriate folder depending on barcode**

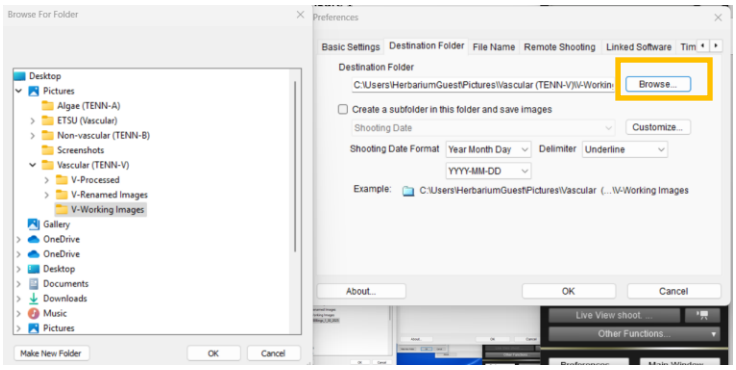


Figure 4

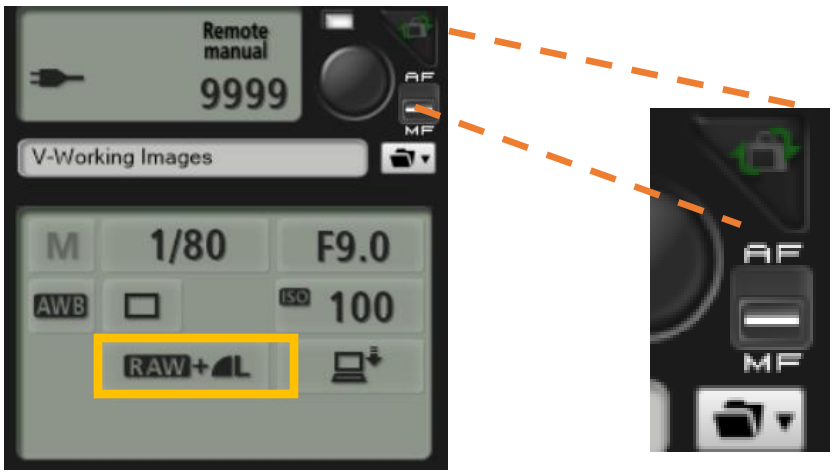
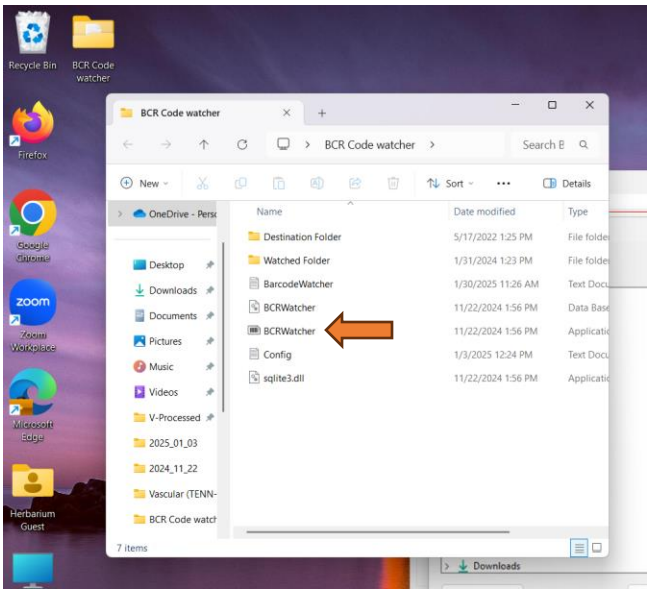


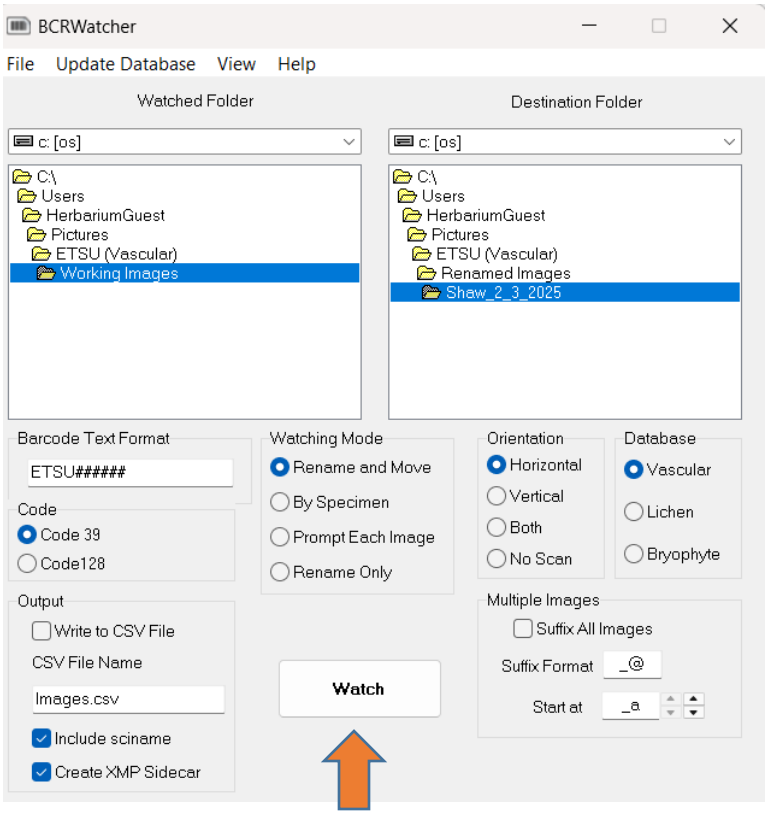
Figure 6

5. Make sure EOS Utility is set up to download the photos to the computer as JPG's and Raw images (**Fig 6**; staircase looking symbol next to an L + RAW). Click on this box and use left/right arrow keys to change. Also make sure camera icon is rotated as pictured (**Fig 7**) so photos will download correctly oriented.

6. Open BCR Code Watcher folder on desktop. Choose the BCRWatcher Application file in the folder (Figure 5). Make sure the settings are the same is Figure 6. For the "Watched Folder" select the **Working Images** folder for the particular collection you are imaging depending on barcode. Select the "renamed" folder in the appropriate collection for the destination folder. You should create a subfolder named: **lastname_date**. The barcode format will also change depending on the collection. Barcode formats are below.

- Vascular = **TENN-V-####### (7 digits)**
- ETSU **= ETSU######**
- Algae = **TENN-A-###### (6 digits)**
- Fungi = **TENN-F-###### (6 digits)**
- Lichens = **TENN-L-####### (7 digits)**
- Bryophytes = **TENN-B-####### (7 digits)**





7. Once the settings appear as above, select the "watch" button

Specimen Placement

8. Barcodes should be placed in the top right corner of the specimen sheet a little bit from the edges (**Fig 9**).

- If the top right corner isn't open, use the top left corner
- If the top left corner isn't open, place the barcode along the top edge of the sheet

Always keep the barcode horizontal on the specimen sheet and parallel to the edge!

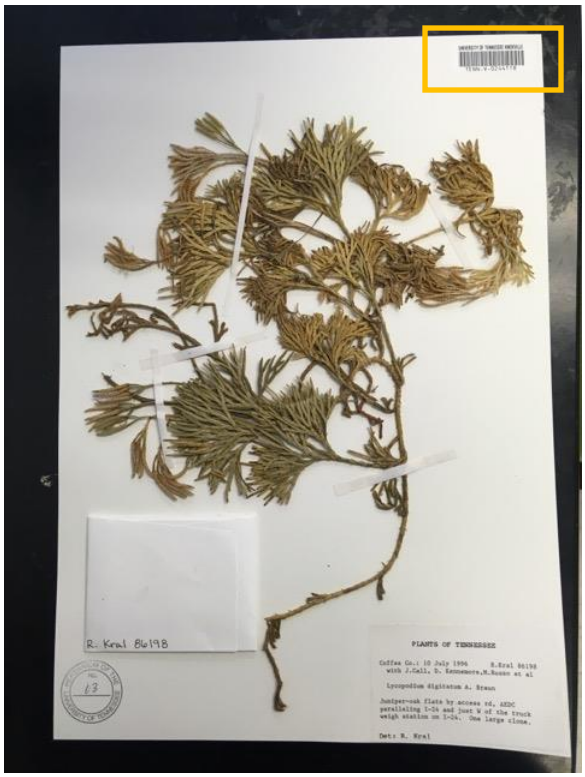


Figure 9

9. Open the doors of the light box and carefully place the specimen sheet inside without bending it (**Fig 10**).

- The bottom of the sheet, with the label, needs to be oriented on the right side of the box --- the side with the scale bar and color tile.



Figure 10



Figure 11

10. If the corner of the specimen with the label curls up, tuck it under the black tiles that mark where the specimen is placed (**Fig 11**).

11. Close to doors completely

Taking the image

12. Click on “Live View Shoot” (**Fig 14**) towards the bottom of the EOS Utility window. This will open another window titled “Remote Live View” and will automatically change the camera to manual focus (arrow in Fig 14 points to a switch that will change from AF to MF).

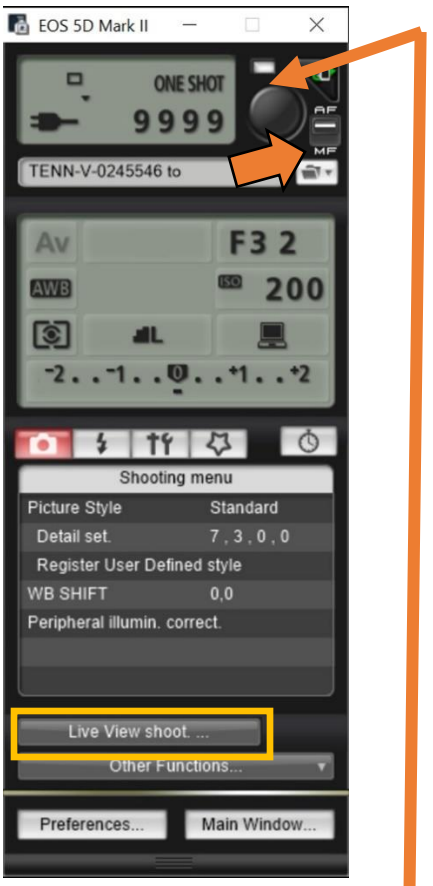


Figure 14

13. The “Remote Live View” window shows a live view of the specimen in the light box (**Fig 15**). There will be two rectangles (a smaller one inside a larger one, highlighted yellow in Fig 15 for clarity) --- click and drag these boxes so they’re placed over part of the plant specimen and then double click in the center of the two boxes to focus the camera.

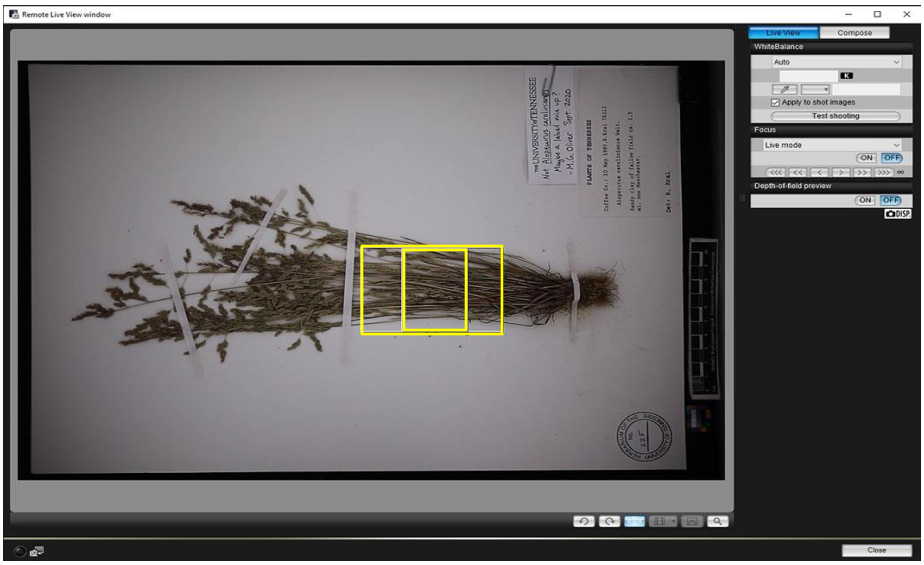


Figure 15

14. Take the photo by either pressing the spacebar or pressing the round shutter button in the EOS Utility window.

15. Once the photo has been taken, BCR Watcher will attempt to read the barcode and rename the image. If BRC Watcher is unable to read the barcode (this is likely) then a separate window will pop up (**Fig. 15**) and you will need to manually scan in the barcode into the “Catalogue number” field. Once this is done press “Continue”



Figure 15

16. Move on to the next specimen to be imaged.

- Try to keep the specimens aligned straight in the light box as best as you can so there's an even black "frame" around the specimen in the photo, particularly down the left side of the specimen sheet. Like this!



So pretty and even! ☺



17. The most efficient flow for taking images is to snap the image, then while BCR Watcher is attempting to read the barcode, take out the specimen from the imaging box and place a new one in the box. By the time this is done the dialogue box should appear and you can scan the barcode of the previous specimen.

18. Repeat this workflow until images are finished.

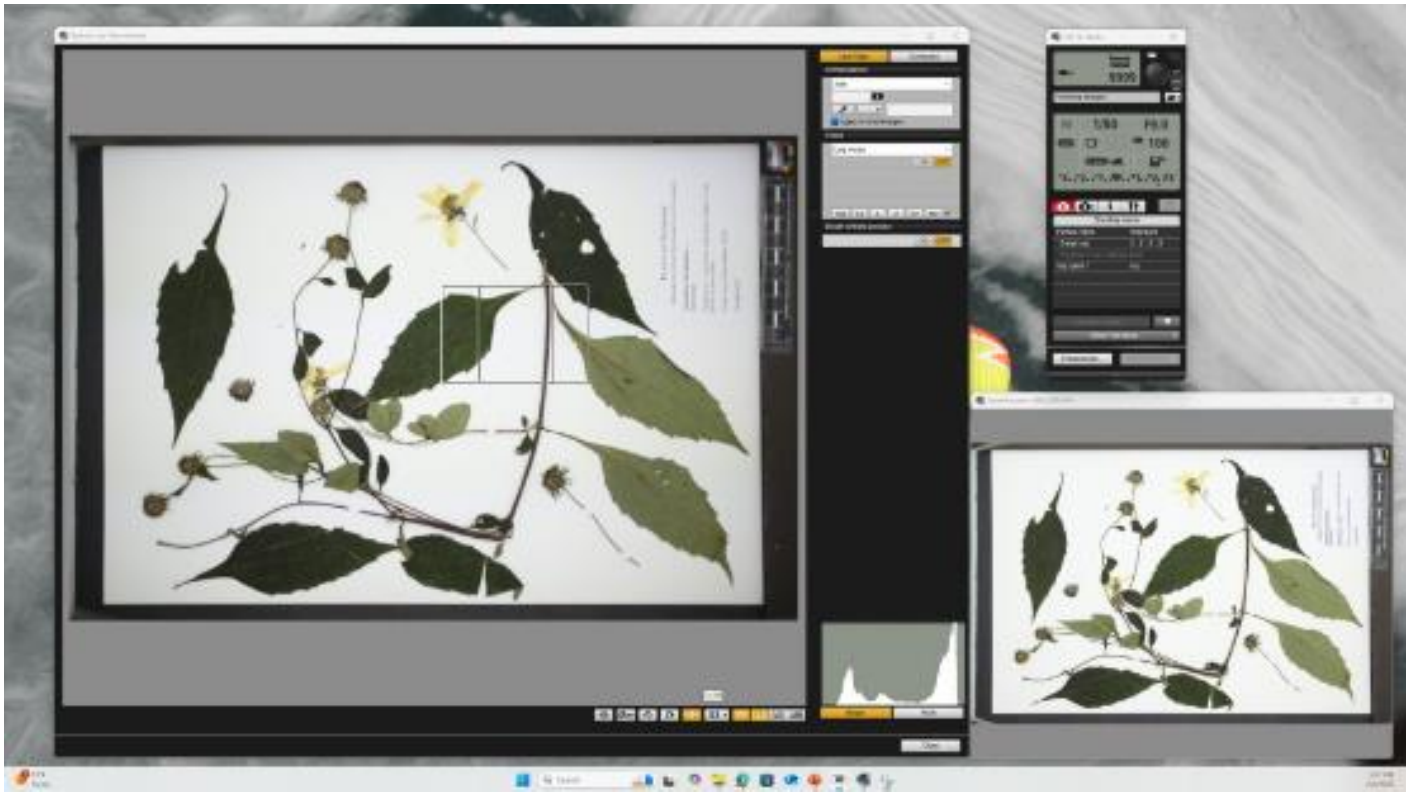
You can choose how you prefer the window setup, but It seems most efficient to have the large screen with the photo software pulled up, and the smaller laptop screen to have the BCR watcher boxes (Figures 15&16)

19. Make sure that you close out of BRC Watcher, close the light box and turn off lights when finished

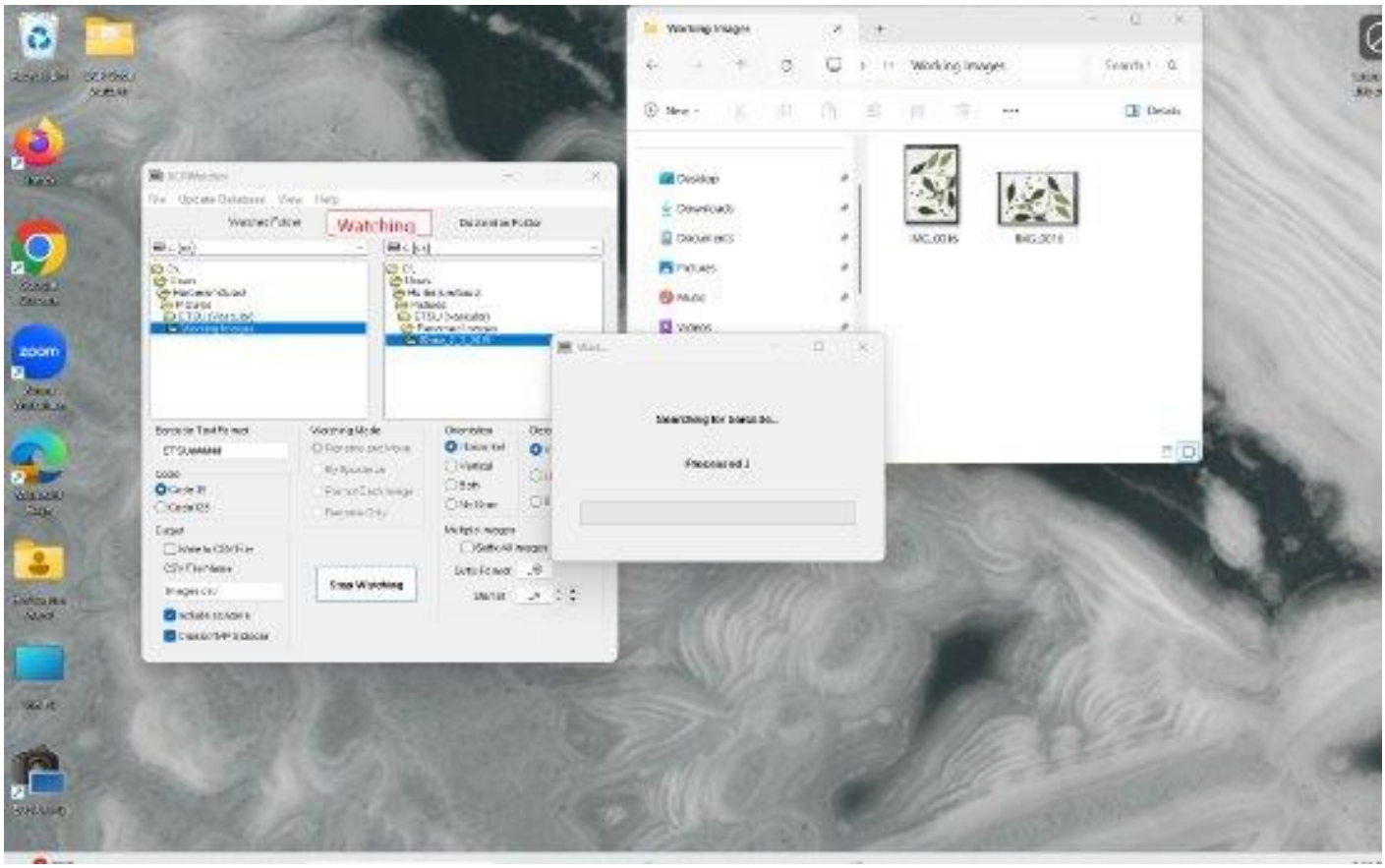
TURN OFF CAMERA WHEN FINISHED!!!

Window arrangement (suggestion)

Top Monitor



Bottom monitor (laptop screen)



Figures 16 & 17

How to image a single specimen that needed to be mounted on multiple sheets.

Some specimens are too large to mount on one specimen sheet. The extra sheets aren't duplicates because *all* the plant material is important to keep together. Good examples of species that often need to be mounted across multiple sheets are palms (Fig ##) and some species in the Asteraceae that are too tall for one sheet but need the basal leaves, the higher leaves, and the inflorescences for identification. Specimens like these will all have the same specimen label, but with the additional note of "Sheet 1 of x, sheet 2 of x" etc.