LSU HERBARIUM IMAGING INSTRUCTIONS:

- **Station 1 (towards fish bowl) is primarily for imaging lichens, bryophytes, and fungi, whereas Station 2 (center of bench) is primarily for vascular plants.**
- **Record Any and All imaging in the desktop Image Log file: IMAGE_StationX_RecordKeeping.xlsx**
- **Details of scripts, log files, and csv files that automate the movement of images to the CFLA/Sassafras server and produce mappings, are available at Genna Mount's GitHub page: https://github.com/LizEve/LSU_Herbarium_Imaging_Scripts**

Camera (Cannon EOS 5D Mark II):

Turn on 5 settings: 1 camera, 2 rocker switches, 2 remote flash triggers. Be sure to turn all off when done or the AAA batteries will die.

EOS Utility:

Camera Settings: F16; 1/100, 100, 100; Detail: 7,3,0,0

Set Destination Folder Each and Every Session: For example, *Vascular Plants* are filed under C:Users\Image\Desktop\Imaging\Vascular and *Lichens* are filed under …Desktop\Imaging\Lichen.

Confirm that the Barcode Rename Software is linked to EOS Utility: Preferences > Linked Software > Register > Browse and select: renameimage.exe. Found in C: Users\Images\Documents\PNWHerbaria\Scripts\renameimage\renameimage.exe

Barcodes are alpha-numeric. For example: LSU00123456. If multiple images are taken, add a postfix. For example: LSU00123456_2. Label files incrementally and follow the rules below:

Post fixes: For whole sheet or labels-only use _1, _2, _3, _4; For Specimen-only use _5, _6, _7; For spore prints use _8, _9.

Image Set-up:

Copy stand height is fixed and leveled for different types of images – sheets vs. smaller packets.

For specimen images, capture color bar, scale bar, and herbarium accession stamp. Barcode must be in every image in order to verify image file name. Accession number only requires one image. Label-only images do not require scale bar nor color bar.

For image capture, place specimen on copy stand, close door to light box with one hand, and click the remote trigger switch with the other hand.

Remove specimen from copy stand and re-packet any loose material. Barcode with the Symbol scanner. Barcode Rename Software should be hands-free, but do occasionally check that filenames are properly recorded, and fix if not.

Digital Photo Professional (DPP v4):

View photos in DPP under the selected destination folder according to taxon.

Take photos and re-name using the software window that automatically appears. If the window cannot be located, the images can be re-named in DPP by selecting the image + right click and select “rename”.

When all images in the session are taken, select the 1st photo and go to “Edit” **tab** in the “Tool Palette”. Crop (use “free” scaling under Aspect Ratio) and White Balance the image by clicking the eye dropper on the white color bar. Do NOT SAVE at that point, but do the following:

To Copy and Paste the recipe to all images: “Ctl + **Shift** + C”; Return to Home (using back arrow button); “Ctl + A”; and “Ctl + **Shift** + V”.

In order to create JPG files from raw (CR2) files, select File > Batch Process. See the list of all images that are selected (use “ctl + A” if needed). Choose resolution, any compression, destination folder, and name with same filename as barcoded raw file.

Save and Close DPP Program. Close EOS Utility. Turn off camera (all 5 switches!).

Record Keeping:

Record the day’s counts in the Image Log File on the Desktop (IMAGE_StationX_RecordKeeping.xlsx). Every Night at 9pm, all files in the Desktop\Imaging Folder are moved to the LaCie drive and then to the Sassafras Server. Check your work: Any file name changes or portal changes need to be made beforehand.

Follow up. The next day, check all log files (C:Users\Image\Desktop\Imaging\LocalLogs) to be sure images were properly sorted. If images transferred properly, mark “y” on Record Keeping Log (on desktop).

When csv files are uploaded to the proper Symbiota portal, mark “y” on Record Keeping Log.

If there are any issues with the image workflow, STOP imaging and sort out the errors with Collections Manager before resuming. Thanks!