

# Imaging Protocol VSC Valdosta State University

## PREPARE CAMERA

Attach camera to stand, if required

BE VERY CAREFUL NOT TO MOVE THE SPECIMEN FRAME

Attach camera to computer via usb cable

Attach AC/DC cable to camera and plug into outlet

Adjust lights to height and angle

Turn on lights, allow them to warm up for about 10 minutes

Toggle the switch on the back of the camera to full frame focusing

Raise camera to about 107 cm on the vertical column

Use copy stand levels and hand level to ensure camera is level

Turn on camera

Open Camera Control Pro 2

Using Live View, CAREFULLY AND PRECISELY adjust view finder to specimen size, crank camera up or down as needed

## SET UP CAMERA CONTROL PRO 2

0. Turn on camera

1. Open Camera Control Pro 2

2. Adjust settings:

Exposure 1

Mode: manual

Shutter speed: 1/8

Aperture: F20

Exposure Comp: 0

Exposure 2

ISO: 100

white balance: Auto

Storage

NEF

JPEG Compression: optimal quality

Type: lossless compression

NEF bit depth: 14

Image processing

Picture control: standard

color space: sRGB

3. Tools/download options

Next file name to be used: edit and set to next bar code

Prefix: TTRS\_0

Suffix: none for plants, L for butterflies

Between prefix and suffix: use sequential number  
Starting number: next bar code  
length of number: 8 digits  
When a new image is received: sent to Capture NX 2

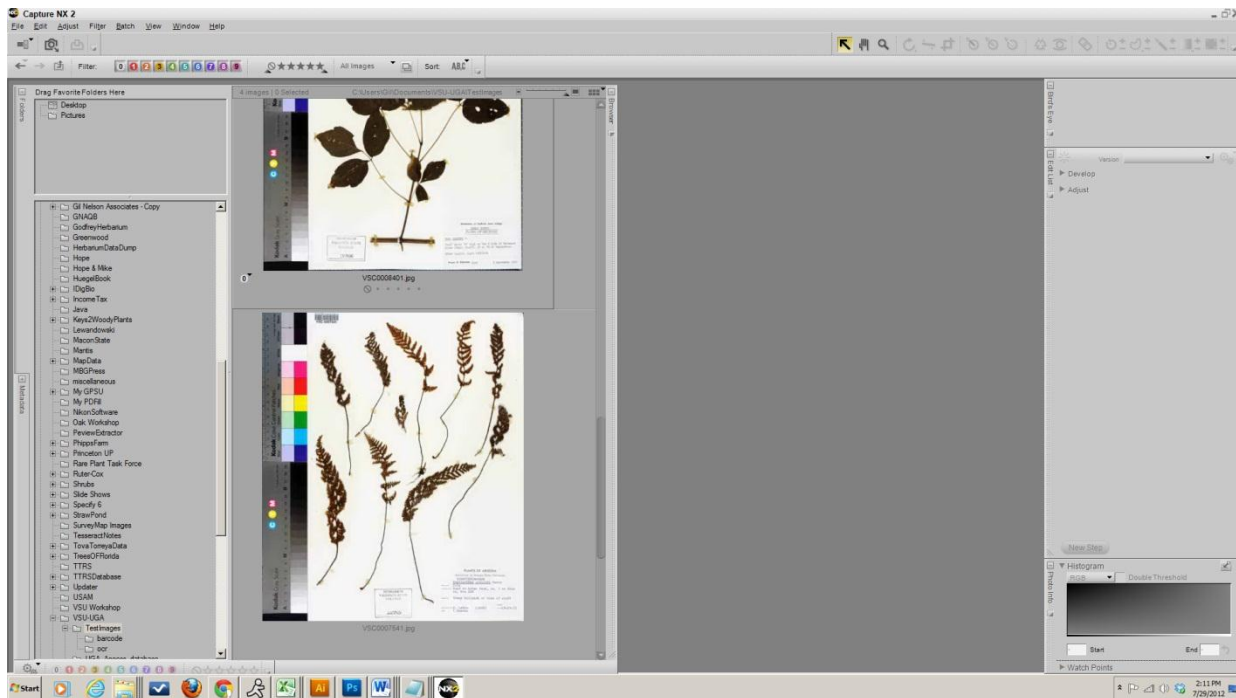
4. Camera custom settings
  - AF-C mode: release + focus

## **SPECIFY DATE ENTRY PROTOCOL**

1. Load Specify
2. Login
3. Click Data (tool bar)
4. Click Collection Object
5. Using bar code reader, scan bar code from specimen into Specify [NOTE: If you have stored something in the copy buffer, you will need to clear it by clicking on the shortcut at the top right of the desktop: Clear Clipboard.]
6. Click the green + adjacent to Determinations
7. Type in part of the species name in the Taxon field
8. Click the down arrow and wait for the drop down to populate
9. Select the correct Taxon name from the list
10. If there is a determination noted on the label, enter the date of the determination  
[NOTE: date fields can be Full Date, Month/Year, or Year]
11. Enter the collection number from the label, if available, into the Collection Number field
12. Enter date of collection into Collection Date
13. Click the + at the end of the Locality field
14. In the popup, click the search button following the Geography field
15. Enter the county name followed by an asterisk (\*) in the Full Name field
16. Click Search
17. Select the correct County/state combination and click OK
18. Type a space into Locality Name
19. Click Save
20. Click the + adjacent to Collectors
21. Enter the collector's last name in Agent and click the down arrow
22. If no name appears (may take a few seconds), click Add
23. Enter Last Name, First Name, Middle Initial
24. Click Save
25. Repeat steps 20-24 for all collectors

# IMAGING PROTOCOL

## 1. Open Capture NX2



2. Open Camera Control Pro 2
3. Open appropriate .ncc file as settings file
4. Create a folder in C:\images\, using the current date as the folder name, as 2011-06-27
5. Open File Name Intercept from the desktop and select the folder just created
6. Retrieve next specimens to image from cabinet
7. Set image number in Camera Control 2 to next bar code (tools->download options)
8. Set the default folder to the one you created in step 4
9. Position specimen in frame, ensuring complete specimen is visible
10. Open Live View, position the focus square on plant material
11. Click AF to test
12. Click AF and Shoot
13. Once the first image loads, navigate to it in Capture NX2
14. Open the image, zoom in and check margins to ensure all of the image is visible
15. Repeat 8-11 until satisfied, resetting image number each time
16. Close Live View
17. Load next image in frame
18. Use remote release on camera and begin taking images

19. As you shoot, check each image bar code to ensure it is in sequence with the one preceeding it and matches the next one in the series
20. For out-of-sequence bar codes, change the number in the download options

---

## **IMAGE PROCESSING PROTOCOL**

1. In Capture NX2, set preview pane to large icons
2. Slowly scan images top to bottom for abnormalities; check first and last image in folder and spot check others to make sure file numbers match bar-code
3. Move poor quality images to a subfolder: ReShoot
4. Spot check to ensure correspondence of filename and bar code number
5. In Capture NX2 select one image and double click it
6. Click Adjust->Light->Autolevels
7. Crop image to size
8. Rotate image to vertical
9. Click Batch->Save Adjustments
10. Close but do not save the adjusted image
11. Select a name to save the batch as: as "A"
12. Select quality: Excellent Quality (100%)
13. Browse to the TMP\_JPG destination folder, click OK
14. After processing complete, inspect and move contents to JPG folder
15. Move NEF contents to NEF\_Archive