Herbarium Specimen Digitization

Volunteer Manual

Welcome to the Imaging Lab:

The New York Botanical Garden and staff of the William and Lynda Steere Herbarium thank you for generously giving your time and effort to digitize our invaluable herbarium specimens. We hope this manual will provide some guidance, in supplement to the verbal instructions and demonstrations you will receive upon your first day of work in the Imaging Lab. Please do not hesitate to ask Kim Watson or Charlie Zimmerman, if you have any questions.

While working in the Imaging Lab, please remember:

- No food is allowed. This includes food wrappers which should be discarded elsewhere.

- Beverages are allowed in spill-proof or lidded containers only, which must remain in the designated corner of the room.

- You're welcome to ask questions and speak to staff, while being mindful of their need to work.

- You're welcome to listen with headphones to personal audio devices while working, once you are trained and able to perform tasks without issue.

- A keycard is required to enter the Imaging Lab. Be sure to take and return the volunteer keycard card, if you need to exit for a break.

- If you take a break for 5 minutes or longer, turn OFF the lightbox.

- Always wash your hands before and after handling herbarium specimens.

Getting started:

1. Power ON the lightbox using the main power switch only. Let lights warm ±3 minutes.
2. Power ON the computer (if not already on).
3. Login in as "visitor" (if not already logged in).
4. Once computer desktop has loaded, gently power on the camera (if not already on).
5. Open software (if not already on): Camera Control Pro and ViewNX 2.

Notes:
- Do not touch the camera except to power ON/OFF.
- Do not rest arms on or otherwise bump the lightbox to avoid moving it relative to the camera.

Camera Control Pro

Toggle switch ON/OFF

ViewNX 2

Getting specimens:

- Retrieve a stack of folders from the next available cubby in the volunteer cabinet, or if instructed, from a cart designated for volunteers.

- Leave a droptag with your name in the empty cubby.

- Always carry the stack of specimens with two hands, and with the stack flat or level with the floor; if possible, place one hand underneath the stack to prevent the sheets from bending.

- Take the stack of specimens to your camera station and place them on the cart at your station.
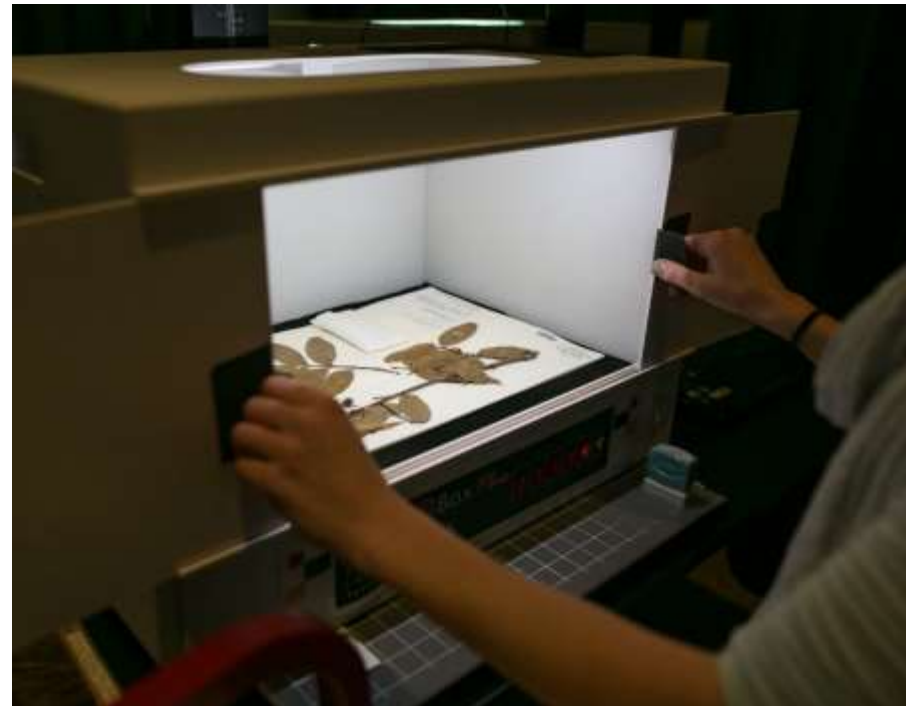
Handling specimens:

- Always maintain the order of the thick-paper folders (= genus folders) as they were found in the cabinet.

- Always maintain the order of the thin-paper folders (= species folders) inside each genus folder.

- Always handle the specimens gently, with two hands, and with the plant material facing upward.

- Never turn the herbarium specimens over like pages in a book, or tip them on their edges; the same applies to the specimens when inside their folders. Invaluable plant fragments may fall and be lost forever.

- Keep the specimens aligned straight and neatly stacked inside their folders. This will protect their edges, which can easily bend and break.

- If a plant fragment is loose and known to have come from a specific specimen, place it inside that specimen's fragment packet. If no packet exists or the plant requires repair, leave a droptag note with the specimen.

Photographing specimens:

- Open the doors to the lightbox all the way.

- Gently place one barcoded specimen inside the lightbox, with the bottom edge of the specimen placed near the right side of the box.

- If a specimen is stamped as "Imaged", skip it and move on to the next one.

- If a specimen does not have a barcode, do not photograph it. Place a droptag beneath it and move on to the next one.

Photographing specimens:

- Check that flowers or fruits and leaves are visible on the specimen.

  - If reproductive material or leaves are not visible, check inside the fragment packet.

  - If there is material inside the packet not represented elsewhere on the sheet, and it can be removed from the packet without damaging the material, gently do so and display it in an open area of the sheet.

  - Close the packet.

Photographing specimens:

- Check that the entire collection label and barcode are visible.

- Align the specimen with the template sheet. If the specimen is shorter in length than the template, align it with the top edge of the template sheet.

- Close the lightbox doors all the way.

Barcode and collection label visible.
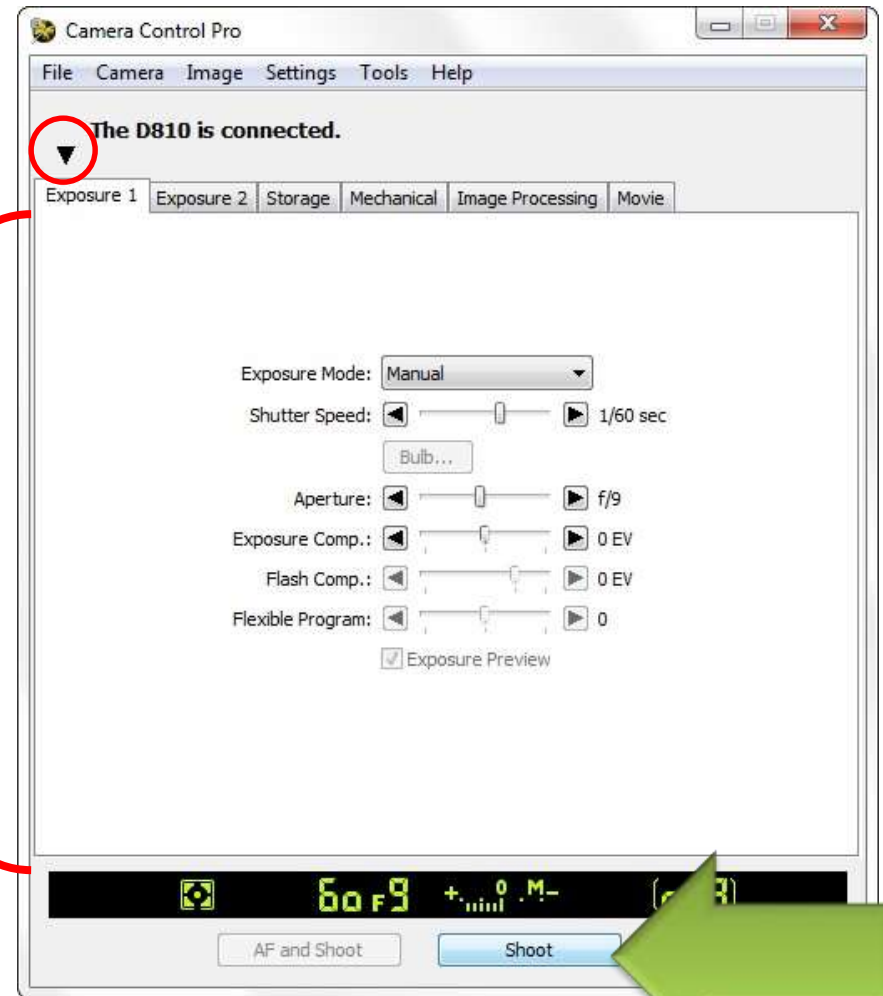

Short sheet, align with top edge.

Photographing specimens:

- Press the "Shoot" button on Camera Control Pro, or press the space bar to take the first picture.

Do not modify any settings for the camera. Press only the "Shoot" button or the space bar.

To avoid inadvertently changing the settings, press the triangle to hide the settings from view.
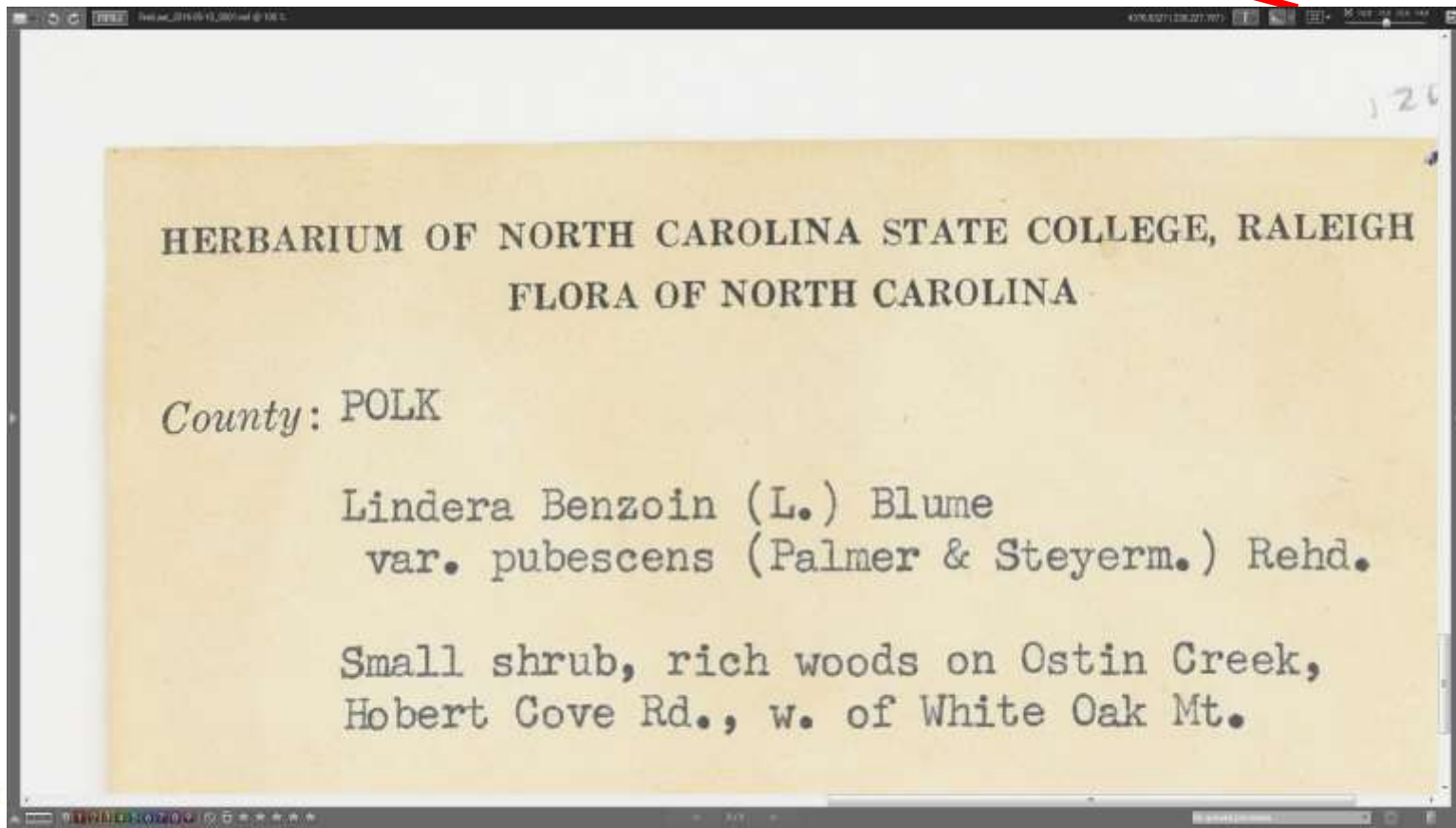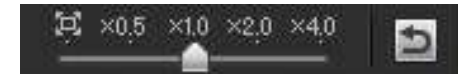
Photographing specimens:

- Double-click on the thumbnail image in ViewNX 2 to open it in full-screen view.
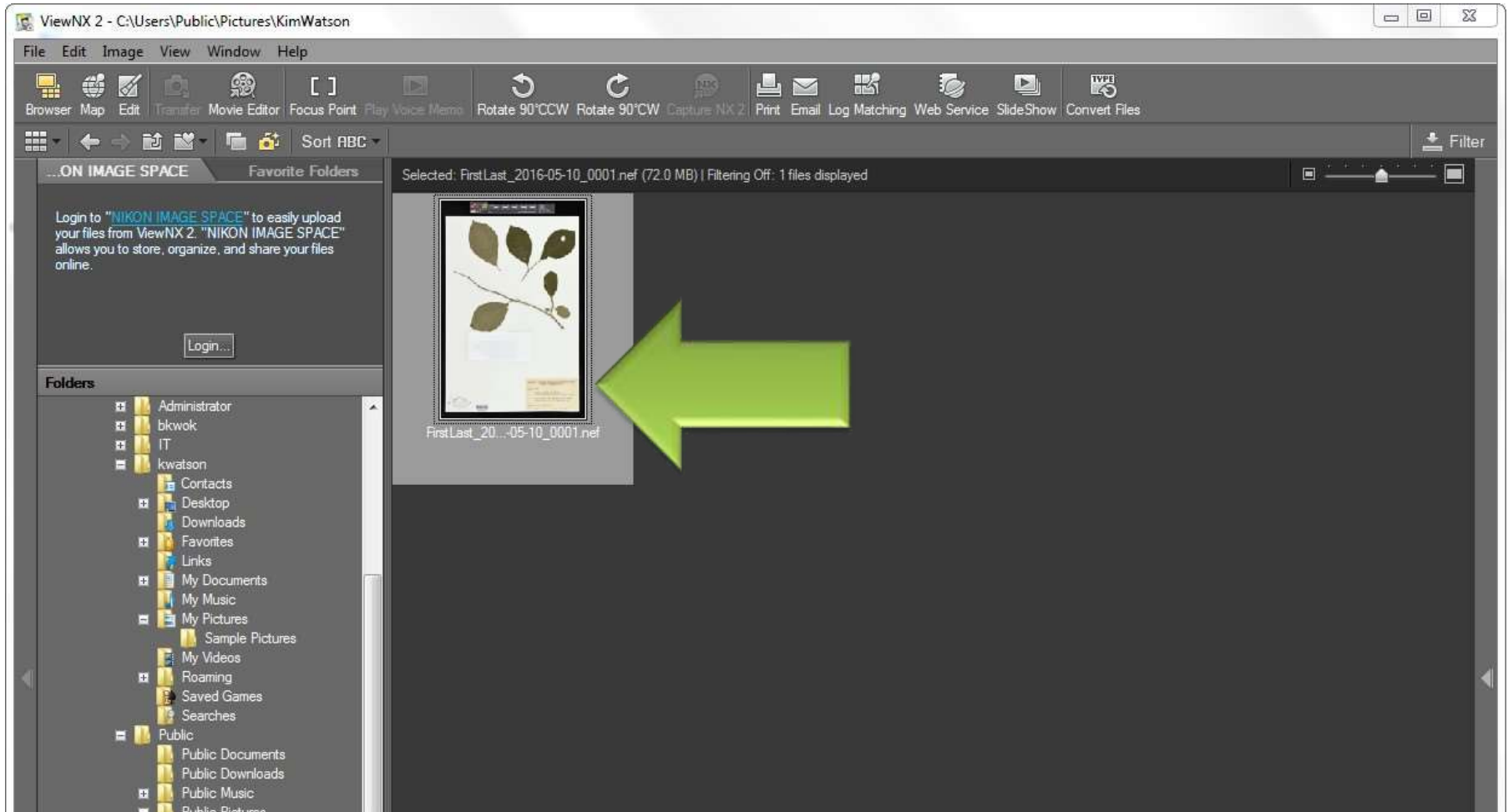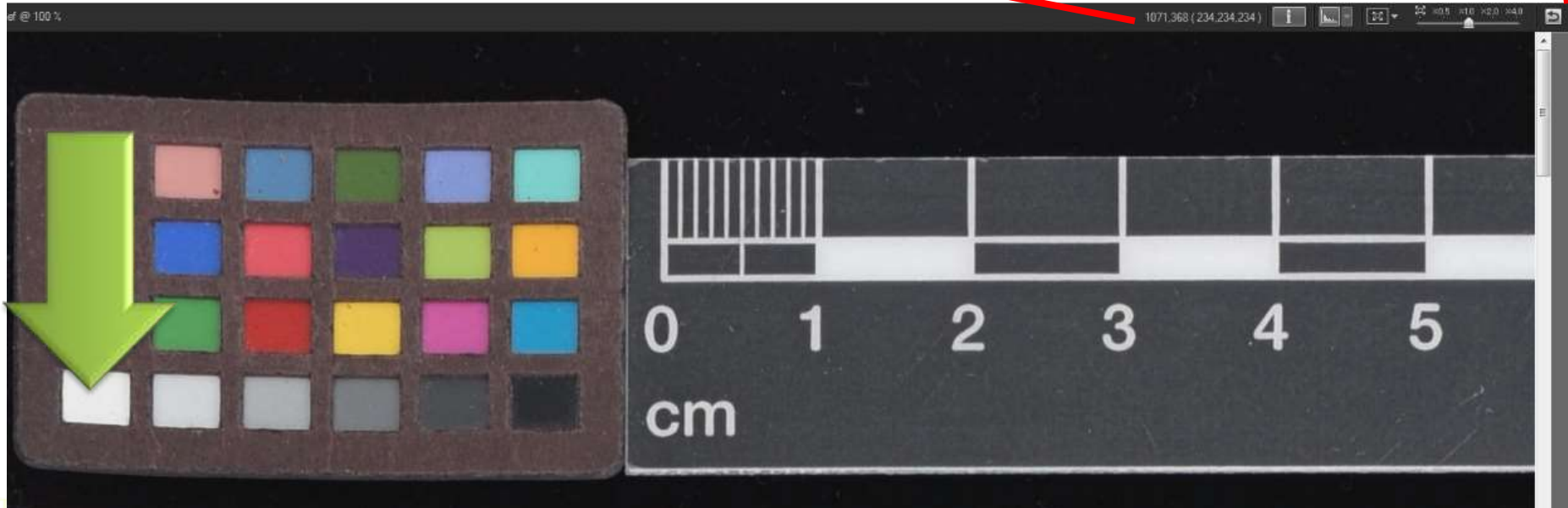
Photographing specimens:

- Check focus: zoom-in to 100% magnification on the collection label and check that the label header is in focus. If it is not, contact Kim Watson.

  - Use roller on mouse to zoom-in and out.

 - "x1.0" on the slider indicates 100% magnification.
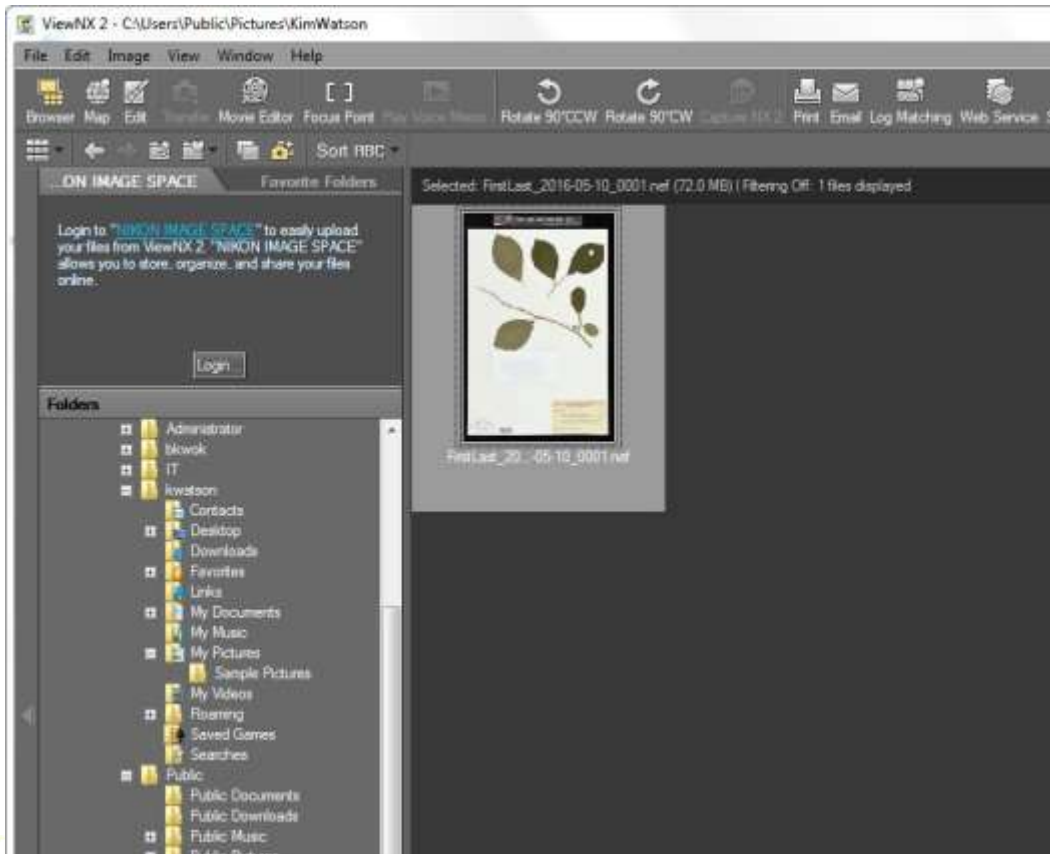
Photographing specimens:

- Check exposure: zoom-in to 100% magnification to view the color target.

- Move the mouse cursor over the center of the white square on the color target.

- Check that the numbers in the upper right of the screen are between ±227 and ±237. If they are not, contact Kim Watson.

- Press the arrow in the upper right corner to exit full-screen mode.

Photographing specimens:

- If the first image is in focus and well exposed, proceed with the next step.
- Check focus and exposure every ±20 specimens throughout the session.
- If you have any questions or notice any change, please contact Kim Watson.
- To delete an image, select the image in ViewNX 2, then press the delete key.
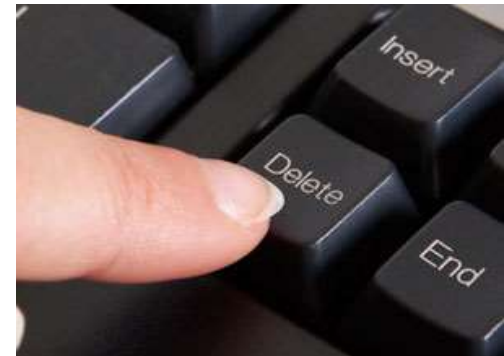
Photographing specimens:

- When satisfied with the image, open the lightbox doors all the way, then return any loose plant material to the fragment packet.
- Stamp each photographed specimen as "Imaged" while it is inside the lightbox.
  - Stamp only the herbarium paper. Do not stamp on or damage the plant material, any existing label, packet, note, or other stamp, etc.
  - Stamp as close to the barcode as possible, preferably immediately above it; if not possible, then below it, or beside it. This confirms a barcode is present and minimizes the space used by the stamp.
  - If it is not possible to stamp adjacent to the barcode, stamp near the bottom edge of the sheet. If not possible, stamp in the lowest area of the sheet possible.
  - If no barcode is present, do not stamp the sheet, delete the image, and place a droptag under the specimen.

NY IMAGED

NEW YORK BOTANICAL GARDEN

00639615

Photographing specimens:

- Remove the specimen from the lightbox and place it on the stack of imaged specimens.

- Continue working through the species folder until each specimen has been imaged.

- Charlie will provide instruction as to whether the specimens should be returned to their original order within the species folder, or stacked in the order that they are imaged.

- Once you have completed imaging all specimens in the stack of folders and returned the folders to their original order, return the stack to the volunteer cabinet (or cart), and pull another stack to image.

- If you do not finish imaging an entire stack of specimens before the end of your session, place the droptag with your name under the last specimen photographed, return all folders to their original order, then return the stack to the volunteer cabinet (or cart).

Every image must include and/or meet the standards indicated below.

Color checker and scale bar straight and at top of image

Stamp as Imaged after specimen is photographed, as close to the barcode as possible

Sheet aligned straight with even black border on all sides

All text visible and in focus

Barcode present and visible

Images which fail to meet these standards will need to be photographed again.

Whenever possible, take one photograph per specimen.
However, in some cases, multiple images of a single specimen may be necessary.

Example:

There are multiple barcodes on the same herbarium sheet.

- Take one photograph for every barcode on the sheet; they will be identical images.

- Stamp the sheet as "Imaged" once, adjacent to the barcode closest to the sheet's bottom edge.

- **Be sure the barcodes are visible in every image.**

Whenever possible, take one photograph per specimen.
However, in some cases, multiple images of a single specimen may be necessary.

Example:

Additional items are attached to the sheet (e.g. correspondence, literature, illustrations, extra collection labels, large maps, etc.).

- Photograph every side of the document with content (only if possible without damaging it) and with as few images as possible.

- Do not crease the material, gently roll it back and secure it with weights.

- If the attached item obscures plant material that is not visible elsewhere on the sheet, photograph the plant material beneath it.

- **Be sure the barcode is visible in every image.**

Whenever possible, take one photograph per specimen.
However, in some cases, multiple images of a single specimen may be necessary.

Example:

There is plant material inside the fragment packet that is not seen elsewhere on the sheet (flowers or fruits are most important), that cannot be removed from the packet without causing damage to the plant material.

A. If there is <u>no</u> information on the outside of the packet:

- Try to open the packet in a way that reveals the plant material inside without obscuring any other information on the sheet.

- Spread out the plant material within the packet, so individual items may be seen.

- If necessary, hold back the packet flaps with weights.

- **Take only one picture** showing the contents of the packet and every other item of information on the sheet.

- **Be sure the barcode is visible in every image.**

Whenever possible, take one picture per specimen.
However, in some cases, multiple images of a single specimen may be necessary.

Example:

There is plant material inside the fragment packet that is not seen elsewhere on the sheet (flowers or fruits are most important), that cannot be removed from the packet without causing damage to the plant material.

B. If there is information on the outside of the packet, or option "A" is not possible:

- Take the first picture with the packet closed.

- Open the packet and spread out the plant material within the packet, so individual items may be seen.

- If necessary, hold back the packet flaps with weights.

- Take the second picture with the packet open.

- **Be sure the barcode is visible in every image.**

Image 1

Image 2

Finishing up:

- Turn OFF the light box using the main power switch only.

- Close all software programs, including Camera Control Pro and ViewNX 2.

- Gently power OFF the camera.

- Empty the computer desktop recycle bin.

- Log off the user profile on the computer.

- Put the cap on the "Imaged" stamp; leave it standing upright on the tabletop.

- Sweep into a garbage can any dust or plant debris from inside the lightbox, from around the workstation, and from the cart. The debris should be minimal, as the specimens should always be handled with care to prevent the loss of any fragments.

- Leave the area clean and ready for the next person.

Final Notes:

Please contact Kim if:

- Anything related to the camera station is not working properly or as expected.

- You are not sure how to photograph a particular specimen.

- The ruler and color target need to be reattached to the background paper inside the lightbox.

- The template sheet is worn out and needs to be replaced.

- You are a paid intern or staff member and have not been trained or need assistance.

Please contact Charlie if:

- Kim is out of the office for the day and a camera station is not working properly or as expected.

- You are a volunteer or unpaid intern and need additional training, assistance setting up for your session, or assistance logging into the computer.

- You need to make/change/delete a camera reservation or modify your schedule.

- You need more specimens to digitize.

THANK YOU