

ADDENDUM 3

FILM SCANNER (SUPER COOLSCAN 5000) SLIDE SCANNING PROTOCOL AT THE COMPTON HERBARIUM

September 2012

Prepared by Michelle Smith

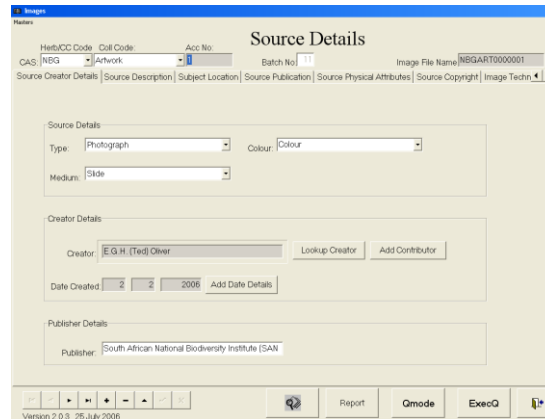
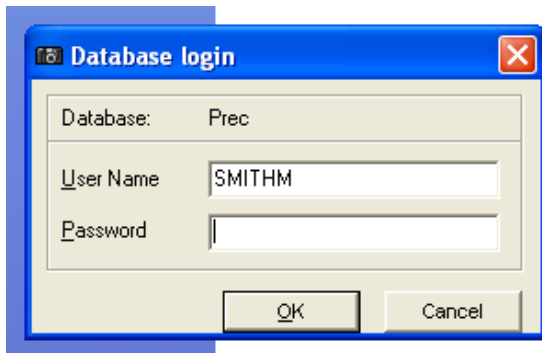


INTRODUCTION

The following slide scanning protocol was developed during the African Plants Initiative (API) and has been in use since. The images and associated metadata generated following the procedure set out below is in line with the standards and protocols as set out by JSTOR.

Prior to scanning slides, it is databased in the Image Database. (See images below.)

 Images.exe



THE FOLLOWING STAGES ARE FOLLOWED IN THE SLIDE SCANNING PROCESS:

STAGE 1 — SCANNER FEATURES

STAGE 2 — SETTING ADJUMENTS

STAGE 3 — SCANNER SETTINGS

STAGE 4 — PREPARATION OF SLIDES

STAGE 5— SCANNING

STAGE 6 — SAVING and CLOSING

STAGE 7 — IMAGE QUALITY CONTROL

STAGE 8 — METADATA AND XML

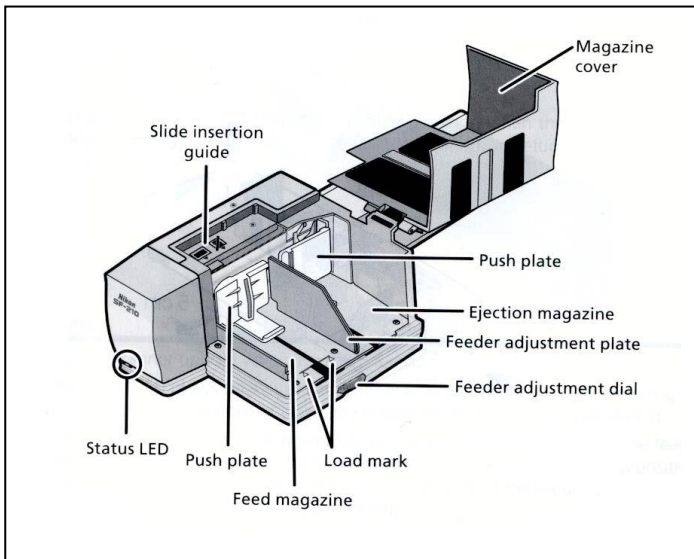
STAGE 9 — BACKUP OF DRIVES

STAGE 10 — SHIPPING AND CORRESPONDENCE

STAGE 1 — SCANNER FEATURES

FILM SCANNER (SUPER COOLSCAN 5000 comes with **3 attachments**)

- **NIKON SF-210**
 - **NIKON SA-21**
 - **NIKON MA-21**
- **Nikon SF-210** (can hold up to 50 slides, thickness 1.5 mm, scanning of consecutive 35 mm slides).
(See images below)



The Nikon LS-5000 with closed feeder SF-210



- **Nikon SA-21**



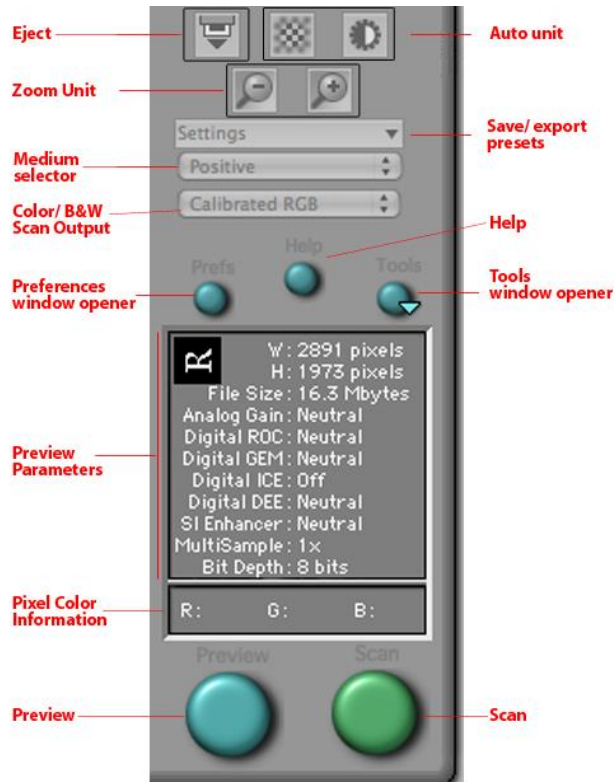
Scanning a 35mm film strip with the serial SA-21

- **Nikon MA-21** (Slide mount adapter)



Inserting a single mounted 35mm slide into the serial slide mount adaptor

MAIN CONTROL PANEL WINDOW- Below is a general description of the CONTROL PANEL:



Auto Unit:

-  **Auto focus**: will find you the right **focal** point.
-  **Auto exposure**: will adjust the overall **exposure** depending on the overall color balance on your slide.

Zoom Unit:

-  **Zoom in**: will **zoom in**. A handy option for checking the resolution
-  **Zoom out**: to undo your zoom in and getting a sense of your slide

Medium Selector:

Select the medium type of your slide from the drop down menu:

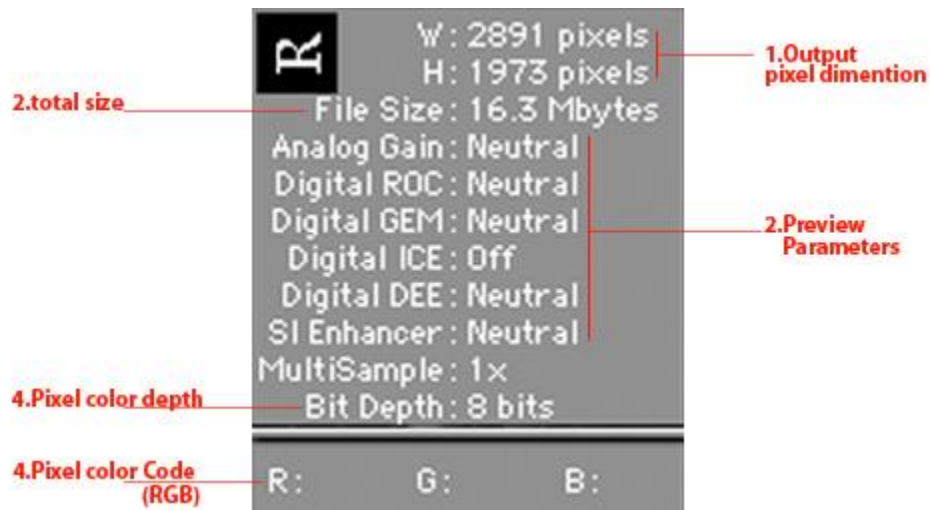
- Positive
- Negative(color)
- Negative(Mono)
- KodaChrome

Output type Selector:

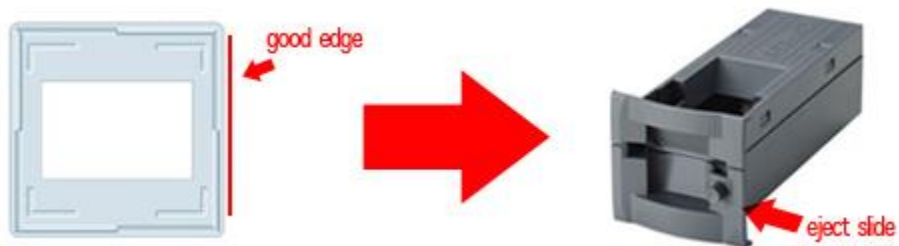
Select the type of your scan result from the dropdown menu:

- Calibrated RGB
- GrayScale

Preview Parameters:



- 1.Width(W) and Height(H) in pixels would give you a better idea on what is the size of the final scan generated. This value could be set manually



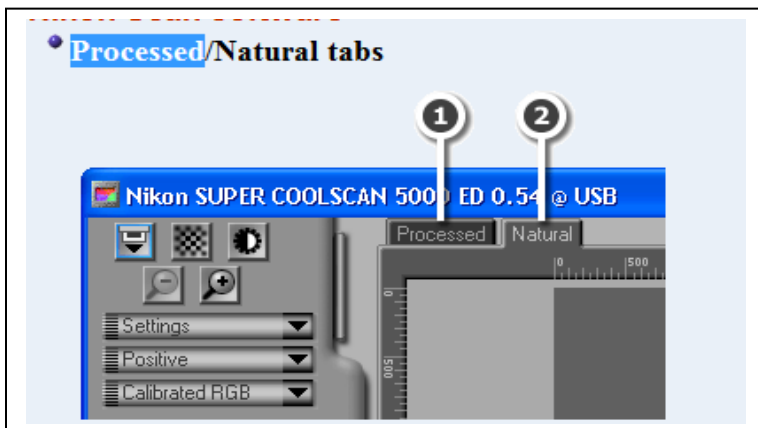
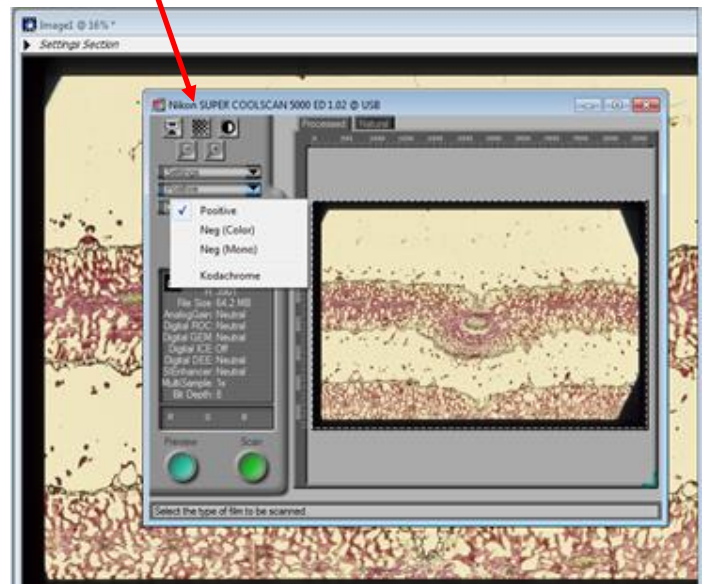
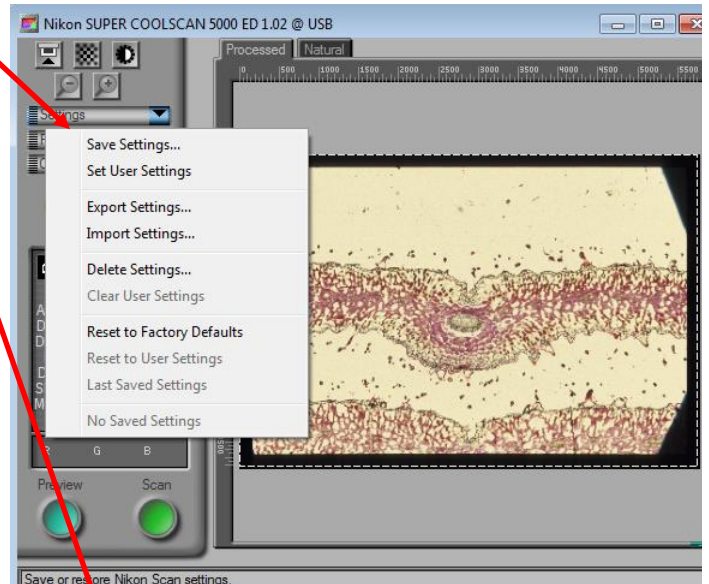
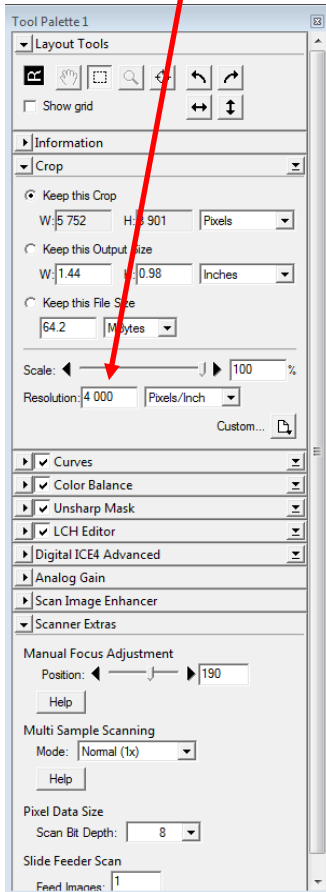
Press **preview** so that you could get a preview of your slide.

① There are also two different tabs presented for **processed** and **natural** viewing. if you prefer your final scan job to not be processed make sure you are on natural tab. ② As the image appears on the **preview** window select a desirable bond for your final scan by just holding the click and dragging over top of the image. You can repeat the same procedure till you are satisfied with your window.

STAGE 3 — SCANNER SETTINGS

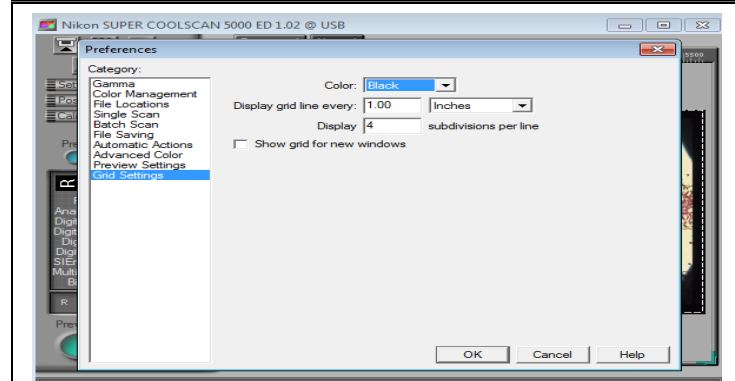
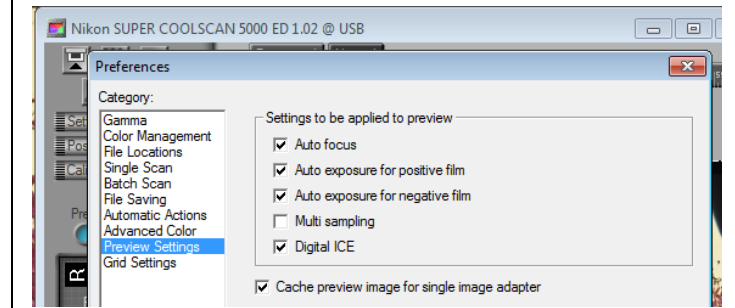
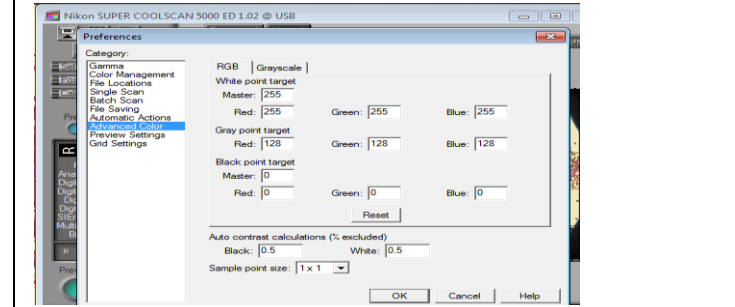
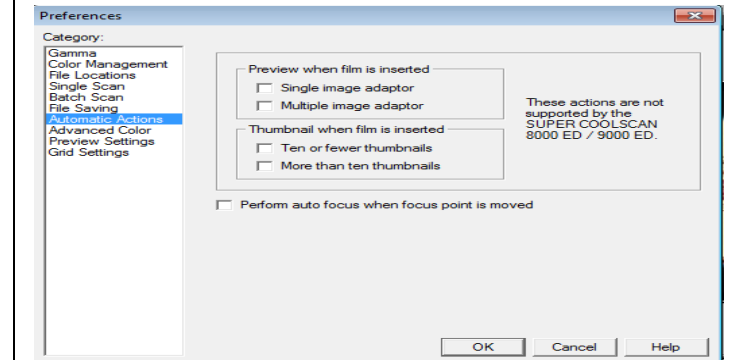
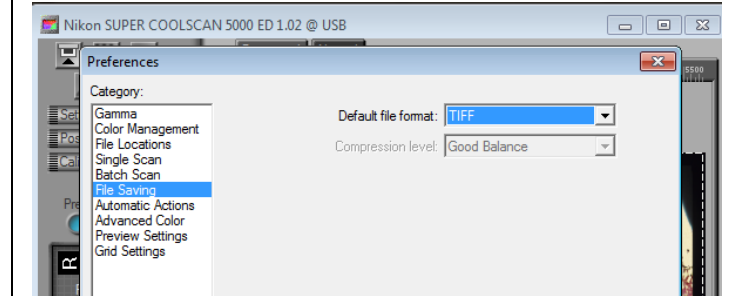
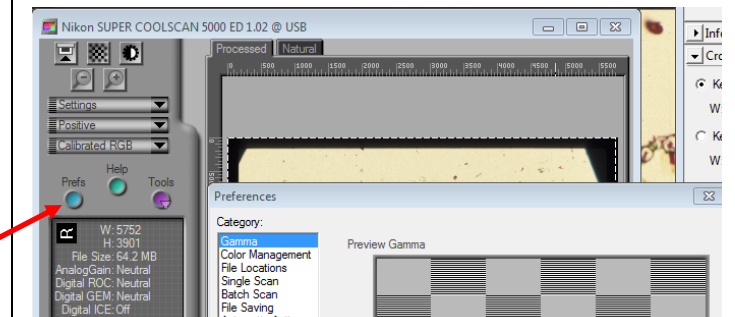
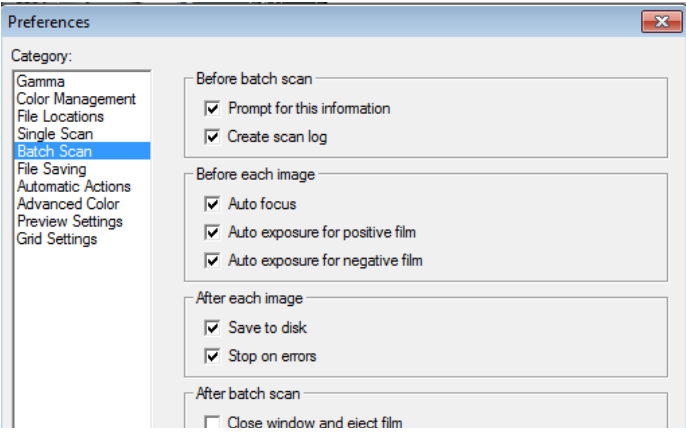
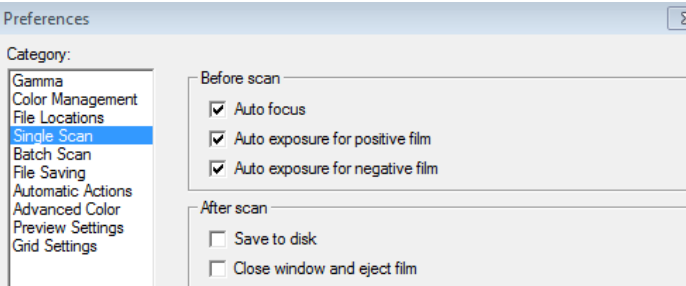
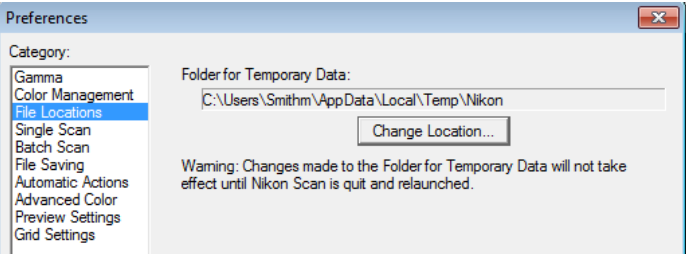
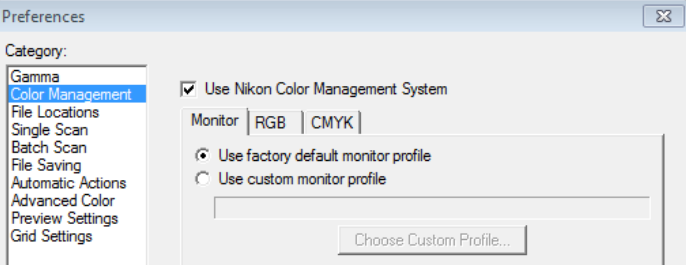
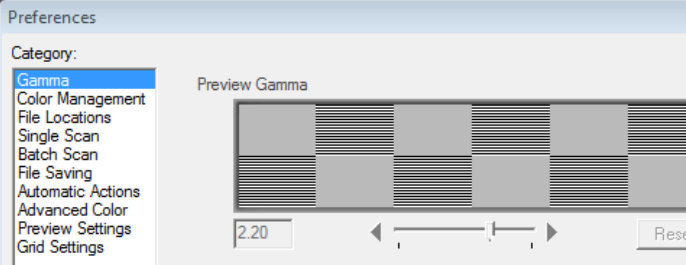
Please make sure all settings are correct before scanning slides. See settings below

1. Resolution: 4000 Pixels/Inch and Scale 100%
2. Settings: See dropdown boxes.
3. For slide film choose “Positive” (For negative (print) film choose “Negative”)
4. Then choose “Calibrated RGB”



When making adjustments to images in the Nikon scan preview window, it's possible to compare the "natural" scan (2) that is the first preview made, to the "processed" image (1) adjusted by any of the tool palettes (like Curves or LCH Editor). This is essentially a before/after tool for comparing the current scan to the potential scan after editing with the scanner tools.

3. Click on Preferences to see the settings of each Category.



- **Cleaning 35MM Slides before Scanning**

35MM slides often have fine dust and debris stuck to the film surface. These tiny specks, stains and spots can be microscopic, but when magnified by high resolution film scanning, they can be troublesome. Light brushing of your Kodachrome film priority to using compressed air. If your slides are *extra* dusty and dirty, it is best to remove as much of the loose debris as possible prior to scanning to avoid dust and lint building up on the optics of the film scanner.

With the 35MM Nikon film scanner all slides must go through the scanner with the long side down. The NikonScan software provides a setting to flip image orientation prior to scanning.

- **Sorting slides by orientation:** Another consideration for sorting of 35MM slides, prior to conversion to digital, is by the photo orientation. With the 35MM Nikon film scanner all slides must go through the scanner with the long side down. The NikonScan software provides a setting to flip image orientation prior to scanning.

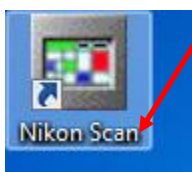
If you group all of your horizontal and vertical shots and scan them separate from each other, you can cut down on the need for post-scan rotation of the digital images.

- **Sorting Slides by mount type or thickness:**

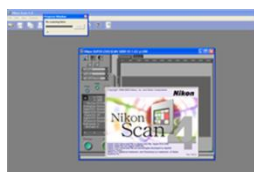
If you're batch scanning using Nikon's SF-210 slide feeder / batch loader, sorting the slides by mount thickness can be helpful. The SF-210 feeder has an adjustable gate which should be set based on the thickness of your slides. If you don't put all similar thickness mounts together, you might find that your constantly stopping the cycle to adjust the gate. Most slide mounts are similar in thickness but some, often those in glass covered mounts, are up to 3 times as thick as the thin ones.

STAGE 5 — SCANNING

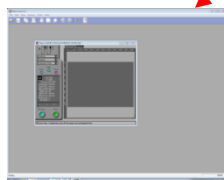
Double-click the Nikon Scan (icon on the desktop)



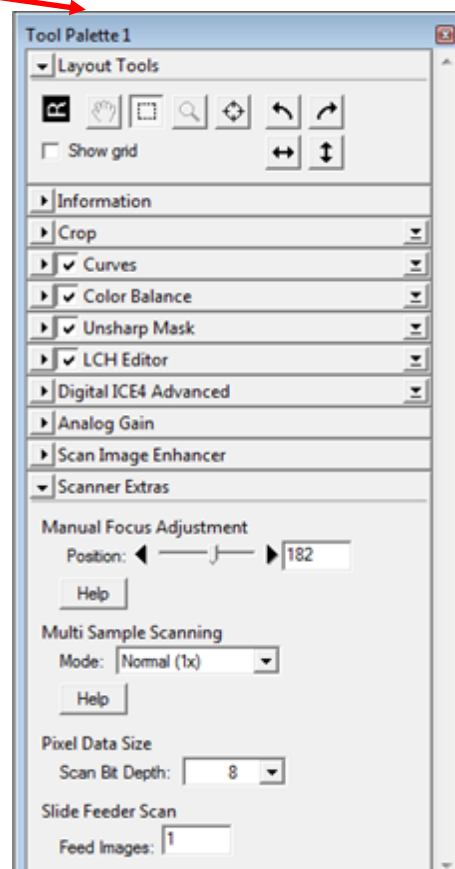
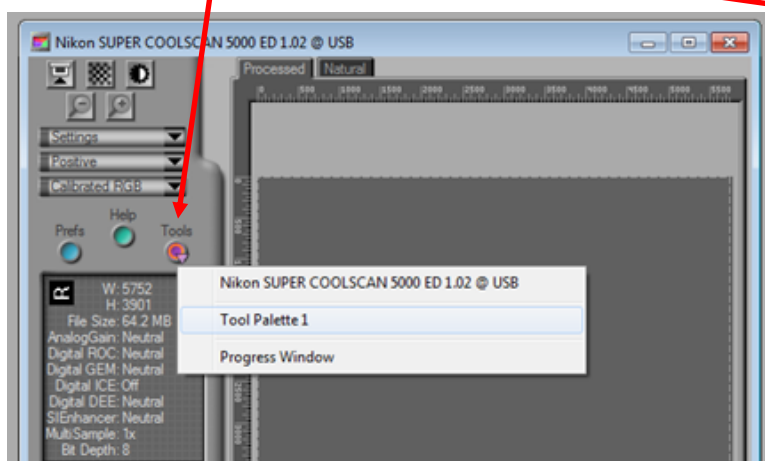
This window will appear below



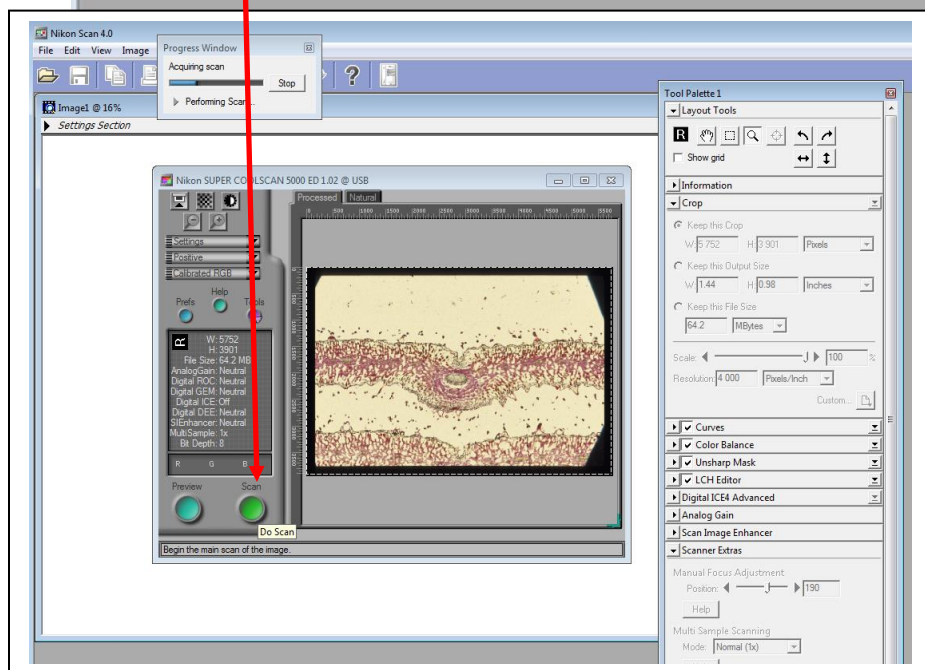
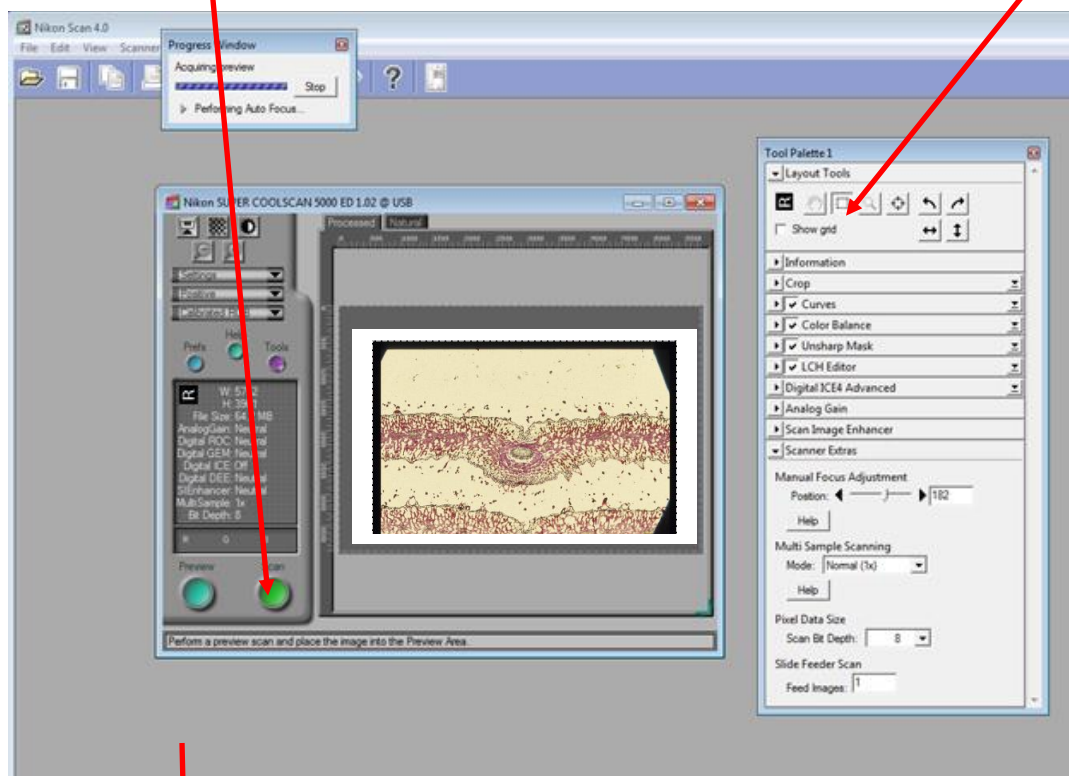
Followed by this window below



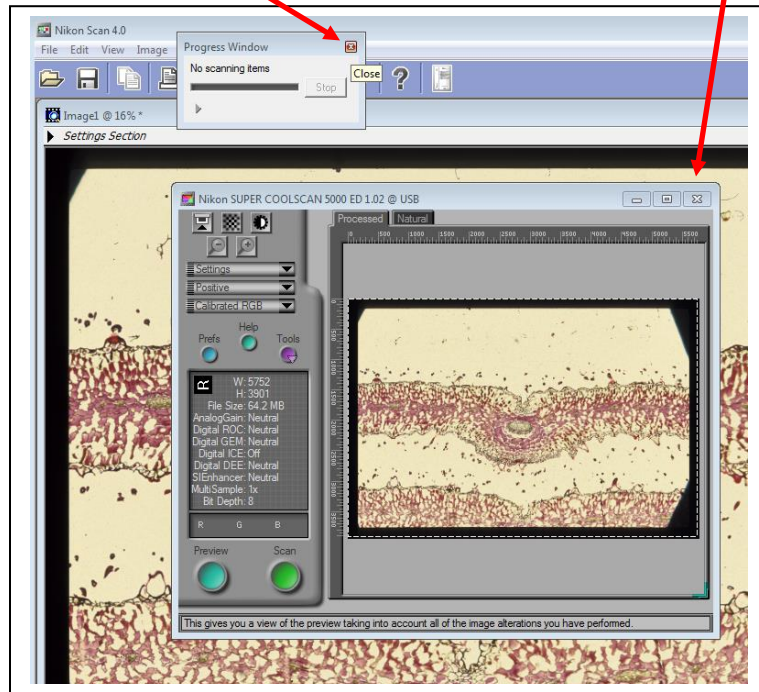
Click on the icon TOOLS to display the palette on the right hand side



Click on the PREVIEW button to display the image. **Make sure all settings in TOOL PALETTE 1 is correct before scanning**

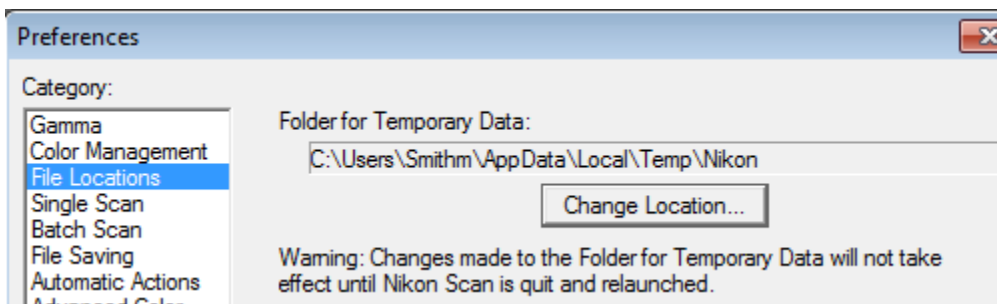
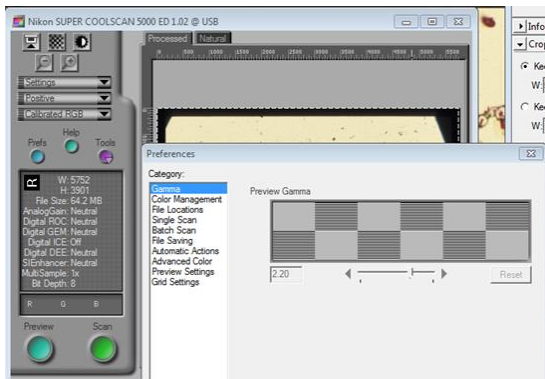


Click on the CLOSE ICON  to close the scanned image and close again.



STAGE 6 — SAVING and CLOSING

The file path will show in the PREFERENCES. See below.



- You can resave this file into a dedicated folder. Select tiff as the format. Verify that the file was saved in the correct folder — (M:\Compton Herbarium\Scans\Slides)

Quality control (QC) is the process used to ensure digitization and metadata creation are done properly.

A 2-step process- the scanning technician will do initial quality checks during production and this is followed by a second check by another person.

The viewing environment for visual inspection of images is also important: monitors should be calibrated, and the room should be dark or at least free from bright lighting, sunlight or glare.

Quality Control process:

- **Completeness.**
100% of the required images files and associated metadata have been completed or provided
- **Inspection of digital image files**
The overall quality of the digital images and metadata will be evaluated using the following procedures. The visual evaluation of the images shall be conducted while viewing the images at a 1 to 1 pixel ratio or 100% magnification on the monitor.

Quality Control Visual Inspection:

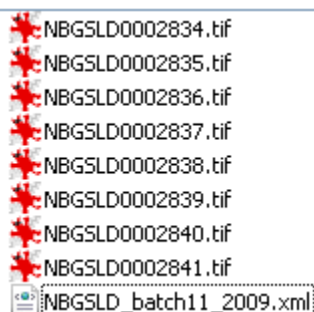
- Image - correct size and resolution
- Image – cropped, rotated and positioned correctly
- File name and file format – correct selection
- Image – correct mode and colour correctness
- Pixelated – check
- Presence of digital artefacts (i.e. regular straight lines across picture)

STAGE 8 — METADATA (Example of Metadata)

Institution Name / batch number				
BAR CODE/ UNIT ID	Image Resolution/	Capture Equipment	Date Created	Creator Identifier
NBGSLD0000001	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000002	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000003	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000004	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000005	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000006	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000007	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000008	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000009	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000010	3000 dpi	Nikon Super Coolscan 5000		Michelle
NBGSLD0000011	3000 dpi	Nikon Super Coolscan 5000		Michelle

XML

L:\API Data\batch8_artwork and slides_sent6April06\Slides



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  <InstitutionName>Compton Herbarium, Kirstenbosch, South Africa</InstitutionName>
  <DateSupplied>2007-01-09</DateSupplied>
  <PersonName>Michelle Smith</PersonName>
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  <dc:rights>South African National Biodiversity Institute.</dc:rights>
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STAGE 9 — BACKUP OF DRIVES

As a safety precaution these images and associated data are backed up on external drives which are stored in the strong room in the herbarium.

- The IT section periodically transfers these data to offsite servers. (The format and frequency of these data transfers are unknown).
- This batch gets sent every quarter together with the metadata in XML-format on the FTP site for transfer to JSTOR or loaded onto a 250 GB external hard drive sent off by courier to ALUKA.

STAGE 10 — SHIPPING AND CORRESPONDENCE

PROCEDURES TO FOLLOW: **SHIPPING**

- Place a label on the external drive clearly showing:

SANBI-Compton Herbarium - Institution's Name Batch 1 – Batch Number

- Place external drive in a small shipping box protected by foam and bubble wrap
- Address to: ALUKA

For attention: Production / African Plant Initiative (API) John Mikulka ITHAKA / JSTOR 100 Campus Drive, Suite 100 Princeton, New Jersey, 08540 UNITED STATES OF AMERICA Tel: +1 (609) 986 2242
