

# SERNEC NfN Data Linkage

## Linking Skeletal Records in Symbiota to Transcribed NfN Data

### Target Audience:

- This guide is intended for curators who have recently had one (or more) of their Notes from Nature (NfN) expeditions completed, and the metadata has been returned to them via NfN. This also requires that the curator has skeletal records/stub data in the Symbiota portal
- This document explains the steps needed to upload completed NfN expedition metadata to existing records in the SERNEC portal.

### Preliminary Steps:

This guide assumes the following:

1. The reader/curator has already created, and has access to a [SERNEC portal](#) account.
  - a. If this is not the case, create an account by following the instructions listed [here](#).
2. The reader/curator has previously linked images to the SERNEC portal.
  - a. If this is not the case, please contact the portal administrator (Herrick or Michael).
3. The reader/curator has access to the SERNEC collection they are desiring to import Notes From Nature data to.
  - a. If this is not the case, please contact the SERNEC Portal site administrator ([herrick.brown@gmail.com](mailto:herrick.brown@gmail.com)) requesting access permissions.
  - b. Note that you will only be permitted to update record for collections that you are an administrator for.

### Considerations:

- If duplicate records are found they will not be loaded into SERNEC.
- If possible, it is best to fix any problem records/fields after each new upload. Having the #####\_expedition.summary.html open and comparing to the newly updated record is the best way to do this at this time.
- Fields within a record that have been edited during the time your expedition was running will not be updated.

# Batch Upload of Notes from Nature Data:

Congratulations! Your Notes from Nature (NFN) expedition has just been completed, but now you need to update the existing specimen records in SERNEC with the new NFN data. Lets walk through the process of updating your existing specimen records with the newly obtained NFN data:

1. You should have received a folder from NFN containing the four files described below:
  - a. NfN\_Reconciliation\_Help.pdf
    - i. This file contains helpful information about the reconciliation procedure, during which; multiple NFN transcriptions are combined to form a single specimen transcription.
  - b. #####\_expedition.summary.html
    - i. A web-based overview of the results of the reconciliation process, along with automatic highlighting of records that should be double checked by the reader. It is important to review this file before uploading to identify any potential issues with the transcriptions or reconciliation process.
  - c. #####\_expedition.raw\_transcripts.csv
    - i. A file containing all NFN transcriptions for a given record (usually 3 rows per specimen record).
  - d. #####\_expedition.reconciled.csv
    - i. A file containing the reconciled transcriptions (1 row per specimen record). This is the data that you will be updating your records with.

2. Navigate (via web-browser) to the [SERNEC Portal](#) and login to your account:

**SERNEC**  
Southeast Regional Network of Expertise and Collections

Home | Specimen Search | Images | Inventories | Dynamic Tools | **Log In** | New Account | Sitemap

Welcome to SERNEC

SERNEC (SouthEast Regional Network of Expertise and Collections) is a consortium of 233 herbaria in 14 states in the Southeast USA. Our aim is to provide herbarium specimen images and metadata from one of the most botanically diverse regions of the earth with the goal of facilitating better research, better management planning and a more well-informed public. These data span 150 years of botanical information housed in herbaria in the Southeast and are vital to studies in biodiversity, evolution, ecology and systematics. We are also working to link our efforts with those of other regional herbarium groups and with the National Resource for Advancing Digitization of Biodiversity Collections, iDigBio. This site is brought to you in collaboration with the SEINet Network. Please send questions or comments to the portal manager.

SERNEC is currently funded by the National Science Foundation as a Thematic Collections Network with the goal of digitizing an additional 4 million specimens from the southeast United States. As part of this effort we are partnering with CyVerse for image archiving and access.

Need data? How can we help? Please contact the PI to see if we can better accommodate your research needs.

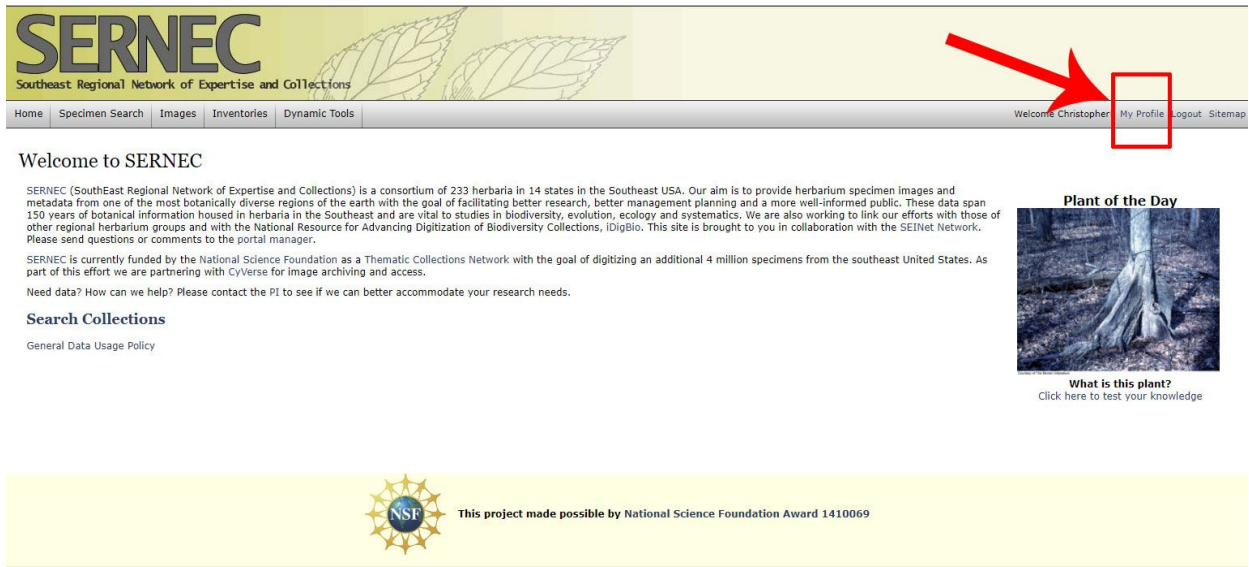
**Search Collections**  
General Data Usage Policy

**Plant of the Day**

**What is this plant?**  
Click here to test your knowledge

This project made possible by National Science Foundation Award 1410069

3. Click on 'MyProfile' located on the top menu-bar:



**SERNEC**  
Southeast Regional Network of Expertise and Collections

Home | Specimen Search | Images | Inventories | Dynamic Tools | Welcome Christopher | **My Profile** | Logout | Sitemap

**Welcome to SERNEC**

SERNEC (SouthEast Regional Network of Expertise and Collections) is a consortium of 233 herbaria in 14 states in the Southeast USA. Our aim is to provide herbarium specimen images and metadata from one of the most botanically diverse regions of the earth with the goal of facilitating better research, better management planning and a more well-informed public. These data span 150 years of botanical information housed in herbaria in the Southeast and are vital to studies in biodiversity, evolution, ecology and systematics. We are also working to link our efforts with those of other regional herbarium groups and with the National Resource for Advancing Digitization of Biodiversity Collections, iDigBio. This site is brought to you in collaboration with the SEINet Network. Please send questions or comments to the portal manager.

SERNEC is currently funded by the National Science Foundation as a Thematic Collections Network with the goal of digitizing an additional 4 million specimens from the southeast United States. As part of this effort we are partnering with CyVerse for image archiving and access.

Need data? How can we help? Please contact the PI to see if we can better accommodate your research needs.

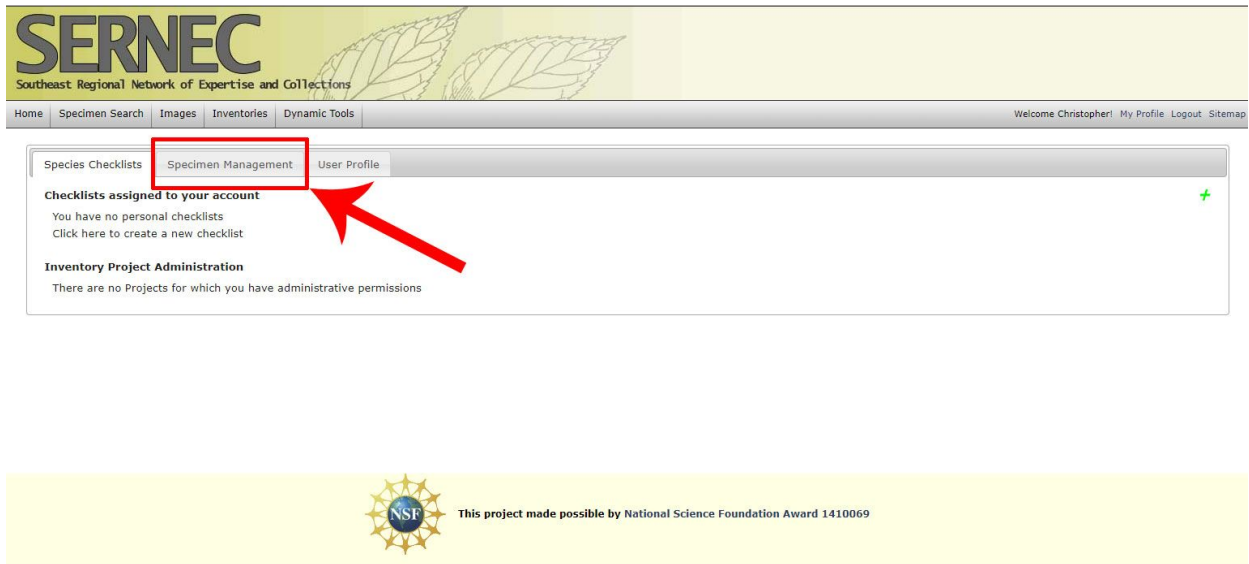
**Search Collections**  
General Data Usage Policy

**Plant of the Day**

**What is this plant?**  
Click here to test your knowledge

**NSF**  
This project made possible by National Science Foundation Award 1410069

4. Click on the tab labeled 'Specimen Management':



**SERNEC**  
Southeast Regional Network of Expertise and Collections

Home | Specimen Search | Images | Inventories | Dynamic Tools | Welcome Christopher | My Profile | Logout | Sitemap

Species Checklists | **Specimen Management** | User Profile

**Checklists assigned to your account**

You have no personal checklists  
Click here to create a new checklist

**Inventory Project Administration**  
There are no Projects for which you have administrative permissions

**NSF**  
This project made possible by National Science Foundation Award 1410069

5. Click on the name of the collection for which you wish to upload NFN data.
- If you do not see the collection for which you wish to upload NFN data, you are most likely not an Administrator of the collection. To gain access to the desired collection, you should first contact the curator. That person can add you, or you can contact Herrick or Michael to do that as well.

**SERNEC**  
Southeast Regional Network of Expertise and Collections

Home Specimen Search Images Inventories Dynamic Tools Welcome Christopher! My Profile Logout Sitemap

Species Checklists Specimen Management User Profile

Personal specimen management has not been setup for your login. Please contact the site administrator (herrick.brown@gmail.com) to activate this feature.

**Collection Management**

- Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)

This project made possible by National Science Foundation Award 1410069

6. Identify the 'Administration Control Panel' section of the web-page, and select 'Import/Update Specimen Records'. This will open a submenu with additional options.

**SERNEC**  
Southeast Regional Network of Expertise and Collections

Home Specimen Search Images Inventories Dynamic Tools Welcome Christopher! My Profile Logout Sitemap

Home >> Collection Search Page >> Appalachian State University, I. W. Carpenter, Jr. Herbarium Details

Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)

**Data Editor Control Panel**

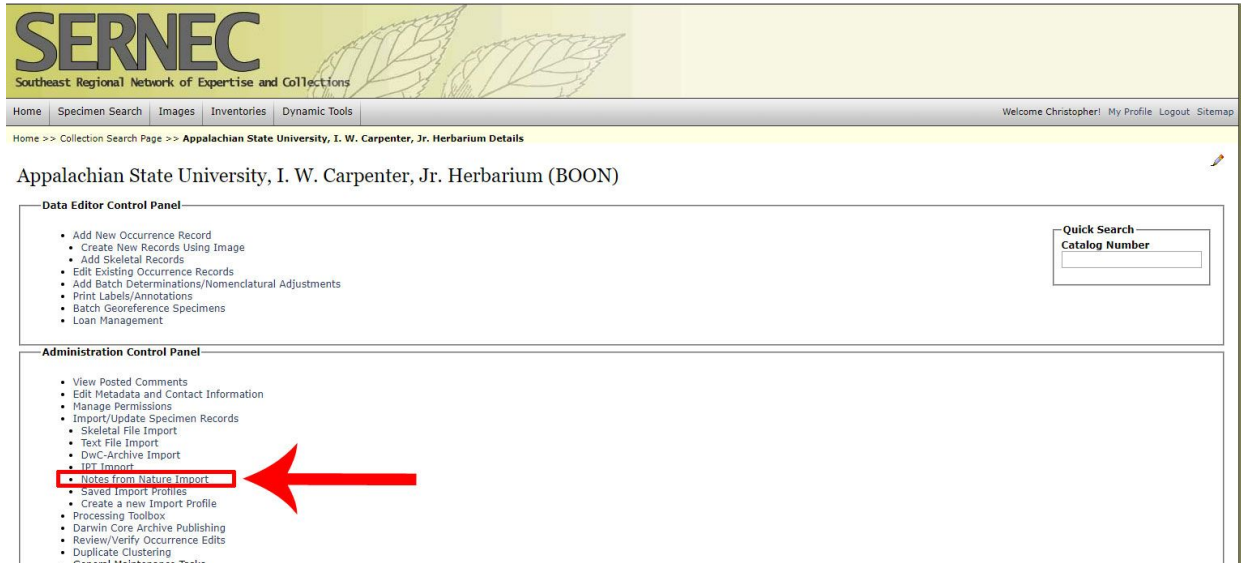
- Add New Occurrence Record
  - Create New Records Using Image
  - Add Skeletal Records
- Edit Existing Occurrence Records
- Add Batch Determinations/Nomenclatural Adjustments
- Print Labels/Annotations
- Batch Georeference Specimens
- Loan Management

**Quick Search**  
Catalog Number

**Administration Control Panel**


- View Posted Comments
- Edit Metadata and Contact Information
- Manage Permissions
- Import/Update Specimen Records**
- Processing Tools
- Darwin Core Archive Publishing
- Review/Verify Occurrence Edits
- Duplicate Clustering
- General Maintenance Tasks
  - Data Cleaning Tools
  - Download Backup Data File
  - Thumbnail Builder Tool
- Update Statistics

7. Select 'Notes from Nature Import' from the submenu produced in the step above.



The screenshot shows the SERNEC website interface. The header includes the SERNEC logo and navigation links: Home, Specimen Search, Images, Inventories, Dynamic Tools. A user greeting 'Welcome Christopher! My Profile Logout Sitemap' is visible. The breadcrumb trail reads: Home >> Collection Search Page >> Appalachian State University, I. W. Carpenter, Jr. Herbarium Details. The main content area is titled 'Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)'. It contains two panels: 'Data Editor Control Panel' with options like 'Add New Occurrence Record' and 'Edit Existing Occurrence Records'; and 'Administration Control Panel' with options like 'View Posted Comments' and 'Import/Update Specimen Records'. In the 'Administration Control Panel', the 'Notes from Nature Import' option is highlighted with a red box and a red arrow points to it. A 'Quick Search' box with 'Catalog Number' is also present.

8. Select the button labeled 'Choose File' and (via your operating system) select the NFN zipped-folder containing all four files mentioned above. Alternatively, you can just upload the #####\_expedition.reconciled.csv as this is currently the only file that is being added to the system.



The screenshot shows the 'Data Upload Module' section of the SERNEC website. The header is the same as the previous screenshot. The breadcrumb trail is: Home >> Collection Management Panel >> List of Upload Profiles >> Specimen Loader. The main content area is titled 'Data Upload Module' and 'Appalachian State University, I. W. Carpenter, Jr. Herbarium'. It shows the 'Last Upload Date: 12 September 2017 12:00:00'. Below this, the section 'Notes from Nature Import: Identify Data Source' is displayed. It contains a 'Choose File' button, a 'No file chosen' text, and an 'Analyze File' button. A red box highlights the 'Choose File' button, and a red arrow points to it. There is also a link for 'Display additional options'.



This project made possible by National Science Foundation Award 1410069

9. Ensure that the box labeled 'Automap fields' is checked (selected).

10. Click the 'Analyze File' button.

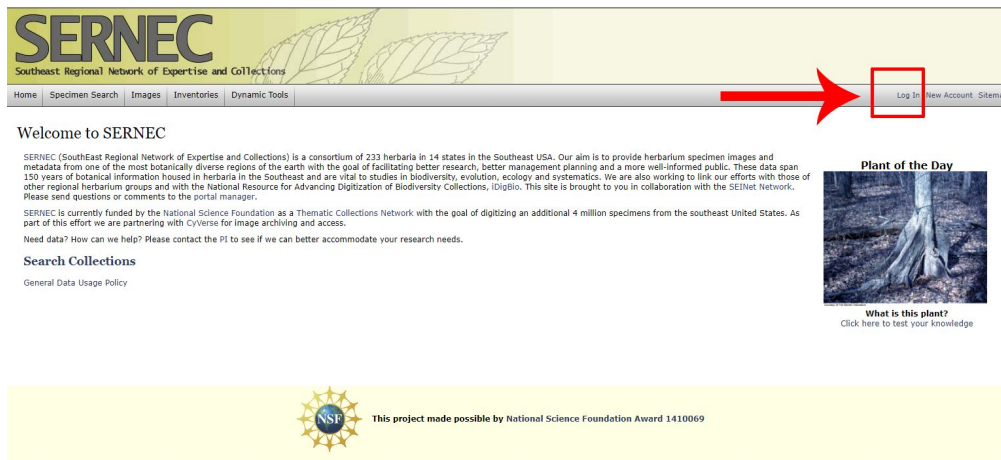
- a. You will be greeted with a screen showing the format of the mappings that are about to be generated.
  - i. The 'Source Field' will be the name of the column header in accordance with your individual project workflow.

- ii. The 'Target Field' is one of several Darwin Core Fields in which the mapper attempts to convert the provided 'Source Field' to.
11. Be sure to select a 'Processing Status' from the dropdown menu. This will enable you to search for all specimen records with this tag. Be sure to choose an option that is appropriate for your project workflow. For instance:
    - a. The subfield 'Pending Review-NfN' indicates that the information in question came from Notes From Nature and has yet to be reviewed manually by the collection curator.
    - b. The subfields with options 'Stage 1' through 'Stage 3' can be used to represent different stages of the review process within your workflow. Just remember to be consistent.
  12. The web-page will now display the attempted mappings between 'Source Field' and 'Target Field'. Perform a manual inspection to ensure that the Darwin Core Archive field mappings make sense. For example:
    - a. scientificname->sciname
    - b. location->locality
    - c. habitatdescription->habitat
    - d. collectedby->recordedby
    - e. collectornumber->recordnumber
    - f. month->month
    - g. day->day
    - h. year->year
    - i. county->county
  13. Click the 'Start Upload' button to begin the updating of specimen records with the NfN expedition data.
  14. Review the resulting 'Final Transfer' box to ensure upload success.
  15. Correct any 'Mismatched Records' and then click the 'Transfer Records to Central Specimen Table' button.
  16. Review newly updated records by following the instructions in the next section.

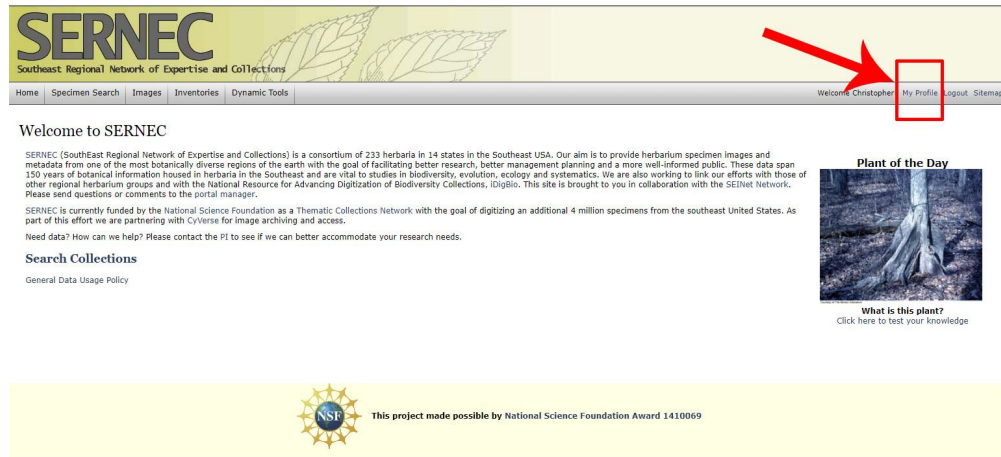


# Reviewing and Editing Newly Imported NfN Data:

1. By now your Notes from Nature data should have been imported via the SERNEC web portal. You should have already clicked the 'Transfer Records to Central Specimen Table' button and been greeted with a screen showcasing the success of the data transfer. Now it is time to review our recently imported data so we can verify that the process went through without a hitch.
2. If you are not already logged in: Navigate to the SERNEC portal and login with your profile:



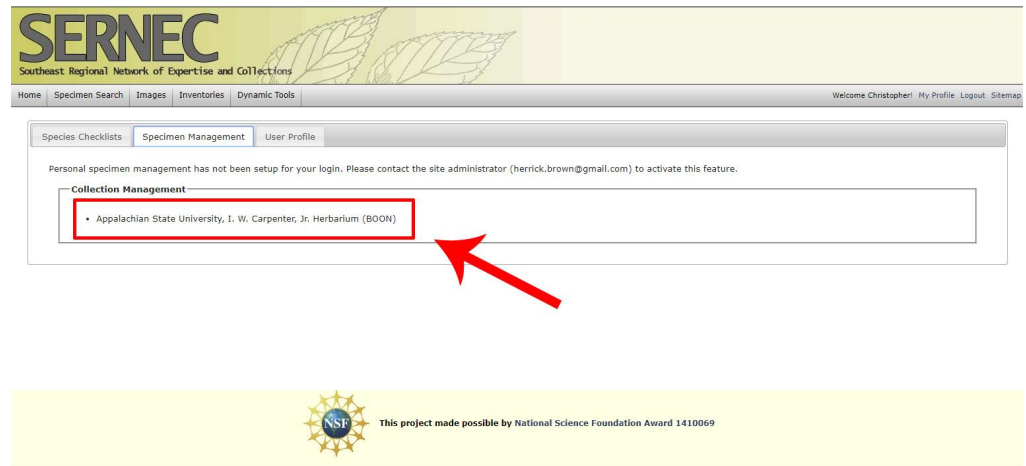
3. If you have not already: Select 'My Profile':



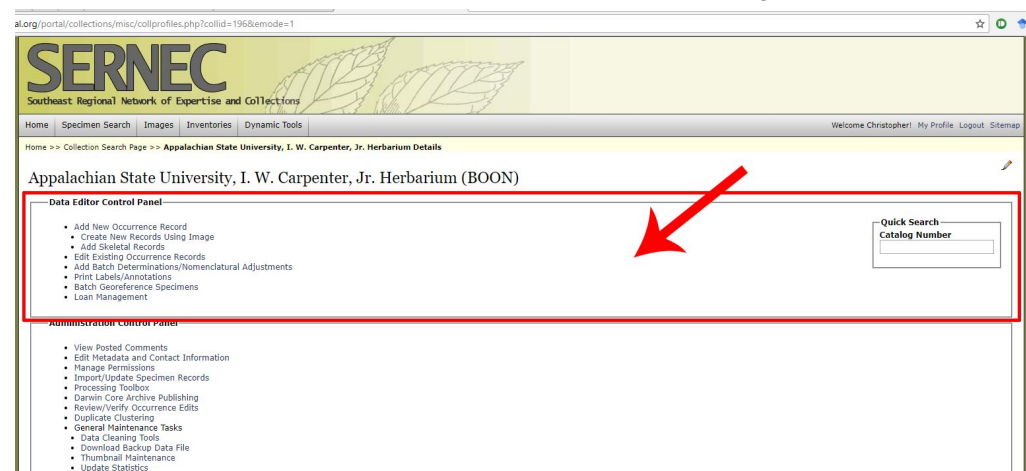
4. Click 'Specimen Management':



5. Select the Herbarium containing the imported NfN data that you wish to review:



6. Locate the 'Data Editor Control Panel' section of the webpage:



7. Select 'Edit Existing Occurrence Records':



al.org/portal/collections/misc/collprofiles.php?collid=196&emode=1

# SERNEC

Southeast Regional Network of Expertise and Collections

Home | Specimen Search | Images | Inventories | Dynamic Tools | Welcome Christopher! | My Profile | Logout | Sitemap

Home >> Collection Search Page >> Appalachian State University, I. W. Carpenter, Jr. Herbarium Details

## Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)

**Data Editor Control Panel**

- Add New Occurrence Record
- Create New Records Using Image
- Add Skeletal Records
- Edit Existing Occurrence Records**
- Download Determinations/terminological adjustments
- Print Labels/Annotations
- Batch Georeference Specimens
- Loan Management

**Quick Search**

Catalog Number

**Administration Control Panel**

- View Posted Comments
- Edit Metadata and Contact Information
- Manage Permissions
- Import/Update Specimen Records
- Processing Toolbox
- Darwin Core Archive Publishing
- Review/Verify Occurrence Edits
- Duplicate Clustering
- General Maintenance Tasks
  - Data Cleaning Tools
  - Download Backup Data File
  - Thumbnail Maintenance
  - Update Statistics

8. You will be greeted with the following:

### Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)

**Record Search Form**

Collector:  Number:  Date:

Catalog Number:  Other Catalog Numbers:

Entered by:  Date entered:  Date modified:

Processing Status:  ☐ With images ☐ Without images

Exsiccati Title:

Custom Field 1:

Sort by:

[Home](#) >> [Collection Management](#) >> [Editor](#)

9. Select the 'Processing Status' drop down menu and select the processing status utilized in step 11 of the previous section:

### Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)

**Record Search Form**

Collector:  Number:  Date:

Catalog Number:  Other Catalog Numbers:

Entered by:  Date entered:  Date modified:

Processing Status:  ☐ With images ☐ Without images

Exsiccati Title:

Custom Field 1:

Sort by:

Home >> [Collection Management](#)

- In the event that a Research Assistant or other SERNEC employee uploaded the Notes from Nature data for you, try selecting the processing status: 'Pending Review-nfn' from the dropdown.
- You may wish to additionally set the 'Date modified' field if you are attempting to rectify or view a record from a previously recorded batch upload.

10. Select the 'Display Table' button:

**Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)**

Record Search Form

Collector:  Number:  Date:

Catalog Number:  Other Catalog Numbers:

Entered by:  Date entered:  Date modified:

Processing Status:  With images ☐ Without images ☐

Exsiccata Title:

Custom Field 1:

Sort by:

[Home](#) >> [Collection Management](#) >> [Editor](#)

11. Review the results. Each occurrence record will have a unique Symbiota ID number:

[Home](#) >> [Collection Management](#) >> [Occurrence Record Table View](#) | 1-781 of 781 records |

Symbiota ID	dbpk	Catalog Number	Other Catalog #	Family	Scientific Name	Author	Collector	Number	Associated Collectors
5525368	IF	000089	1964	Apocynaceae	Apocynum androsaemifolium	L.	J.B. Pilchard	5-5	G.W. Ramsey
5525373	IF	000024	1964	Asclepiadaceae	Asclepias michauxii	Greene	Russell, Martha	5-5	
5525378	IF	001045	1964	Asteraceae	Asteraceae	Greene, S.J. Presl	Brown, Elizabeth, Brown, Edward	7891.1	
5525385	IF	000089	1964	Asteraceae	Bidens vulgata	Greene	Bushman, John, Clark, R.C., Spangberg, S.A., Radford, A.E.	40232	
5525393	IF	000089	1964	Asclepiadaceae	Asclepias lanceolata	Walter	Brown	6	
5525396	IF	000089	1964	Asteraceae	Berlandiera texana	DC.	Fisher, T.	5-5	
5525404	IF	000089	1964	Asteraceae	Bidens bipinnata	L.	Harrison, Ruby	1467	
5525408	IF	000089	1964	Asteraceae	Bidens vulgata	Greene	Wheeler, J.L.	185	
5525411	IF	000089	1964	Asclepiadaceae	Asclepias variegata	L.	J.W. Cooncamp	279	Marie Hobb
5525420	IF	000089	1964	Asteraceae	Botanilla asteroides	Sims	Thomas, R. Dale, Brown, Andrew	37342	
5525421	IF	000089	1964	Asclepiadaceae	Asclepias syriaca	L.	Engel, G.	189	
5525422	IF	000089	1964	Asteraceae	Bidens discoidea	Britton	Leighton, S.W., Radford, A.E.	2233	
5525427	IF	000089	1964	Apocynaceae	Vinca minor	L.	Leighton, S.	1393	
5525432	IF	000089	1964	Asteraceae	Baccharis halimifolia	Muhl.	Griff, Robert	3070	
5525439	IF	000089	1964	Asclepiadaceae	Matelea carolinensis	Walt.	Wheeler, L., Caldwell, G., Lind, Charles	5-5	
5525451	IF	000089	1964	Asclepiadaceae	Asclepias syriaca	L.	Daniel, S. Fendler	55-1963	
5525459	IF	000089	1964	Asteraceae	Borrichia frutescens	DC.	Wheeler, J.L.	32	
5525475	IF	000089	1964	Asclepiadaceae	Asclepias tuberosa subsp. tuberosa	L.	Holmes, Wayne	112	
5525499	IF	000089	1964	Apocynaceae	Vinca minor	L.	Student		
5525528	IF	000089	1964	Asteraceae	Bidens frondosa	L.	Fleming, Chris	4127-2334	
5525540	IF	000089	1964	Asteraceae	Bidens mits	Walt.	Shaw	115-15	
5525541	IF	000089	1964	Asclepiadaceae	Asclepias incarnata	L.	Adams, Betty, Toler	554	
5525558	IF	000089	1964	Apocynaceae	Trachelospermum difforme	Walt.	Harry, E. Jones	40-44	J.A. Duke
5525573	IF	000089	1964	Asclepiadaceae	Asclepias incarnata subsp. pulchra	Walt.	Walt.	185	Marie Hobb
5525579	IF	000089	1964	Apocynaceae	Amsonia tabernaemontana	Walt.	I.W. Carpenter	1132	A.E. Radford
5525582	IF	000089	1964	Asteraceae	Berlandiera	DC.	Thomas, R. Dale	7891	
5525583	IF	000089	1964	Asteraceae	Botanilla asteroides	Sims	Bushman, John, Radford, A.E.	11562	

12. Select the Symbiota ID number for one of the records displayed in the Occurrence Record Table. You will be greeted with the Occurrence Data for the particular specimen you selected:

← → ↻ serneportal.org/portal/collections/editor/occurrenceeditor.php?csmode=0&occindex=10&occid=5525421&collid=196

Appalachian State University, I. W. Carpenter, Jr. Herbarium (BOON)  
Home >> Collection Management >> Public Display >> Editor

Occurrence Data | Determination History | Images | Linked Resources | Admin

Collector Info

Catalog Number: 21994 Other Cat. #: Collector: Wright, S. Number: 169 Date: 2005-08-05 Dupes? ☐ Auto search

Associated Collectors: Verbatim Date: 1 August 2005

Exsiccati Title: Number:

Latest Identification

Scientific Name: *Asclepias syriaca* Author: L.

ID Qualifier: Family: Asclepiadaceae Date Identified:

Locality

Country: United States State/Province: North Carolina County: Avery Municipality:

Locality: Camp Lutherock, Sugar Mountain Road ca. 0.8 miles to left on Camp Luther Road, then onto Lutherock drive (28 Spruce Dr)

☐ Locality Security: ☐ Deactivate Locality Lookup

Latitude: 36.08722 Longitude: -81.9275 Uncertainty: 1287 Datum: NAD83 Verbatim Coordinates: ☐

Elevation in Meters: Verbatim Elevation: Depth in Meters: Verbatim Depth:

Georeferenced By: Georeference Sources: Georeference Remarks:

Georeference Protocol: Georef Verification Status: Footprint Polygon:

Label Processing

Zoom: Rotate: L ↔ R Med Res High Res

OCR Image Options

☐ OCR whole image ☐ OCR w/ analysis

Image 1 of 1

13. You are now able to modify any records you deem incorrect and select the 'Save Edits' button below to apply any desired changes:

Habitat: Saddle.

Substrate:

Associated Taxa:

Description:

Notes (Occurrence Remarks):

Life Stage: Sex: Individual Count: Sampling Protocol: Preparations:

Phenology: flowering Establishment Means: ☐ Cultivated

Curation

Type Status: Disposition: Occurrence ID: Field Number: 169

Basis of Record: Language: Label Project: Dupe Count:

PreservedSpecimen: Institution Code (override): Collection Code (override): Occurrence Code (override): Processing Status: Pending Review-nfn

BOON

Data Generalizations:

Key: 5525421 Modified: 2017- Entered by: not recorded [2014-12-15 11:59:05]

Save Edits

Status Auto-Set: NOT Activated

Additional Options

☐ Go to New Occurrence Record ☐ Carry over locality values

14. Click on the 'Admin' tab in the upper right hand section of the menu:

The screenshot shows the 'serneportal.org' web interface. At the top, the 'Admin' tab is highlighted in the navigation bar. A red arrow points to this tab. The main content area is divided into several sections: 'Collector Info' (Catalog Number, Other Cat. #s, Collector, Number, Duplicates?, Auto search), 'Associated Collectors', 'Verbatim Date' (1 August 2005), 'Exsiccati Title', 'Latest Identification' (Scientific Name: *Asclepias syriaca*, Author: L., ID Qualifier, Family: Asclepiadaceae, Identified By, Date Identified), 'Locality' (Country: United States, State/Province: North Carolina, County: Avery, Municipality, Locality: Camp Lutherok, Sugar Mountain Road ca. 0.8 miles to left on Camp Luther Road, then onto Lutherok drive (28 Spruce D), Locality Security, Deactivate Locality Lookup, Latitude: 36.09722, Longitude: -81.9275, Uncertainty: 1287, Datum: F, Verbatim Coordinates, Elevation in Meters, Verbatim Elevation, Depth in Meters, Verbatim Depth, Georeferenced By, Georeference Sources, Georeference Remarks, GeoLocate, Georeference Protocol, Georef Verification Status, Footprint Polygon). On the right, the 'Label Processing' section shows a thumbnail image of a plant specimen and options for OCR processing: 'OCR Image', 'Options' (OCR whole image, OCR w/ analysis), and 'Image 1 of 1'.

15. Observe the 'History of External Edits' section of the screen.

- The 'Date' field supplies the date and time that the record was last modified.
- You should see that the 'Source' field reads: 'Notes from Nature Expedition'.
- You should notice several entries of the form: 'Field', 'Old Value', and 'New Value'.
  - The 'Field' corresponds to an attribute of the specimen record.
  - The 'Old Value' is the previously stored entry of the specimen record prior to the Notes from Nature upload performed in the last section.
  - The 'New Value' field shows the updated specimen attribute as provided from your completed Notes from Nature expedition.

16. Congratulations! You have now successfully:

- Completed your Notes from Nature Expedition
- Uploaded your returned data via the SERNEC web portal
- Reviewed and/or modified the newly updated specimen data with the use of the Occurrence Record Table Viewer.



