

South Carolina Herbaria Data Standards Workshop

By: SCDNR NHT Botany & Plant Conservation Program (Czakó,
Csilla) and University of South Carolina Herbarium (Browning,
Avery)



Forward

This resource was written and compiled by Csilla Czako from the SCDNR NHT Botany and Plant Conservation Program, Avery Browning from the A.C. Moore Herbarium at the University of South Carolina along with contributions from A.C. Moore Herbarium at the University of South Carolina Staff and Affiliates including but not limited to Collections Manager Charlie Harmon, Curator Dr. Herrick Brown, Research Affiliate Maura C. Flannery, Resident Xylogist Dr. Mihaly Czako, Curator Emeritus Dr. John B. Nelson, State Botanist and Team Lead of the SCDNR NHT Botany and Plant Conservation Program Keith Bradley. Carol Ann McCormick, the wonderful Curatrix of UNC Herbarium provided much needed insight on Collector Name formatting. Thank you to all the All-SC Herbaria Meeting participants (SC, NC, and GA herbarium curators and staff) who contributed their thoughts and wealth of experience. Thank you to Katie Pearson and the Symbiota Team for patiently answering all our questions. All screenshots and images were taken from the Symbiota SERNEC portal. Symbiota Data Fields (accessed via Symbiota Docs) and The Darwin Core Quick Reference Guide were frequently used in the making of this document.

Given the number of people who worked so hard to bring this project together, when using any or all contents of this document, please reference it as from “South Carolina Herbaria Data Entry Standards”.



SCDNR NHT Botany & Plant

Conservation Program



Keith Bradley
Team Lead/State Botanist



Samantha Tessel
Upstate Botanist/Permitting



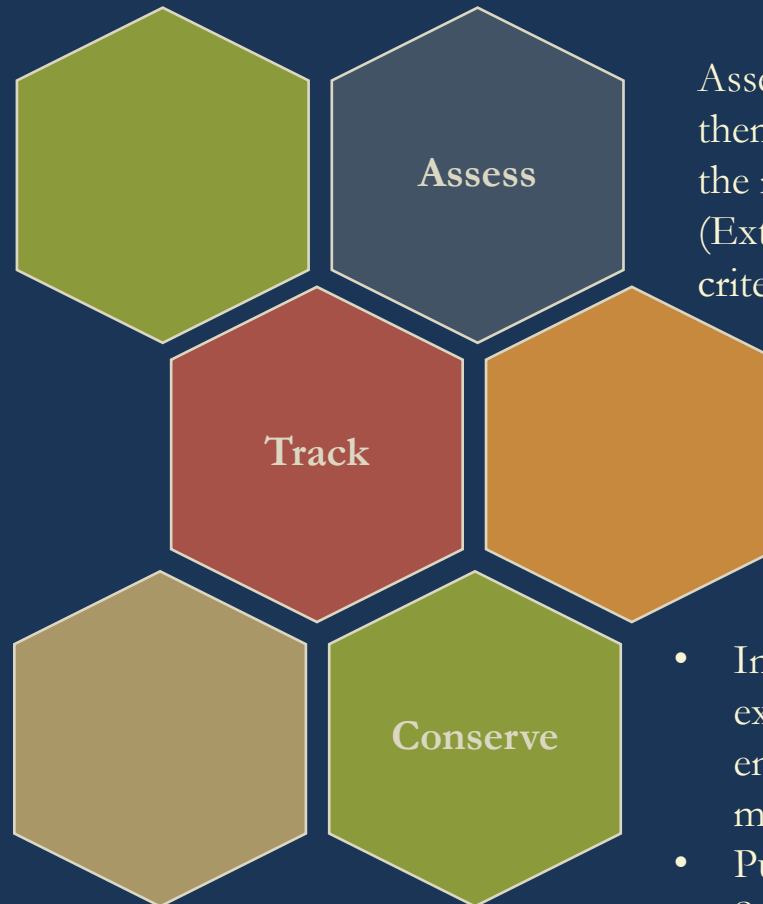
Eric Ungberg
Lowcountry Botanist/iNaturalist



Csilla Czako
Team Data Manager/Geospatial Analyst

SCDNR Natural Heritage Trust Botany & Plant Conservation Program Goals

- Track all S1, S2 and S3 species in the state and other species of conservation interest.
- Assess herbarium specimens, iNaturalist, and published materials for rare and endangered species data.
- Update legacy Natural Heritage Trust data.



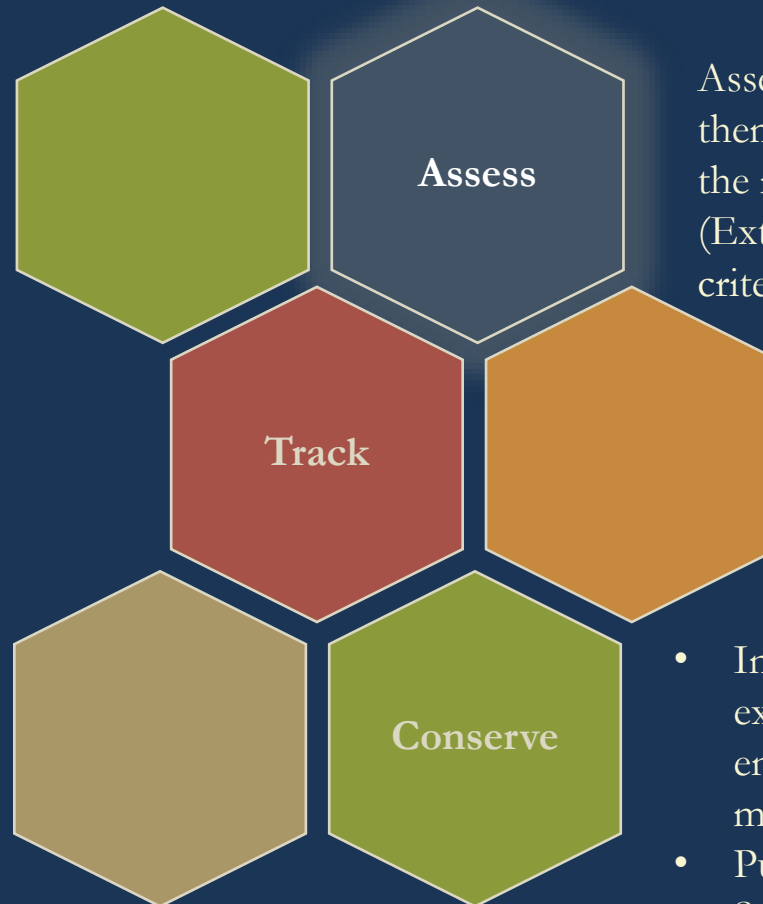
Assess all of South Carolina's Native Flora and give them conservation rankings from S1 to S5 where S5 is the most common (think loblolly pine), SX (Extirpated), or SH (Historical) following NatureServe criteria.

- Inventory all Heritage Preserves for all native and exotic plant species and to keep track of rare and endangered plants to guide conservation and management.
- Purchase more Heritage Preserve Land, using Tracked Species data to guide acquisition.



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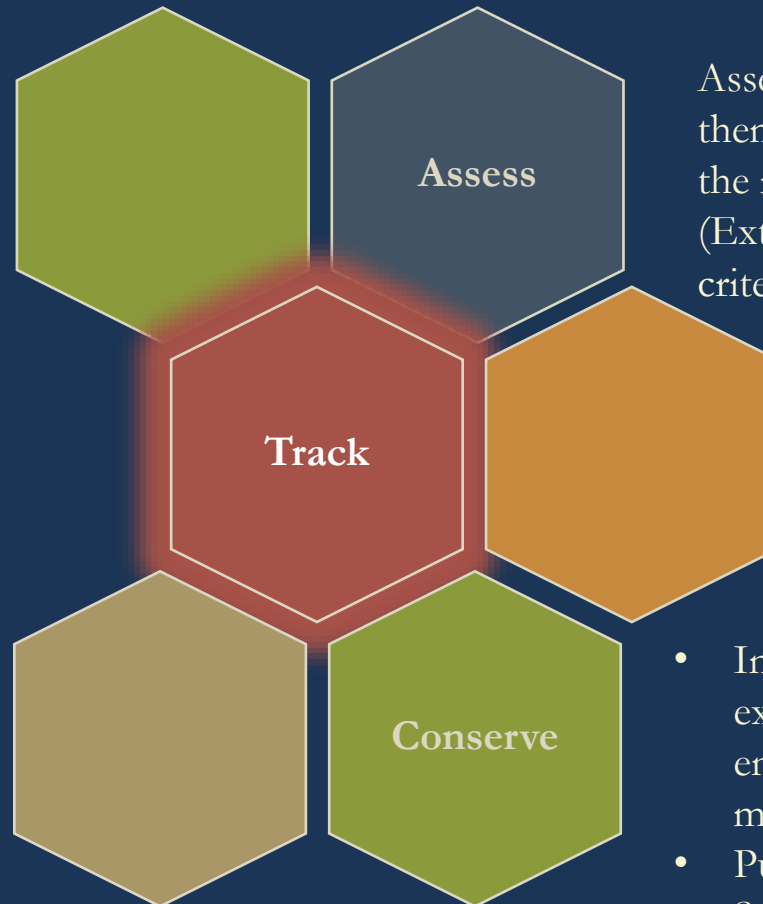
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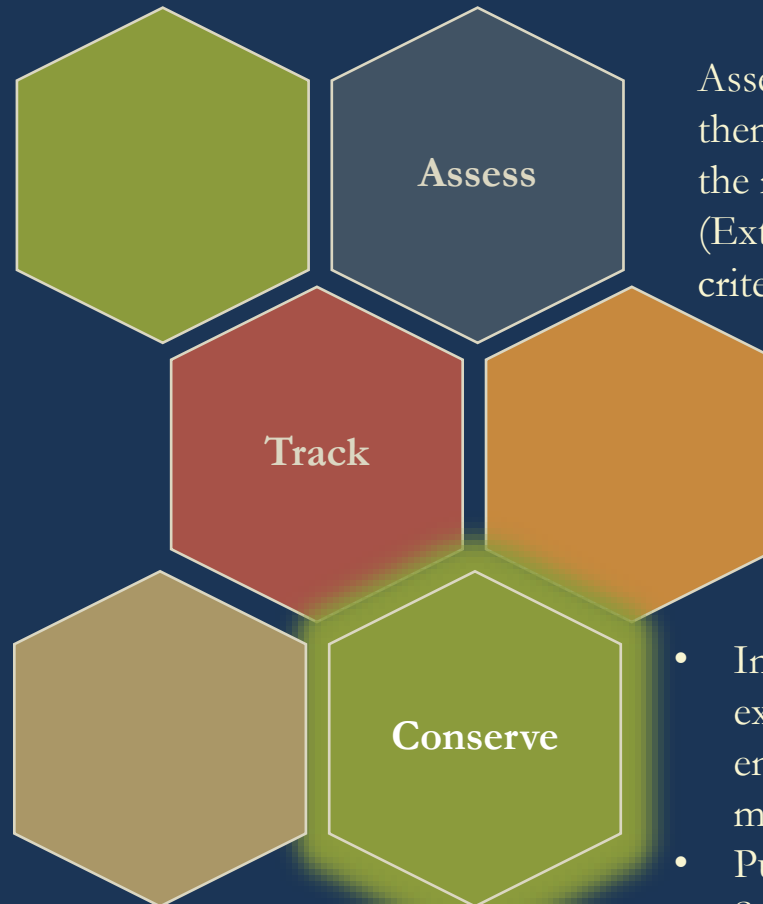
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Brief Intro to USCH



- The A.C. Moore Herbarium (USCH) at the University of South Carolina is located in Columbia, South Carolina.
- Our collections total just over 130,000 specimens making USCH the largest herbarium in SC!



Curator: **Dr. Herrick Brown**



Assistant Collections Manager/Volunteer Manager: **Avery Browning**



Collections Manager: **Charlie Harmon**



SCDNR NHT Botany & Plant Conservation Group Liaison/GIS Specialist: **Csilla Czako**

Additional Staff and Affiliates not Pictured: Dr. Mihaly Czako (Resident Xylologist); Dr. John B. Nelson (Curator Emeritus); Maura C. Flannery (Research Affiliate/Professor Emerita); Keith Bradley (Research Affiliate/SCDNR State Botanist); Samantha Tessel (Research Affiliate/SCDNR Upstate Botanist); Eric Ungberg (Research Affiliate/SCDNR Low Country Botanist)



Field Covered in this Presentation

- Collector/Observer
- Collector Number
- Date
- Associated Collectors
- Verbatim Date
- Scientific Name
- Author
- Identification Qualifier
- Family
- Identified By
- Date Identified
- ID References
- Identification Remarks
- Taxon Remarks
- Country
- State/Province
- County
- Municipality
- Locality
- Location Remarks
- Latitude & Longitude
- Uncertainty
- Datum
- Verbatim Coordinates
- Verbatim Elevation
- Verbatim Depth
- Habitat
- Substrate
- Associated Taxa
- Description
- Phenology



Field Priorities / Skeletal Data

The fields USCH uses for skeletal records include:

- Catalog Number
- Additional Identifier Value (our stamped accession number)
- Collector Name and Number
- Collection Date
- Latest Determination
- Country, State, and County
- Language
- Label Project

We suggest at least the **bare minimum**:

- Catalog Number
- Additional Identifier Value (USCH's) stamped accession number
- Collector Name and Number
- Collection Date
- Latest Determination
- Country, State, and County



Collector Information Fields

Collector Info

Catalog Number ?	Tag Name (optional) ?	Additional Identifier Value
<input type="text"/>	<input type="text"/>	<input type="text"/>
Collector / Observer ?	Number ?	Date ?
<input type="text"/>	<input type="text"/>	<input type="text"/>
Associated Collectors ?	Verbatim Date ?	
<input type="text"/>	<input type="text"/>	
Exsiccati Title	Number	
<input type="text"/>	<input type="text"/>	

Duplicates Auto search

We will address:

- Collector / Observer
- Number
- Date
- Associated Collectors
- Verbatim Date



Collector / Observer

Collector: R. Dale Thomas with Scott D. Thomas
No.: 164,462 Date: 20 Nov



Collector / Observer ?	Number ?
Thomas, R. Dale	164462
Associated Collectors ?	
Thomas, Scott D.	

- The format for this field is to write the name in the format Last name, First name Middle initial Suffixes (if there are any).

Herrick H. K. Brown (coll. & det.)



Collector / Observer ?
Brown, Herrick H.K.

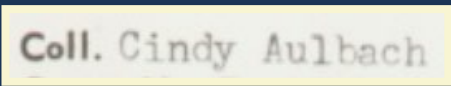
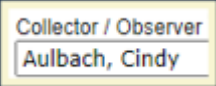
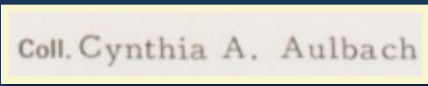
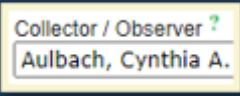
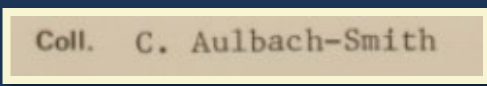
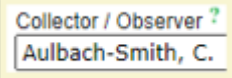

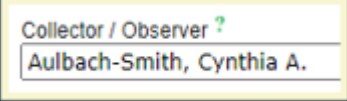
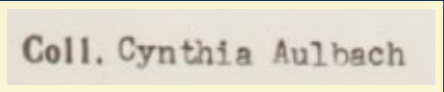
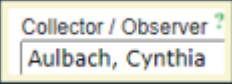
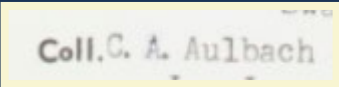
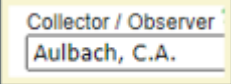
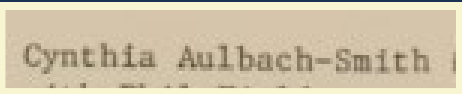
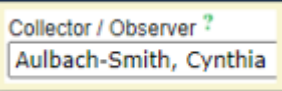

- Write the name as it appears on the label. Do not try to put the collector's full unabbreviated name.
- Only list one person in this field.
- Additional collectors go in the Associated Collectors field.
- If the label lacks a collector completely, the Collector / Observer is entered as "Unknown"

Collector / Observer ?	Number ?
Unknown	s.n.



Collector/Observer: Name Discrepancies

- You may see specimens with the collector's name written differently on other labels from the same collector.
- *This is okay*, and you should still enter the name in the same format as before.

Collector / Observer Number

- A number is typically included in specimen label next to the collector's name – this goes into the Number field immediately after the Collector / Observer field.
- If you come across a label that does not include a collection number, the Number field is entered as “s.n.”
- Not all collector numbers appear in the same format (e.g., letters, dots, dashes, etc. may be included). Always enter the included collection number verbatim*! *Apart from commas

Coll. Mrs. Edna Mixer Date 19 Nov 1960 Det. W. T. Batson	No.	=	Number ? s.n.
--	-----	---	------------------

Uotila, Pertti 43543a	=	Collector / Observer ? Uotila, Pertti	Number ? 43543a
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- Higher numbers may include commas, such as shown in the top example, however, commas should **NOT** be entered in the Number field.

*The reason for not including commas is that it is not possible to search for a collector number with a comma in it.

Loran C. Anderson No. 13,076	=	Collector / Observer ? Anderson, Loran C.	Number ? 13076
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DO **NOT** INCLUDE
THE COMMA



Collector Number: Examples

Steven R. Hill 18735A

Collector / Observer ?	Number ?
Hill, Steven R.	18735A

R. T. Ovrebo & C. M. Sladewski, W0100

Collector / Observer ?	Number ?
Ovrebo, R.T.	W0100

Associated Collectors ?
Sladewski, C.M.

Ben Williamson 2-11

Collector / Observer ?	Number ?
Williamson, Ben	2-11

Coll. H. W. House, Jr. Date 4/9/66 No. H-19

Collector / Observer ?	Number ?
House, H.W. Jr.	H-19

D.A. Rayner 1928 b

Collector / Observer ?	Number ?
Rayner, D.A.	1928 b

Royal D. Suttkus 79-19-06
September 23, 1979

Collector / Observer ?	Number ?
Suttkus, Royal D.	79-19-06

D. Fulcher, M. Gavin; #10162002 16 X 2020
Herrick Brown (det.)

Collector / Observer ?	Number ?
Fulcher, D.	10162002

Associated Collectors ?
Gavin, M.

F.H. Utech and
M. Ohara 83-509

Collector / Observer ?	Number ?
Utech, F.H.	83-509

Associated Collectors ?
Ohara, M.



Date

- The Date field next to the Collector / Observer field refers to the date of collection. The format you use for this field is YEAR-MONTH-DAY.
 - Ex. May 1, 2003 would be entered as 2003-05-01
- You may also come across labels that do not include the complete date, or any date at all.
 - In these instances, the Date field is entered differently. A date with only the month and day, such as February 12, is entered as 0000-02-12, where zeros replace the year, and the verbatim field is entered as February 12. Similarly, a date that has only a year, for example, 1999, is entered as 1999-00-00, while the verbatim field will say 1999.
 - If the label lacks a date entirely, the Date is entered as 0000-00-00 with the Verbatim Date field entered as “s.d.”

Date ?
0000-00-00

Verbatim Date ?
s.d.



Associated Collector(s)

- Follows the same format as the Collector/Observer field
 - Last Name, First Name Middle Initial

Ex. John B. Nelson with Keith A. Bradley

John B. Nelson 36141
with Keith Bradley

- Entered in the same format as Collector/Observer name.
 - Ex. Keith A. Bradley becomes **Bradley, Keith A.**



Collector / Observer ?
Nelson, John B.
Associated Collectors ?
Bradley, Keith A.

- If there are multiple associated collectors, each name is separated with a semicolon (;).

• Ex.

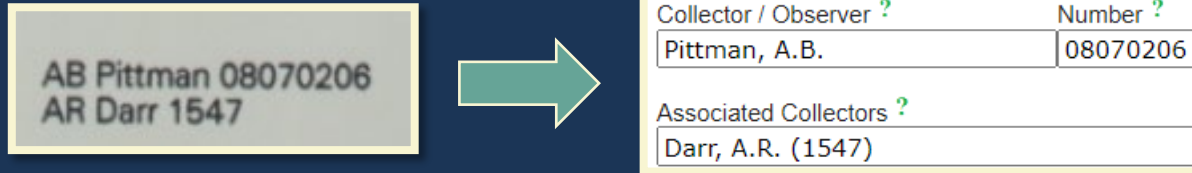
R.K. Godfrey no. 82847 with Angus Gholson &
Richard Carter



Collector / Observer ?
Godfrey, R.K.
Associated Collectors ?
Cholson, Angus; Carter, Richard



Associated Collector: Special Cases



You may run into labels that include a collector number for an Associated Collector as well as the Collector / Observer Number.

- In this case, the only deviation we make from our regular format is to include the Associated Collector's number in *parentheses after their name*.



Verbatim Date

- Not all collectors write the collection date the same way – the Verbatim Date field is where you enter the collection date from the label **exactly as it appears** (i.e., verbatim)
 - Ex. 24 IX 2016 would be entered in the Date field as 2016-09-24 and entered in the Verbatim Date field as 24 IX 2016

- From the label:

24 IX 2016

- Entered in Date as:



Date ?
2016-09-24

- Entered in Verbatim Date as:



Verbatim Date ?
24 IX 2016



Verbatim Date: Special Instances

- You may run into a collection that includes more than one date
 - Ex. USCH0078585 has two collection dates
 - Flowers/Fruits: 24 III 1999, Foliage 7 X 1999
 - In this instance, the earliest date is listed in the Date field (i.e., 24 III 1999 becomes 1999-03-24)
 - In the Verbatim Date field, include both dates along with any additional information, then click on the pencil icon.



Associated Collectors ?	Verbatim Date ?
	24 III 1999; Foliage 7 X 199
YYYY-MM-DD: ?	1999 - 3 - 21 Day of Year: ? 80 -

- After clicking the icon, a new field will appear. Your initial entry into the Date field will automatically fill out the beginning of the field and determine the day of the year that the collection took place. You can then use a day of the year calculation to find the day number for the second collection by using this link: <https://miniwebtool.com/day-of-the-year-calculator/>

Then manually type in the number provided by the calculator. In this example, it will be 280.

Then finalized field then looks like this:

YYYY-MM-DD: ?	1999	-	3	-	21	Day of Year: ?	80	-	280
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Latest Identification Fields

The screenshot shows a form titled "Latest Identification" with the following fields:

- Scientific Name ?
- Author ?
- ID Confidence ? (Dropdown menu showing "Undefined")
- Identification Qualifier ?
- Family ?
- Identified By ?
- Date Identified ? (with a small edit icon)

We will address:

- Scientific Name*
- Author*
- Identification Qualifier
- Family*
- Identified By
- Date Identified
- ID References
- Identification Remarks
- Taxon Remarks

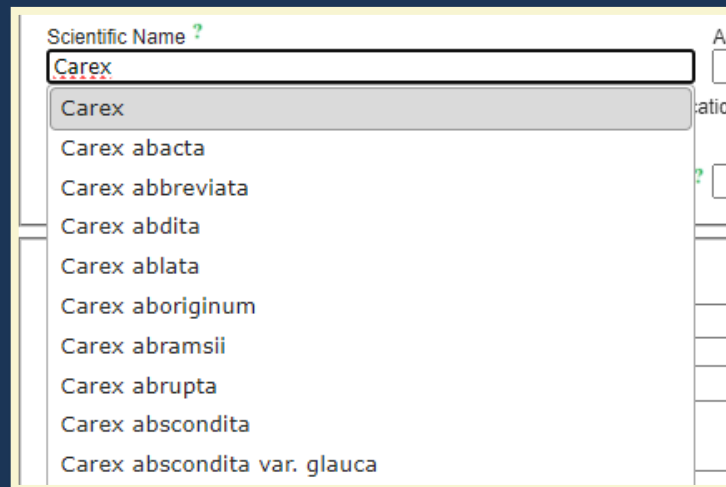
*The slide **after** the Family field explains what to do if the auto-filled Scientific Name, Author, or Family do **NOT** match the data the collector provided on their label



Scientific Name

Enter the scientific name as it appears on the label.

- As you type, a drop-down list will appear.
 - You can select the scientific name of the specimen from this list to avoid keystroke errors, but make sure you **DOUBLE CHECK** that you selected the correct name!



Scientific Name ?

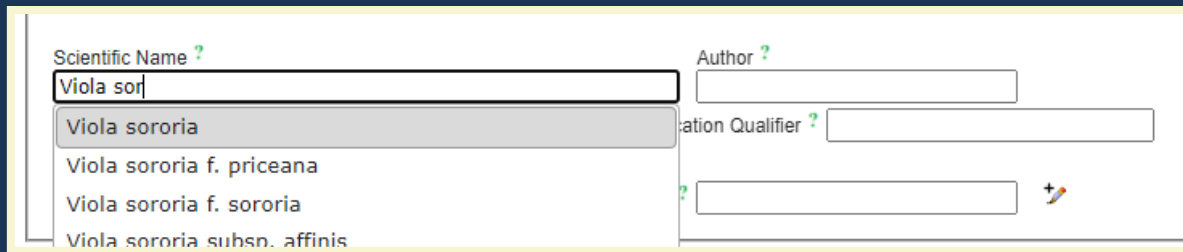
Carex

- Carex
- Carex abacta
- Carex abbreviata
- Carex abdita
- Carex ablata
- Carex aboriginum
- Carex abramsii
- Carex abrupta
- Carex abscondita
- Carex abscondita var. glauca



Author

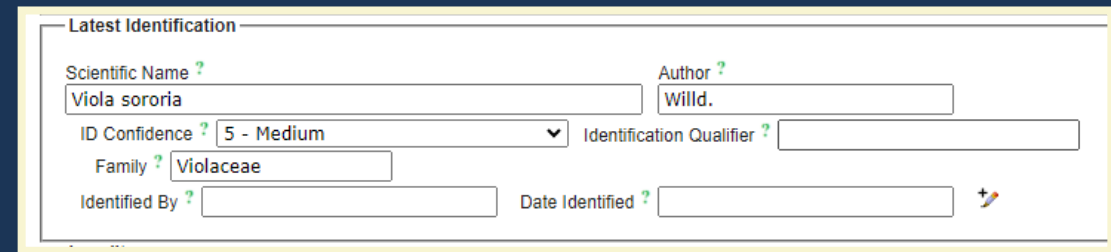
The Author field is auto-filled after the Scientific Name is entered. Do **not** change anything that is auto-filled!



Scientific Name ?
Viola sor

- Viola sororia
- Viola sororia f. priceana
- Viola sororia f. sororia
- Viola sororia subsp. affinis

Author ?
Identification Qualifier ?



Latest Identification

Scientific Name ?
Viola sororia

Author ?
Willd.

ID Confidence ? 5 - Medium
Identification Qualifier ?

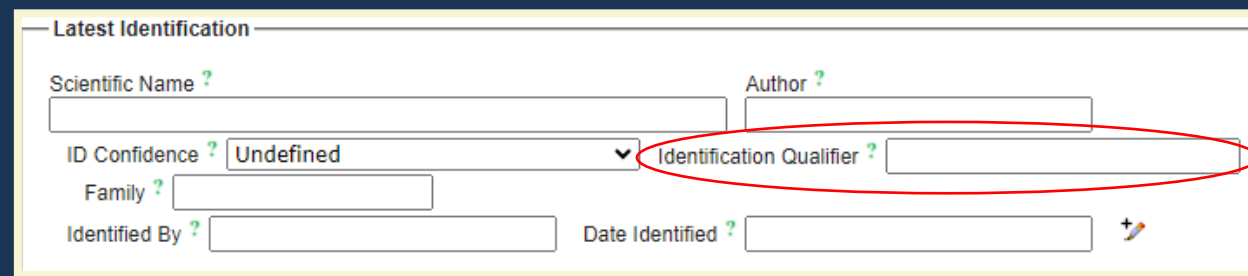
Family ?
Violaceae

Identified By ?
Date Identified ?



Identification Qualifier

- Enter the qualifier verbatim as it appears on the label in the Identification Qualifier field. This should be done in association with the relevant Identification/Determination only.
- Identification qualifiers may appear between the Genus and specific epithet, after or before the scientific name, or without apparent context.



The image shows a screenshot of a web form titled "Latest Identification". The form contains several input fields: "Scientific Name" and "Author" at the top; "ID Confidence" (set to "Undefined") and "Identification Qualifier" in the middle; "Family", "Identified By", and "Date Identified" at the bottom. The "Identification Qualifier" field is circled in red, indicating it is the focus of the slide.



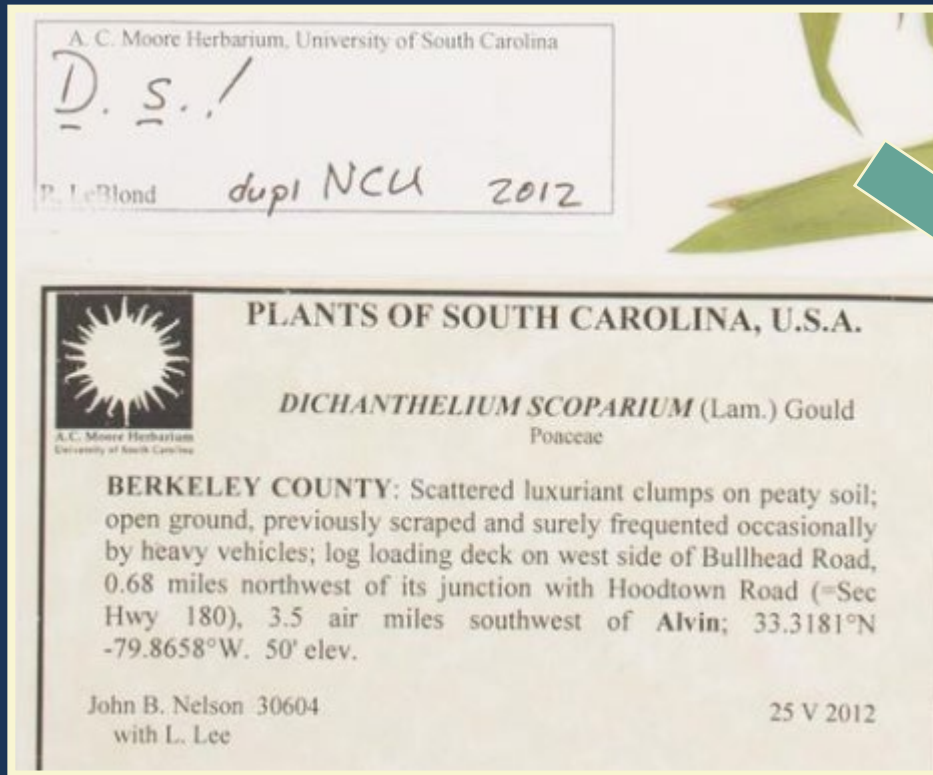
Commonly Encountered Identification Qualifiers and Their Meanings

- ! - meaning: the same Genus and species as previous
 - (enter same Genus specific epithet as previous)
- 'as det.' - meaning: as determined previously
 - (enter same Genus specific epithet as previous)
- 'not' - meaning: I don't know what it is, but it's not what previous wrote*
- *cf.* - meaning: *conferre* in Latin or compare to
 - (the determiner is confident with the Genus, but specimen lacks distinguishing characteristics to determine species definitively)
- *aff.* - meaning: *affinis* in Latin or affinity for or looks like
 - (the determiner is confident with Genus, but the specimen is distinctive from the proposed species or it is uncertain whether it falls within the range of variability)

***The specimen then should be given to an expert to review the issue**



Identification Qualifier: Example



Latest Identification

Scientific Name ?	Author ?
Dichanthelium scoparium	(Lam.) Gould
Identification Qualifier ?	Family ?
!	Poaceae
Identified By ?	Date Identified ?
LeBlond, R.J.	2012-00-00

LeBlond is using 'D. s. !' to mean that he agrees (shown by '!' with the original determination of *Dichanthelium scoparium* (shown by 'D. s.')

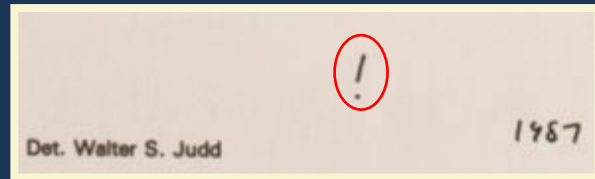
Determination History

! <i>Dichanthelium scoparium</i> (Lam.) Gould	CURRENT DETERMINATION
Determiner: LeBlond, R.J.	Date: 2012-00-00
Notes: Dupl NCU [duplicate at NCU]	
<hr/>	
<i>Dichanthelium scoparium</i> (Lam.) Gould	
Determiner: Nelson, John B.	Date: s.d.
Notes: Original det. on label. Presumed to be determined by collector.	

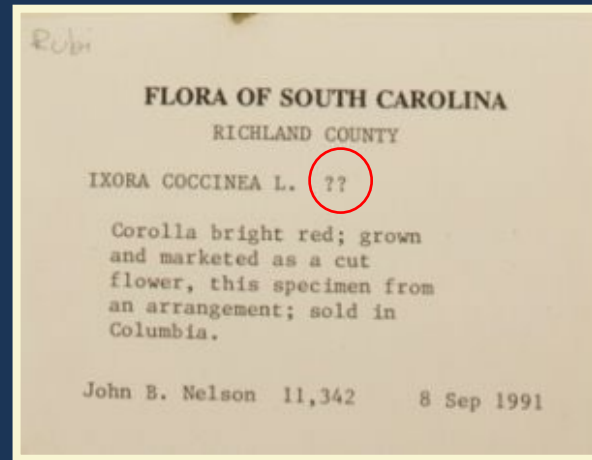
← Original ID



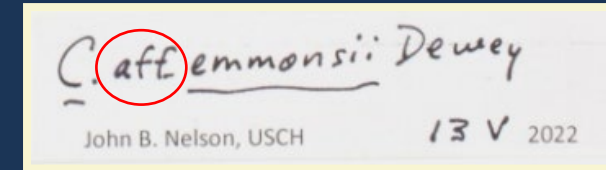
Identification Qualifier: More Examples



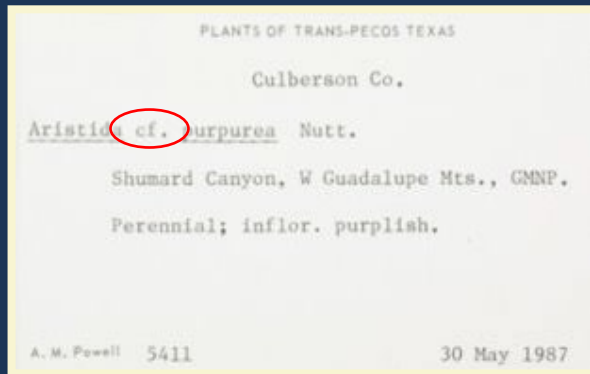
Identification Qualifier ? !



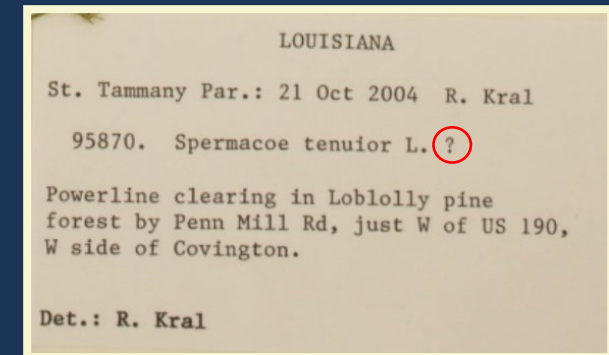
Identification Qualifier ? cf.



Identification Qualifier ? aff.



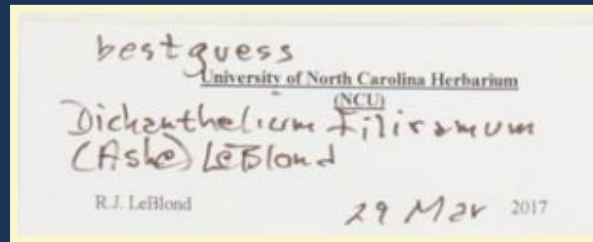
Identification Qualifier ? cf.



Identification Qualifier ? cf.



Identification Qualifier: Special Case



This example is a little unique because we don't know exactly what LeBlond means by 'best guess.'

That is, is he confident with the species but not the genus?

Is he saying that he does not see specific features known for that species but still believes that this is the correct species?

In this instance, we use cf. due to this uncertainty.



Identification Qualifier ? cf.



Family

- The Family field is auto filled by SERNEC after the Scientific Name is entered. Do not change anything that is auto filled!



Scientific Name, Family, and Author Discrepancies

*For this issue, we highly recommend keeping an Excel sheet for these records that includes the following:

- Barcode/catalog number
- Accession number
- Collector and collector number
- Collection date
- Collector-provided scientific name
- Collector-provided family name
- Collector-provided author name
- SERNEC-provided scientific name
- SERNEC-provided family name,
- SERNEC-provided author,
- Date that the issue was found and who it was found by
- If the discrepancy has been resolved

***The specimen then should be given to an expert to review the issue**

Mistakes **do** happen, and the data that is physically listed on the specimen label may be different from what SERNEC auto-fills.

*This most often occurs in copy-paste errors by the collector when they create their labels.



Identified By

- The original determination on the label is the first determination that is added into the Latest Identification field.
- Unless the determiner is specified on the label, assume that the original identification was made by the collector.
 - In these instances, in the Identification Remarks, also include: "Original det. on label. Presumed to be by the collector."
- If the determiner *is* identified on the label, you should *still* include "Original det. on label." in the Identification Remarks.

Identification Remarks: ?
Original det. on label. Presumed to be by collector.

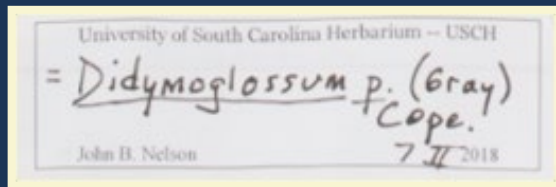
Identification Remarks: ?
Original det. on label.



Date Identified

- If no date is included for when the identification was made, write "s.d." into the Date field.
- If a date is provided, follow the same format as used for the collection date, i.e., YEAR-MONTH-DAY
 - The same standards also apply if the provided date is incomplete, such as May 2009 – which is then written as 2009-05-00, with zeros as place holders for missing information.

Date Identified ?

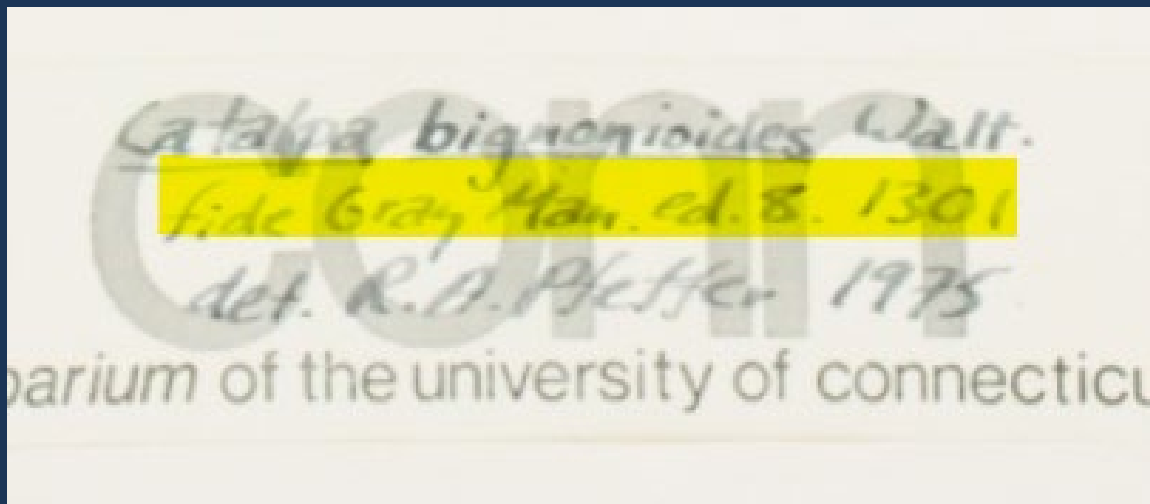


Scientific Name ?	Author ?
<input type="text" value="Didymoglossum petersii"/>	<input type="text"/>
Identification Qualifier ?	Family ? <input type="text" value="Hymenophyllaceae"/>
Identified By ? <input type="text" value="Nelson, John B."/>	Date Identified ? <input type="text" value="2018-02-07"/>

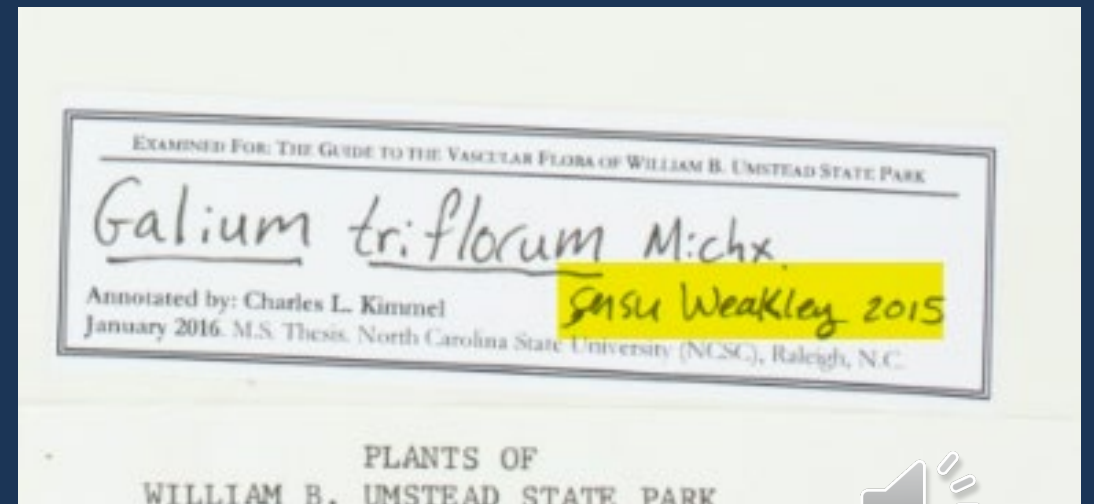


ID References

- The reference source used to make the identification. (as per Symbiota Docs)
- Write the references verbatim.



ID References: *fide Gray Man. ed. 8. 1301*



ID References: *sensu Weakley 2015*

Identification Remarks

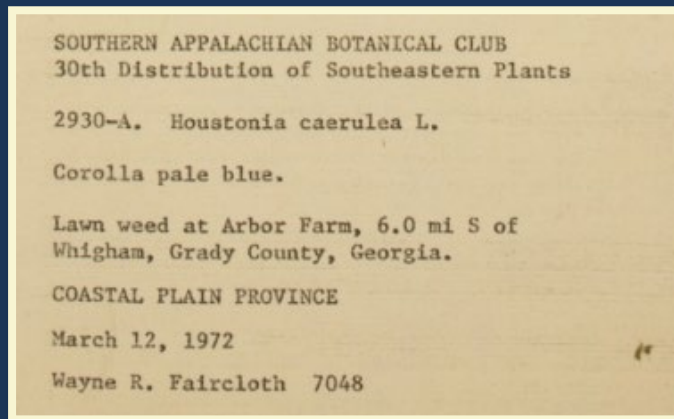
- Used for any notes about the identification other than ID references.
- Separate types of remarks with a semicolon.
- These are the most common types:
 - Comments about the determiner
 - Comments about the determination
 - Projects the Annotation was From
 - Taxon Remarks*



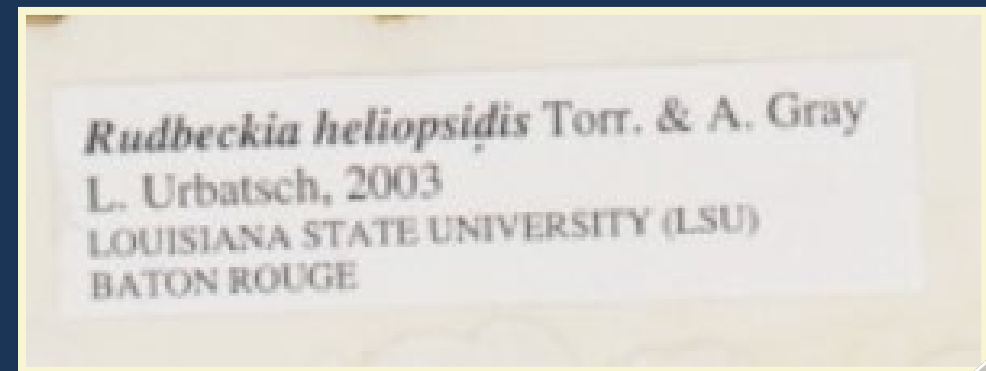
*See Taxon Remarks Slide

Identification Remarks: Comments About the Determiner

- Comments about the determiner
 - What institutions the determiner is associated with
 - Only if it is written! Do not assume institution.
 - Usually only found on annotation labels; rarely on specimen label itself.
 - If no determiner and no determination date is provided specifically for the original determination on the specimen label
 - Write “Original det. on label. Presumed to be determined by collector.”
 - If no determination date is provided specifically for the original determination on the specimen label
 - Write “Original det. on label.”



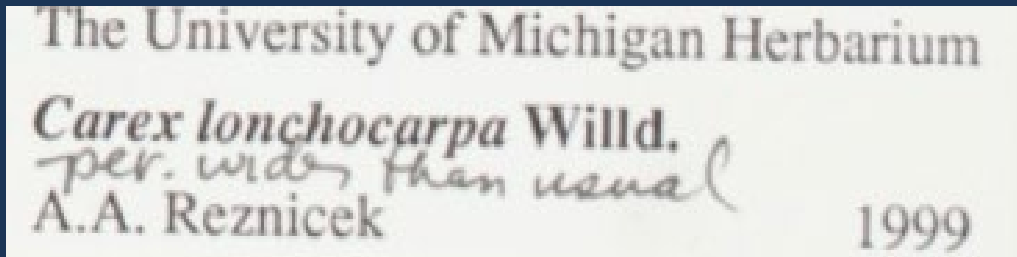
Identification Remarks: Original det. on label. Presumed to be determined by collector.



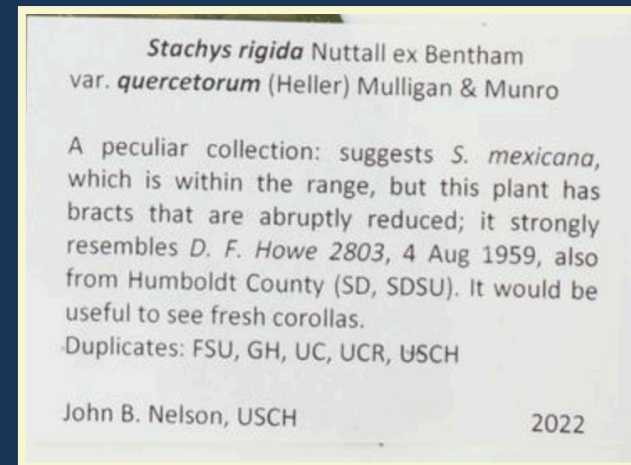
Identification Remarks: Annotation label from Louisiana State University (LSU) Baton Rouge

Identification Remarks: Comments About Determination

- Comments specifically about the determination including how they came to the determination or any comments about how sure they are about the determination



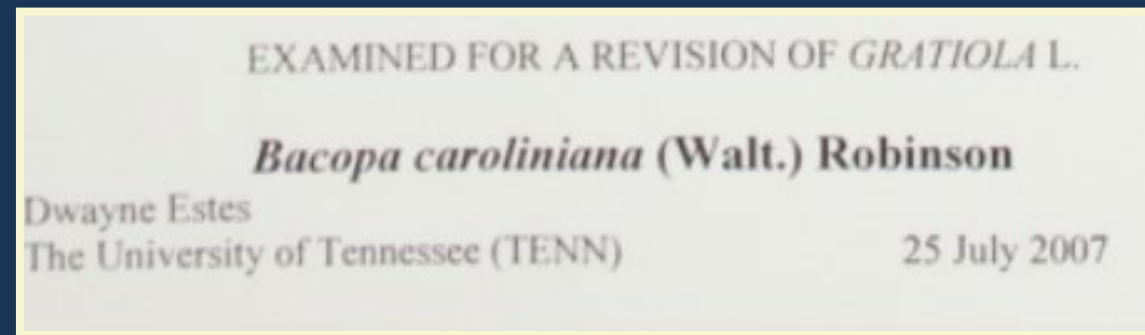
Identification Remarks: per. wider than usual; Annotation label from The University of Michigan Herbarium



Identification Remarks: A peculiar collection: suggests S. Mexicana, which is currently within the range, but this plant has bracts that are abruptly reduced; it strongly resembles D.F. Howe 2803, 4 Aug 1959, also from Humboldt County (SD, SDSU). It would be useful to see fresh corollas.; Original det. on label. Presumed to be determined by collector.

Identification Remarks: Projects the Annotation was From

- Some annotation labels mention a project that the annotator was working on that lead to them annotating the specimen



Identification Remarks: Examined for a Revision of Gratiola L.; Annotation label is from The University of Tennessee (TENN)

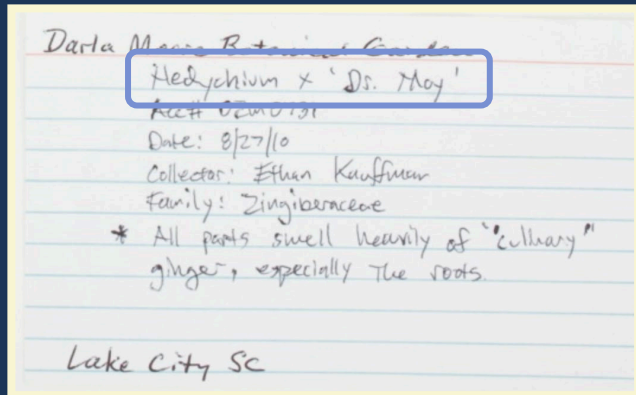


Identification Remarks: Taxon Remarks

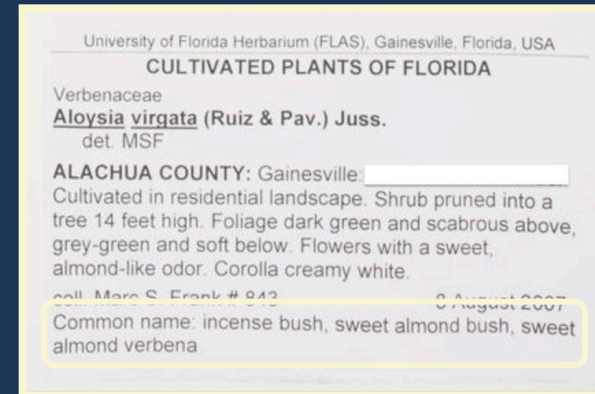
- The Taxon Remarks field is not being used currently because it is tied to the record not to individual determinations

Taxon Remarks Include:

- Common name(s) (Only enter name(s) listed on the label!)
- Label notes regarding hybridization, cultivars, etc.



Identification Remarks: *Hedychium* x 'Dr. May'



Identification Remarks: Common name: incense bush, sweet almond bush, sweet almond verbena



Locality Fields

— Locality

Country ?	State/Province ?	County ?	Municipality ?	Location ID ?
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Locality ? <input type="text"/>				
Security: <input type="text" value="Security not applied"/> ?				<input type="checkbox"/> Deactivate Locality Lookup
Latitude	Longitude	Uncertainty ?	Datum ?	Verbatim Coordinates ?
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="C"/> <input type="text" value="F"/>	<input type="text"/>
Elevation in Meters ?	Verbatim Elevation ?	Depth in Meters ?	Verbatim Depth ?	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

We will address:

- Country
- State / Province
- County
- Municipality
- Locality
- Security
- Location Remarks
- Verbatim Coordinates

- Latitude and Longitude
- Uncertainty
- Datum
- Verbatim Coordinates
- Verbatim Elevation
- Verbatim Depth



Country

Definition: First Level Administrative Subdivision or the country that the herbarium specimen was collected in.

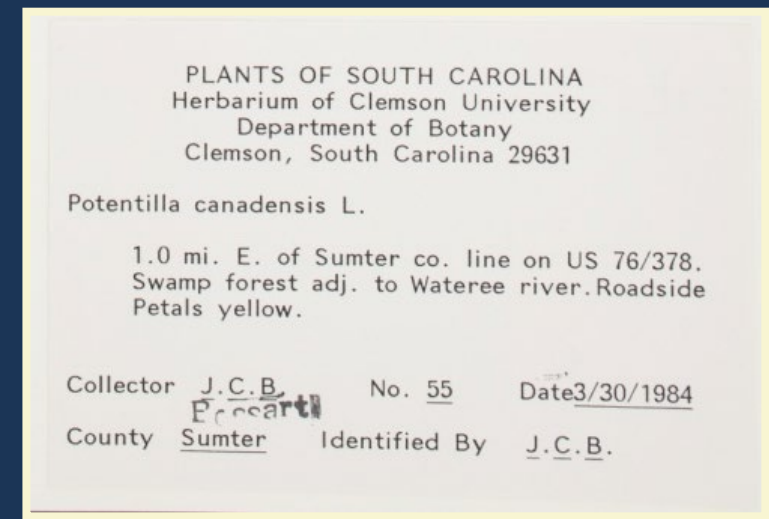
- SERNEC follows the Getty Thesaurus
- For all specimens collected in the United States the country is “United States”

If a specimen is collected outside of the United States, please reference the Georeferencing Data Processing Presentation.

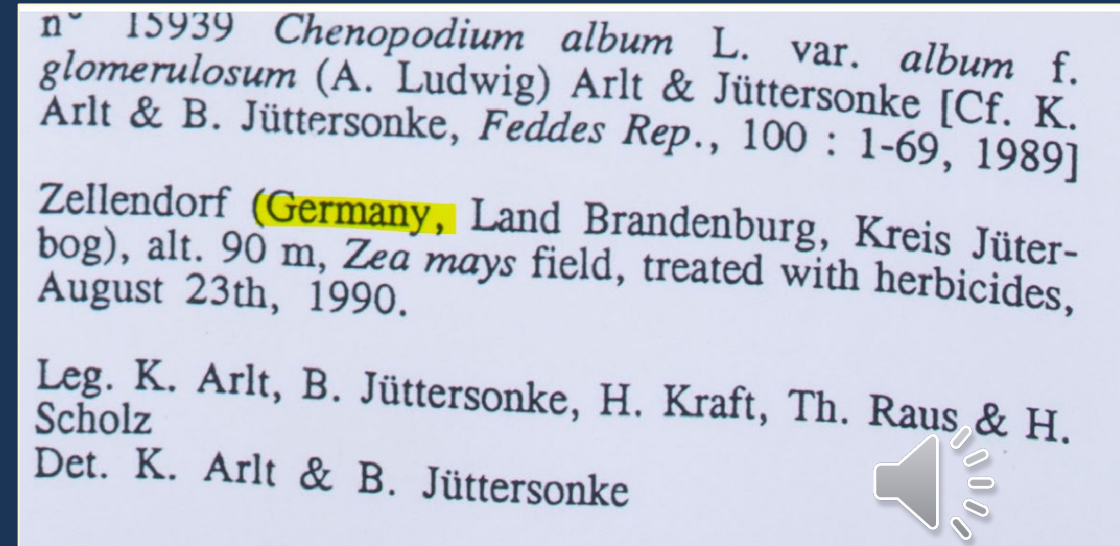


Country

- Based on the label, the data processor should be able to tell that it is in the United States
- If you are unsure, please reference the Georeferencing Data Processing Presentation or ask for assistance



Herbarium Specimen Label indicating the state but not that it was collected in the U.S.



Herbarium Specimen Label indicating it was collected outside of US.

Country: Using the Dropdown

- Options don't start to show up until at least 2 letters have been written.
- Make sure to select the correct option.

The image shows a screenshot of a data entry form with the following fields and controls:

- Country ?**: A text input field with a cursor. A dropdown menu is open below it, showing a list of countries starting with the letters 'C' and 'F'.
- State/Province ?**: An empty text input field.
- Locality ?**: An empty text input field.
- Security:** A dropdown menu currently set to "Security not applied".
- Latitude**: An empty text input field.
- Longitude**: An empty text input field.
- Uncertainty ?**: An empty text input field.
- Datum ?**: A text input field with a dropdown menu showing "C" and "F" options.
- Elevation in Meters ?**: A text input field followed by a hyphen and another empty text input field.
- Verbatim Elevation ?**: A text input field followed by a double less-than sign (<<).
- Depth in Meters ?**: A text input field followed by a hyphen and another empty text input field.

State/Province

Definition: Second Level Administrative Subdivision or the state/province that the herbarium specimen was collected in.

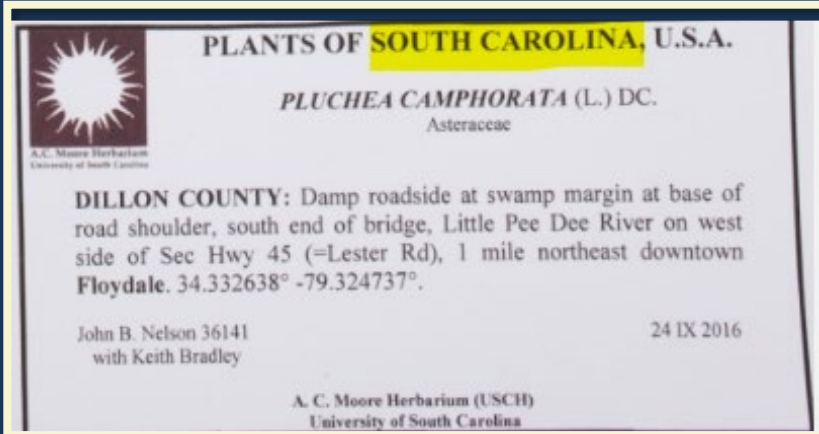
For specimens collected in the United States:

- Always make sure that the State is spelled correctly
- Write out abbreviated states
- Do not put extra spaces in the state name
 - Ex. “South Carolina “
 - Ex. ” South Carolina”
 - Ex. “South Carolina”

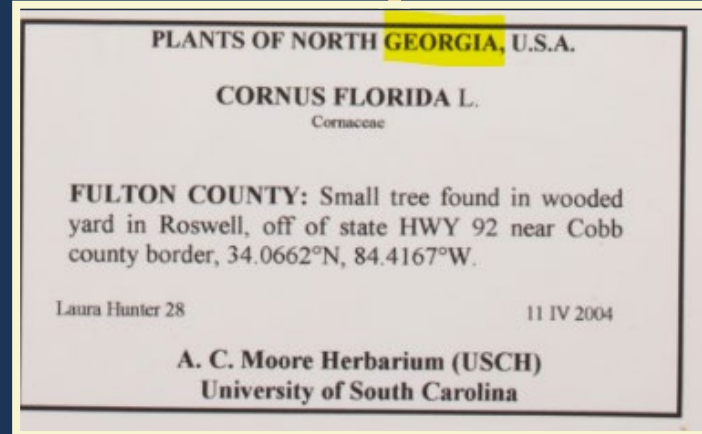
If a specimen is collected outside of the United States, please reference the Georeferencing Data Processing Presentation.



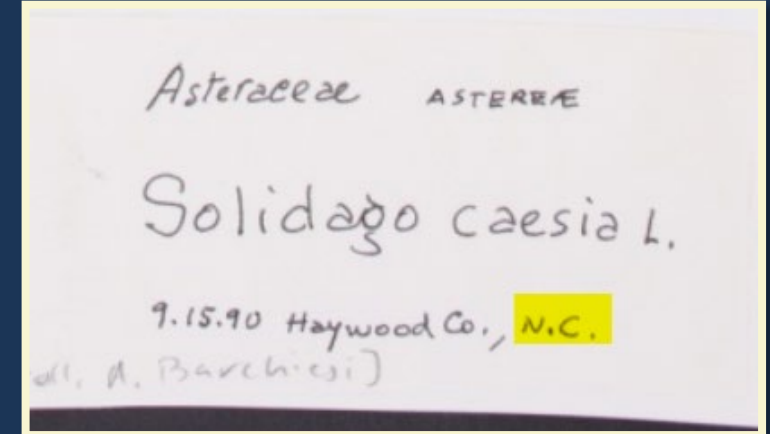
State/Province: Examples



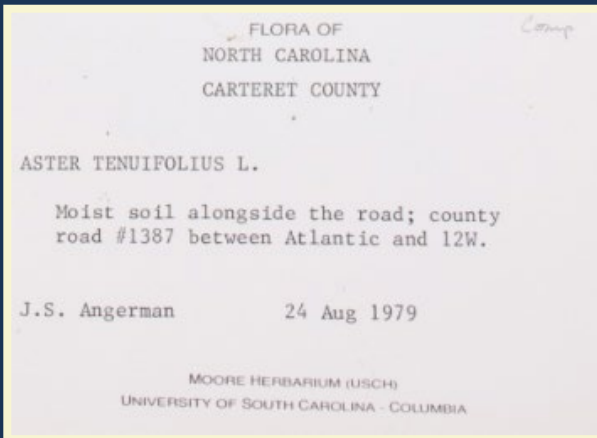
State/Province: South Carolina



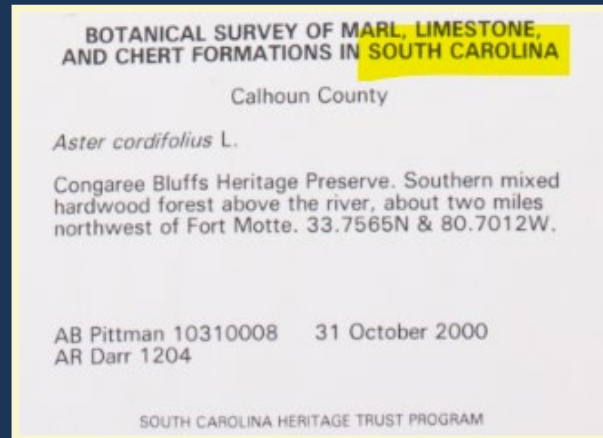
State/Province: Georgia



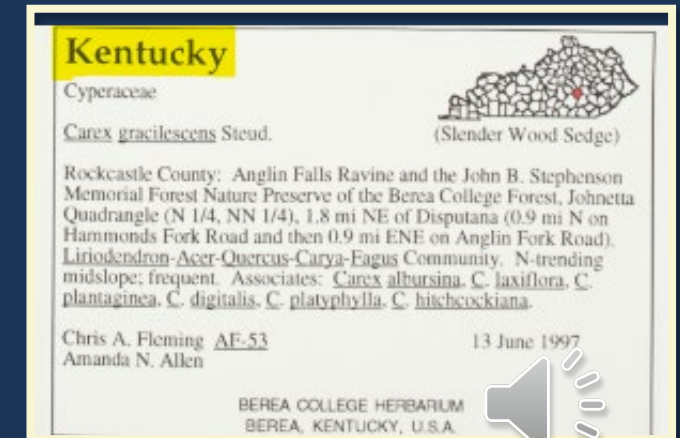
State/Province: North Carolina



State/Province: North Carolina



State/Province: South Carolina



State/Province: Kentucky

[Return to Field List](#)

[Return to Locality](#)

State/Province: Using the Dropdown

- Options don't start to show up until at least 2 letters have been written.
- Make sure to select the correct option.

Country ?	State/Province ?	County ?
United States		
Locality ?		
Security:	Security not applied	?
Latitude	Longitude	Uncertainty ?
		Datum ?
Elevation in Meters ?		Verbatim Elevation ?
Depth in Meters ?		

County

Definition: Third Level Administrative Subdivision or the county that the herbarium specimen was collected in.

For specimens collected in the United States:



- Don't add the word "County", "Co.", "CO" or any other additional words
- Spell the county correctly

If a specimen is collected outside of the United States, please reference the Georeferencing Data Processing Presentation.

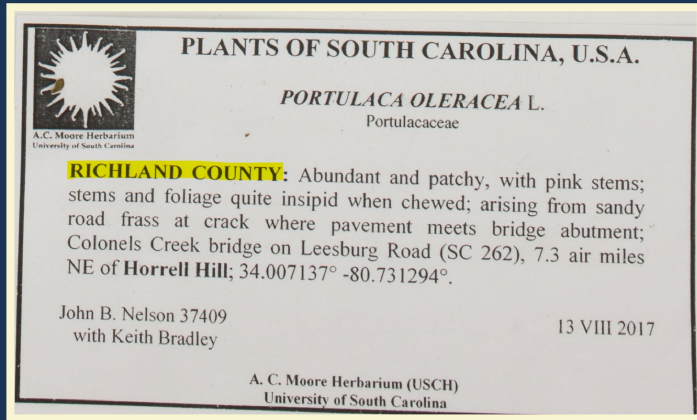


County

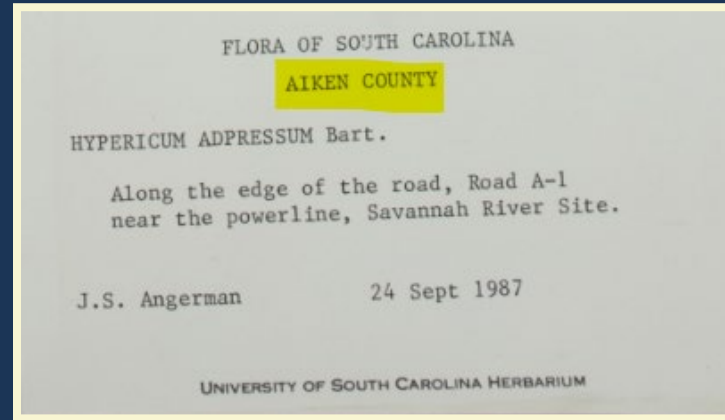
- Options don't start to show up until at least 2 letters have been written.
- Make sure to select the correct option.

Country ?	State/Province ?	County ?						
<input type="text" value="United States"/>	<input type="text" value="South Carolina"/>	<input type="text"/>						
Locality ? <input type="text"/>								
Security: <input type="text" value="Security not applied"/> ?								
Latitude	Longitude	Uncertainty ?			C	F	Datum ?	Ve
<input type="text"/>	<input type="text"/>	<input type="text"/>					<input type="text"/>	<input type="text"/>
Elevation in Meters ?		Verbatim Elevation ?		Depth in Meters ?				
<input type="text"/>	- <input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	- <input type="text"/>			

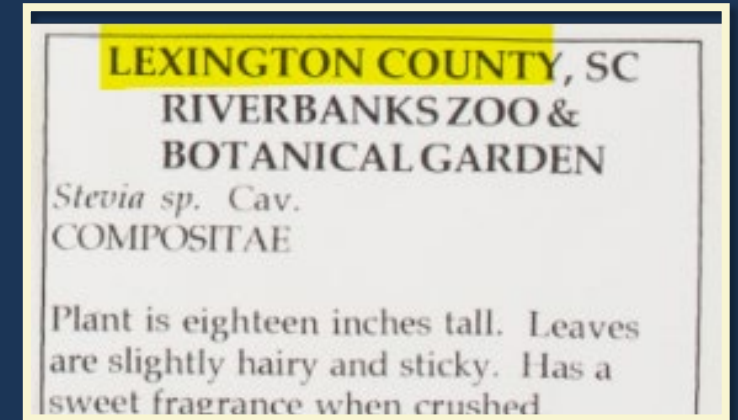
County: Examples



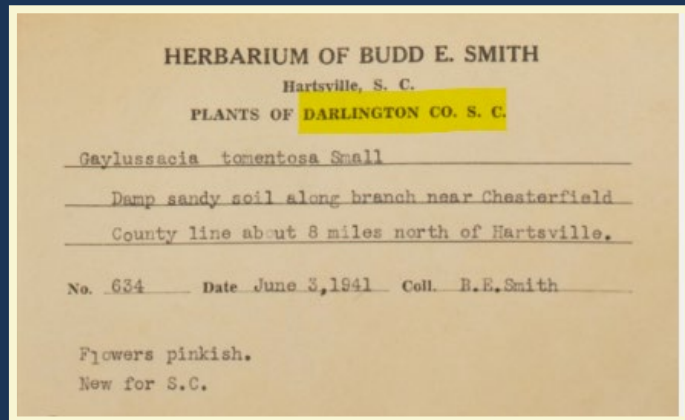
County: Richland



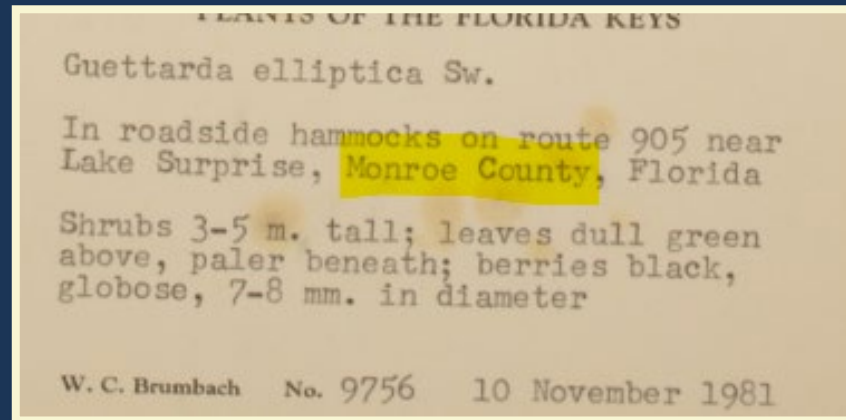
County: Aiken



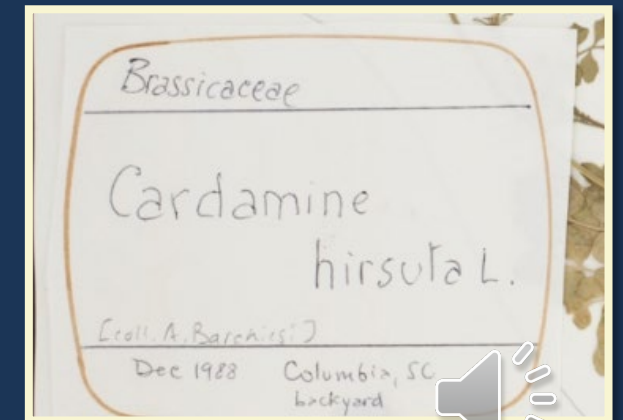
County: Lexington



County: Darlington



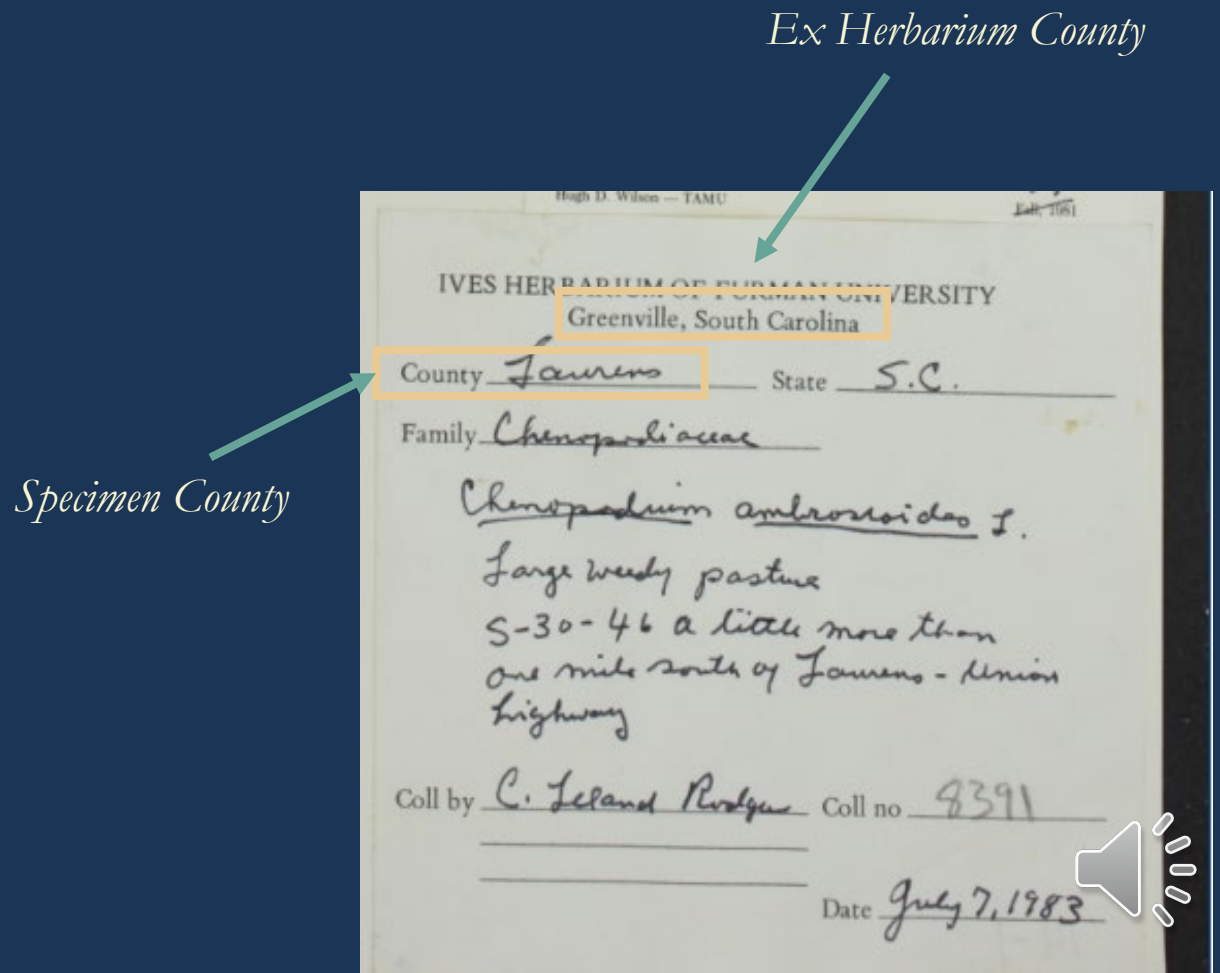
County: Monroe



This label needs research!

County: Special Cases

- Some labels may have old herbaria information on it that includes the location of the herbarium.
- The difference is that this county information is located right next to the herbarium information.
- Ask for assistance if unsure.



Municipality

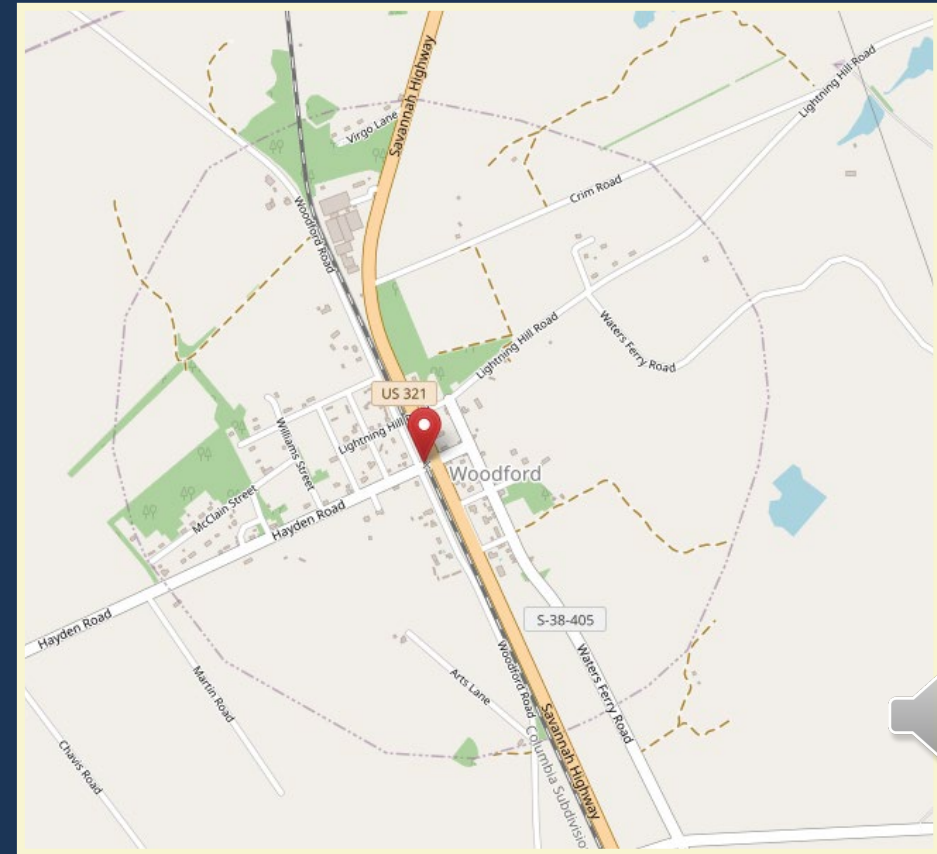
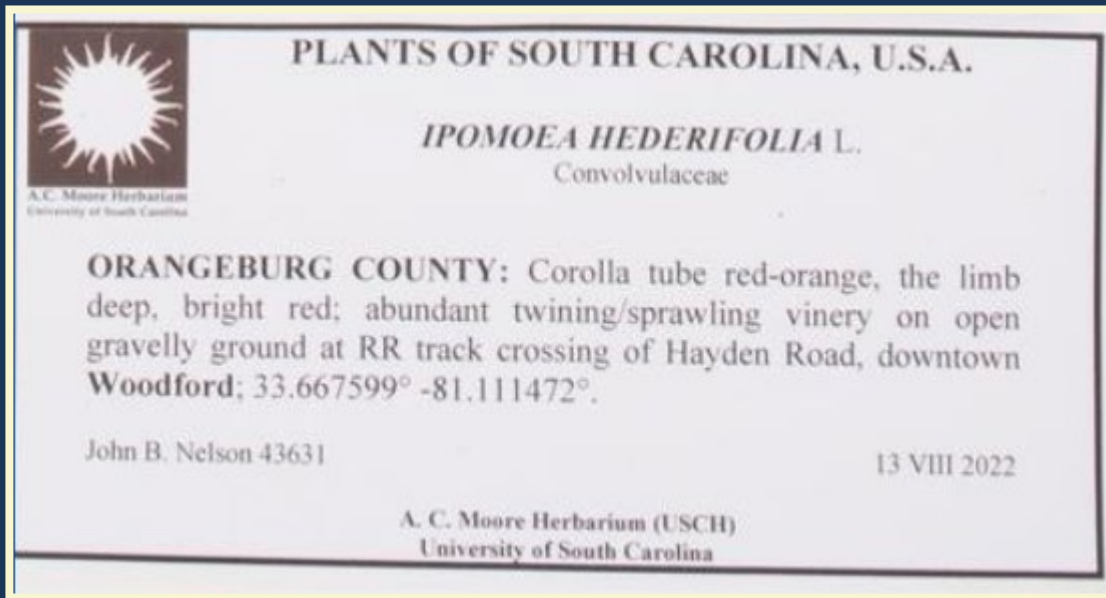
Definition: Fourth Level Administrative Subdivision or the city that the specimen was collected in.

- SERNEC follows the Getty Thesaurus
- Just because a city is mentioned on the label does not mean that the specimen was collected in that city
- If no municipality is given by the collector, leave this field blank
- If you are unsure, please reference the Georeferencing Data Processing Presentation or ask for assistance



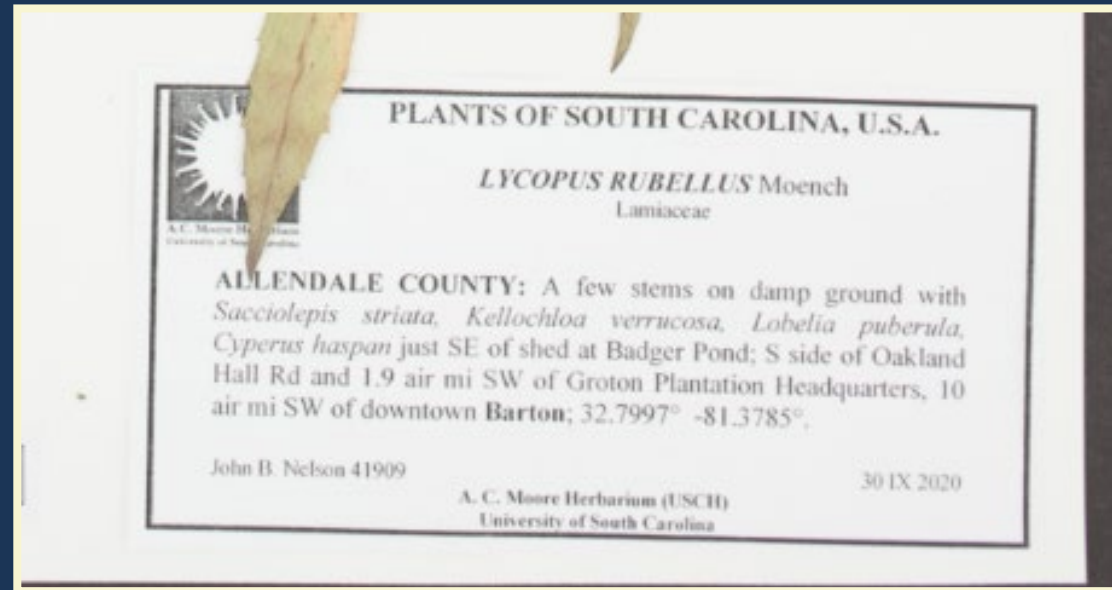
Municipality: Example

This specimen not only says it is in Woodford, but it can also be seen on Open Street Maps that is.



Municipality: Example

There is a municipality on this label. However, it says it is 10 air mi SW of downtown Barton meaning it is not in Barton so it will not go in the municipality field.



Locality

- At USCH which processes specimens in stages the data processor leaves Locality blank, please refer to your manager for instructions
- For more detailed information see Georeferencing Data Processing Presentation
- The basic structure
 - The main broadest area goes first, then a semicolon “;”, and then the rest follows separated by a comma “,”.
 - It is written to be broken down by hierarchy. Imagine that you are using a map to find the place. Most labels are written bottom up.



Locality: Example

Step 1: Identify largest broadest area that the specimen is on. If someone wanted to get into a car and drive to this location, where would they go to first?

US 17

Step 2: Where on US 17 is the specimen?

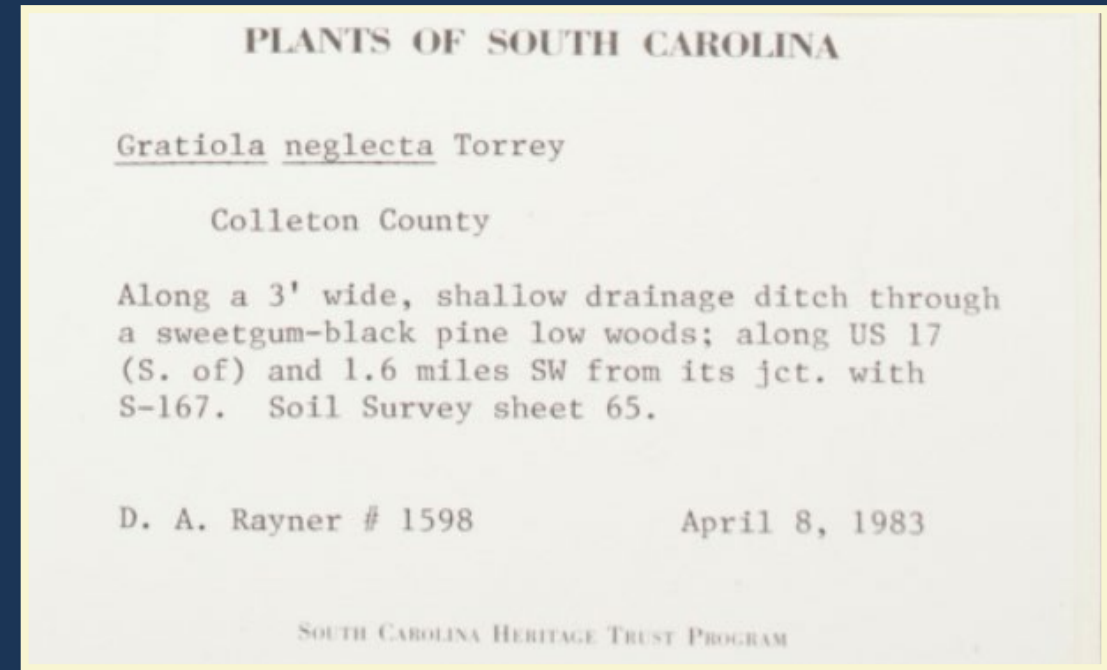
1.6 miles SW from its jct. with S-167 [State Rd S-15-167/Pon Pon Plantation Avenue]

Step 3: Any other info?

S of US 17

Step 4: Put it together

Locality: US 17; 1.6 mi SW of jct with State Rd S-15-167, S side of rd



Locality: United States, South Carolina, Colleton, US 17; 1.6 mi SW of jct with State Rd S-15-167, S side of rd



Security

- If the label specifically mentions that the location is a private residence AND has a name associated with it set it to “Landowner Concern”.
- Will show up as:
 - “Private residence”
 - “Property of _____”
 - “_____ Property”

Security: ?

Lock Security Setting


Reason:



Locality: United States, South Carolina, Lexington, Garden of Private Residence (Grown in garden of Mike Creel, for the last 15 years)

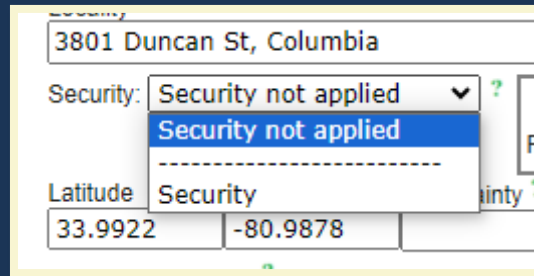
Locality details protected: Landowner Concern

Current user has been granted access

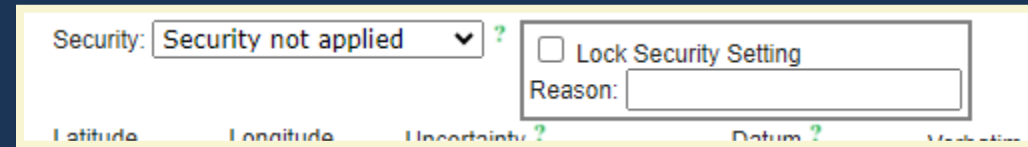


How to Apply Security

1. Click the down arrow on Security
2. Select Security

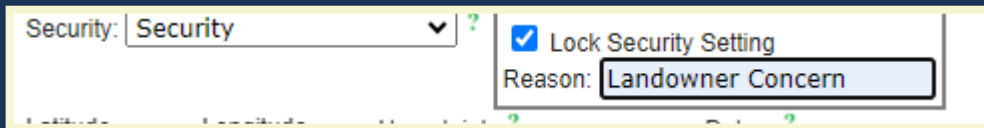


A screenshot of a form with the following fields: Address: 3801 Duncan St, Columbia; Security: Security not applied (dropdown menu is open showing 'Security not applied' selected); Latitude: 33.9922; Longitude: -80.9878.



A screenshot of a form with the following fields: Security: Security not applied (dropdown menu is closed); Lock Security Setting: ; Reason: (empty text box); Latitude: (empty); Longitude: (empty); Uncertainty: (empty); Datum: (empty); Metadata: (empty).

3. Go to the reason box and type the reason. The Lock Security Setting will automatically become checked.



A screenshot of a form with the following fields: Security: Security (dropdown menu is closed); Lock Security Setting: ; Reason: Landowner Concern; Latitude: (empty); Longitude: (empty); Uncertainty: (empty); Datum: (empty); Metadata: (empty).



Security-Reason Private Residence Examples

Common, at edge of cove forest with basic soils at the base of north-northwest-facing ridges of Wadakoe Mountain, **Property of Wes Cooler**. USGS Sunset 7.5' quad., [redacted]
W. Associated with *Carya ovalis*, *Fraxinus pennsylvanica*, *Quercus rubra*, *Liriodendron tulipifera*, *Fagus grandifolia*, *Calycanthus floridus*, *Coreopsis latifolia*, *Actaea racemosa*.

Infrequent in frequently mown and annually burned meadow in sandy soil of uplands, [redacted]

Property of Richard D. Porcher

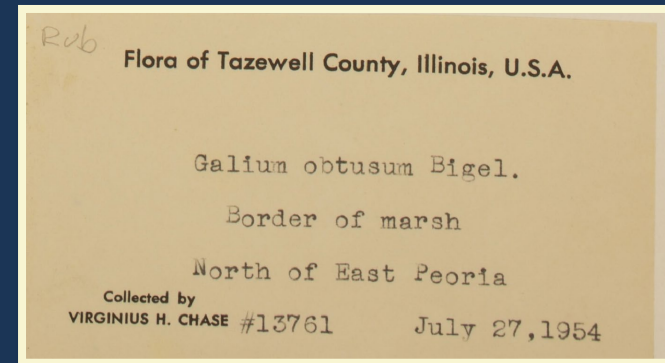
KERSHAW COUNTY: Corollas white; occasional erect herbs, the foliage tends to be a sort of bright, light green; grassy ground at base of slope with *Juniperus virginiana*, *Sabatia angularis*, *Gonolobus suberosus*, *Aesculus pavia*, *Juglans nigra*; north end of dried-down small pond; east side of Wateree River, **Ferral property**,

starting in a gourd patch, gourds now long gone; this plant's stems erect and profusely branched, would be about 2m tall, but halfway through this past summer the stems as a group began to fall over, so propped up for the rest of the season with a three-tiered metal garden plant stand; full bloom in mid-October, and on sunny afternoons, attracting great numbers of small wasps and carpenter bees (?) (two or more size classes?); **backyard at residence** [redacted]

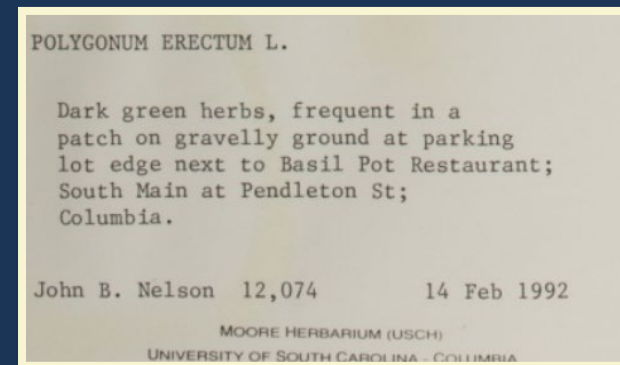


Location Remarks

- What goes into this field:
 - Anything and everything to do with location *even if it is repeated in habitat*
 - Sometimes the location remarks are mixed into the label depending on who wrote the label.



Locality: United States, Illinois, Tazewell, N of East Peoria; border of marsh
Location Remarks: Border of marsh. North of East Peoria.
Habitat: Border of marsh.



Locality: United States, South Carolina, Richland, Columbia, Basil Pot Restaurant; parking lot edge
Location Remarks: At parking lot edge next to Basil Pot Restaurant; South Main at Pendleton St; Columbia.
Habitat: Frequent in a patch on gravelly ground at parking lot edge.

Location Remarks: Example

Label Information:

4.5 mi N of jct FSRD 715 and 715 A. Deep drainage on wooded slope. Oak-hickory forest.

Location Remarks: 4.5 mi [miles] N [north] of jct [junction] FSRD [forest service road] 715 and 715 A. Deep drainage on wooded slope.

Habitat: Deep drainage on wooded slope. Oak-hickory forest.



Verbatim Coordinates

- Some collectors will provide coordinates of where they found the specimen on the label.
- If they collector provided other types of coordinates such as UTM or other geographical identifiers such as TRS those will also be entered into the Verbatim Coordinates field.

BOONE COUNTY: T84N R25W SW ¼ Sec. 30. Elev. 346 m, 42.051580°N Lat., -93.811186°W Long. (NAD83).

shady wet woods, the edge of a seepage slope featuring a permanent seepage stream, this a west-flowing tributary of Singleton Creek; 2.02 air mi SW of Liberty Hill; 34.4669°N, 80.8346°W; Liberty Hill 7.5' topo.

E of mouth of Cedar Creek and near river bend and immediately W of Vegetation Plot 121, UTM coords 3736053N 527558.2W; 5.38 mi upstream from US 601 boat landing. Elev 85'.

Small prairie opening in pine woods along road to a cemetery about 1.5 miles west of U.S. 167 south of Pacton, Sec. 5, T9N, R2W. Tancock's Prairie.

Johnston #2/Lower Stripmine/Crisp Pond area. LAT: 40° 09' 45" N; LONG: 79° 16' 10" W. ELEV: 1250 ft.

Verbatim Coordinates

- If the collector provides Verbatim Coordinates, type the coordinates into the Verbatim Coordinates Field exactly as they appear; don't worry if they don't carry over
- If the coordinates are in decimal degrees like this label:

34.473800N, -
80.859338W; elev. 405'

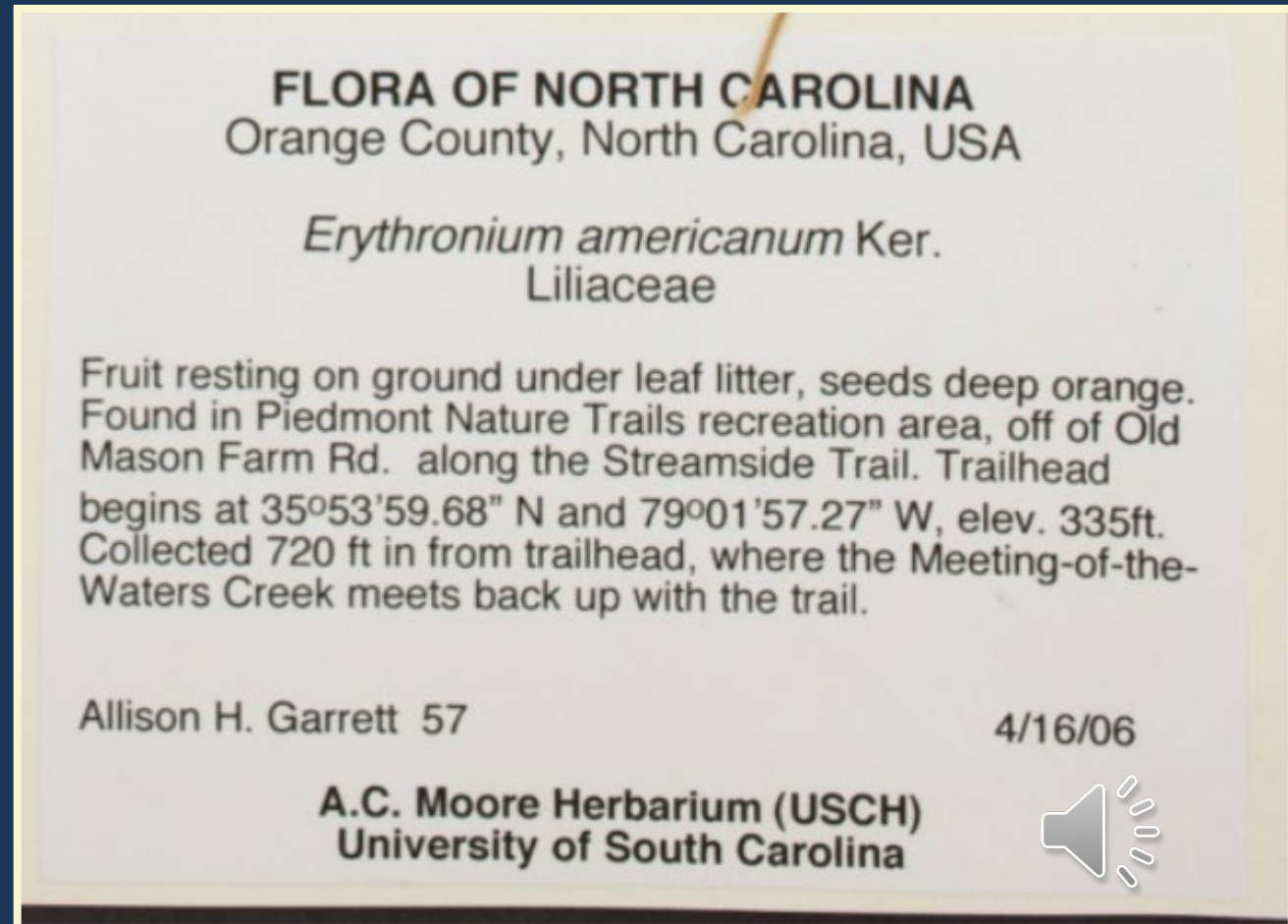
- Copy the coordinates into decimal lat and long:

Latitude	Longitude
34.4738	-80.859338



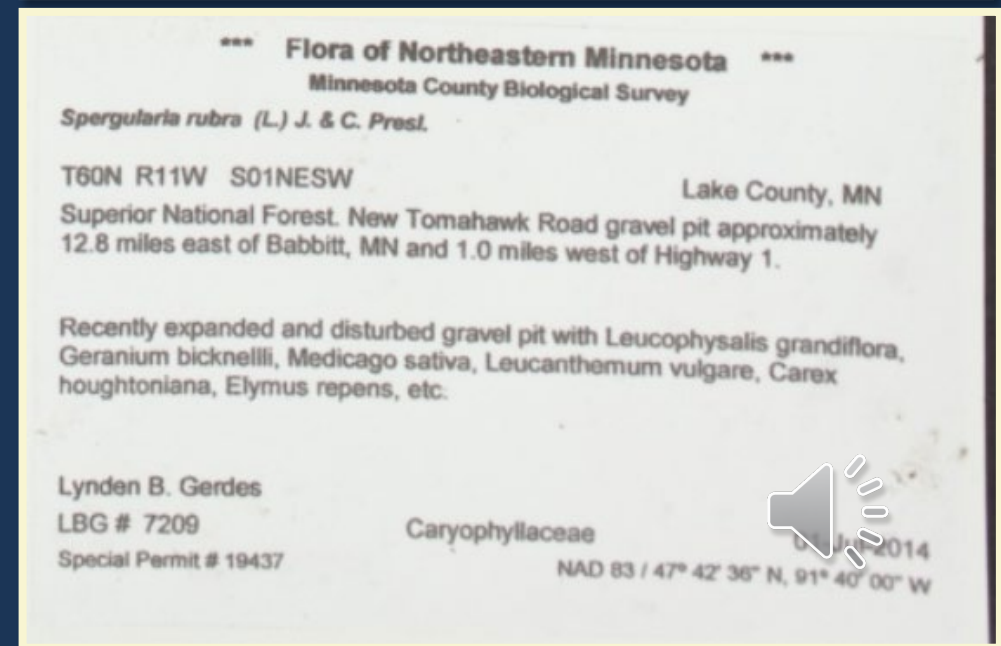
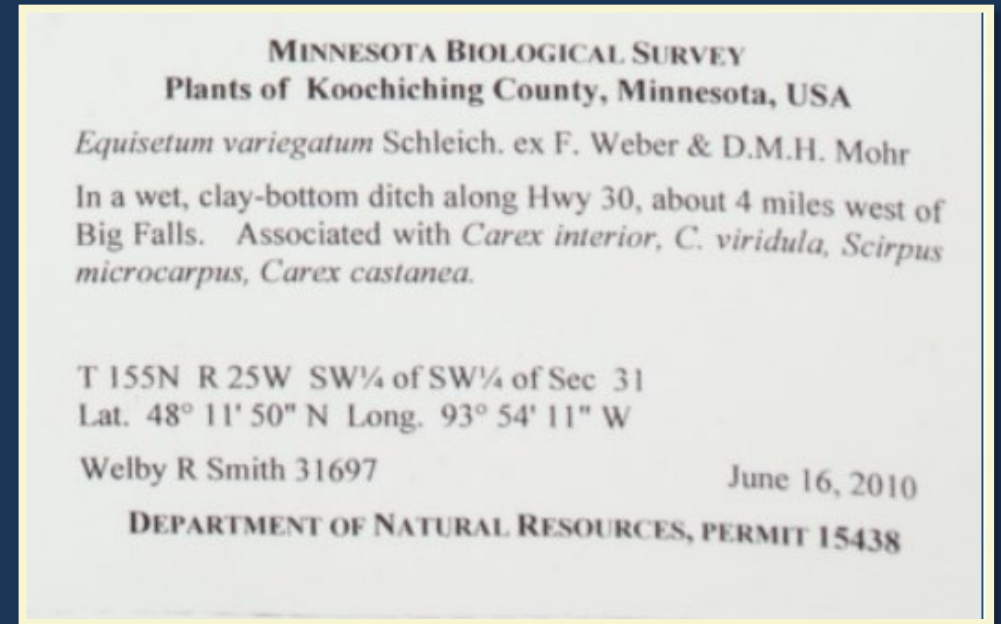
Reference Coordinates

- Sometimes collectors will provide reference coordinates.
- In this example, the collector put the coordinates of the trailhead but says that the specimen was collected 720 feet from those coordinates.
- These are not the coordinates of the collection! They go into Location Remarks along with all other location information.



Multiple Geographical Identifiers

- Some collectors will put multiple geographical identifiers such as coordinates and TRS or UTM and coordinates in decimal degrees.
- Prioritize putting coordinates (specifically decimal degrees) into the verbatim coordinates field.
- Make sure all geographical identifiers are in Location Remarks.



Latitude and Longitude

- Latitude and longitude make up the coordinates used to map the specimen
- Some labels may provide coordinates or coordinate systems such as UTM that need to be converted
- For the SERNEC map view to display, the latitude and longitude need to be in decimal degrees in WGS84



Latitude and Longitude

- If Verbatim Coordinates are provided and they are in decimal degrees copy them into the Latitude and Longitude fields
- Otherwise leave coordinates in verbatim coordinates
- Examples:

recently acquired by SC DNR. Liberty Hill Tract; 34.473800N, -80.859338W; elev. 405'.



Latitude	Longitude
34.4738	-80.859338

Road, 2 air miles east of downtown Antioch. 34.2365° -80.4387°.



Latitude	Longitude
34.2365	-80.4387

Asplenium platyneuron, at riprap adjacent to gravel road; Ephriam Branch along Old Edgefield Road, 6.1 air miles ESE of downtown Kirksey; 33.993039° -81.942936°.



Latitude	Longitude
33.993039	-81.942936

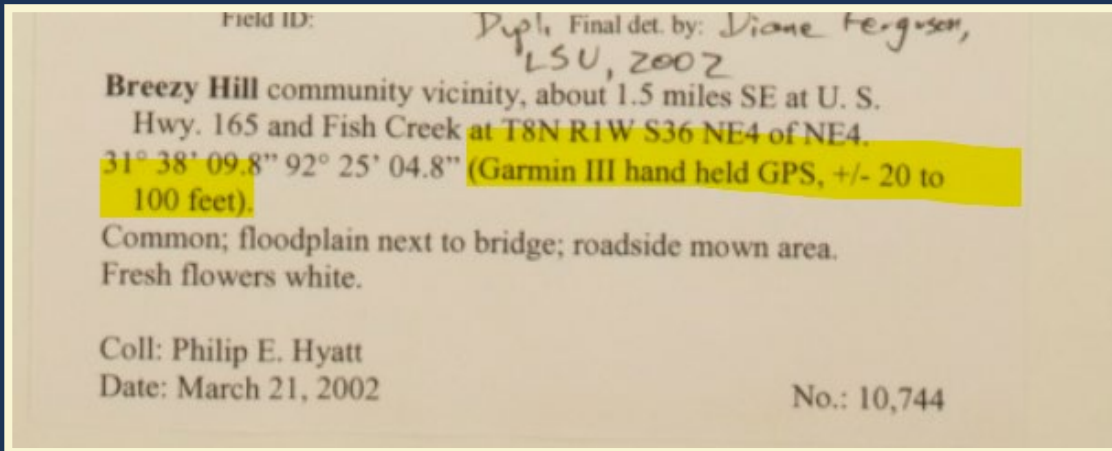


Uncertainty

- The accuracy of the georeference coordinates in meters (numeric value only). This is measured as the radius of a circle where the true point would be found if known. If coordinates are collected using a GPS, then the accuracy would be the error found within the GPS unit (usually around 10m). (from Symbiota Docs)
- Most labels won't have this
- Only enter if it is provided on the label
- It should be located near the coordinates
- If a range is provided, choose the higher end of the range

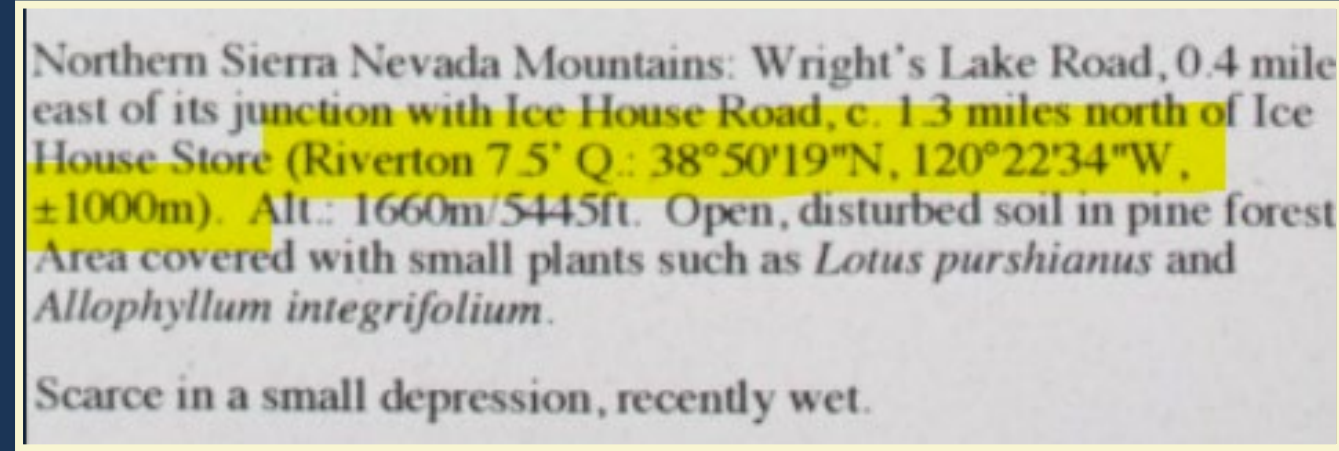


Uncertainty: Examples



The uncertainty is a range between 20 to 100 feet. Use the maximum for the uncertainty. Also, it needs to be converted to meters, so the uncertainty for this label is 30 meters.

Uncertainty: 30



The uncertainty is provided: 1000 meters.

Uncertainty: 1000



Datum

- Spatial reference system of the coordinates
- Mainly important for coordinates collected by the collector because depending on their method and equipment there can be a measurable difference between NAD27, NAD83, and WGS84
- If it's provided on the label, enter it in the field, otherwise leave blank



Datum: Examples

Collected along powerline cut in wet depression (NAD 27
UTM 17 - 659993E & 3735280N)
Bert Pittman 08230606 23 August 2006
Ann Darr 3036
Kathy Boyle
South Carolina Heritage Trust Program

Datum: NAD27

Castilleja miniata Douglas ex Hook.

Shoshone Co., Idaho: Off of Interstate Hwy. 90 at Exit
64 - Golaconda District, ca. 4 miles east of Wallace.
Elev. 894 m.

N 47.47413° W 115.87053° WGS84

Bracts scarlet.

Associated taxa: *Leucanthemum*, *Trifolium*, *Juncus*,
Abies, *Pinus*, *Phleum*.

Richard R. Halse 8290

31 July 2011

Datum: WGS84

Stachys pilosa Nutt.

BOONE COUNTY: T84N R25W SW ¼ Sec. 30. Elev. 346
m, 42.051580°N Lat., -93.811186°W Long. (NAD83).

Located 3.50 miles east, southeast of Boone along RR right of
way on north side of 210th Street. Wet, prairie remnant.
Growing in association with *Asclepias incarnata*, *Liatris*
pycnostachya, *Silphium laciniatum*, *Helianthus*
grosseserratus, *Verbena hastata*, *Vernonia fasciculata*, and
Carex spp. Specimen sampled near peak flowering.
Pubescence on stems and leaves. Localized population.

Datum: NAD83



Verbatim Elevation

- Verbatim elevation is the elevation provided by the collector on the label.
- Collectors will sometimes refer to elevation as “Elev” which is short for elevation or “Alt” which is short for altitude.
- They may provide the elevation in meters or feet and might provide a range instead of a single number.

270, ROCK BLUFF 7.5 QUAD., NEW, NEW, NEW, SW
30°36'15" N; 84°55'13" W. Elev. 60-170 ft

POLYGALACEAE
Polygala mariana Mill.
Horry County: Waccamaw National Wildlife Refuge, US501 Tract, South side of US501, 950 m SE of Waccamaw River, just SE of Conway. Powerline easement in floodplain swamp forest, in gravel parking lot. 33.826088°N, -79.035836°W. Elevation: 7 m.
Keith A. Bradley #8853 8/3/2018
A.C. MOORE HERBARIUM (USCH)
UNIVERSITY OF SOUTH CAROLINA

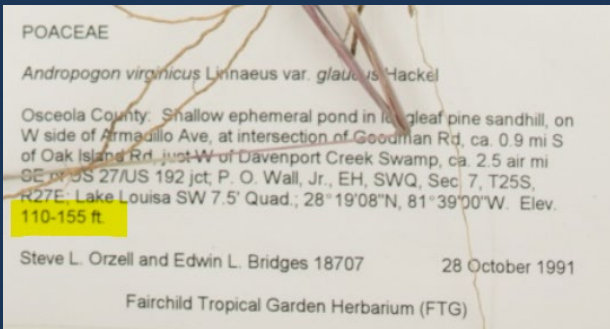
POACEAE
Andropogon virginicus Linnaeus var. *glaucus* Hackel
Osceola County: Shallow ephemeral pond in leaf pine sandhill, on W side of Armadillo Ave, at intersection of Goodman Rd, ca. 0.9 mi S of Oak Island Rd, just W of Davenport Creek Swamp, ca. 2.5 air mi SE of US 27/US 192 jct, P. O. Wall, Jr., EH, SWQ, Sec 7, T25S, R27E, Lake Louisa SW 7.5° Quad.; 28°19'08"N, 81°39'00"W. Elev. 110-155 ft.
Steve L. Orzell and Edwin L. Bridges 18707 28 October 1991
Fairchild Tropical Garden Herbarium (FTG)

Sierra Nevada Mountains: Wright's Lake Road, 0.4 mile east of its junction with Ice House Road, about 1.3 miles north of Ice House (Riverton 7.5° Q: 38°49'51"N, 120°22'50"W, ±1000m). Alt.: 1654m/5425ft. Large meadow in a drying depression, surrounded by a rocky, shrubby area and finally pine forest.
Uncommon; wet roadside ditch.
G.K. Helmkamp 15131 08 Jul 2009
w/ Amy Barnes

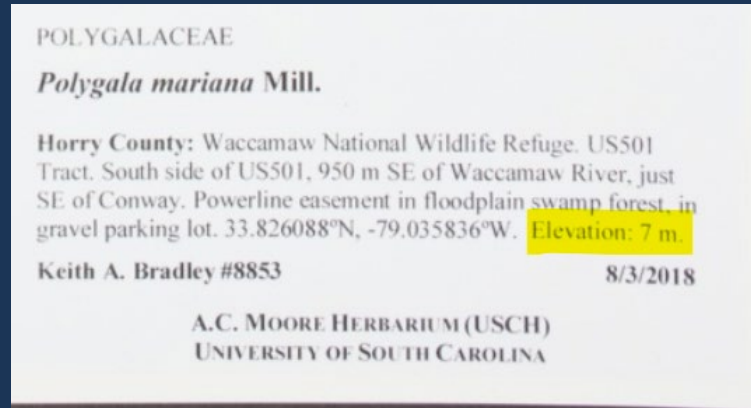
immediately below head, but open to ± closed *Pinus jeffreyi* grading to *Abies concolor* coniferous forest nearby. In moist parts of mid-drainage. Perennial, uncommon.
ELEV: ~6200 ft.
39°18'39"N; 120°10'0"W July 17, 1999
UTM: 10S, 4355113 N, 0744264 E
G.F. Hrusa 15151
J. Glazner
Specimens Courtesy of

Verbatim Elevation: Examples

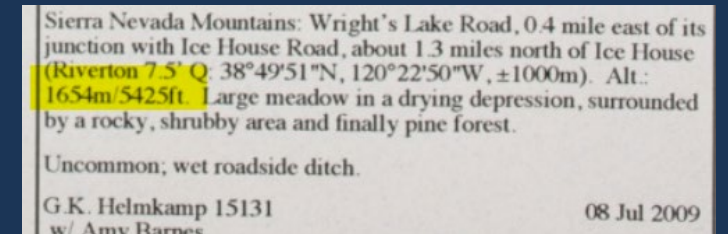
- Write the elevation as it appears into the verbatim elevation field.
- It's okay if it does not carry over.



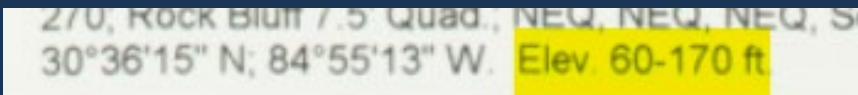
Verbatim Elevation: 110-115 ft.



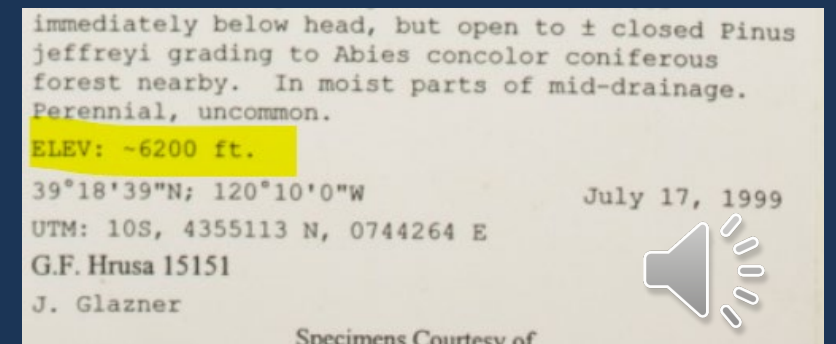
Verbatim Elevation: 7 m



*Verbatim Elevation:
1654m/5425ft*



Verbatim Elevation: 60-170 ft



Verbatim Elevation: ~6200 ft.

Elevation Not Letting Record Save

- There is a known issue in which Specify put the converted elevations into the maximum elevation, but SERNEC will not the record be saved. A minimum elevation only can be saved but not a maximum elevation only.
- If this happens, empty the elevations fields, and write the verbatim elevation into the verbatim elevation field and save.

Locality ?
Ocmulgee Mounds National Historical Park

Security: Security not applied ?

Latitude Longitude Uncertainty ? Datum ?
32.8378 -83.6004 20 C F

Elevation in Meters ? Verbatim Elevation ? Depth in Meters ?
-284 <<< <<<

This will cause an error that will not let you save the record.

U.S. Moore Herbarium
University of South Carolina

Cyperaceae

BIBB COUNTY: Ocmulgee National Monument: 1.7 miles east of downtown Macon; 32.8431°N -83.6040°W. 368' elev. north side of main headquarters building on Ocmulgee National Park Road; lawn in partial shade of loblolly pines; in clumps, from stout rhizomes.

John B. Nelson 23646 4 IV 2003

Security: Security not applied ?

Latitude Longitude Uncertainty ?
32.8378 -83.6004 20

Elevation in Meters ? Verbatim Elevation ?
112 - <<< 368'

Verbatim Depth

- Depth of the water that the plant was collected in
- Depth is the distance from the surface of the water to the bottom of the body of water.
- The verbatim depth is the depth as it is written on the label.

at S margin of high pond; in area with 4"-6" of standing water and no live or dead

BARNWELL COUNTY: Frequent patches rooted in about 1m of quiet water, branches totally submersed; with *Nymphaea odorata*,

growing mostly in sunny areas. The water was flowing and often is, but it is very shallow. Average depth in the area of the collection is approximately one foot; immediately east of (behind) the North Fifty-two Square Shopping Center



Verbatim Depth: Examples

at S margin of high pond; in area with 4"-6"
of standing water and no live or dead

Verbatim Depth: 4"-6"

BARNWELL COUNTY: Frequent patches rooted in about 1m of
quiet water, branches totally submersed; with *Nymphaea odorata*,

Verbatim Depth: 1m

growing almost exclusively in sunny areas. The water was
flowing and often is, but it is very shallow. Average depth in the
area of the collection is approximately one foot; immediately
east of (behind) the North Fifty-two Square Shopping Center

Verbatim Depth: one foot



Miscellaneous Fields

— Misc —

Habitat ?

Substrate ?

Associated Taxa ?

Description ?

Notes (Occurrence Remarks) ?

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

Phenology ? Establishment Means ? Cultivated/Captive

We will address:

- Habitat
- Substrate
- Associated Taxa
- Description

- Phenology



General Formatting

- All fields should be treated as “sentences” **EXCEPT** for Associated Taxa.
- Capitalize the beginning and add punctuation.
- Repetition is *okay*. There are some parts of the label that can be in multiple fields.
- Ex. Substrate comments can go in both habitat and substrate
- If you know what the abbreviation is write it out in brackets, *especially* if it is not obvious.
 - Ex. Found along RR. -> Found along RR [railroad tracks].



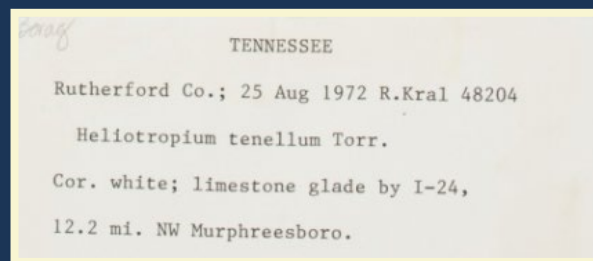
Habitat Data Standards

- Full sentences.
- Capitalize the beginning, use punctuation, and include a period at the end.
- Repetition is *okay*. There are some parts of the label that can be in multiple fields.
- If you know what the abbreviation is write it out in brackets, *especially* if it is not obvious.

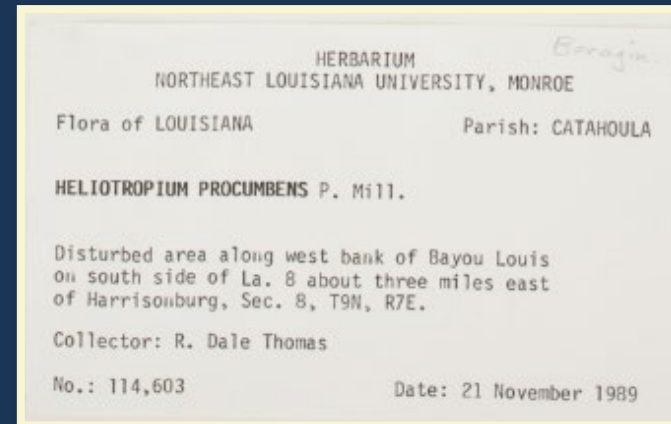


Habitat

- The Habitat field describes the *collection site*.
- Ex. Shaded woods, moist bog, clear-cut field, roadside, etc.
- **We *also* include associated taxa in this field as well as the distribution and substrate.**
- Some labels, such as algae, may have the air temperature, water temperature, and salinity. These measurements go in the Habitat field as well.



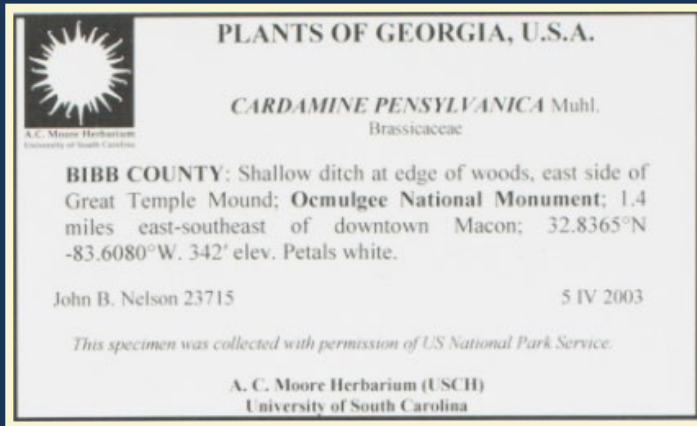
Habitat ?
Limestone glade.



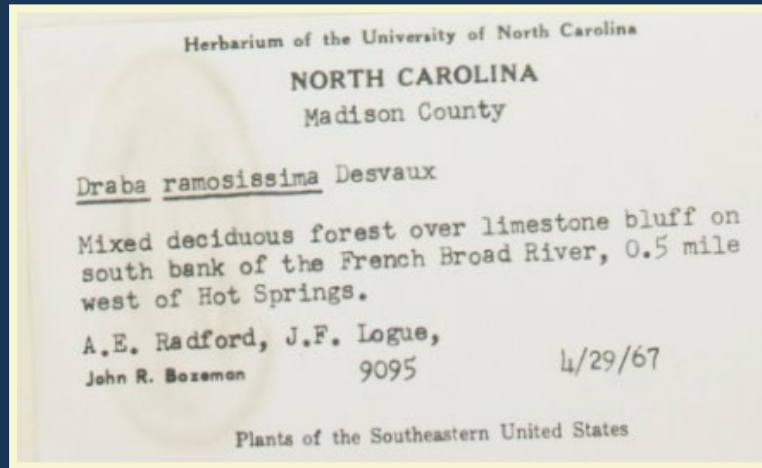
Habitat ?
Disturbed area along west bank of Bayou Luis.



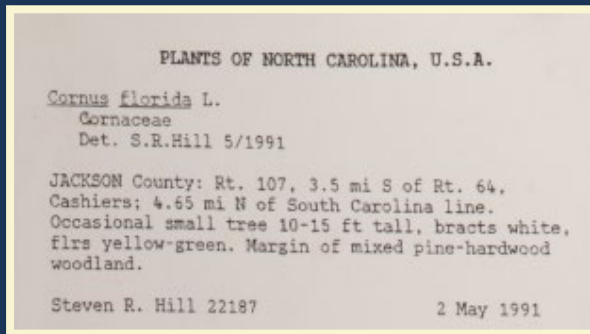
Habitat: Examples



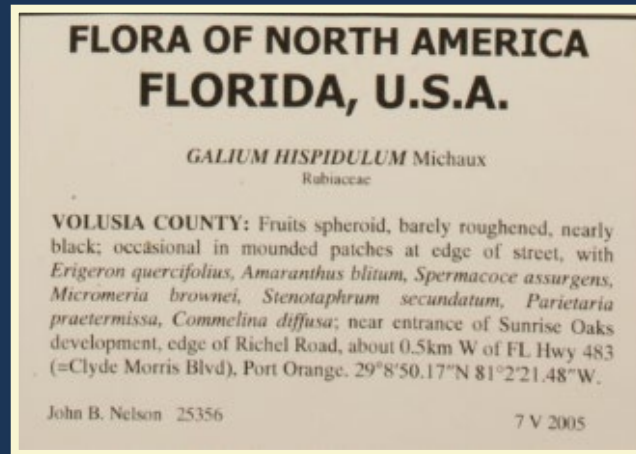
Habitat ?
Shallow ditch at edge of woods, east side of Great Temple Mound.



Habitat ?
Mixed deciduous forest over limestone bluff on south bank of the French Broad River.



Habitat ?
Margin of mixed pine-hardwood woodland.

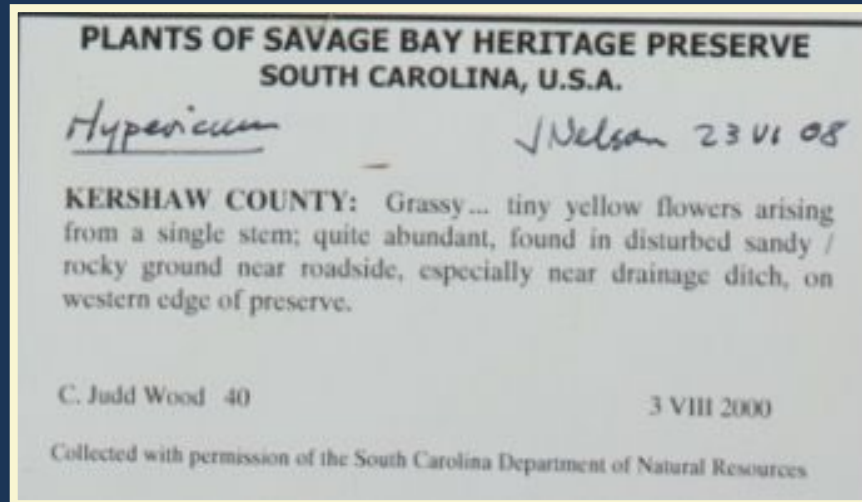


Habitat ?
Occasional in mounded patches at edge of street, with Erigeron quercifolius, Amaranthus blitum, Spermacoce assurg

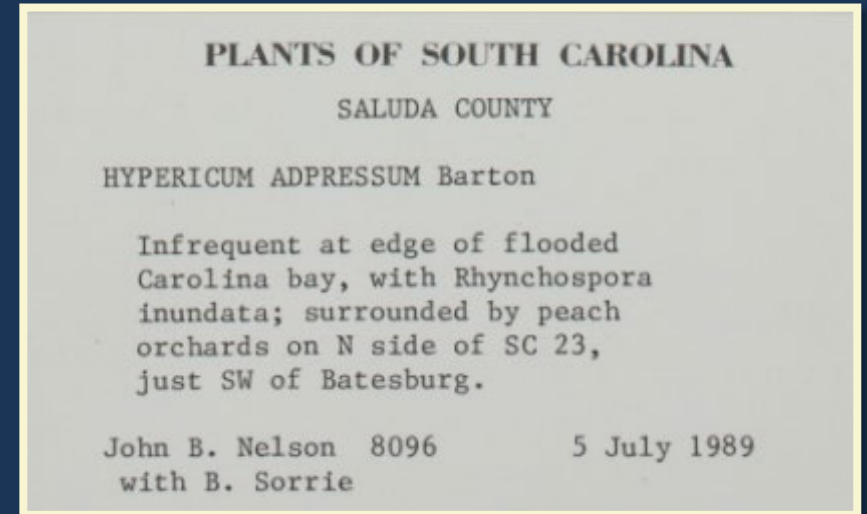
The entry for the Habitat field is cut off in this screenshot due to the box length. The full entry is: "Occasional in mounded patches at edge of street, with Erigeron quercifolius, Amaranthus blitum, Spermacoce assurgens, Micromeria brownei, Stenotaphrum secundatum, Parietaria praetermissa, Commelina diffusa."



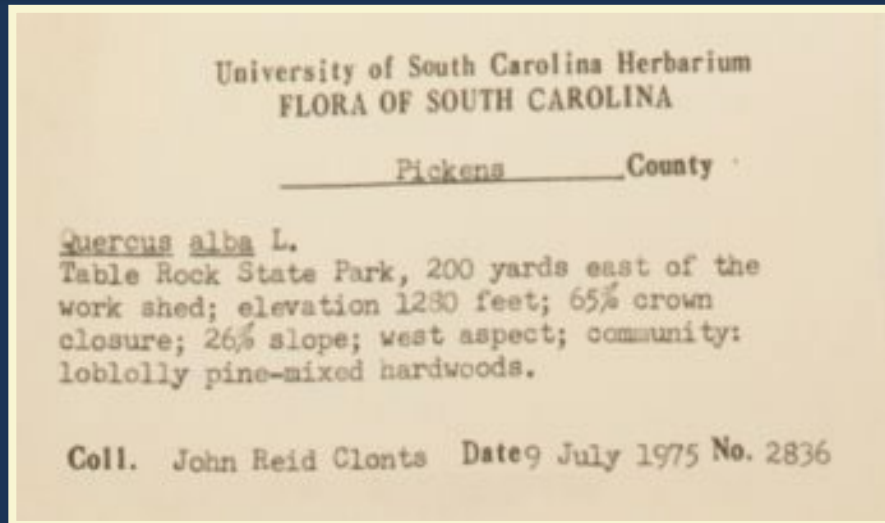
Habitat: Examples



Habitat ?
Found in disturbed sandy / rocky ground near roadside, especially near drainage ditch, on western edge of preserve.



Habitat ?
Infrequent at edge of flooded Carolina bay, with *Rhynchospora inundata*; surrounded by peach orchards.



Habitat ?
200 yards east of the work shed; elevation 1280 feet; 65% crown closure; 26% slope; west aspect; community: loblolly pine-mixed hardwoods.

↙ The entry for the Habitat field is cut off in this screenshot due to the box length. The full entry is: "200 yards east of the work shed; elevation 1280 feet; 65% crown closure; 26% slope; west aspect; community: loblolly pine-mixed hardwoods."



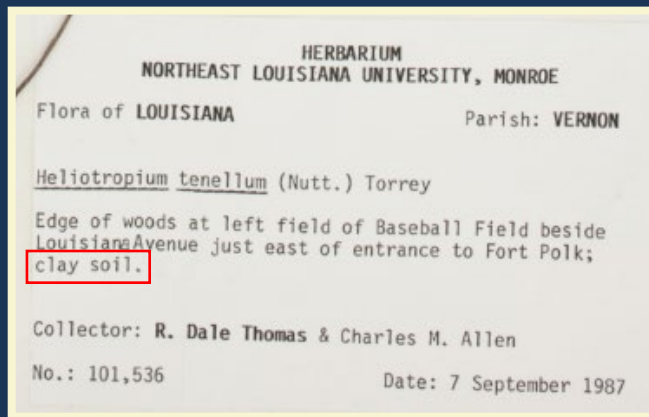
Substrate Data Standards

- Full sentences.
- Capitalize the beginning and add punctuation.

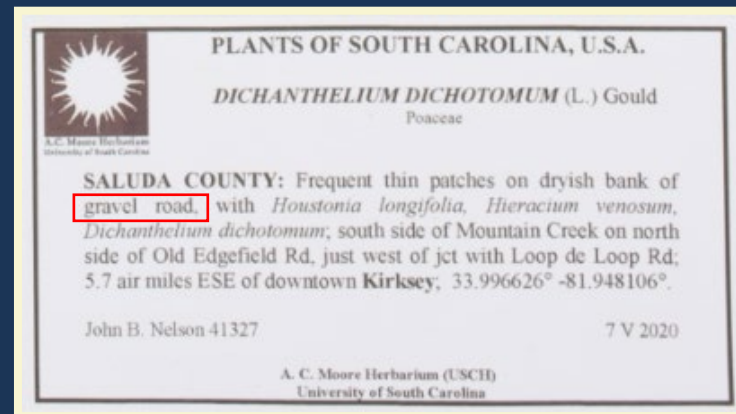


Substrate

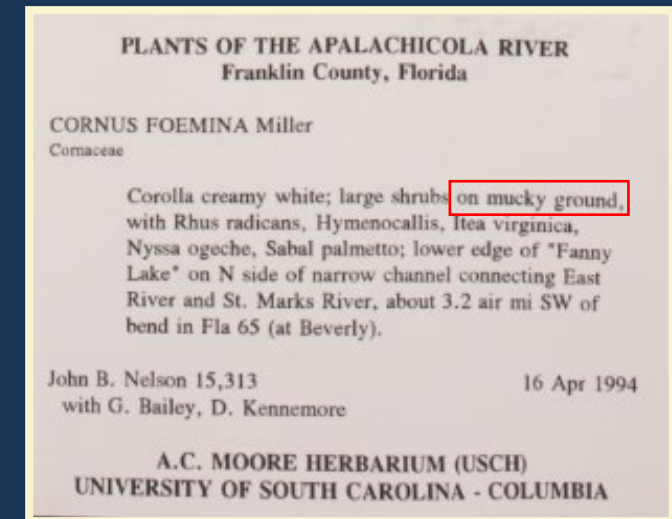
- We include the full description of the substrate, such as: Iredell soil, moist sand, basic soil, acidic, nutrient-rich, poor, etc.
- This field is also written as a sentence, with capitalization and a period at the end.



Substrate ?
Clay soil.



Substrate ?
Gravel road.



Substrate ?
Mucky ground.



Substrate: Examples

PLANTS OF WEST VIRGINIA
FAYETTE COUNTY

CORNUS FOEMINA Mill.

Berries gun-metal blue; occasional shrubs on wet sand at rafter's pull-out place on W side of New River, just S of WV 25 and S of Thurmond.

John B. Nelson 9562 7 Aug 1990

UNIVERSITY OF SOUTH CAROLINA HERBARIUM

Substrate ?

Wet sand.

PLANTS OF MISSISSIPPI

Richardia scabra L.

PEARL RIVER CO.: SE of Poplarville, 4.3 mi. SE jct of Hwys I-59 and MS 53, open pastures to N of Hwy MS 53, on sandy to silty loam soil.

October 29, 1998
Charles T. Bryson 16908
Blair Sampson, Don Sudbrink

Substrate ?

Sandy to silty loam soil.

WEEDS OF SOUTH CAROLINA
Newberry County

EUPHORBIACEAE
Phyllanthus amarus Schum. & Thon.

Growing under middle workbench in gravel and soil mixture, greenhouse #10. Carter & Holmes Orchids, Newberry.

David F. Adcock 24 30 Jan 1993
with J.B. Nelson, and D.E. Kennemore

A.C. MOORE HERBARIUM (USCH)
UNIVERSITY OF SOUTH CAROLINA -COLUMBIA

Substrate ?

Gravel and soil mixture.

HERBARIUM
NORTHEAST LOUISIANA UNIVERSITY, MONROE

Flora of ALABAMA County: SUMTER

Houstonia lanceolata (Poir.) Britt.
(*Hedyotis purpurea* (L.) Torr. & Gray)
var. *calycosa* (Gray) Fosb.

Thin soil on chalky substrate between Epes and Boligee Exits on I-59 and I-20 south of Tuscaloosa.

Collector: R. Dale Thomas and Cecil Slaughter
No.: 104,196 Date: 1 May 1988

Substrate ?

Thin soil on chalky substrate.

Cyperaceae

PLANTS OF FLORIDA, USA

Carex kraliana Naczi & Bryson

GADSDEN CO.: Frequent with *C. bromoides*, *C. corrugata*, *C. digitalis*, and *C. oxylepis* in loose mucky loam of light gap in beech, magnolia, ash, hickory, and maple upper floodplain woods of Willacoochee Creek, ca. 5 air mi NE of Quincy. Lat. 30.64630 N, Long. 84.52054 W.

7 April 2009
Loran C. Anderson no. 24,384 w/ Wilson Baker
R. K. Godfrey Herbarium (FSU)

Substrate ?

In loose mucky loam.

PLANTS OF THE ATLANTIC COASTAL PLAIN
Ware County, Georgia, U.S.A.

PINCKNEYA BRACTEATA (Bartram) Rafinesque
Rubiaceae

Bracts bright pink or somewhat yellowish-whitened; erect shrubs, abundantly blooming, and very conspicuous boggy ground at woods edge and within portion of sphagnous ditch, with *Liriodendron tulipifera*, *Acer rubrum*, *Hypericum denticulatum*, *Boehmeria cylindrica*, *Lygodium japonicum*; W edge of US 1/US 23 ("Alma Hwy") on N side of Waycross, 0.1 mi N of Dryden Creek.

John B. Nelson 20449 25 V 1999
with D. E. Kennemore, Jr.

Substrate ?

Boggy ground.



Associated Taxa Formatting

- Scientific names only
- Only those from the dropdown list
- Do not write “sp.” or “spp.”
- Do not convert common names into scientific names from habitat and add them to associated taxa
- No period at the end
- Write out abbreviated Genus names (ex. *Aster dumosus*, *A. pilosus* = *Aster dumosus*, *Aster pilosus*).



Associated Taxa

- Associated Taxa are those that are found along with the collected specimen within the habitat.

*Not all associated taxa may be included in the same sentence or part of the label – read the label carefully to be sure you have entered everything. See the next few slides for examples.

- May include a genus and species, a genus only, or common names in place of scientific names. Scientific names are commonly written in italics with the genus capitalized.

* If you encounter common names, these are *not* included in the Associated Taxa field.

- When you begin typing a scientific name, a drop-down list will formulate with suggestions.
- You can select the correct scientific name from the list to avoid spelling errors but be sure that you ***double check afterwards*** that you selected the correct name!

Associated Taxa ?

- Aster
- Aster abatus
- Aster abyssinicus
- Aster acadiensis
- Aster acris
- Aster acuminatus
- Aster acuminatus var. acuminatus
- Aster acuminatus var. magdalenensis

Associated Taxa ?

- Aster albanicus
- Aster albescens
- Aster albescens var. levissimus
- Aster alpicola
- Aster alpigenus**
- Aster alpigenus subsp. alpigenus
- Aster alpigenus subsp. andersonii



Abbreviated Genus

- Collectors will sometimes abbreviate the genus
- Only done when multiple of the genus is mentioned
- Look for the preceding scientific name to figure out the genus
- Write the abbreviated name as it appears in Habitat
- Spell out the genus in associated taxa

Habitat Open mown roadsides with Kummerowia sp., Rubus sp., Lespedeza cuneata, Andropogon virginicus, Aster dumosus, **A. pilosus**, Chrysopsis mariana, Lobelia puberula, Solidago erecta, Cyperus strigosus, Microstegium vimineum, Apios americana, Eupatorium spp., Boehmeria cylindrica. Common in a number of colonies. Not found along tributary creeks.

Habitat ?

via sp., Rubus sp., Lespedeza cuneata, Andropogon virginicus, Aster dumosus, **A. pilosus**, Chrysopsis mariana, Lobelia

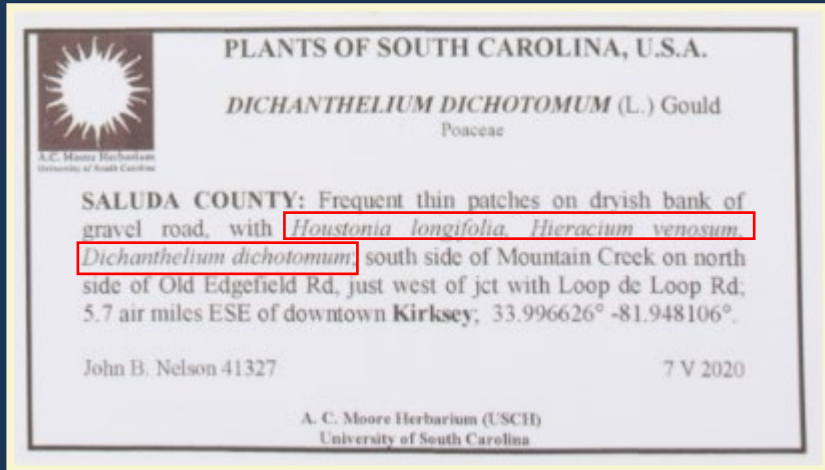
Substrate ?

Associated Taxa ?

Kummerowia, Rubus, Lespedeza cuneata, Andropogon virginicus, Aster dumosus, **Aster pilosus**, Chrysopsis mariana, Lobelia puberula, Solidago erecta, Cyperus strigosus, Microstegium vimineum, Apios americana, Eupatorium, Boehmeria cylindrica

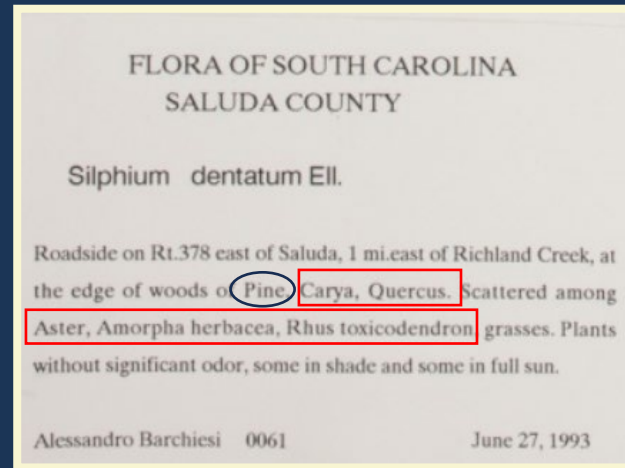


Associated Taxa: Examples



Associated Taxa ?

Houstonia longifolia, *Hieracium venosum*, *Dichanthelium dichotomum*



Associated Taxa ?

Carya, *Quercus*, *Aster*, *Amorpha herbacea*, *Rhus toxicodendron*



*Ignore "Pine" for the Associated Taxa field because Pine is a common name, not scientific.

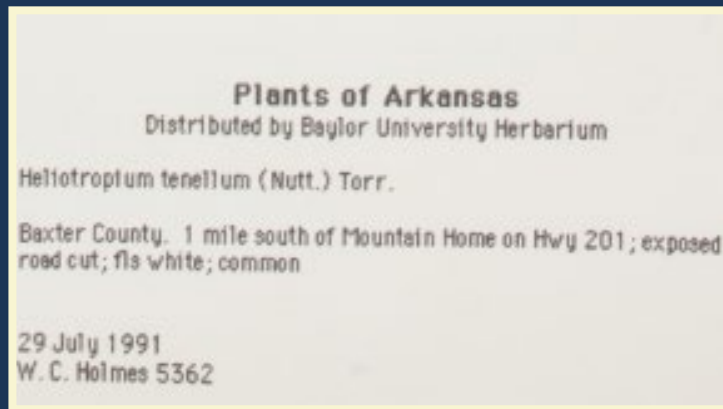


*If you come across abbreviations that you are unfamiliar with, this may be helpful:

https://www.nybg.org/bsci/brit/pdf/Brittonia_Abbreviations.pdf

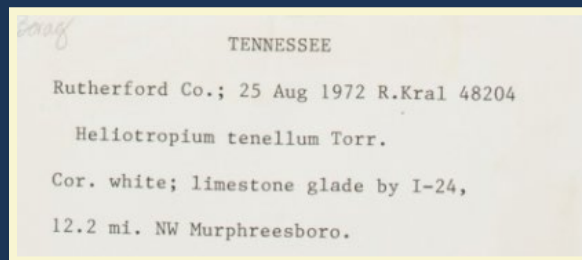
Description

- The Description field is used to describe the specimen's physical characteristics.
 - Numerical values may also be included, such as the height of the plant.
 - ***If abbreviations are used, write out the meaning in brackets.**
 - Ex. dbh [diameter at breast height] 2' [feet].



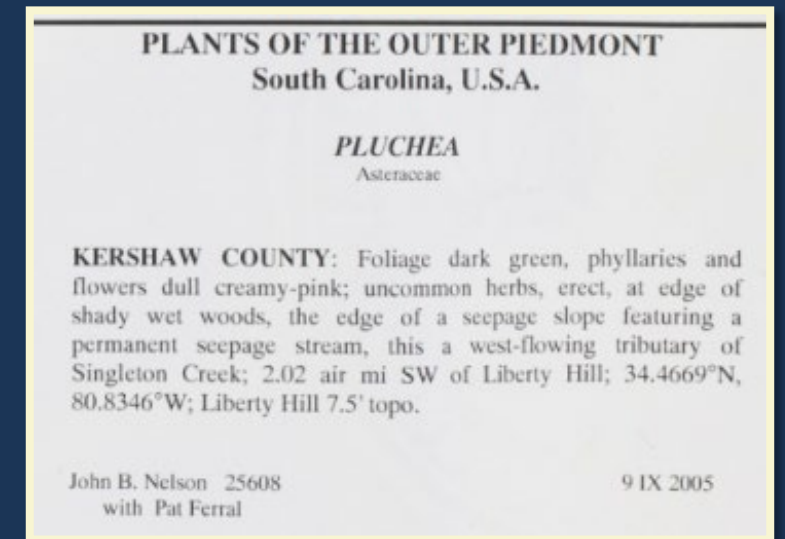
Description ?

Fls [flowers] white; common.



Description ?

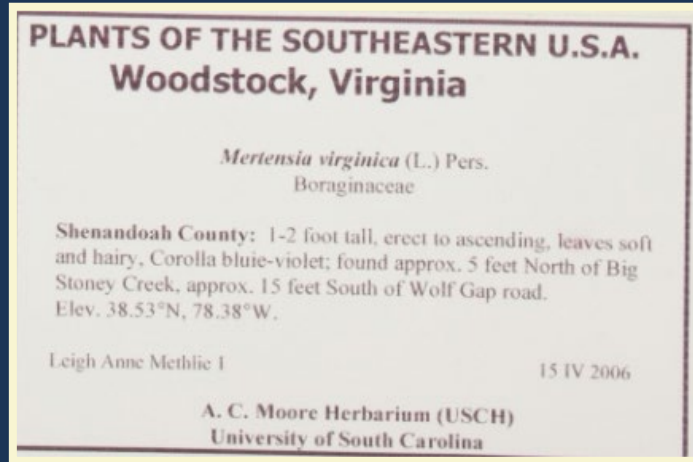
Cor. [corollas] white.



Description ?

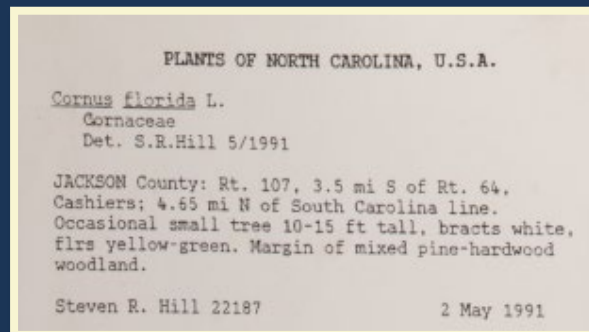
Foliage dark green, phyllaries and flowers dull creamy-pink; uncommon herbs, erect

Description: Examples



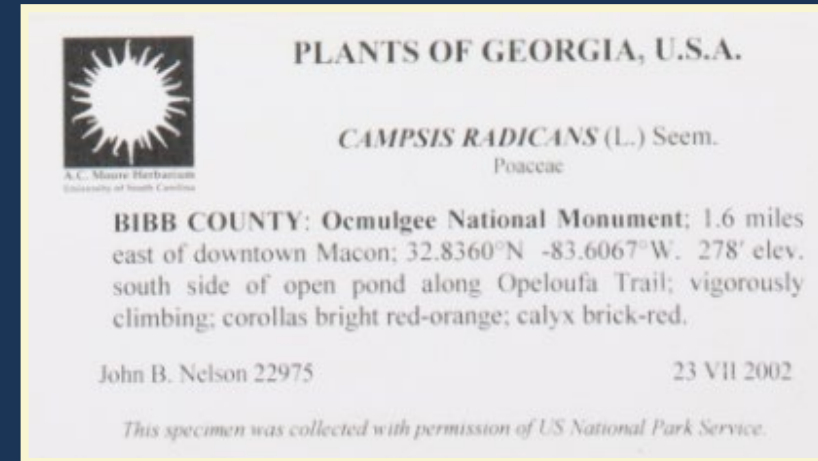
Description ?

1-2 foot tall, erect to ascending, leaves soft and hairy. Corolla blue-violet.



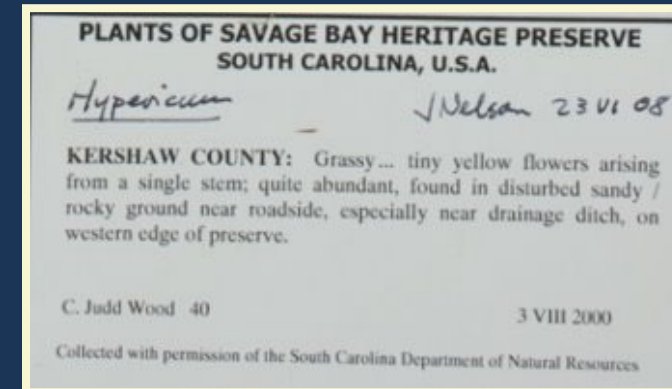
Description ?

Occasional small tree 10-15 ft tall, bracts white, flrs [flowers] yellow-green.



Description ?

Vigorously climbing; corollas bright red-orange; calyx brick-red.



Description ?

Grassy... tiny yellow flowers arising from a single stem; quite abundant.



Phenology

- We currently leave this field blank unless the data processor is **certain** of the plant's phenology or if it was specified by the collector in their description.
- Darwin Core:

Phenology (Reproductive Condition): The reproductive stage the specimen is in. Typically used for plant and fungal collections.

Ex: flower, fruit, sterile

See Darwin Core's [reproductiveCondition](#)

*USCH mainly uses "flowering," "fruiting," and "reproductive."

*More than one descriptor is also acceptable

reproductiveCondition

Identifier	http://rs.tdwg.org/dwc/terms/reproductiveCondition
Definition	The reproductive condition of the biological individual(s) represented in the dwc:Occurrence.
Comments	Recommended best practice is to use a controlled vocabulary. This term has an equivalent in the dwciri: namespace that allows only an IRI as a value, whereas this term allows for any string literal value.
Examples	non-reproductive pregnant in bloom fruit-bearing

