



South Carolina Herbaria Data Entry Standards

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

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Forward

This resource was written and compiled by Csilla Czakó 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 Xylologist Dr. Mihaly Czakó, 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 Curator 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".

Field Priorities/Skeletal Data

When entering skeletal data these are the fields that we suggest be entered at 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

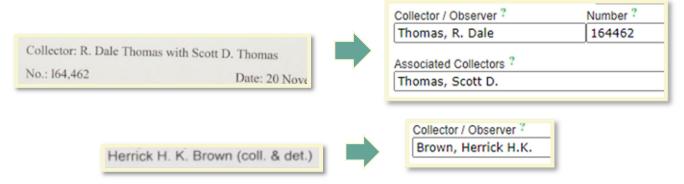
We will address:

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

Catalog Number ?	Tag Name (optional) ?	Additional Identifier Value	
			+
Collector / Observer ?	Number ? Date ?	Duplicates Auto search	
Associated Collectors ?		Verbatim Date ?	•∕
Exsiccati Title			Number

Collector/Observer

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

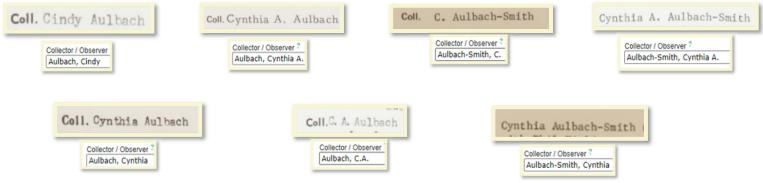


- Write the name as it appears on the label. Do not try to put the collector's full unabbreviated name.
- Only list one person in this field.
- Additional collectors go in the Associated Collectors field.
- If the label lacks a collector completely, the Collector / Observer is entered as "Unknown"
-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

Collector / Observer ?	Number ?
Unknown	s.n.

• *This is okay*, and you should still enter the name in the same format as before.

Collector Name Examples



Collector / Observer Number

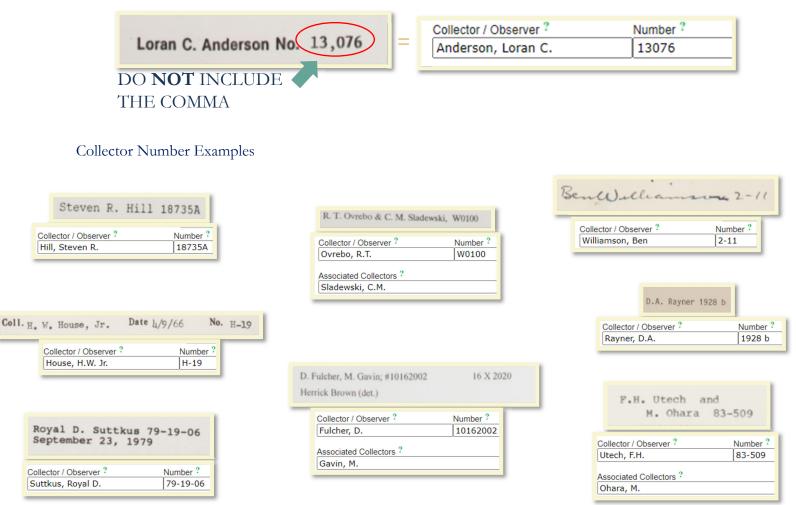
- A number is typically included in specimen label next to the collector's name this goes into the Number field immediately after the Collector / Observer field.
- If you come across a label that does not include a collection number, the Number field is entered as "s.n."



• 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 with the exception of commas!

Uotila Dartti 43543a		Collector / Observer ?	Number ?
Uotila, Pertti 43543a	=	Uotila, Pertti	43543a

• Higher numbers may include commas, such as shown in the top example, however, commas should **NOT** be entered in the Number field.¹



¹ It is not possible to search for a collector number with a comma, so it is best practice to simply not include it. In general we try to encourage collectors not to use them.

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."



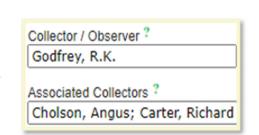
- Follows the same format as the Collector/Observer field
 - Last Name, First Name Middle Initial

Ex. John B. Nelson with Keith A. Bradley

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

John B. Nelson 36141 with Keith Bradley



Collector / Observer ?

Associated Collectors ?

Bradley, Keith A.

Nelson, John B.

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 ?

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

Latest Identification Fields

Latest Identification	
Scientific Name ? Author ?	
ID Confidence ? Undefined V Identification Qualifier ?	
Family ?	
Identified By ? Date Identified ?	*⁄

We will address:

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

Scientific Name

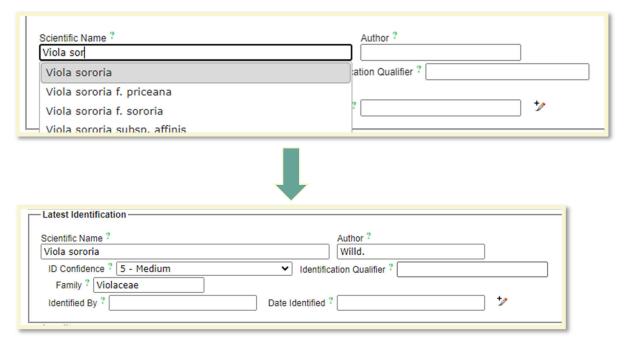
Enter the scientific name as it appears on the label.

- 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 ?	AL
Carex	J ۲
Carex	atio
Carex abacta	
Carex abbreviata	۴L
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!



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.

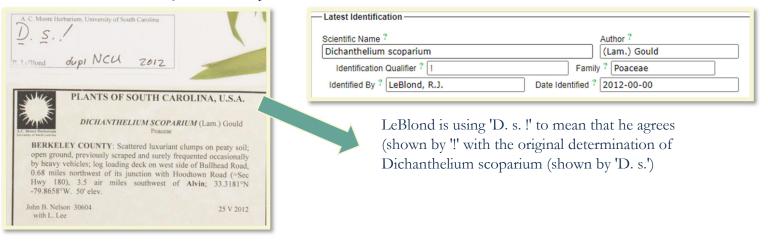
• Identification qualifiers may appear between the Genus and specific epithet, after or before the scientific name, or without apparent context.

Latest Identification	
Scientific Name ?	Author ?
	tion Qualifier ?
Family ? Date Identified ?	+2
Date Identified -	·

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 wrote²
- 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)

Identification Qualifier Examples



² The specimen then should be given to an expert to review the issue.



Identification Qualifier: Special Case

best guess Dichanthelium. (Ashe) leBlon. R.J. LeBlond 29 Mar 2017

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.



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

Mistakes³ **do** happen, and the data that is physically listed on the specimen label may be different from what SERNEC auto-fills.

For this issue, we highly recommend keeping an Excel sheet for these records⁴ 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

³ This most often occurs in copy-paste errors by the collector when they create their labels.

⁴ The specimen then should be given to an expert to review the issue

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."

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

Identification Remarks: 7

Original det. on label.

Date Identified ?

s.d.

• If the determiner *is* identified on the label, you should *still* include "Original det. on label." in the Identification Remarks.

Date Identified

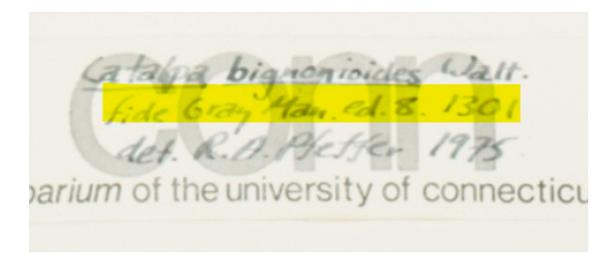
- If no date is included for when the identification was made, write "s.d." into the Date field.
- If a date is provided, follow the same format as used for the collection date, i.e., YEAR-MONTH-DAY
 - The same standards also apply if the provided date is incomplete, such as May 2009

 which is then written as 2009-05-00, with zeros as place holders for missing
 information.

University of South Carolina Herbarium USCH	Scientific Name ? Author ?
= Didymoglossum p. (Gray)	Didymoglossum petersii
Cope.	Identification Qualifier ? Family ? Hymenophyllaceae
John B. Nelson 7 7 2018	Identified By ? Nelson, John B. Date Identified ? 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

EXAMINED FOR: THE GUIDE TO THE VASCELAR FLORA OF WILLIAM B. UMSTEAD STATE PARK uW Annotated by: Charles L. Kimmel January 2016. M.S. Thesis. North Carolina State University (NCSC), Raleigh, N.C. PLANTS OF WILLIAM B. UMSTEAD STATE PARK

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 Remarks⁵

⁵ The Taxon Remarks is not functional at the time of writing this document August 2023.

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."



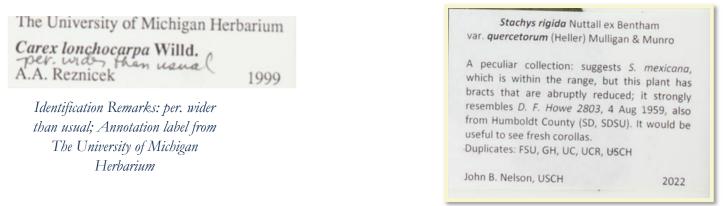
Identification Remarks: Original det. on label. Presumed to be determined by collector.

Rudbeckia heliopsidis Torr. & A. Gray L. Urbatsch, 2003 LOUISIANA STATE UNIVERSITY (LSU) BATON ROUGE

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: 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.

Projects the Annotation was From

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

EXAMINED FOR A REVISION OF GRATIOLA L.

Bacopa caroliniana (Walt.) Robinson

Dwayne Estes The University of Tennessee (TENN)

25 July 2007

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

Taxon Remarks

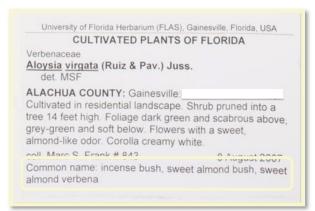
• The Taxon Remarks field is not being used currently because it is tied to the record not to individual determinations

Taxon Remarks Include:

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

	Hedychium × Dr. May'
	Date: 0/27/10
	Collector: Ethan Kaufman
*	Family! Zingiberneeve All parts smell heavily of "Cultury"
	gluger, especially The roots.

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 ?
Locality ?		l	I	
Security: Security not	applied 🗸 ?			Deactivate Locality Lookup
Latitude Longitud	de Uncertainty ?	Datum ?	Verbatim Coordinates ?	
Elevation in Meters ?	Verbatim Elevation ?	Depth in Meters ?	Verbatim Depth ?	

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.

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

	Herbarium Depa	OF SOUTH of Clemso rtment of South Car	on Univ Botany	versity
Potentill	a canaden	sis L.		
Sw) mi. E. o amp forest als yellow	t adj. to W	o. line ateree	e on US 76/378. river.Roadside
Collecto	Procar	No.	55	Date <u>3/30/1984</u>
	Cumton	Identified	d D.	J.C.B.

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

n° 15939 Chenopodium album L. var. album f. glomerulosum (A. Ludwig) Arlt & Jüttersonke [Cf. K. Arlt & B. Jüttersonke, Feddes Rep., 100 : 1-69, 1989]
Zellendorf (Germany, Land Brandenburg, Kreis Jüterbog), alt. 90 m, Zea mays field, treated with herbicides, August 23th, 1990.
Leg. K. Arlt, B. Jüttersonke, H. Kraft, Th. Raus & H. Scholz
Det. K. Arlt & B. Jüttersonke

19 | P a g e

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.

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



UNIVERSITY OF SOUTH CAROLINA - COLUMBIA

State/Province: North Carolina

State/Province: South Carolina

SOUTH CAROLINA HERITAGE TRUST PROGRAM

State/Province: Kentucky

BEREA COLLEGE HERBARIUM

BEREA, KENTUCKY, U.S.A.

County

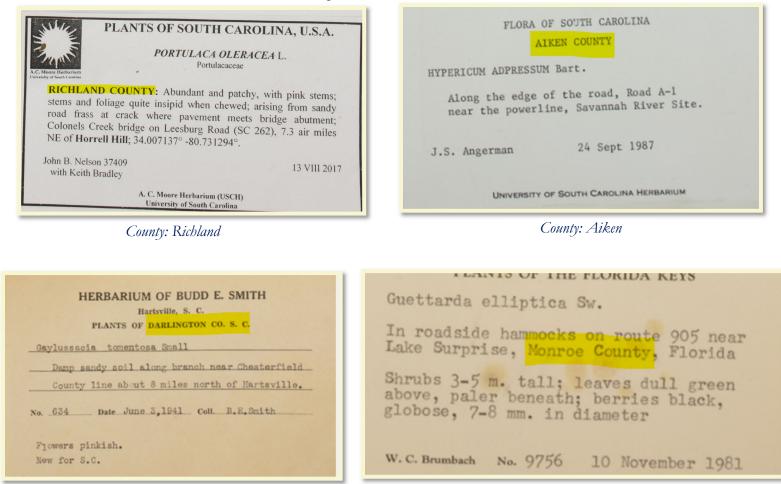
Definition: Third Level Administrative Subdivision or the county that the herbarium specimen was collected in.

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.

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





County: Monroe

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.

Ex Herbarium County gh D. Wilson - TAMU Eatt. 1981 IVES HER Greenville, South Carolina County Jaurens State _ S.C. Family Chenopoliaceae Specimen County henopodium ambrostoideo I Jarge weedy pasture 5-30-46 a little more than one mile south of Jamens - Union Lighway Coll by C. Leland Rodge Coll no_ 839 Date July 7, 1983

Municipality

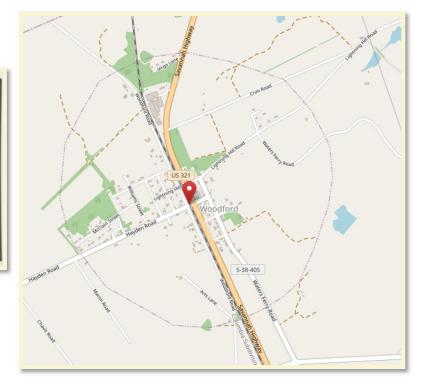
Definition: Fourth Level Administrative Subdivision or the city that the specimen was collected in.

- 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.

WHE	PLANT	IS OF SOUT	TH CARO	LINA, U.S.A.
And the second		IPOMOEA I Con	HEDERIFO volvulaceae	ULLA L.
deep, brig gravelly g	ght red; abu round at RR	indant twinin	g/sprawling g of Hayder	l-orange, the limb vinery on open n Road, downtown
John B. Nels	on 43631			13 VIII 2022
	1	A. C. Moore Herba University of Sou		



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.

PLANTS OF SOUTH CAROLINA, U.S.A.
A. Marer He Finance and Finance A. C. Marer He Finance A. C. Marer H
ALLENDALE COUNTY: A few stems on damp ground with Sacciolepis striata, Kellochloa verrucosa, Lobelia puberula, Cyperus haspan just SE of shed at Badger Pond; S side of Oakland Hall Rd and 1.9 air mi SW of Groton Plantation Headquarters, 10 air mi SW of downtown Barton; 32.7997° -81.3785°.
John B. Nelson 41909 A. C. Moore Herbarium (USCH) University of South Carolina

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.

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

PLANTS OF SOUTH CAROLINA

Gratiola neglecta Torrey

Colleton County

Along a 3' wide, shallow drainage ditch through a sweetgum-black pine low woods; along US 17 (S. of) and 1.6 miles SW from its jct. with S-167. Soil Survey sheet 65.

D. A. Rayner # 1598

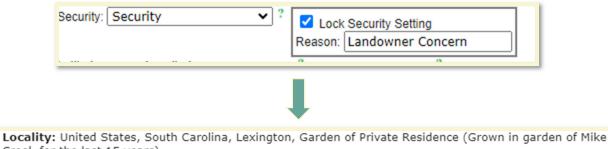
April 8, 1983

SOUTH CAROLINA HERITAGE TRUST PROGRAM

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"



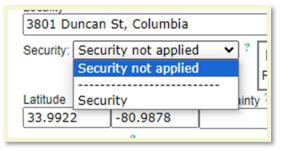
Creel, for the last 15 years) Locality details protected: Landowner Concern Current user has been granted access

How to Apply Security

1. Click the down arrow on Security

Security:	Security not applied	d ♥ ?	Lock Reason:	Security Setting	
Latitude	Longitude	Uncortainty	?	Datum ?	14-

2. Select Security



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

Security: Se	curity	~	[?] Z Lock Security Setting	
			Reason: Landowner Concern	
1	1			

Security Examples

Common, at edge of cove forest with basic soils at the base of northnorthwest-facing ridges of Wadakoe Mountain, Property of Wes-Cooler, USGS Sunset 7.5' quad., : W. Associated with *Carya ovalis, Fraxinus pensylvanica, 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,

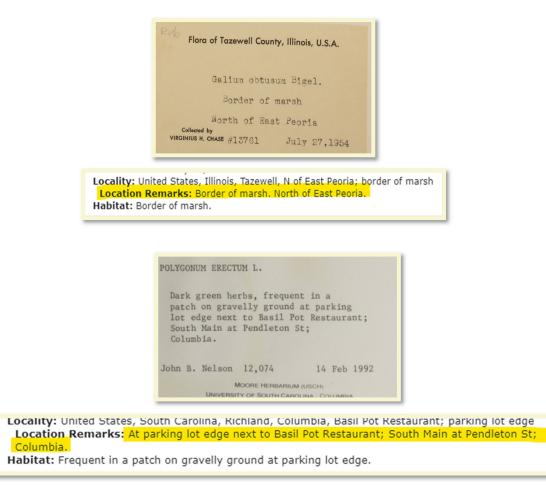
Property of Richard D. Porcher.

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

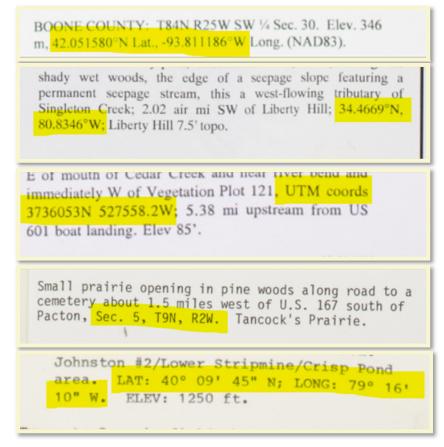
Location Remarks

- 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.

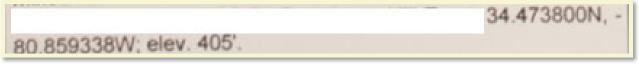


Verbatim Coordinates

- 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.



- 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:



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.

FLORA OF NORTH CAR Orange County, North Caro		
Erythronium americanur Liliaceae	n Ker.	
Fruit resting on ground under leaf litter, Found in Piedmont Nature Trails recrea Mason Farm Rd. along the Streamside begins at 35°53'59.68" N and 79°01'57. Collected 720 ft in from trailhead, where Waters Creek meets back up with the tr	tion area, off of Old Trail. Trailhead 27" W, elev. 335ft.	
Allison H. Garrett 57	4/16/06	
A.C. Moore Herbarium (USCH) University of South Carolina		

Multiple Geographical Identifiers

- Some collectors will put multiple geographical identifiers such a 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.

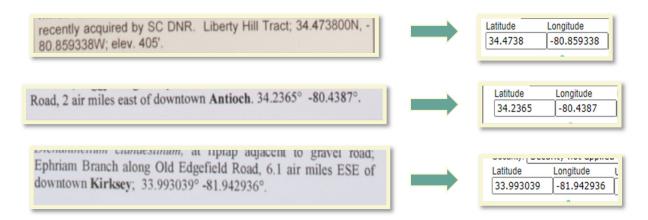
MINNESOTA BIOLOGICAL SURVEY Plants of Koochiching County, Minnesota, USA Equisetum variegatum Schleich. ex F. Weber & D.M.H. Mohr In a wet, clay-bottom ditch along Hwy 30, about 4 miles west of Big Falls. Associated with Carex interior, C. viridula, Scirpus microcarpus, Carex castanea.	Flora of Northeastern Minnesota Minnesota County Biological Survey Spergularia rubra (L) J. & C. Prest. T60N R11W S01NESW Lake County, MN Superior National Forest. New Tomahawk Road gravel pit approximately 12.8 miles east of Babbitt, MN and 1.0 miles west of Highway 1. Recently expanded and disturbed gravel pit with Leucophysalis grandiflora. Geranium bicknellii. Medicase extended and disturbed gravel pit with Leucophysalis grandiflora.	
T 155N R 25W SW¼ of SW¼ of Sec 31 Lat. 48° 11' 50" N Long. 93° 54' 11" W Welby R Smith 31697 June 16, 2010 DEPARTMENT OF NATURAL RESOURCES, PERMIT 15438	Geranium bicknellii, Medicago sativa, Leucanthemum vulgare, Carex houghtoniana, Elymus repens, etc. Lynden B. Gerdes LBG # 7209 Caryophyllaceae 01-Jul-2014 Special Permit # 19437 NAD 83 / 47° 42' 36" N, 91° 40' 00" W	

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

- 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

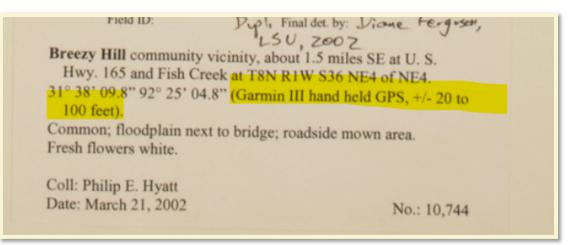
Examples



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

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

Northern Sierra Nevada Mountains: Wright's Lake Road, 0.4 mile east of its junction with Ice House Road, c. 1.3 miles north of Ice House Store (Riverton 7.5' Q.: 38°50'19"N, 120°22'34"W, ±1000m). Alt.: 1660m/5445ft. Open, disturbed soil in pine forest Area covered with small plants such as *Lotus purshianus* and *Allophyllum integrifolium*.

Scarce in a small depression, recently wet.

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

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	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	Stachys pilosa Nutt. BOONE COUNTY: T84N R25W SW ½ Sec. 30. Eley. 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 210 th Street. Wet, prairie remnant. Growing in association with <i>Asclepias incarnata</i> , <i>Liatris</i> <i>pyenostachya</i> , <i>Silphium laciniatum</i> , <i>Helianthus</i> <i>grosseserratus</i> , <i>Verbena hastata</i> , <i>Vernonia fasciculata</i> , and <i>Carex</i> spp. Specimen sampled near peak flowering. Patrice and the state of the state.
	Richard R. Halse 8290 31 July 2011	<i>Carex</i> spp. Specimen sampled near peak flowering. Pubescence on stems and leaves. Localized population.

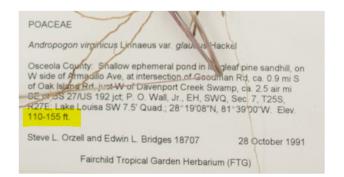
Datum: NAD27

Datum: WGS84

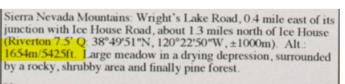
Datum: NAD83

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







Uncommon; wet roadside ditch.

G.K. Helmkamp 15131 w/ Amy Barnes

08 Jul 2009

270; Rock Bluff 7.5; Quad.; NEQ, NEQ, NEQ, Se 30°36'15" N; 84°55'13" W. Elev. 60-170 ft.

Verbatim Elevation: 7 m

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.

A.C. MOORE HERBARIUM (USCH)

UNIVERSITY OF SOUTH CAROLINA

Verbatim Elevation: 60-170 ft

8/3/2018

Verbatim Elevation: 1654m/5425ft

immediately below head, but open t jeffreyi grading to Abies concolor forest nearby. In moist parts of Perennial, uncommon.	coniferous
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	

POLYGALACEAE

Polygala mariana Mill.

Keith A. Bradley #8853

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 Mo	unds National	Historical Park	(
Security: Secu	rity not applied	Uncertainty ?		Datum ?	
32.8378	-83.6004		9 🥥 C F		
Elevation in Met		rbatim Elevation	Depth	in Meters ?	



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

. C. Moore Herbarium sizenity of South Carolina	Сурс	craceae
east of downtown M north side of main h	Macon; 32.8431°N neadquarters build partial shade of	al Monument; 1.7 miles -83.6040°W. 368' elev. ing on Ocmulgee National loblolly pines; in clumps,
John B. Nelson 23646		4 IV 2003
Security. Esecu		su 👻 -
Latitude	Longitude	Uncertainty ?
32.8378	-83.6004	20
Elevation in Met		erbatim 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.

Examples

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

SARNWELL COUNTY: Frequent patches rooted in about 1m of uiet water, branches totally submersed; with Nymphaea odorata,

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

Miscellaneous Fields

Misc
Habitat ?
Substrate ?
Associated Taxa ?
Description ?
Notes (Occurrence Remarks) ?
Life Stage ? Sex ? Individual Count ? Sampling Protocol ? Preparations ?
Phenology ? Establishment Means ?

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

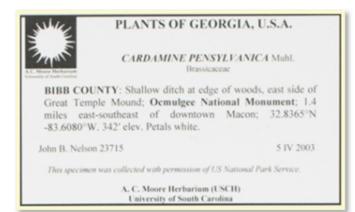
- Full sentences.
- Capitalize the beginning, use punctuation, and include a period at the end.
- Repetition is *okay*. There are some parts of the label that can be in multiple fields.
- If you know what the abbreviation is write it out in brackets, *especially* if it is not obvious.
- The Habitat field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

Limestone glade.

- 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.

	HERBARIUM NORTHEAST LOUISIANA UNIVERSITY, MONROE	
	Flora of LOUISIANA Parish: CATAHOULA	
TENNESSEE	HELIOTROPIUM PROCUMBENS P. Mill.	
Rutherford Co.; 25 Aug 1972 R.Kral 48204 Heliotropium tenellum Torr.	Disturbed area along west bank of Bayou Louis on south side of La. 8 about three miles east of Harrisonburg, Sec. 8, T9N, R7E.	
Cor. white; limestone glade by I-24,	Collector: R. Dale Thomas	
12.2 mi. NW Murphreesboro.	No.: 114,603 Date: 21 November 1989	

Habitat Disturbed area along west bank of Bayou Luis.



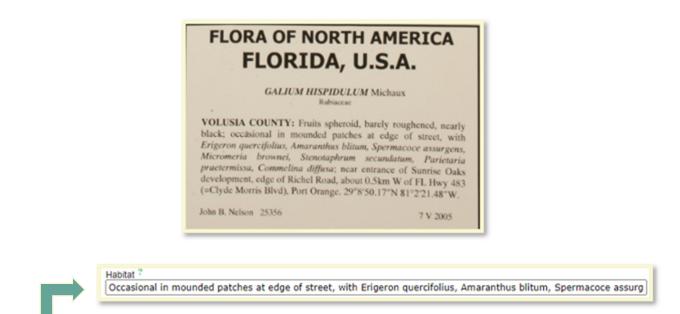
Habitat ? Shallow ditch at edge of woods, east side of Great Temple Mound.

Herbarium of the University of North Carolina NORTH CAROLINA Madison County Draba ramosiasima Desvaux Draba ramosiasima Desvaux Mixed deciduous forest over limestone bluff on south bank of the French Broad River, 0.5 mile west of Hot Springs. A.E. Radford, J.F. Logue, John R. Bozemon 9095 4/29/67 Plants of the Southeastern United States

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

ornus .	florida L.	
	aceae	
Dec.	S.R.Hill 5/1991	
Cashier Occasio	ellow-green. Margin of	Carolina line. ft tall, bracts white.
Steven	R. Hill 22187	2 May 1991

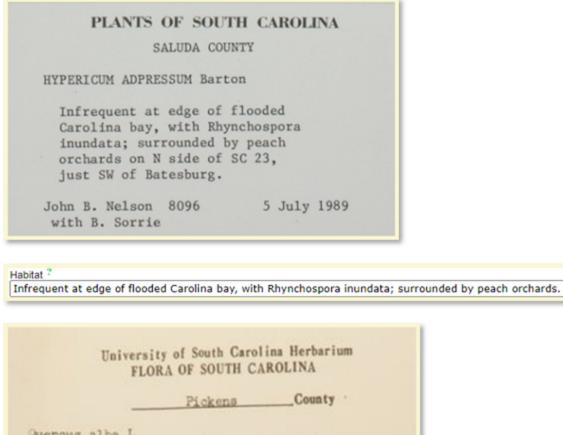
Habitat ? Margin of mixed pine-hardwood woodland.



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, Pariet aria praetermissa, Commelina diffusa."

Hypericum	JNelson 23 11 08
from a single stem; quite	Grassy tiny yellow flowers arising abundant, found in disturbed sandy / e, especially near drainage ditch, on
C. Judd Wood 40	3 VIII 2000
ollected with permission of the Sor	ath Carolina Department of Natural Resources



<u>Auercus alba</u> L. Table Rock State Park, 200 yards east of the work shed; elevation 1230 feet; 65% crown closure; 26% slope; west aspect; community: loblolly pine-mixed hardwoods.

Coll. John Reid Clonts Date9 July 1975 No. 2836

Habitat ?

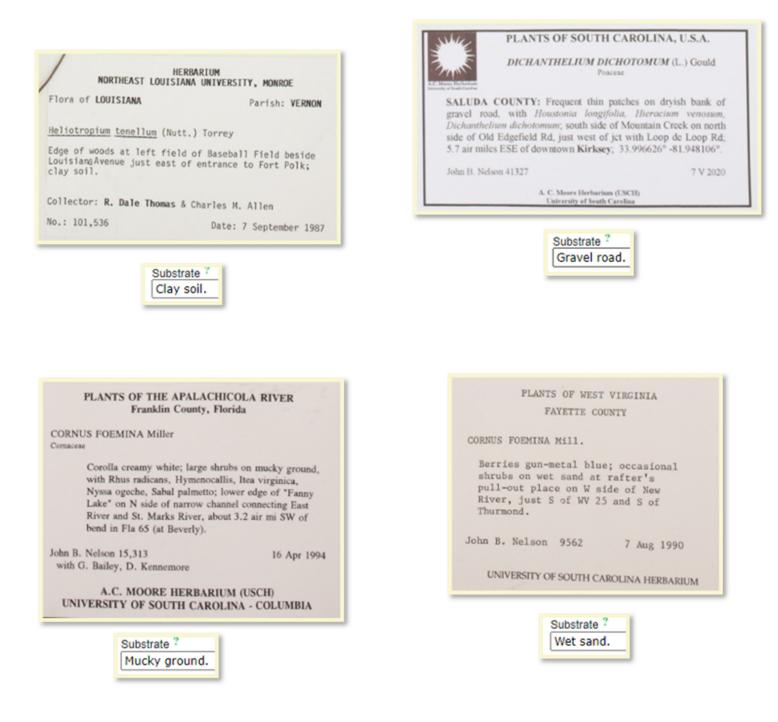
200 yards east of the work shed; elevation 1280 feet; 65% crown closure; 26% slope; west aspect; community: lobl

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.

- 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.



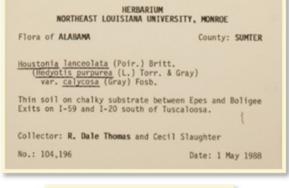
PLANTS OF MISSISSIPPI

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.



Substrate ? Thin soil on chalky substrate.

WEEDS OF SOUTH CAROLINA Newberry County EUPHORBIACEAE Phyllanthus amarus Schum. & Thon.

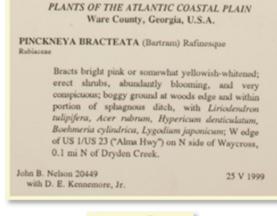
Growing under middle workbench in gravel and soil mixture, greenhouse #10. Carter & Holmes Orehids, Newberry.

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

30 Jan 1993

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

> Substrate ? Gravel and soil mixture.



Substrate ? Boggy ground. 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. T April 2009 Loran C. Anderson no. 24,384 w/ Wilson Baker R.K. Godfrey Herbarium (FSU)

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

Associated Taxa ? Aster al
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
- ٠

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.

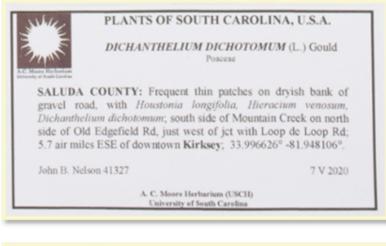
Habitat ?

via sp., Rubus sp., Lespedeza cuneata, Andropogon virginicus, Aster dumosus, <mark>A. pilosus</mark>, Chrysopsis mariana, Lobel**i** Substrate ?

Associated Taxa ?

Kummerowia, Rubus, Lespedeza cuneata, Andropogon virginicus, Aster dumosus, <mark>Aster pilosus</mark>, 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 : 🖽

FLORA OF SOUTH SALUDA COUNT	
Silphium dentatum Ell.	
Roadside on Rt.378 east of Saluda, 1 m	ni.east of Richland Creek, at
the edge of woods of Pine, Carya, 6	Quercus. Scattered among
Aster, Amorpha herbacea, Rhus toxi	codendron, grasses. Plants
without significant odor, some in shade	and some in full sun.
Alessandro Barchiesi 0061	June 27, 1993
Associated Taxa ?	
Carva, Quercus, Aster, Amorp	<u>ha herbacea, Rhus to</u>

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

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].

Fls [flowers] white; common.

*If you come across abbreviations that you are unfamiliar with, this may be helpful: <u>https://www.nybg.org/bsci/brit/pdf/Brittonia_Abbreviations.pdf</u>

Plants of Arkansas Distributed by Baylor University Herbarium Heliotropium tenellum (Nutt.) Torr. Baxter County. 1 mile south of Mountain Home on Hwy 201; exposed road cut; fls white; common 29 July 1991	Rutherford Co.; 25 Aug 1972 R.Kral 48204 Heliotropium tenellum Torr. Cor. white; limestone glade by I-24, 12.2 mi. NW Murphreesboro. Description ?
W. C. Holmes 5362	Cor. [corollas] white.

PLANTS OF THE OUTER PIEDMONT South Carolina, U.S.A.

PLUCHEA

Asteraceae

KERSHAW COUNTY: Foliage dark green, phyllaries and flowers dull creamy-pink; uncommon herbs, erect, at edge of 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.

John B. Nelson 25608 with Pat Ferral 9 IX 2005

Description ?

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

PLANTS OF NORTH CARO	LINA, U.S.A.
Cornaus florida L. Cornaceae Det. S.R.Hill 5/1991	
JACKBON County: Rt. 107, 3.5 mi Cashiers: 4.65 mi N of South Ca Occasional small tree 10-15 ft flrs yellow-green. Margin of mi woodland.	tall, bracts white.
Steven R. Hill 22187	2 May 1991

Description ?

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

PLANTS OF THE SOUTHEASTERN U.S.A. Woodstock, Virginia

Mertensia virginica (L.) Pers. Boraginaceae

Shenandoah County: 1-2 foot tall, erect to ascending, leaves soft and hairy, Corolla bluie-violet; found approx. 5 feet North of Big Stoney Creek, approx. 15 feet South of Wolf Gap road. Elev. 38.53°N, 78.38°W.

Leigh Anne Methlie I

15 IV 2006

A. C. Moore Herbarium (USCH) University of South Carolina

Description 7

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



PLANTS OF GEORGIA, U.S.A.

CAMPSIS RADICANS (L.) Seem. Poaceae

BIBB COUNTY: Ocmulgee National Monument; 1.6 miles east of downtown Macon; 32.8360°N -83.6067°W. 278' elev. south side of open pond along Opeloufa Trail; vigorously climbing; corollas bright red-orange; calyx brick-red.

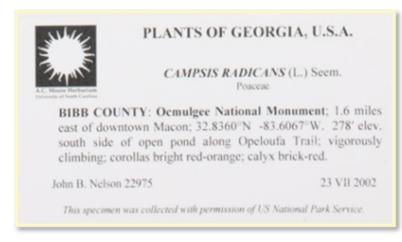
John B. Nelson 22975

23 VII 2002

This specimen was collected with permission of US National Park Service.

Description 7

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



Description 7

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

Hypericum	- Nelson 23 11 08
from a single stem; quite	Grassy tiny yellow flowers arising e abundant, found in disturbed sandy / ide, especially near drainage ditch, on
C. Judd Wood 40	3 VIII 2000
Collected with permission of the S	south Carolina Department of Natural Resources

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

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

*USCH mainly uses "flowering," "fruiting," and "reproductive." *More than one descriptor is also acceptable