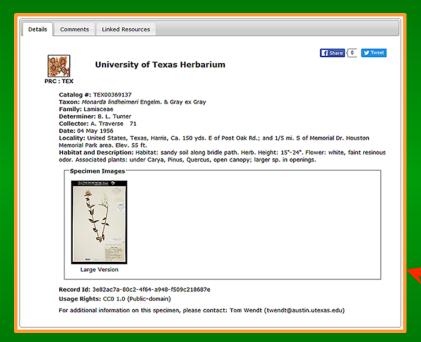
Advancing Plant Specimen Digitization in the Texas-Oklahoma Region: Creating a Framework Across Institutions and a Portal for Shared Data





George Yatskievych@Austin.utexas.edu



Digitization of herbarium specimens involves three processes:

- 1) databasing of label information
- 2) imaging of specimens
- 3) geo-referencing localities on labels

PLANTS OF MISSOURI, U.S.A.

EUPHORBIACEAE

Euphorbia ouachitana Mayfield

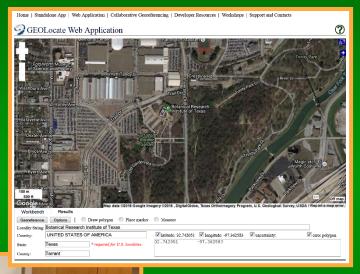
BARRY COUNTY: Roaring River State Park, ca. 4 air miles S of Cassville via State Highway 112. Near S end of River Trail. Scattered intermittently along ca. 1/4 mile of trail, usually not in deep shade or on bluff ledges, but mostly in light gaps in loose gravelly soil. With Juniperus, Acer, Quercus, Ulmus, and (in some places) Lonicera japonica. 36° 34' 53" N Lat., 093° 50' 01" W Long. 1050 ft.

7 May 2014

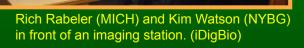
G. Yatskievych 14-15 with Nels J. Holmberg

EXAMINED FOR THE FLORA OF MISSOURI PROJECT

MISSOURI BOTANICAL GARDEN HERBARIUM (MO)



http://www.museum.tulane.edu/geolocate/web/WebGeoref.aspx





Flora of	Missouri Project - Edit Catalog Data					
	Species list for Hasteola: suaveolens					
Genus:	Hasteola unknown					
Family:	ASTERACEAE/SENECIONEAE					
Species Code:	2460 Native					
Common Name:	false Indian plantain					
Authority:	suaveolens (L.) Pojark.					
Synonymy:	Cacalia suaveolens L., Synosma suaveolens (L.) Britton					
Citation:						
	Clear Form Edit Record Save Record Close					

The earliest digitization projects involved mainly the databasing aspect and were institution-specific.

Flora of Missouri Project - Add / Edit Specimens								
Genus: Hasteola	Authority: suaveolens (L.) Pojark.							
Species: suaveolens								
Family: ASTERACEAE/SENECIONEAE	Cacalia suaveolens L., Synosma suaveolens (L.) Britton							
Species Code: 2460 Number of Occurrences: 11								
Native Number of Counties: 8								
	'							
County Butler								
Taxonomic Comment	Locality (W edge of Poplar Bluff, ca. 5 mi NE of junction with County Highway M on County Road 450							
Häbitat small spring-fed slough along Kenner Spring Branch; heavily disturbed; large colony on shaded bank of slough	Plant With partial canopy of Acer, Ulmus, Associates Platanus, Quercus							
Township 025N Range 005E								
Collection Date - Month 08 Day 28 Year 1994 Other First Collector Yatskievych, G. Yatskievych, G. Collection Number 94-207 Herbarium MO Phenology FL Yatskievych Yat								
Delete Print Clear Record 1 of 11 Add New Edit Save Close								

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English +

Tropicos® was originally created for internal research but has since been made
available to the world's scientific community. All of the nomenclatural, bibliographic, and
specimen data accumulated in MBG's electronic databases during the past 25 years are
publicly available here. This system has over 1.2 million scientific names and 4.0 million
specimen records.

Quick Name Search Search Search Exact

Common Name

News	Links	Stats	Heat Map	Country Map
	Names 1,	275,756		
Spec	cimens 4,	256,335		
I	mages	305,115		
Public	ations	49,252		
Refe	rences	130,889		
Common	Names	63.087		

Click an image for detailed information:



















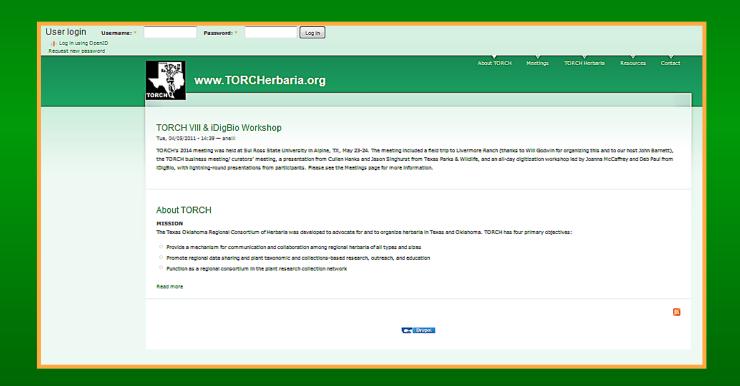






Cite this page: Tropicos.org. Missouri Botanical Garden. 07 Apr 2014 http://www.tropicos.org
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The establishment of regional consortia of herbaria such as TORCH has been one logical extension of this concept

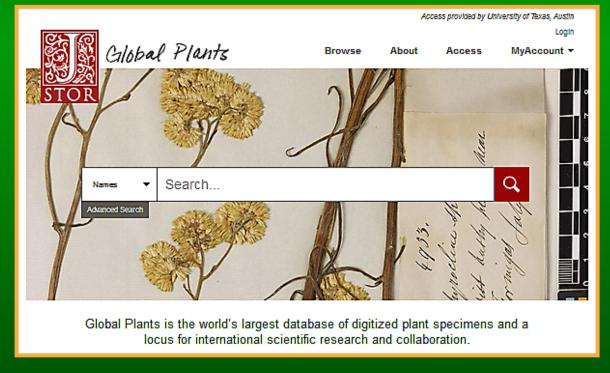




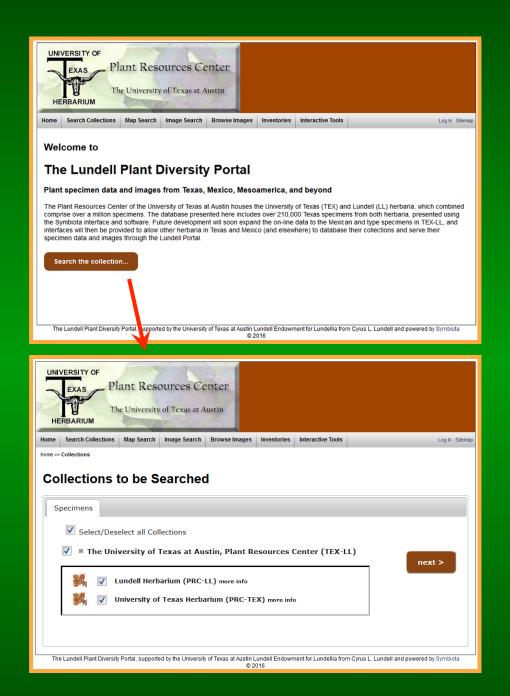
Historically the **TEX-LL** herbaria began databasing in the 1990s using several off-theshelf programs, especially **Microsoft** Access and Filemaker Pro

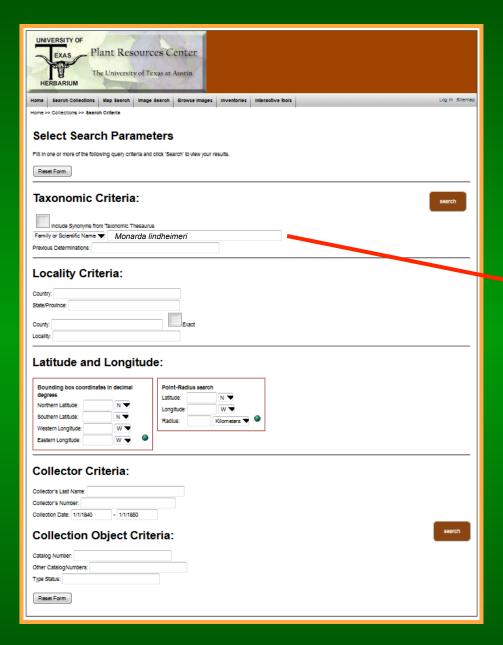


We established a web site that allowed us to serve separate Texas and Mexican portions of the overall data from our collections and shipped off our type data and images to be hosted externally on the JSTOR Global Plants website.



We also began development of an application to aggregate specimen data and images across multiple collections, which currently is called the Lundell Portal.

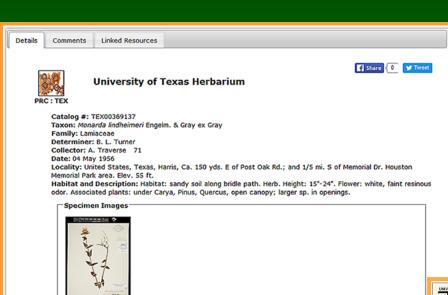




Searches on one of more of a variety of criteria

yield lists
of
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matching
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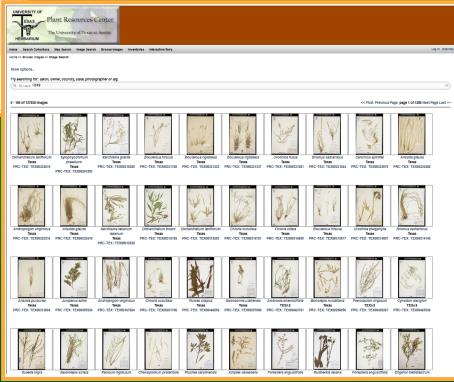
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High-resolution scanned images are linked to specimen records, which can be viewed full-screen

For additional information on this specimen, please contact: Tom Wendt (twendt@austin.utexas.edu)

Record Id: 3e82ac7a-80c2-4f64-a948-f509c218687e Usage Rights: CC0 1.0 (Public-domain) Specimen records convey label data and indicate if images are linked to the records





Welcome to SEINet

The SEINet data portal was created to serve as a gateway to distributed data resources of interest to the environmental research community within Arizona and New Mexico. Through a common web interface, we offer tools to locate, access and work with a variety of data. SEINet is more than just a web site - it is a suite of data access technologies and a distributed network of collections, museums and agencies that provide environmental information.

To learn more about the features and capabilities available through this site, visit the Symbiota Help Pages. Join SEINet as a regular visitor and please send your feedback to seinetAdmin@asu.edu. Visit the Data Usage Policy page for information on how to cite data obtained from this web resource.

Visit some of the other regional data portals that are fellow members of the SEINet Network.

- Consortium of Midwest Herbaria
- Intermountain Regional Herbarium Network
- Madrean Archipelago Biodiversity Assessment (MABA)
- · Consortium of Midwest Herbaria
- North American Network of Small Herbaria
- North Great Plains Herbaria
- Red de Herbarios del noroeste de México (northern Mexico)
- SERNEC (Southeast USA)

Plant of the Day

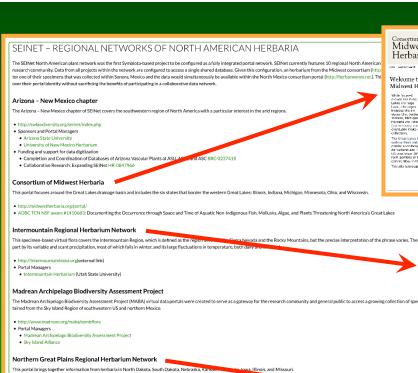


What is this plant? Click here to test your knowledge



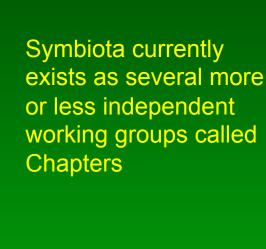
Development of SEINet, Symbiota, and several of the specimen databases have been supported by National Science Foundation Grants (DBI 9983132, BRC 0237418, DBI 0743827, DBI 0847966)

Symbiota, the platform developed under the auspices of the Symbiota Working Group by Ed Gilbert and his colleagues at what is now called Arizona State University's School of Life Sciences Biodiversity Informatics Group. The first product of this work was SEINet.



Chihuahua y Durango.

SERNEC







Intermountain Region

Herbarium Network



Consortium of Midwest

Herbaria

Midwest Herbaria

Welcome to the Consortium of







Queries can be performed across multiple member institutions and also across multiple chapters

Results are presented in a concatenated list with each institution's contribution listed separately.



Howard Payne University Herbarium



Asclepias nummularia Torr.

HPC00008665 Daniel, Britt 95 27 April 1979 United States, Texas, Jeff Davis

Full Record Details



Asclepias nummularia Torr.

HPC00008704 Mashburn, Judy L. 183 27 April 1979 United States, Texas, Jeff Davis

Full Record Details



Asclepias nummularia Torr.

HPC00008705 Ryman, Susie 360 27 April 1979

United States, Texas, Jeff Davis

Full Record Details

Herbarium
Biology Department
Howard Payne University
Brownwood, Texas 76801



SEINet results of taxon search on Asclepias nummularia.

Symbiota also allows the creation of Projects that capture data from the database on the fly to produce checklists, such as this one for Chiricahua **National** Monument in Arizona.





The SERNEC Portal includes Texas in the list of states for which one can generate a checklist and search for data

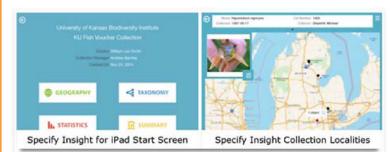




Take Your Collection to the Cloud-To the Field-Anywhere You Go.

Donors, Deans, Students & Colleagues. Funding, Visibility, Education & Research.

How Far Does Your Data Reach?



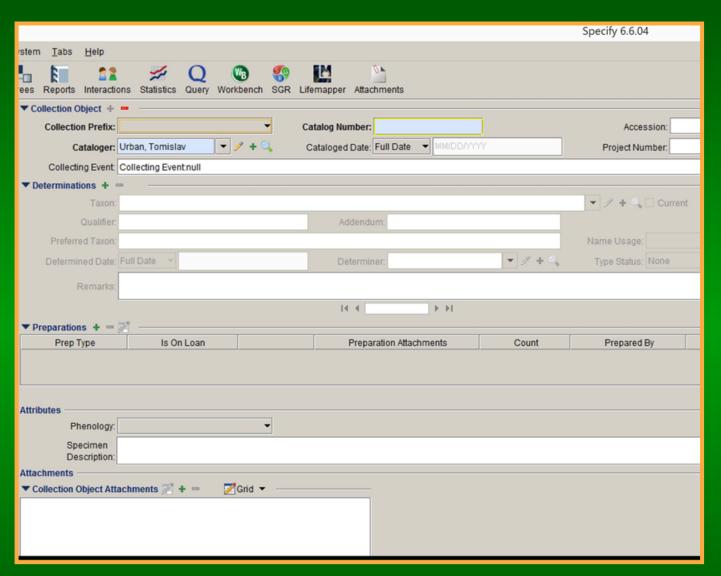
Welcome to Specify

Specify software manages species and specimen data for biological research collections. As a database platform, it tracks specimen transactions, links images to specimen records and publishes data to the Internet. Specify 6 is robust software for Windows, MacOS, and Linux computers. The Specify 7 web platform eliminates desktop software installation and operates within a web browser. Specify Cloud is our Specify 7 cloud hosting service; a one-stop, zero hardware and software installation, collection computerization system. The Specify Web Portal serves your collection data, maps and images to public web users. And Specify Insight, our iPad app is for taking your collection data to new venues--for showcasing specimen maps, data and images. Specify Project services include efficient data migration and help desk support for U.S. collections. E-mail: support@specifysoftware.org, or call: +1 785 864-4400, if we could help you evaluate Specify for your collection.

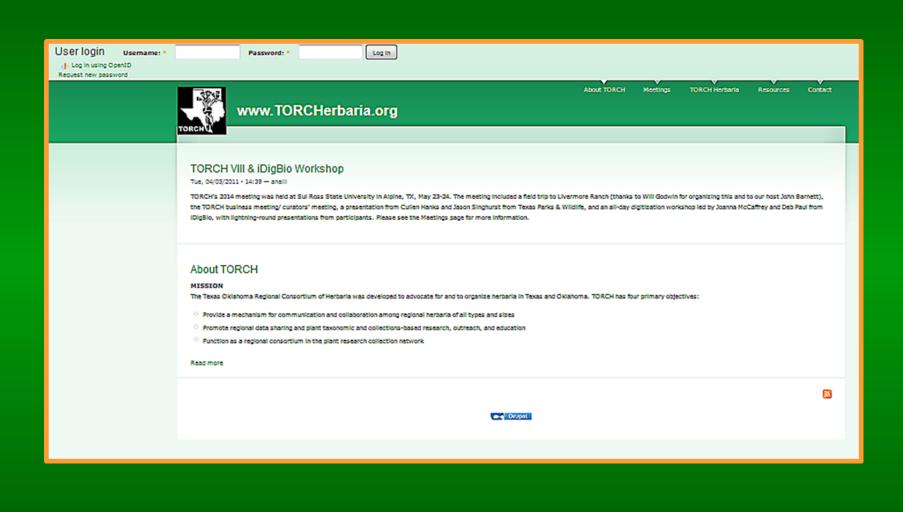
Take a look at our video "HelpCasts" which demonstrate Specify's features.

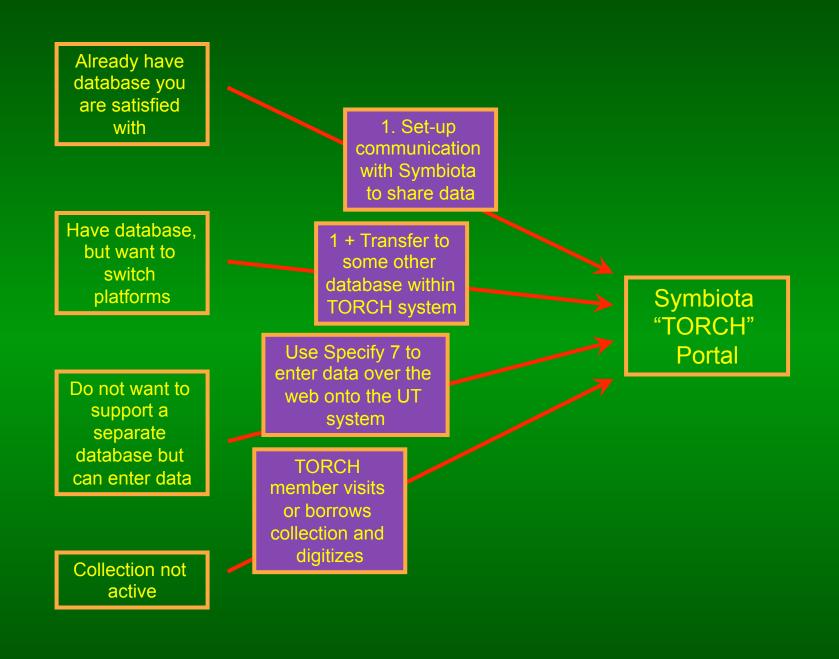
After deciding that Symbiota by itself lacked features important to us for managing our herbarium, we followed the lead of a number of other regional consortium members and chose Specify as our main institutional database, for several reasons, including:

- 1) It is free and open source, thus can be customized by a programmer;
- 2) It has been tested by numerous museums in this country and abroad;
- 3) It is a general platform that can support multiple collections of different types of organisms, so that museums can integrate data from various animal, fungal, plant, fossil, and other collections:
- It has built-in protocols to communicate information to Symbiota and also can easily transfer information to the national portal, iDigBio.



Default specimen data entry screen for the Botany Module in Specify. This needs customization to make data entry easier.







Potential complications: Barcode use Georeferencing

Specimens at collections that TORCH members visit can be imaged and then databased from the images

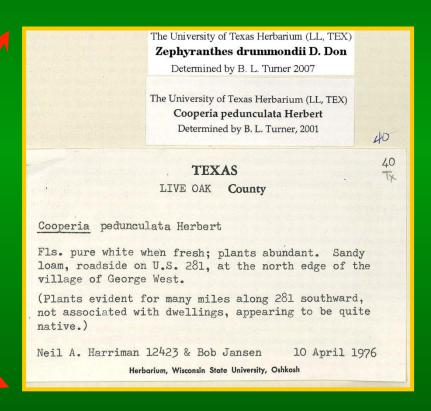


Photo: Dan Charles



Establishing the framework for aggregating data from member collections through a regional portal is an important step in the overall goals of the TORCH network. It will also help to give TORCH more visibility and provides a common goal for all of the member herbaria to work toward. To mix metaphors, it will help to light a fire under the TORCH.