Specify 101

Specify Collections Consortium

Specify Collections Consortium

- The Specify Collections Consortium (SCC) was founded in 2018 as a collaborative, open-source software community.
- The SCC aims to advance research and education uses of specimen and sample information.
- Currently have members in 28 countries and are working with several more.
- The Consortium is governed by a Board of Directors and Research and Technology Advisory Committees drawn from member institutions.
- The Board and Committees determine the software and technical service priorities of the Consortium.

Specify
COLLECTIONS CONSORTIUM

Specify Collections Consortium

- The Consortium advances the interests of its members through:
  - Engineering, deployment, and support of software technologies
  - Facilitating the creation, curation, discovery, and scientific utilization of information and knowledge.
- The consortium produces the Specify Collection Management System and offers related technical services for processing data associated with specimens and samples in biological collections used for research.
- We have partnered with natural history museums and biological repositories for more than 35 years.

Specify Software

- Our software catalog includes:

  - Specify 7

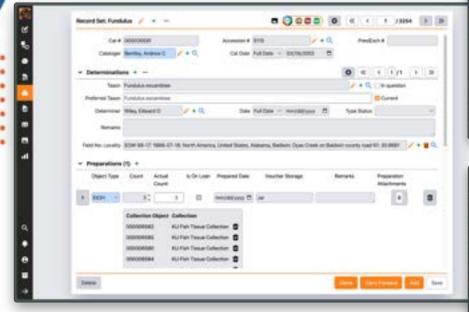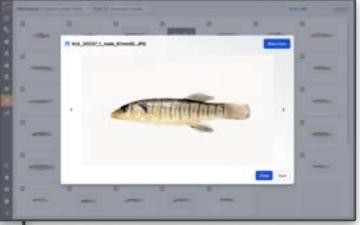 - Specify 6

  - Specify Web Portal

  - Specify Asset Server
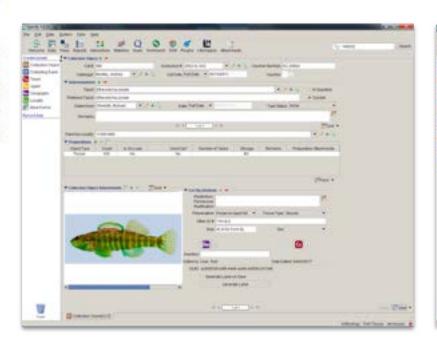
Specify Software: **Specify 7**

Specify 7

Specify 7

Specify 7
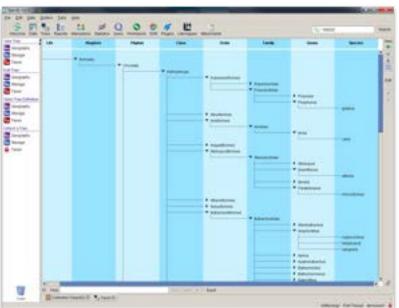
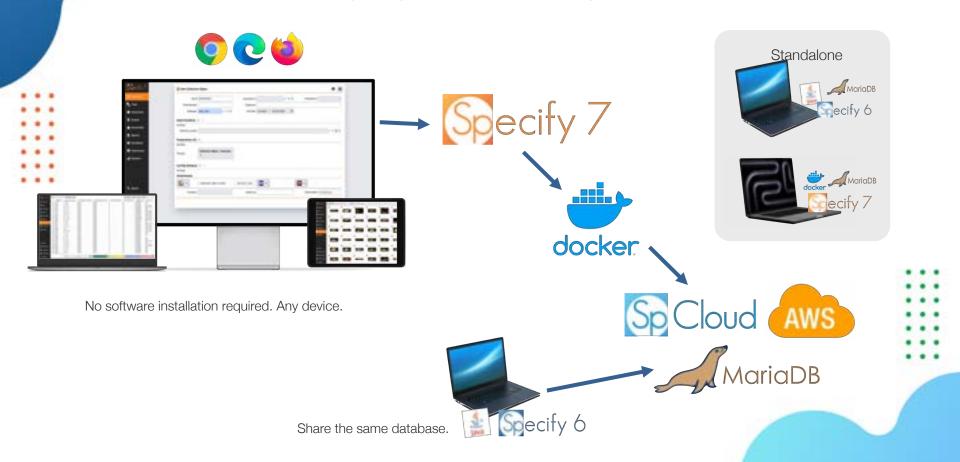# Specify Software: **Specify 6**

Specify Software: Specify Web Portal

Specify System Configuration

No software installation required. Any device.

Specify 7

docker

SpCloud AWS

MariaDB

Share the same database. Specify 6

Standalone

MariaDB
Specify 6

docker MariaDB
Specify 7

Hardware Configuration

Specify 7
Specify 6
MariaDB

Database, attachment, web Server
(physical)
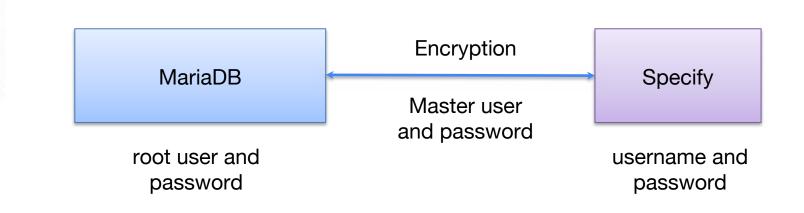
docker

MariaDB

Specify 7
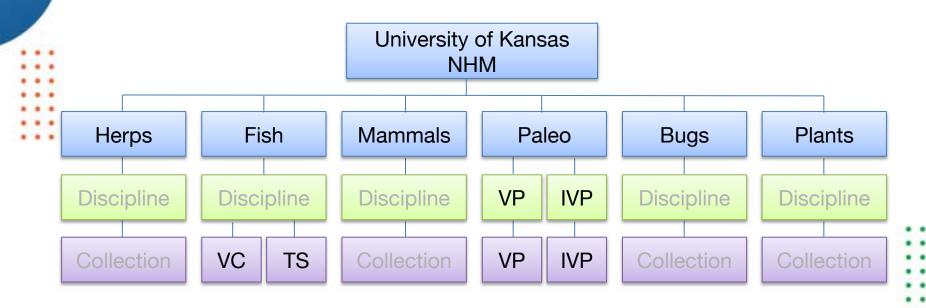
Database Server
(physical)

Attachment Server
(Physical or virtual)

Web Server
(Physical or virtual)

Specify 6 Web Portal
IPT server
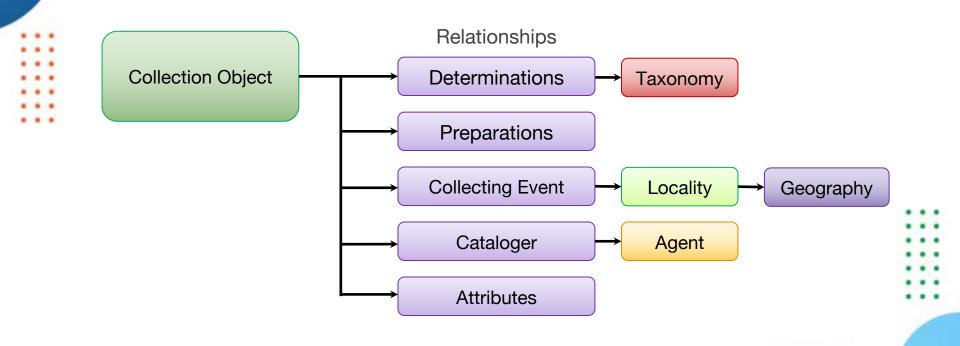
Specify Usernames and Passwords

MariaDB		Specify

Encryption

Master user
and password

root user and
password

username and
password

Organization

What is a Collection Object?

Relationships

Collection Object → Determinations → Taxonomy

Preparations

Collecting Event → Locality → Geography

Cataloger → Agent

Attributes
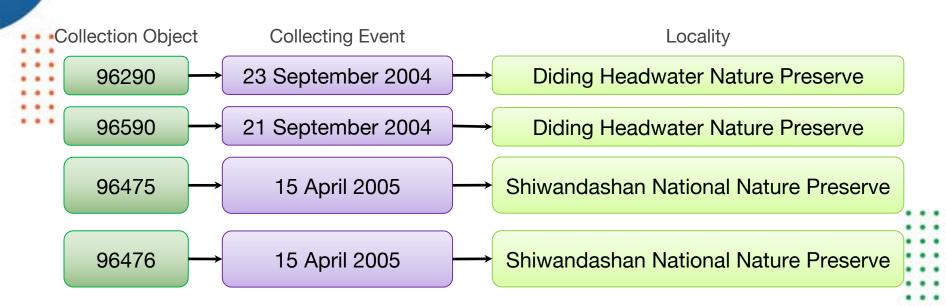
What is a Collection Object?

Relationships

De-normalized Data

Collection Object	Collecting Event	Locality
96290	23 September 2004	Diding Headwater Nature Preserve
96590	21 September 2004	Diding Headwater Nature Preserve
96475	15 April 2005	Shiwandashan National Nature Preserve
96476	15 April 2005	Shiwandashan National Nature Preserve
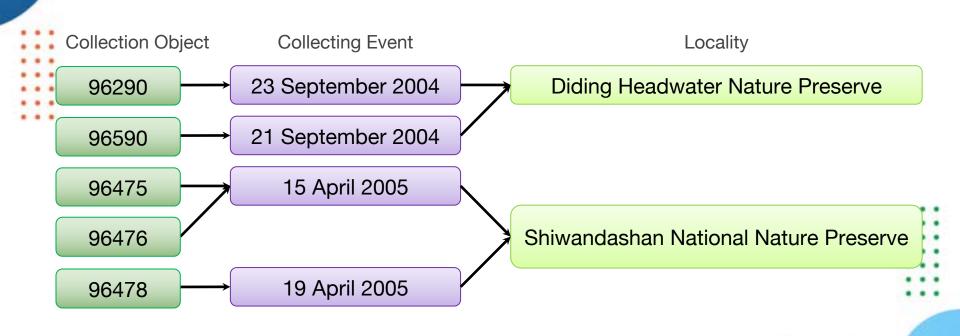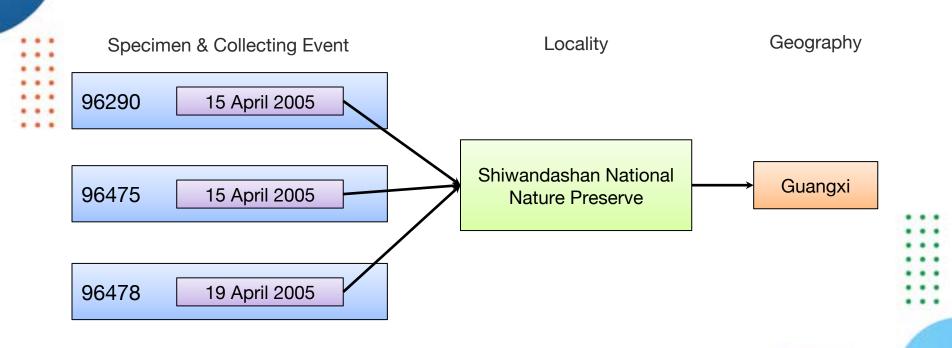
Normalized Data
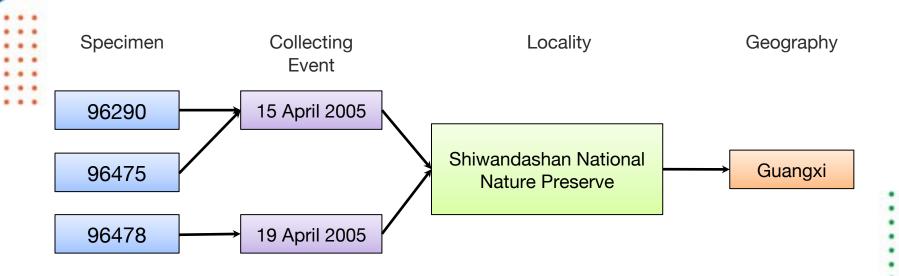
Data is shared through relationships, linked behind-the-scenes in the database

Collection Object	Collecting Event	Locality
96290	23 September 2004	Diding Headwater Nature Preserve
96590	21 September 2004	
96475	15 April 2005	Shiwandashan National Nature Preserve
96476		
96478	19 April 2005	

Embedded Collecting Events

Specimen & Collecting Event

Locality

Geography

96290   15 April 2005

96475   15 April 2005

96478   19 April 2005

Shiwandashan National Nature Preserve

Guangxi

Shared Collecting Events

Specimen   Collecting Event   Locality   Geography

96290

96475

96478

15 April 2005

19 April 2005

Shiwandashan National Nature Preserve

Guangxi

Institutional Hierarchy

Institution	Natural History Museum							
Division	Vertebrate Zoology				Botany			
Discipline	Ichthyology		Herpetology		Non-Vascular Plants		Vascular Plants	
Collection	Wet	Dry	Amphibians	Reptiles	Mosses	Lichens	Herbarium	Pollen

The decisions made regarding data sharing and scoping can have a significant impact on the success of a Specify implementation.

Specify
COLLECTIONS CONSORTIUM

Table Scoping Hierarchy

*Accession can be either at the Institution or Division level

Institution
- Storage Tree
- Journal
- Permit
- Reference Work
- Accession*
- Deaccession
- Disposal

Division
- Agent
- Exchange In / Out
- Repository Agreement
- Accession*

Discipline
- Taxon Tree
- Geography Tree
- Schema Config
- Collecting Event
- Locality
- Loan, Gift, Borrow
- Field Notebook
- Litho/Chronostrat

Collection
- Preparation Type
- Pick List

Collection Object
- Preparation
- Determination
- DNA Sequence
- Treatment Event
- Exsiccata Item

Visibility

Specify's hierarchical levels

Institution
Accession, Permit, Agreement, Storage

Division
Agent, Accession, Conservator

Discipline
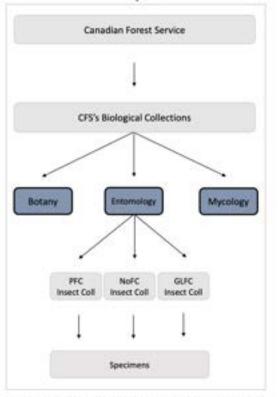*Taxonomy, Collecting event, Loan, Locality, Geography*

Collection
Pick lists, DNA Sequence, Preparation type
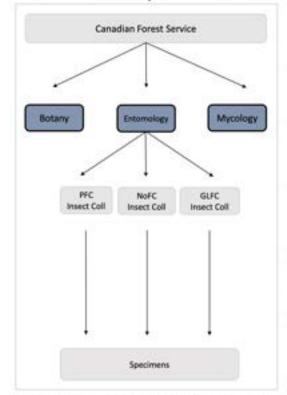
Object
Determination, Preparation

Example A

Canadian Forest Service

↓

CFS's Biological Collections

Botany — Entomology — Mycology

PFC Insect Coll — NoFC Insect Coll — GLFC Insect Coll

Specimens

Description: Biological groups are at the Discipline level. A unique taxon tree must be created for each biological group (Botany, Entomolgy, Mycology). **Challenge**: All curators under a given biological group must agree on a taxon authority. Each modification affects all collections under the same Discipline.

Example B

Canadian Forest Service

Botany — Entomology — Mycology

PFC Insect Coll — NoFC Insect Coll — GLFC Insect Coll

Specimens

Description: Collections are at the Discipline level. A unique taxon tree must be created for each collection. **Challenge**: Creating a taxon tree for each collection is time consuming and may lead to same species having a different ID, as trees could be edited independently of each other.
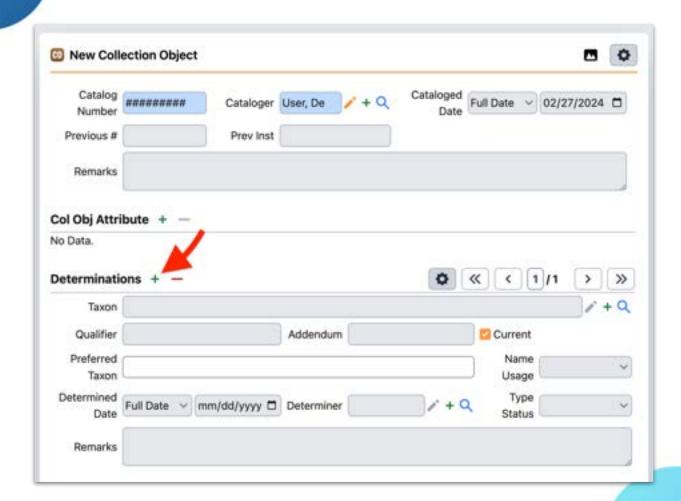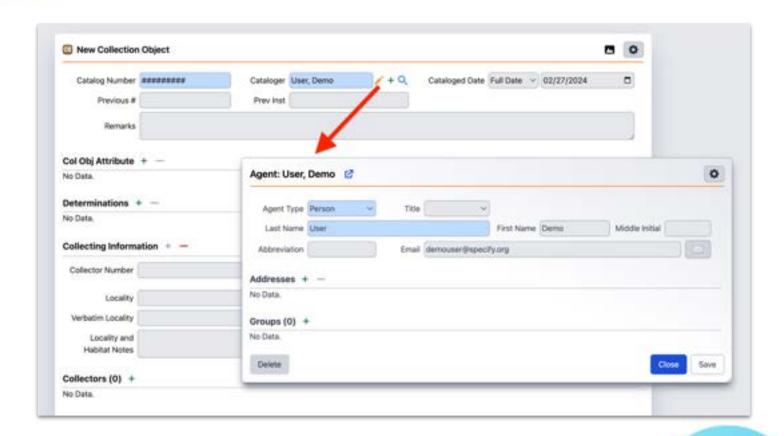
Natural Resources Canada — Ressources naturelles Canada

Data Entry in Specify

New Collection Object

Cat #	########	Accession #	✎ + 🔍	Prev/Exch #	
Cataloger	User, Test C ✎ + 🔍	Cat Date	Full Date ∨ mm/dd/yyyy 📅		

Determinations + —   ⚙ « < 1 /1 > »

Taxon		✎ + 🔍 ☐ In question
Preferred Taxon		☑ Current
Determiner	✎ + 🔍 Date Full Date ∨ mm/dd/yyyy 📅	Type Status ∨
Remarks		
Field No: Locality		✎ + 🗑 🔍

Preparations (0) +

No Data.

Tissues:

Collection Object Collection
+

Col Obj Attribute + —

No Data.

Total Count:		Actual Count:	

Attachments

[CO] 0   ☑ Generate Label on Save   Generate Label   [DNA] 0   [Cit] 0

CT Scan		📎
Inventory		Edited By		Date Edited	mm/dd/yyyy
GUID					

Clone   Add   Save

New Collection Object

Catalog Number	#########	Cataloger	User, De
		Cataloged Date	Full Date ▾ 02/27/2024 📅

Previous # [   ]   Prev Inst [   ]

Remarks [   ]

Col Obj Attribute + —

No Data.

Determinations + —

⚙ « ‹ 1 /1 › »

Taxon [   ] ✏ + 🔍

Qualifier [   ]   Addendum [   ] ☑ Current

Preferred Taxon [   ]   Name Usage [▾]

Determined Date Full Date ▾ mm/dd/yyyy 📅 Determiner [   ] ✏ + 🔍   Type Status [▾]

Remarks [   ]
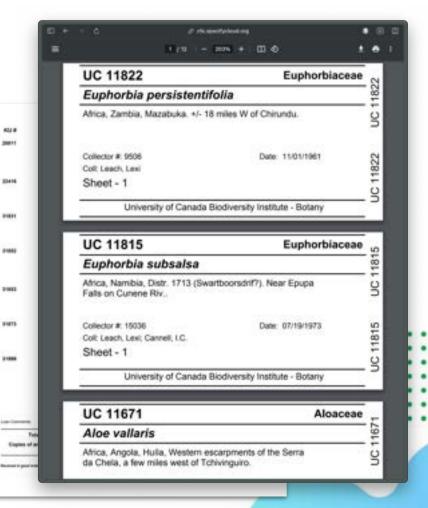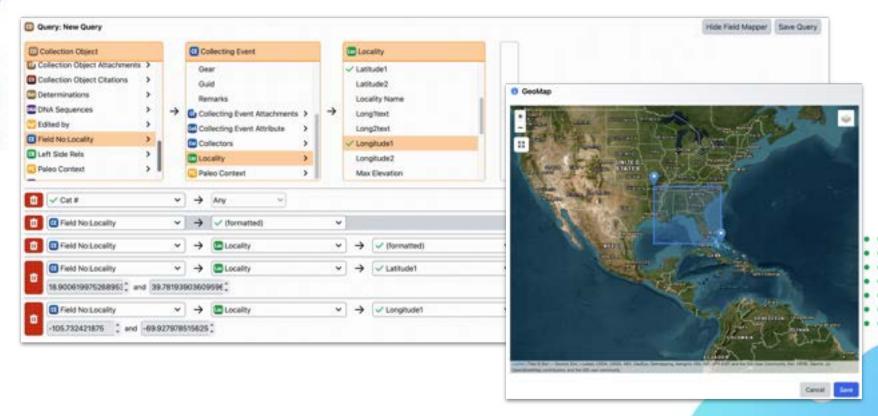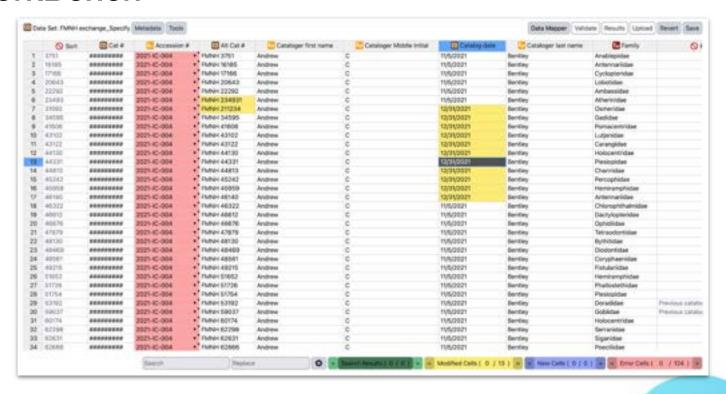
Reports & Labels

Query Building

WorkBench

Trees in Specify
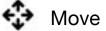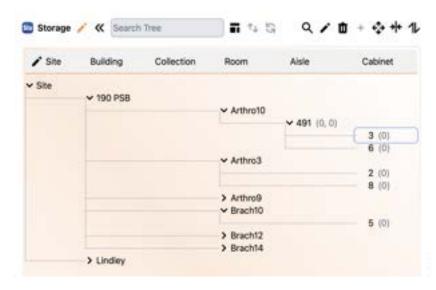

Q Search

✎ Edit

🗑 Delete

+ Add

✛ Move

⇥⇤ Merge
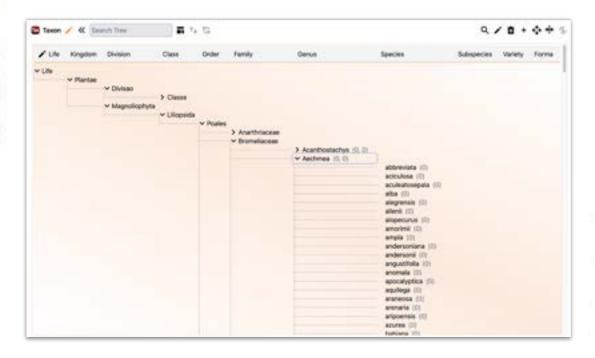
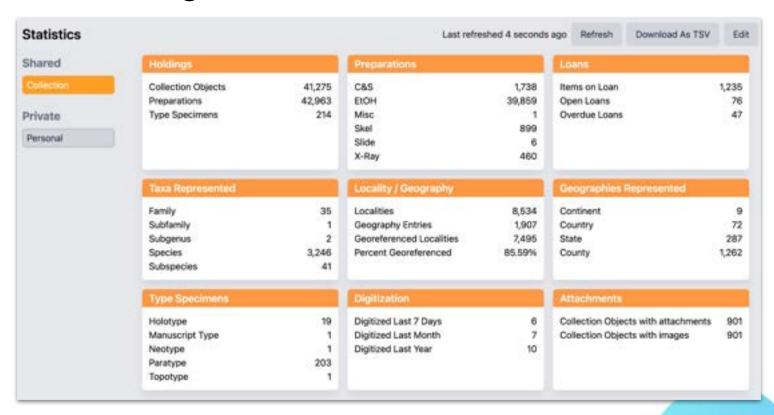⇅ Synonymize

Storage Management

- The physical components of collection objects known as "preparations" can be given specific storage locations.

- The "Storage" tree is shared by all collections in a single Specify database.

  - There is a set hierarchy for the tree and any number of nodes can be added at a level.

  - E.g. Site, Building, Collection, Room, Aisle, Cabinet, etc.

You can see how many specimens are at each location and quickly search for them from the tree!
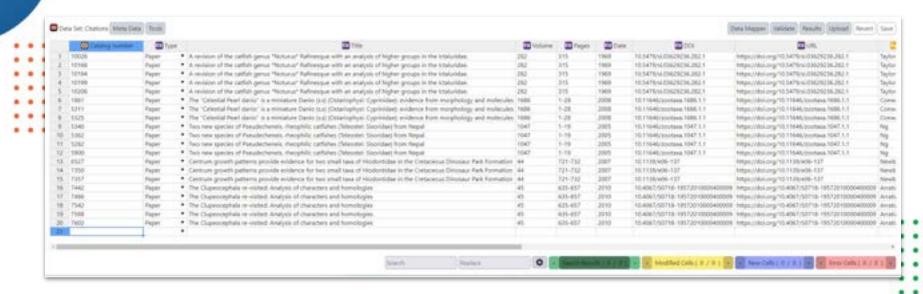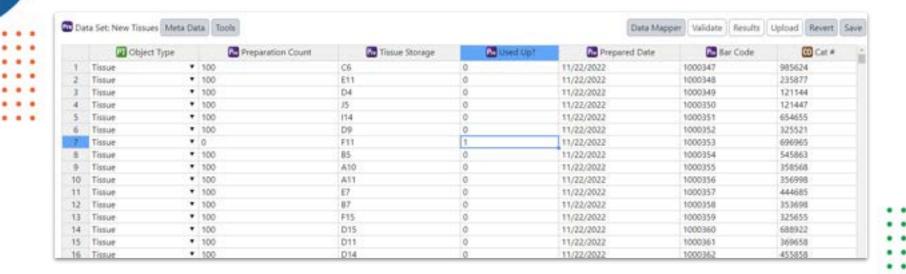
Statistics Page

Statistics

Shared

Collection

Private

Personal

Holdings

Collection Objects	41,275
Preparations	42,963
Type Specimens	214

Preparations

C&S	1,738
EtOH	39,859
Misc	1
Skel	899
Slide	6
X-Ray	460

Loans

Items on Loan	1,235
Open Loans	76
Overdue Loans	47

Taxa Represented

Family	35
Subfamily	1
Subgenus	2
Species	3,246
Subspecies	41

Locality / Geography

Localities	8,534
Geography Entries	1,907
Georeferenced Localities	7,495
Percent Georeferenced	85.59%

Geographies Represented

Continent	9
Country	72
State	287
County	1,262

Type Specimens

Holotype	19
Manuscript Type	1
Neotype	1
Paratype	203
Topotype	1

Digitization

Digitized Last 7 Days	6
Digitized Last Month	7
Digitized Last Year	10

Attachments

Collection Objects with attachments	901
Collection Objects with images	901

Specify Network

WorkBench

WorkBench

WorkBench

Specify
COLLECTIONS CONSORTIUM

Customizing Specify

- Data entry forms
- Language
- Theme
- Interface
- Colors
- Labels and reports
- Trees
- Background images
- Export file delimiter
- A multitude of preferences

Specify
COLLECTIONS / CONSORTIUM

Preferences

General	
Home Page	
Navigation Menu	
Interactions	
Forms	
Choose Collection	
Attachments	
Tree Editor	
Query Builder	
Reports	
WorkBench	
App Resources	
GeoMap	

General

User Interface   Reset

Language   English (en-us)

Theme   Use system setting
Copies value from your Operating System settings

Reduce motion   Use system setting
Disable non-essential animations and   Copies value from your Operating
transitions   System settings

Reduce transparency   Use system setting
Whether to disable translucent   Copies value from your Operating
backgrounds for user interface   System settings
components whenever possible (e.g.
table headers in tree view)

Contrast   Use system setting
Copies value from your Operating System settings

Font size   100

Scale Interface ☑
Scale interface to match font size

Font family   (default font)
You can specify any font that is on
your computer, even if it is not in the
list. A comma separated list of fonts

Accessibility and Supported Languages

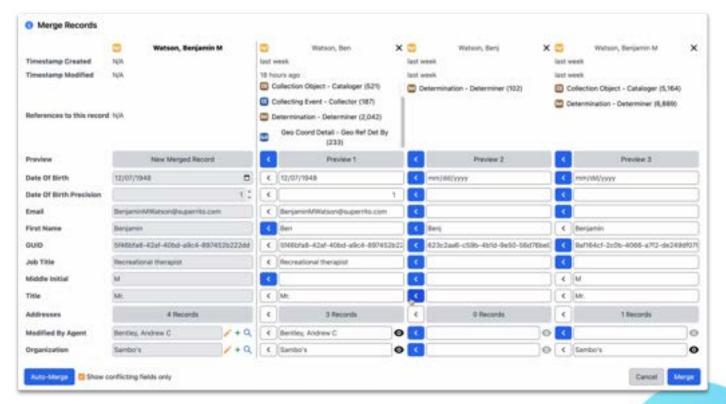Specify supports English, French, Spanish, Ukrainian, Russian, German, and more languages are being added.

WCAG 2.1 Compliant
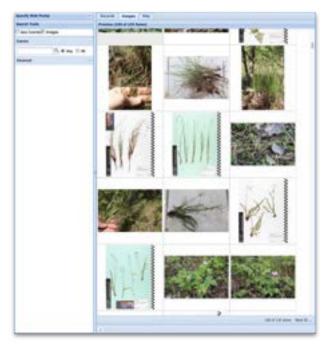(Supports screen readers, keyboard navigation, magnifiers)
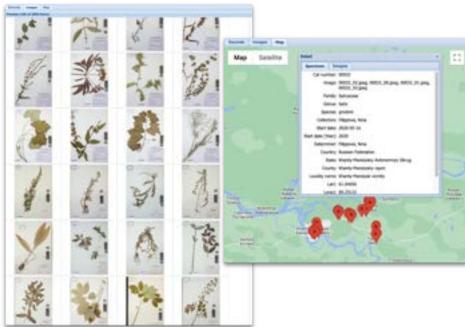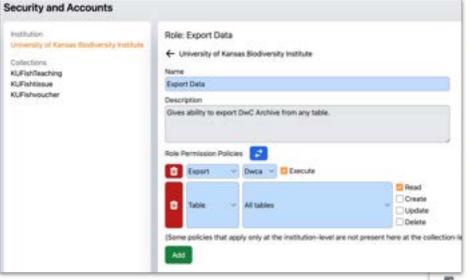
Record Deduplication/Merging

Export to the Specify Web Portal

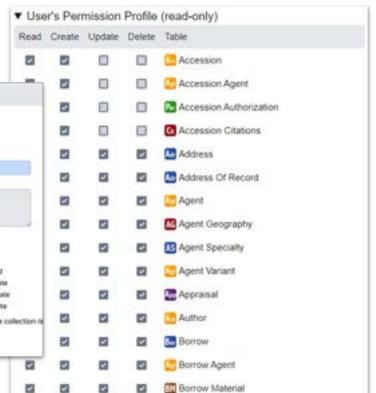# Security & Permissions

Data Publishing & Sharing

RSS Feed + Supports Darwin Core Standard Terms