



Requirements Document

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Introduction

Biological collections in the United States have amassed over 500 million specimens but only 14% of these have been digitized; we need to greatly expand existing tools and methods to efficiently digitize specimen data.

Symbiota¹ is one of the most widely used online biodiversity data management software platforms. By integrating data and images from networks of data providers, it has helped mobilize over 37 million specimen records from 766 natural history collections. As a web service, Symbiota is one of the most successful platforms for sharing and displaying biodiversity data.

Problem Statement

While Symbiota has proved to be a robust, widely-adopted platform, significant barriers for entry exist for developers. Lack of self-documenting variables, tight coupling of key modules, siloing of project knowledge, and lack of integrated testing could be some reasons that such barriers exist. These barriers for entry are evidenced by the fact that the two main Symbiota developers, Ed Gilbert and Ben Brandt, contributed 458,216 and 152,380 lines to the code base, respectively. The next most frequent contributor was dflemin, with 1,292 lines.² In the modern open-source environment, developer accessibility and community contribution are key for project maintenance and avoiding software rot. The wide adoption of Symbiota has also yielded significant feedback on how it could be made more effective. Users want more features, and community contribution needs to be cultivated in order to develop an organizational infrastructure to provide those features at scale.

Despite widespread usage in production, the code base for Symbiota is not being actively maintained. As a result, two independent projects have emerged as successors to Symbiota. The first, Symbiota Light³, began as a single-user fork of Symbiota and continues to be primarily supported by a single developer. Symbiota2 is the alternative path forward, and aims to be accessible to a large community of developers. There are currently four developers working on Symbiota2.

¹ <https://github.com/Symbiota/Symbiota>

² <https://github.com/Symbiota/Symbiota/graphs/contributors>

³ <https://github.com/egbot/Symbiota-Light>

Solution Vision

Symbiota needs a fundamental restructuring to increase its maintainability and facilitate development of new features. The transformation of Symbiota into Symbiota2 involves completely refactoring the codebase, emphasizing modularity in order to improve usability and accessibility.

Modern web development practices involve splitting a web application into an Application Programming interface (API) and a User Interface (UI), in a practice known as the Representational State Transfer, or RESTful, architecture⁴. The UI is a presentation layer, displaying data to the user. The API handles business logic, sending and receiving data to and from the UI when requested. Splitting Symbiota2 into an API and UI will improve modularity. New UI features will be developed independently of things like database access or data processing, and API logic will be independent of the presentation layer. Splitting the API and UI also allows for more granular horizontal scaling⁵, another modern web development practice that allows for better performance.

Symbiota2 will be further modularized by utilizing a plugin architecture. This architecture specifies a small, extremely stable core application that is closed for modification, but open for extension by “plugging-in” new modules. This architecture will allow for user features to be toggled on and off, and for developers to contribute new functionality without having to contribute to the core Symbiota2 codebase.

Many modern web development platforms come with modularization functionality out of the box. Angular, a frontend platform originally developed by Google, will be used to build the UI for Symbiota2. NestJS is a backend platform modeled around the same design principles as Angular and is a logical choice for the API. Both frameworks are written in Typescript, have support for building modular “libraries”, and can be organized within a single, full-stack monorepository utilizing a tool called Nx.

Building modularity into Symbiota2 will improve the speed with which new features can be added and ensure maintainability and accessibility. A plugin architecture will allow contributors to develop content without having to read through inapplicable code. A single, modern web development language like Typescript will provide for better code quality and a lower barrier for entry. These improvements, taken together, will greatly improve the efficacy of sharing biodiversity data within the scientific community.

⁴ https://www.ics.uci.edu/~fielding/pubs/dissertation/rest_arch_style.htm

⁵ <https://12factor.net/concurrency>

Project requirements⁶

Required Functionality

The primary functional requirement of Symbiota2 is to be an upgrade of Symbiota. As a result, the functional requirements of Symbiota2 revolve around re-implementing all functionality that users would expect from Symbiota.

- I. Symbiota2 Core - Responsible for configuring Symbiota2, authenticating/authorizing users, and enabling/disabling plugins
 - A. API core
 1. An configuration module for reading portal-wide API configuration data from environment variables⁷
 2. An authentication module for authenticating and authorizing user requests
 3. A user module for adding and removing application users
 4. A plugin management module for enabling/disabling official and 3rd party plugins for the Symbiota2 API
 5. A database module for fetching/updating the Symbiota2 backing database
 - B. UI Core⁸
 1. A configuration module for reading portal-wide UI configuration data from environment variables
 2. A user module
 - a) Displaying login screens
 - b) Fetching/updating user data from the API
 - c) Editing user permissions for portal administrators ('SuperAdmins')
 3. A translation module for handling internationalization
 4. A plugin management module for enabling/disabling official and 3rd party plugins for the Symbiota2 UI
 - II. Symbiota2 Collection plugin - Responsible for defining and manipulating collections of specimen records
 - A. UI Collection plugin: All pages in [Appendix B](#)
 - B. API Collection plugin: Data manipulation for all pages in [Appendix B](#)
 - III. Symbiota2 Occurrence plugin - Responsible for defining and manipulating specimen records
 - A. UI Occurrence plugin: All pages in [Appendix C](#)
 - B. API Collection plugin: Data manipulation for all pages in [Appendix C](#)

⁶ A “module” refers to an Angular or NestJS library utilized by the core Symbiota2 app, while a “plugin” refers to an Angular or NestJS library that comprises a Symbiota2 plugin.

⁷ <https://12factor.net/config>

⁸ See [Appendix A](#)

- IV. Symbiota2 Taxa Plugin - Responsible for defining and manipulating groups of organisms considered by taxonomists to form a homogeneous unit⁹
 - A. UI Taxa plugin: All pages in [Appendix D](#)
 - B. API Taxa plugin: Data manipulation for all pages in Appendix D
- V. Symbiota2 Image Plugin - Responsible for defining and manipulating images for specimens
 - A. UI Image Plugin: All pages in [Appendix E](#)
 - B. API Image plugin: Data manipulation for all pages in Appendix E

Performance Requirements

Symbiota2 is designed to implement modern web development practices in the context of the existing functionality for Symbiota. The Performance Requirements define how Symbiota2 improves upon the user experience for the expected functionality.

- Performance
 - All UI data fetching must be asynchronous
 - Long-running data manipulation must be done in a background process
 - Users should be notified of backend crashes with a human-readable message that can be shared with site administrators
- Usability
 - All configuration must be stored:
 - In simple scalar environment variables
 - In the database and editable via the API/UI
 - Migration from a Symbiota database must be done in a single command
 - Installation / migration documentation must be developed
- Maintainability
 - All code must be written in Typescript
 - All functions and classes must have doctrings explaining their functionality
 - All core modules and plugins must have unit tests
 - The API and UI modules must have integration tests
 - Each core module and plugin must have a README explaining its functionality

⁹ <https://dwc.tdwg.org/terms/#taxon>

Conclusion

The restructuring of Symbiota into Symbiota2 is essential to the project's survival as a tool for biodiversity data sharing. Although the importance of Symbiota to the scientific community is evidenced by its wide adoption, the code for Symbiota is unmaintained. Symbiota2 will refactor the Symbiota codebase into a modular structure using modern web development libraries and techniques, ensuring that the project is more extensible, more accessible to a wider community of developers, and more resistant to software rot. Symbiota2 will provide an upgraded biodiversity data sharing experience with a familiar UI, improved performance, and easier extensibility.

Introduction to Appendices

Each appendix corresponds to a functional requirement above. Since Symbiota2 is an upgrade to Symbiota, each page in the existing implementation should be present in Symbiota2. These pages give a metric for determining the completion status of the new Symbiota2 modules and plugins. [SCAN](#) is used as an example.

Appendix A: Symbiota Core Pages

The screenshot shows the SCAN homepage. At the top is a banner featuring the SCAN logo (a globe with a dragonfly and a scorpion) and a large image of a beetle. Below the banner is a navigation bar with links: Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, Contact, Log In, New Account, and Sitemap. The main content area has a title "Symbiota Collections of Arthropods Network (SCAN): A Data Portal Built to Visualize, Manipulate, and Export Species Occurrences". It includes a brief description of the service, a "Taxon Search" input field, and a search button. To the right is a large image of a beetle. Below the main content are several smaller sections: a "Get a free 1-on-1 Demo" box, logos for ASU, BON-EARTH, iDigBio, NSF, USDA, and USGS, and a footer section with social media icons.

Home Page

The screenshot shows the SCAN website's Site Map page for SuperAdmins. At the top left is the SCAN logo with the tagline "Symbiota Collections of Arthropods Network". The top right features a photograph of a darkling beetle. The navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, Contact, Welcome Neil!, My Profile, Logout, and Sitemap.

Site Map

Collections

- Search Engine - search collections
- Collection List - list of collection participating in project
- Collection Statistics
- Elevation Index
- RSS Feed
- RSS Feed for Natural History Collections and Observation Projects
- Darwin Core Archives (DivCA) - published datasets of selected collections
- Rare Species - list of taxa where locality information is hidden due to rare/threatened/endangered status

Image Library

- Image Library
- Image Search Tool
- Image Contributors
- Usage Policy and Copyright Information

Taxonomy

- Taxonomic Tree Viewer
- Taxonomy Explorer

Biotic Inventory Projects

- Arizona
 - Manager: Neil Cobb
- Arthropods of North America
 - Manager: David Fennig
- Coleopteridae of America
 - Manager: George Lee
- National Park Service
 - Manager: Neil Cobb, NPS
 - Supervisor: Mark Barkworth
 - Manager: Mark Barkworth
 - UC Natural History Museum Reserve System
 - Manager: UC NRS

Dynamic Species Lists

- Checklist - dynamically build a checklist using georeferenced specimen records
- Dynamic Key - dynamically build a key using georeferenced specimen records

Data Management Tools

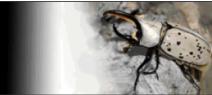
Administrative Functions (Super Admins only)

- User Permissions
- Taxonomic Interest User Permissions
- Global Endorhynchus Name Cleaner
- Create New Collection or Observation Profile
- Thumbnail Builder Tool
- Collection Map
- SALIX WordStar Manager

Identification Keys

- You are authorized to access the Characters and Character States Editor

Site Map Page for SuperAdmins

Welcome Neil! My Profile Logout Sitemap

[Home](#) >> Collection Search Page >> [Collection Profiles Details](#)

SCAN Natural History Collections and Observation Projects

RSS Feed: <https://scan-bugs.org:443/portal/collections/datasets/rsshandler.php>

ANS-P-ENT Academy of Natural Sciences Entomology Collection - LepNet

Live specimen data from The Academy of Natural Sciences Entomology Collection. Data in this collection includes LepNet and OrthoNet related records. Live data contributions towards SCAN for other TCN/PEN related projects where ANSP Entomology is a participant will be entered here.

Contact for LepNet: Jason Weintraub, weintraub@ansp.org
 Contact for OrthoNet: Greg Cowper, copper@ansp.org
 Contact: Jason Weintraub, Collection Manager, (weintraub@ansp.org)
 Home
 Collection Type: Preserved Specimens
 Management: Live Data managed directly within data portal
 Global Unique Identifier: af7140d3-4aa2-41ac-b3e9-4c7415b3e90
 DwC-Archive Publishing: <https://scan-bugs.org:443/portal/collections/datasets/datapublisher.php>
 Live Data Download: DwC-Archive File
 Digital Metadata: EML File
 Usage Rights: CC-BY-NC 4.0 (Attribution-Non-Commercial International)
 Rights Holder: Academy of Natural Sciences
 Access Rights: CC BY-NC (Attribution-Non-Commercial)
[More Information](#)

ANS-ORTH Academy of Natural Sciences Entomology Collection – OrthoNet

OrthoNet consists of specimen records from Orthoptera, Phasmatodea & Mantodea in the ANSP collection. It is a NSF-ADBC PEN project.

Contact: Copper, Greg (gmc23@cornell.edu)
 Collection Type: Preserved Specimens
 Management: Live Data managed directly within data portal
 Global Unique Identifier: af7140d3-a7af-f4dc-965f-71aa79c14f5d
 DwC-Archive Publishing: <https://scan-bugs.org:443/portal/collections/datasets/datapublisher.php>
 Live Data Download: DwC-Archive File
 Digital Metadata: EML File
 Usage Rights: CC BY-NC 4.0 (Attribution-Non-Commercial International)
 Rights Holder: ANSP
 Access Rights: Net-for-profit use only
[More Information](#)

ANS-PARA Academy of Natural Sciences Entomology Collection – ParasiteTracker

This collection is comprised of arthropod parasites on vertebrates

[ParasiteTracker](#)

Alphabetical list of Collections Page



Guidelines for Acceptable Use of Data

Recommended Citation Formats

Use one of the following formats to cite data retrieved from the SCAN network:

General Citation:
SCAN. 2021. <http://scan-bugs.org/portal/index.php>. Accessed on June 30.

Usage of occurrence data from specific institutions:
Biodiversity occurrence data published by: <List of Collections> (Accessed through SCAN Data Portal, <http://scan-bugs.org/portal/index.php>, YYYY-MM-DD)

For example:
Biodiversity occurrence data published by: Field Museum of Natural History, Museum of Vertebrate Zoology, and New York Botanical Garden (Accessed through SCAN Data Portal, <http://scan-bugs.org/portal/index.php>, 2021-06-30)

Occurrence Record Use Policy

- While SCAN will make every effort possible to control and document the quality of the data it publishes, the data are made available "as is". Any report of errors in the data should be directed to the appropriate curators and/or collections managers.
- SCAN cannot assume responsibility for damages resulting from mis-use, mis-interpretation of data, or from errors or omissions that may exist in the data.
- It is considered a violation of copyright law to alter and redistribute the data or other materials that have been used in subsequent research.
- SCAN expects that any use of data from this server will be accompanied with the appropriate citations and acknowledgments.
- SCAN encourages users to contact the original investigator responsible for the data that they are accessing. Where appropriate, researchers whose projects are integrally dependent on particular group of specimen data are encouraged to consider collaboration and/or co-authorship with original investigators.
- SCAN data that does not redistribute data obtained from this site without permission for data owners. However, links or references to this site may be freely posted.

Collection Use Rights

Collection use rights are defined by the individual collection managers. Please refer to the collection manager if you have any questions.

Collection Name	Collection Rights	Rights
Academy of Natural Sciences Entomology Collection - Lepid.	http://creativecommons.org/licenses/by-nc/4.0/	
Academy of Natural Sciences Entomology Collection - Orthopter.	http://creativecommons.org/licenses/by-nc/4.0/	
Academy of Natural Sciences Entomology Collection - PterygotaFacies	http://creativecommons.org/licenses/by-nc/3.0/	
Actualización de la Colección de Artrópodos con importancia médica (CAIM), Laboratorio de Entomología, InDRE	http://creativecommons.org/licenses/by-nd/1.0/	
American Museum of Natural History Invertebrate Zoology Collection	http://creativecommons.org/licenses/by-nd/4.0/	
AMNH Arthropoda	http://creativecommons.org/licenses/by-nd/4.0/	
AmiWeb	http://creativecommons.org/publicdomain/zero/1.0/	
Apoyo para la infraestructura de la colección de artrópodos con y sin importancia médica del Laboratorio estatal de Salud Pública del estado de Guanajuato	http://creativecommons.org/licenses/by-nd/4.0/	
Archbold Biological Station Arthropod Collection	http://creativecommons.org/licenses/by-nd/4.0/	
Arizona State University - Social Insect Biodiversity Repository	http://creativecommons.org/licenses/by-nc/3.0/	

Usage Rights Page

The screenshot shows the SCAN website interface. At the top left is the SCAN logo with the tagline "Symbiota Collections of Arthropods Network". The top navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, and Contact. On the right side of the header are links for "Welcome Neil!", "My Profile", "Logout", and "Sitemap". A large image of a beetle is displayed on the right side of the header.

The main content area has a breadcrumb trail: "Home >> Exsiccati Index". Below this, the title "Exsiccati" is shown in bold. A message states "There are no exsiccati matching your request". To the right of this message is a yellow sidebar titled "Options" containing a search bar and checkboxes for "Display only those w/ specimens" and "Display sort by" (with "Title" selected). There is also a "Rebuild List" button.

At the bottom of the page, there are several logos for partner organizations: ASU (Arizona State University), BON-EARTH, iDigBio, NCEAS (National Center for Ecological Analysis and Synthesis), USDA (United States Department of Agriculture), and USGS (United States Geological Survey).

Exsiccati Index Page

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<rss version="2.0">
  <channel>
    <title>SCAN Biological Occurrences RSS Feed</title>
    <link>https://scan-bugs.org:443/portal/</link>
    <description>SCAN Natural History Collections and Observation Project feed</description>
    <language>en-US</language>
    <item collid="71">
      <title>ANSP-ENT</title>
      <image>https://scan-bugs.org:443/portal/content/collicon/ansp-ent.png</image>
      <description>Academy of Natural Sciences Entomology Collection - LepNet</description>
      <guid>ef714bc3-4aa2-41ac-b3e9-4c7415b3c980</guid>
      <emllink>https://scan-bugs.org:443/portal/collections/datasets/emlhandler.php?collid=71</emllink>
      <type>DWCA</type>
      <link>https://scan-bugs.org:443/portal/content/dwca/ANSP-ENT_DwC-A.zip</link>
      <pubDate>Wed, 30 Jun 2021 05:42:15</pubDate>
    </item>
    <item collid="228">
      <title>ANSP-ORTH</title>
      <image>https://scan-bugs.org:443/portal/content/collicon/ansp-orth.png</image>
      <description>Academy of Natural Sciences Entomology Collection - OrthopNet</description>
      <guid>edc5983a-a7af-4adc-96b0-71aa79c16f5d</guid>
      <emllink>https://scan-bugs.org:443/portal/collections/datasets/emlhandler.php?collid=228</emllink>
      <type>DWCA</type>
      <link>https://scan-bugs.org:443/portal/content/dwca/ANSP-ORTH_DwC-A.zip</link>
      <pubDate>Wed, 30 Jun 2021 05:42:15</pubDate>
    </item>
    <item collid="137">
      <title>CONABIO-CAIM</title>
      <image>https://scan-bugs.org:443/portal/content/collicon/conabio-caim.png</image>
      <description>Actualización de la Colección de Artrópodos con importancia médica (CAIM), Laboratorio de Entomología, InDRE</description>
      <guid>5f574da4-03f9-4709-a1ff-03adff50abc5</guid>
      <emllink>https://scan-bugs.org:443/portal/collections/datasets/emlhandler.php?collid=137</emllink>
      <type>DWCA</type>
      <link>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=137</link>
      <pubDate>Thu, 08 Jun 2017 00:00:00</pubDate>
    </item>
    <item collid="260">
      <title>AMNH-IIZC</title>
      <image>https://scan-bugs.org:443/portal/content/collicon/amnh-iizc.jpg</image>
      <description>American Museum of Natural History Invertebrate Zoology Collection</description>
      <guid>ca77c4c3-1d79-4dbc-a95e-81f944ec8518</guid>
    </item>
  </channel>
</rss>
```

RSS Feed Information Page




Code*	Collection Name	DwC-Archive	Metadata	Pub Date
ANS-P-ENT	Academy of Natural Sciences Entomology Collection - LepNet	DwC-A (3.8M) ✕	EML	2021-04-29
ANS-ORTH	Academy of Natural Sciences Entomology Collection – OrthopterNet	DwC-A (3.9M) ✕	EML	2021-04-29
ABS-ARTHARCH	Arbordat Biological Station Arthropod Collection	DwC-A (4.3M) ✕	EML	2021-04-29
MELU-AR	Australian Freshwater Invertebrates	DwC-A (0.1M) ✕	EML	2021-04-29
BLMU-ENT	BU Museum of Life and Bats of Pine Hill Preserve	DwC-A (0.1M) ✕	EML	2021-04-29
BYUC-BIUC	Bryce Young University Arthropod Museum	DwC-A (12.8M) ✕	EML	2021-04-29
CSLU-CSUC	C.P. Gillette Museum of Arthropod Diversity	DwC-A (21.7M) ✕	EML	2021-04-29
CSUEB-CSUEBNHM	California State University East Bay Natural History Museum	DwC-A (0.1M) ✕	EML	2021-04-29
CUAUC	Clemson University Arthropod Collection	DwC-A (1.9M) ✕	EML	2021-04-29
CLEVCMN-ENT	Cleveland Museum of Natural History Invertebrate Zoology Collection	DwC-A (8.5M) ✕	EML	2021-04-29
CC-CBE-COCOA	Colorado College Arthropod Collection	DwC-A (0.1M) ✕	EML	2021-04-29
NAU-CPMAB	Colorado Plateau Museum of Anthropology	DwC-A (4.8M) ✕	EML	2021-04-29
DBG-DBGA	Denver Botanic Gardens Collection of Arthropods	DwC-A (0.2M) ✕	EML	2021-05-07
DMNS-Arc	Denver Museum of Nature & Science - Arachnology	DwC-A (4.9M) ✕	EML	2021-04-29
DMNS-Ento	Denver Museum of Nature & Science - Entomology	DwC-A (0.1M) ✕	EML	2021-04-29
DMNS-Para	Denver Museum of Nature & Science - Parasites	DwC-A (0.1M) ✕	EML	2021-04-29
DAWIC-CAWIC	Dave A. Weller Insect Collection	DwC-A (8.5M) ✕	EML	2021-04-29
UMNH-ENT	Entomology Collection at the Natural History Museum of Utah	DwC-A (0.9M) ✕	EML	2021-04-29
EGC-ESG_CRC	Eric G Chapman Coleoptera Research Collection	DwC-A (0.5M) ✕	EML	2021-04-29
PSUC-ENTO	Frost Entomological Museum	DwC-A (7.8M) ✕	EML	2021-04-29
GPSG	Gregory P. Seitoff Collection - Kutztown University	DwC-A (0.1M) ✕	EML	2021-02-02
HDOA-HDOAPPC	Hawaii Department of Agriculture, Plant Pest Control Branch	DwC-A (0.1M) ✕	EML	2021-04-29
UKY-HIC-HIC	Hymenoptera Institute Collection	DwC-A (1.4M) ✕	EML	2021-04-29
JMM-JMMI	Joseph Moore Museum	DwC-A (1.9M) ✕	EML	2021-04-29
KSU-MEPAR	K-State Museum of Entomological and Prairie Arthropod Research	DwC-A (0.6M) ✕	EML	2021-04-29
UCSC-UCSC	University of California Santa Cruz, Insect Collection	DwC-A (0.1M) ✕	EML	2021-04-29
XKG-XKG	Xigun Xie Insect Collection	DwC-A (0.1M) ✕	EML	2021-04-29
LCD-LERC	Luther Entomological Research Collection	DwC-A (0.7M) ✕	EML	2021-05-04
*AA = Arthropoda Polyphemida				

Darwin Core Archives Page

Rare, Threatened, Sensitive Species

Species in the list below have protective status with specific locality details below county withheld (e.g. decimal lat/long). Rare, threatened, or sensitive status are the typical causes for protection though species that are cherished by collectors or wild harvesters may also appear on the list.

Global Protections

Gelechiidae

Gelechiidae sp1
Stericta sp1

Hepiceridae

Erynnis mormon (Scudder, 1869)

Leptometidae

Neoleptomena Brignoli, 1972

Lycaenidae

Ceruchus MacLeay, 1819
Ceruchus piceus (Weber, 1801)

Nymphalidae

Boloria improba acronema
Boloria improba acronema
Speyeria nokomis nokomis Edwards 1862

Passalidae

Odonotoneurus Kuwert, 1896

Welcome Neil! My Profile Logout Sitemap

Taxon Search

Species of Conservation Concern Page

SCAN
Symbiota Collections of Arthropods Network

Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact | Welcome Neil! | My Profile | Logout | Sitemap

Home > Arizona

Arizona

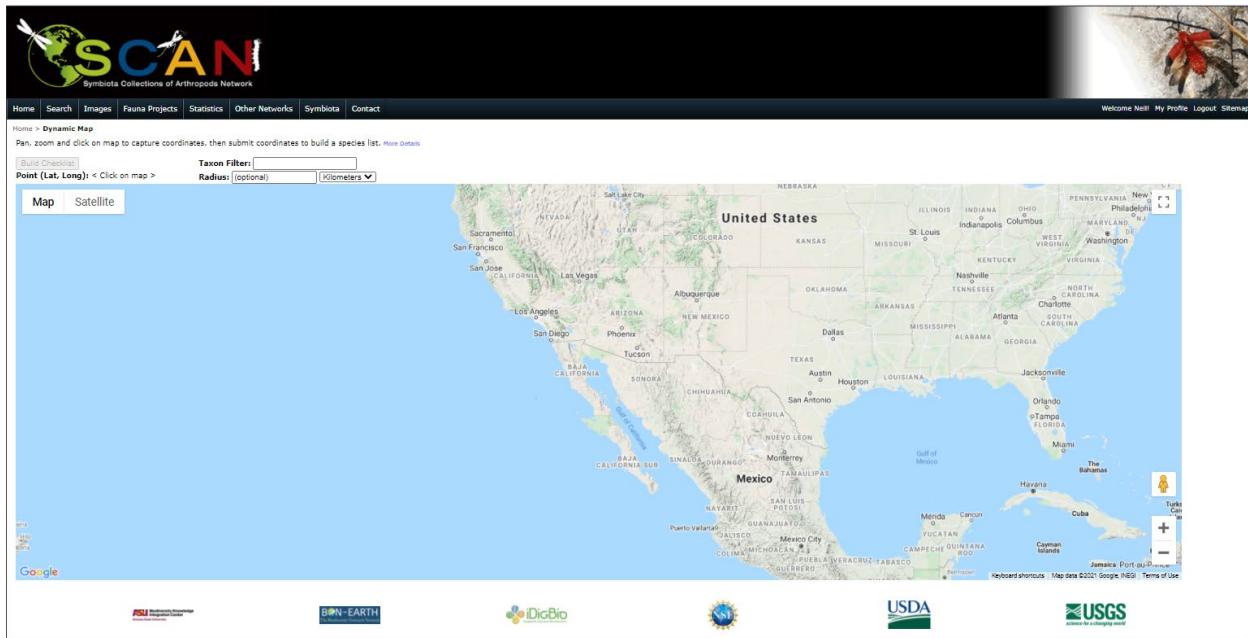
Project Managers: Neil Cobb

Research Checklists ⓘ

The ⓘ symbol opens the species list as an interactive key.

- Arthropods of Maricopa County ⓘ
- Lepidoptera of Arizona ⓘ
- San Francisco Peaks Arthropods ⓘ

Research Checklist Page



Research Checklist Page or Dynamic Map (Legacy Page) that is replaced by Spatial Map



List of Users Page

Taxonomic Interest User Permissions

Occurrence Identification Editor

- Anderson, Robert (Theognete) ×
- Coleoptera ×
- Brantley, Sandra (Sandraliny) ×
 - Anyphaenidae ×
 - Connidae ×
 - Endomychidae ×
 - Lynphiidae ×
 - Lycosidae ×
 - Oxytelidae ×
- Bundy, Scott (@bundy12) ×
 - Pentatomidae ×
 - Thysanoptera ×
- Fleming, David (dfleming) ×
 - Curculionidae ×
 - Scarabaeidae ×
 - Leucospigini (zangmilee) ×
 - Cosmopterigidae ×
 - Elachistidae ×
 - Gelichiidae ×
 - Oecophoridae ×
 - Pyralidae ×
 - Moore, Wendy (wmooore) ×
 - Pascal, Odile (odile) ×
 - Moss, Paul (mole) ×
 - Curculionidae ×

Taxonomic Thesaurus Editor

- Anderson, Robert (Theognete) ×
- Barkworth, Mary (Barkworth) ×
 - Scarabaeidae (Africa) ×
- Brantley, Sandra (Sandraliny) ×
 - Lynphiidae ×
- Brown, Richard (rb7) ×
 - Lepidoptera ×
- Fleming, David (dfleming2) ×
 - Cladellidae ×
- gape, ed (edgape) ×
 - Jacobsen, Terry Liz (maryliz;jameson) ×
 - Rubeline ×
 - Moore, Wendy (wmooore) ×
 - Papilionidae ×
- Ratchiffe, Brett (Brett) ×
 - Dynastidae (New World) ×
- Sierwald, Petra (psierwald) ×
 - Diptera ×
 - Odonata ×
 - Shelley, Paula (PaulSkelly) ×
 - Aptelinidae ×
 - Smith, Andrew (asmith) ×
 - Someone, Mary (MaryB) ×
 - Scarabaeidae (Africa) ×
 - Whitehouse, Ryan (rwhitehouse) ×
 - Lepidoptera ×

Region Of Interest

- Betancourt, Isa (Betancourt) ×

Taxonomic User Permissions Page

SCAN
Symbiota Collections of Arthropods Network

Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact | Log In | New Account | Sitemap

Login:

Password: Remember me on this computer

[Don't have an Account?](#)
[Create an account now](#)

[Can't remember your password?](#)
[Reset Password](#)

[Can't Remember Login Name?](#)
[Retrieve Login](#)

Login Page

Create New Profile

Login Details

Login: *

Password: *

Password Again: *

First Name: *

Middle Initial:

Last Name: *

Email Address: *

* required fields

Information below is optional, but encouraged

Title:

Institution:

Department:

Street Address:

City:

State:

Zip Code:

Country:

Url:

Biography:

Public can view email and bio within website (e.g. photographer listing)

I'm not a robot 

reCAPTCHA
Privacy - Terms

ASU University Knowledge
Arizona State University

BON-EARTH
Biodiversity Observation Network

iDigBio
Inspiring Digital Biodiversity



USDA

USGS
Science for a changing world

Sign up page for registering a personal account on a Symbiota portal

SCAN
Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Profile Details

Evin M Dunn
evindunn14@gmail.com
Login name: evindunn
User information: private

Edit Profile Change Password Change Login Manage Access

Edit User Profile

First Name:	Evin
Middle Initial:	M
Last Name:	Dunn
Title:	
Institution:	
Department:	
Street Address:	
City:	
State:	
Zip Code:	
Country:	
Email Address:	evindunn14@gmail.com
Url:	
Biography:	

Make user information displayable to public

Delete Profile

Taxonomic Relationships +

No relationships defined

ASU Biodiversity Knowledge Center
Arizona State University

BON-EARTH
The Biodiversity Observation Network

iDigBio
Integrated Digital Biosphere

NSF

USDA

USGS
science for a changing world

User profile page that provides basic user profile information

The screenshot shows the SCAN website interface. At the top left is the logo 'SCAN' with a globe and insects. The top navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, and Contact. On the right of the header are links for Welcome Evin!, My Profile, Logout, and Sitemap.

User Information:

- Title: Lindsie Abbott (#139)
- Institution: Northern Arizona University
- City: Flagstaff
- State: Arizona
- Zip: 86001
- Country: United States
- Email: lma243@nau.edu
- URL: lindsiebug9 (last login: 2020-01-17 09:10:36)

Search Bar:

Search Last Name or Login Name:

Quick Search:

A|B|C|D|E|F|G|H
I|J|K|L|M|N|O|P|Q
R|S|T|U|M|W|X|Y|Z

Login as this user

Current Permissions

- Super Administrator
- Taxonomy Editor
- Taxon Profile Editor
- Collection Editor for following collections
 - Colorado Plateau Museum of Arthropod Biodiversity
- Administrator for following checklists
 - Bees of the San Francisco Peaks, AZ
 - Pipe Spring National Monument
 - San Francisco Peaks Arthropods

Assign New Permissions

Identification Key Administrator

Identification Key Editor

Occurrence Management

Rare Species Administrator (add/remove species from list)
 Can read Rare Species data for all collections

Specimen Collections

Admin Editor Rare

Academy of Natural Sciences Entomology Collection - LepNet (ANSP-ENT)
 Academy of Natural Sciences Entomology Collection - OrthopNet (ANSP-ORTH)
 Academy of Natural Sciences Entomology Collection - ParasiteTracker (ANSP-PARA)
 Actualización de la Colección de Artrópodos con importancia médica (CAIM), Laboratorio de Entomología, InDRE (CONABIO-CAIM)
 American Museum of Natural History Invertebrate Zoology Collection (AMNH-IZC)
 AMNH Arthropods (AMNH)
 AntWeb (CAS-ANTWEB)
 Apoyo para la Infraestructura de la colección de artrópodos con y sin importancia médica del Laboratorio estatal de Salud Pública del estado de Guanaj (CONABIO-LSPG)
 Archbold Biological Station Arthropod Collection (ABS-ARTHARCH)
 Arizona State University - Social Insect Biodiversity Repository (ASU-SIBR)
 Arizona State University Charles W. O'Brien Collection (ASU-ASUCOB)
 Arizona State University Hasbrouck Insect Collection (ASU-ASUHIC)
 Arizona State University Lois B. O'Brien Collection (ASU-ASULOB)
 Auburn University Museum of Natural History Entomology (AUMNH-ENT)
 Augustana College Entomology Collection (AUGIE-ENT)
 Australian Freshwater Invertebrates (MELU-AFI)
 Bee Biology and Systematics Laboratory (USDA-ARS)
 Bees in the Trees Cornell Collection (CORN-URBAN)
 Bernice Pauahi Bishop Museum (BPBM-ENT)

User permissions edit page for administering and editing

Appendix B: Symbiota Collection Pages

The screenshot shows the SCAN website interface. At the top left is the SCAN logo with the tagline "Symbiota Collections of Arthropods Network". The top navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, and Contact. On the right side of the header are links for "Welcome Evin!", "My Profile", "Logout", and "Sitemap". A small thumbnail image of a red insect is visible in the top right corner.

The main content area is titled "Add New Collection Information". It contains various input fields for collection details:

- Institution Code: [text input]
- Collection Code: [text input]
- Collection Name: [text input]
- Description (2000 character max): [text area]
- Homepage: [text input]
- Contact: [text input]
- Email: [text input]
- Latitude: [text input]
- Longitude: [text input]
- Category: [dropdown menu] set to "No Category"
- Allow Public Edits: [checkbox]
- License: [dropdown menu] set to "http://creativecommons.org/licenses/by-nc/4.0/ [orphaned term]"
- Rights Holder: [text input]
- Access Rights: [text input]
- GUID source: [dropdown menu] set to "Not defined"
- Publish to Aggregators: [checkbox]
- Source Record URL: [text input]
- Icon URL: [text input]
- Collection Type: [dropdown menu] set to "Preserved Specimens"
- Management: [dropdown menu] set to "Snapshot"
- Sort Sequence: [text input]
- Global Unique ID: [text input]

Below these fields is a "Create New Collection" button.

A "Mailing Address" section follows, containing a message "No addresses linked" and two buttons: "Select Institution Address" and "Link Address". Below these buttons is a link "Add an institution not on list".

At the bottom of the page, there are logos for various partners: ASU Biodiversity Knowledge Center, BON-EARTH, iDigBio, USDA, and USGS.

Create/Edit Collection Page



SCAN
Symbiota Collections of Arthropods Network



Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Home >> Collection Search Page >> Bee Biology and Systematics Laboratory Details

Bee Biology and Systematics Laboratory (USDA-ARS)

This is a one-time snapshot collection of data originally hosted by GBIF: <http://www.gbif.org/publisher/1e26a630-7203-11dc-a0d8-b8a03c50a862>

The Pollinating Insects -- Biology, Management and Systematics Research Unit (PIRU) was founded in the late 1940s as part of the alfalfa seed production unit. We focus primarily on pollination research with bees. The mission of the Pollinating Insect - Biology, Management and Systematics Research Unit is the development of non-*Apis* bees, for example the alfalfa leafcutting bee and blue orchard bee, as crop pollinators. Research emphasis areas include the development and improvement of management systems for bee populations, biological studies of bees, plant-pollination systems, and bee biosystematics. Cross-pollinated crops not effectively pollinated by honey bees have been targeted for improved pollination management, and the candidacy of selected pollinator species continues to be evaluated. Current research on established species, like the alfalfa leafcutting bee and blue orchard bee, is directed toward developing control programs for pests and diseases, improving management that will result in better bee health and demonstrating pollination efficacy and increased producer profitability on "new" crops.

Contact: Terry Griswold (Terry.Griswold@ars.usda.gov)

Home Page: <https://www.ars.usda.gov/pacific-west-area/ogallala-pollinating-insect-biology-management-systematics-research/>

Collection Type: Preserved Specimens

Management: Data snapshot of local collection database

Last Update: 12 January 2017

IPT / DwC-A Source: Patterns of widespread decline in North America
Bee Biology and Systematics Laboratory

Digital Metadata: EML File

Usage Rights: CCO 1.0 (Public-domain)

Collection Statistics

- 620,545 occurrence
- 614,355 (98%) georeferenced
- 620,130 (99%) identified to species
- 11 families
- 279 genera
- 4,494 species
- 4,494 total taxa (including subsp. and var.)

Extra Statistics

Show Geographic Distribution
Show Family Distribution








Collection Profile Page

The screenshot shows the SCAN website interface. At the top left is the SCAN logo with a globe and two insects. At the top right is a photograph of a wasp on a spider. The top navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, Contact, Welcome Evin!, My Profile, Logout, and Sitemap. Below the navigation is a breadcrumb trail: Home >> Collection Search Page >> Bee Biology and Systematics Laboratory Details. The main content area is titled "Bee Biology and Systematics Laboratory (USDA-ARS)". It features two panels: "Data Editor Control Panel" with a list of functions like Add New Occurrence Record, Create New Records Using Image, etc.; and "Administration Control Panel" with a list of tasks like View Posted Comments, Edit Metadata and Contact Information, etc. A "Quick Search" box labeled "Catalog Number" is also present.

Collection Tools Page that lists all the basic functions available to collections



SCAN
Symbiota Collections of Arthropods Network



Welcome Evin! My Profile Logout Sitemap

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact

Home >> Collection Management >> Occurrence Comment Listing

1-4 of 4 comments

BBSL228328 S. Vanderwall 1977-10-09
Cobb, Neil posted on 2020-11-09 15:04:19
 This is misidentified, *B. cockerelli* is restricted to *cockerelli* is limited to Otero and Lincoln counties in New Mexico, at high elevation

BBSL228327 S. Vanderwall 1977-10-09
Cobb, Neil posted on 2020-11-09 15:04:08
 This is misidentified, *B. cockerelli* is restricted to *cockerelli* is limited to Otero and Lincoln counties in New Mexico, at high elevation

BOMBUS8463 1925-08-01
Cobb, Neil posted on 2020-11-09 15:03:18
 This is misidentified, *B. cockerelli* is restricted to *cockerelli* is limited to Otero and Lincoln counties in New Mexico, at high elevation

BBSL228326 S. Vanderwall 1977-10-09
Cobb, Neil posted on 2020-11-09 15:02:52
 This is misidentified, *B. cockerelli* is restricted to *cockerelli* is limited to Otero and Lincoln counties in New Mexico, at high elevation

Options

 Public
 Non-public
 Reviewed
 All

Collection comments page



SCAN
Symbiota Collections of Arthropods Network

Welcome Evin! My Profile Logout Sitemap

Home >> Collection Management >> Bee Biology and Systematics Laboratory Permissions

— Administrators —
There are no administrative permissions (excluding Super Admins)

— Editors —
There are no general Editor permissions
*Administrators automatically inherit editing rights

— Rare Species Readers —
There are no Sensitive Species Reader permissions
*Administrators and editors automatically inherit protected species viewing rights

— Add a User —
Select User
 Administrator
 Editor
 Rare Species Reader
[Add Permissions for User](#)

— Identification Editors —
Following users have permission to edit occurrence records that are insignificantly identified to a taxon that is within the scope of their taxonomic interest and has an identification confidence ranking value of less than 6. Identification Editors can also edit occurrence records that are only identified to order or above or lack an identification altogether.
+
 There are no Identification Editor permissions

Collection permissions page that designates permissions for a user




Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact | Welcome Neil! | My Profile | Logout | Sitemap

Home >> Collections >> Collection Statistics

Select Collections to be Analyzed

Record Criteria

Parent Taxon: Country:

Select/Deselect all Collections

Bee-Pollinator Projects (BPP)

<input type="checkbox"/> Bee Biology and Systematics Laboratory (USDA-ARS) more info	<input type="button" value="Run Statistics"/>
<input type="checkbox"/> Bees in the Trees Cornell Collection (CORN-URBAN) more info	<input type="button" value="Update Statistics"/>
<input type="checkbox"/> Biodiversidad de la apifauna de Yucatán (CONABIO-UADY) more info	
<input type="checkbox"/> BLM Mother Lode Field Office: The Bees of Pine Hill Preserve (BLM-MLO) more info	
<input type="checkbox"/> Bombus of Canada (CNC-CNC) more info	
<input type="checkbox"/> Computarización de la colección de abejas (Hymenoptera: Apoidea) del Museo de Zoología Alfonso L. Herrera, de la Facultad de Ciencias de la UNAM (CONABIO-CMZ) more info	
<input type="checkbox"/> Diversidad de abejas (Hymenoptera: Apoidea) de la Reserva de la Biosfera El Triunfo, Chiapas (CONABIO-RBTC) more info	
<input type="checkbox"/> Maine State Museum - Brienne Du Clos (MSM-DUCL) more info	
<input type="checkbox"/> Minnesota Bee Atlas (UMN-EXT) more info	

Collection Statistics Page (1 of 2). You can select data for one taxa or all taxa for one country or all countries and for one collection or multiple collections.



SCAN
Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Neil! My Profile Logout Sitemap

Home >> Collections >> Collection Statistics

Select Collections to be Analyzed

Collections Statistics

Selected Collection Statistics

Display List of Collections Analyzed

- 1,483,824 occurrence records
- 1,465,429 (99%) georeferenced
- 862 (0.06%) imaged
- 1,269,801 (86%) identified to species
- 182 families
- 643 genera
- 5,594 species
- 5,642 total taxa (including subsp. and var.)

Show Statistics per Collection

Extra Statistics

Show Family Distribution Show Geographic Distribution Load Order Distribution

Year Stats

Years: Load Stats

Collection Statistics Page (2 of 2) results showing number of total records, georeferenced records, records with images, records identified to species, number of taxa, family distribution, country distribution, and monthly performance going back to 2011.

Appendix C: Symbiota Occurrence Pages

New Occurrence Record

Collector Info

Catalog Number ?	Other Cat. #s ?	Collector ?	Number ?	Date ?	<input type="checkbox"/> Dupes?
<input type="text"/>	<input type="checkbox"/> Auto search				

Associated Collectors ? Verbatim Date ?

Latest Identification

Scientific Name ?	Author ?
<input type="text"/>	<input type="text"/>
ID Confidence ? Undefined	ID Qualifier ? <input type="text"/>
Family ? <input type="text"/>	
Identified By ? <input type="text"/>	Date Identified ? <input type="text"/>

Locality

Country ? <input type="text"/>	State/Province ? <input type="text"/>	County ? <input type="text"/>	Municipality ? <input type="text"/>
Locality ? <input type="text"/>			
<input type="checkbox"/> Locality Security ? <input type="text"/>	<input type="checkbox"/> Deactivate Locality Lookup <input type="text"/>		
Latitude <input type="text"/>	Longitude <input type="text"/>	Uncertainty ? <input type="text"/>	Datum ? <input type="text"/> Verbatim Coordinates ? <input type="text"/>
Elevation in Meters ? <input type="text"/>	Verbatim Elevation ? <input type="text"/>	Depth in Meters ? <input type="text"/>	Verbatim Depth ? <input type="text"/>

Misc

Habitat ? <input type="text"/>				
Substrate ? <input type="text"/>				
Associated Taxa ? <input type="text"/>				
Description ? <input type="text"/>				
Occurrence Remarks ? <input type="text"/>				
Field Notes ? <input type="text"/>				
Dynamic Properties ? <input type="text"/>				
Life Stage ? <input type="text"/>	Sex ? <input type="text"/>	Individual Count ? <input type="text"/>	Sampling Protocol ? <input type="text"/>	Preparations ? <input type="text"/>
Phenology ? <input type="text"/>	Establishment Means ? <input type="text"/>	<input type="checkbox"/> Cultivated		

Curation

Type Status ? <input type="text"/>	Disposition ? <input type="text"/>	Occurrence ID ? <input type="text"/>	Field Number ? <input type="text"/>
Basis of Record ? PreservedSpecimen <input type="text"/>	Language <input type="text"/>	Label Project <input type="text"/>	Dupe Count <input type="text"/>
Institution Code (override) ? <input type="text"/>	Collection Code (override) ? <input type="text"/>	Owner Code (override) ? <input type="text"/>	Processing Status Pending Review <input type="text"/>
Data Generalizations <input type="text"/>			

Create/Edit Occurrence Page (1 of 4)



Occurrence Data Determination History Images Linked Resources Admin

Identification Confidence Ranking

Determination History

There are no historic annotations for this specimen

Add a New Determination

Identification Qualifier:

Scientific Name:

Author:

Confidence of Determination: Medium

Determiner:

Date:

Reference:

Notes:

Make this the current determination
 Add to Annotation Queue

Create/Edit Occurrence Page (2 of 4)

Academy of Natural Sciences Entomology Collection - LepNet (ANSP:ENT)

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



Occurrence Data Determination History Images Linked Resources Admin

Duplicate Specimens

No Linked Duplicate Records

Search for Records to Link

Genetic Resources

Add New Resource

Name:

Identifier:

Locus:

URL:

Notes:

Add New Genetic Resource

Associated Occurrences ?

X

Add row Update Associated Occurrences

Create/Edit Occurrence Page (3 of 4)

Academy of Natural Sciences Entomology Collection - LepNet (ANSP:ENT)

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



No previous edits recorded

Transfer Specimen

Target Collection

Select Collection

Remain on Current Collection

Delete Occurrence Record

Record first needs to be evaluated before it can be deleted from the system. The evaluation ensures that the deletion of this record will not interfere with the integrity of other linked data. Note that all determination and comments for this occurrence will be automatically deleted. Links to images, and checklist vouchers will have to be individually addressed before can be deleted.

Image Links:

Checklist Voucher Links:

Create/Edit Occurrence Page (4 of 4)



Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Home >> Collections

Specimens & Observations Specimens Observations

Select/Deselect All Expand/Collapse All

Bee-Pollinator Projects (BPP) Search >

	<input checked="" type="checkbox"/> Bee Biology and Systematics Laboratory (USDA-ARS) more info
	<input checked="" type="checkbox"/> Bees in the Trees Cornell Collection (CORN-URBAN) more info
	<input checked="" type="checkbox"/> Biodiversidad de la apifauna de Yucatán (CONABIO-UADY) more info
	<input checked="" type="checkbox"/> BLM Mother Lode Field Office: The Bees of Pine Hill Preserve (BLM-MLFO) more info
	<input checked="" type="checkbox"/> Bombus of Canada (CNC-CNC) more info
	<input checked="" type="checkbox"/> Computarización de la colección de abejas (Hymenoptera: Apoidea) del Museo de Zoología Alfonso L. Herrera, de la Facultad de Ciencias de la UNAM (CONABIO-CMZ) more info
	<input checked="" type="checkbox"/> Diversidad de abejas (Hymenoptera: Apoidea) de la Reserva de la Biosfera El Triunfo, Chiapas (CONABIO-RBTC) more info
	<input checked="" type="checkbox"/> Maine State Museum - Brianne Du Clos (MSM-DUCL) more info
	<input checked="" type="checkbox"/> Minnesota Bee Atlas (UMN-EXT) more info
	<input checked="" type="checkbox"/> Native Bee Inventory and Monitoring Lab - US-CA-MX - Bees (USGS-PWRC-US-CA-MX) more info
	<input checked="" type="checkbox"/> Native Bee Inventory and Monitoring Lab - World - Bees (USGS-PWRC) more info
	<input checked="" type="checkbox"/> Oregon Bee Atlas (OSAC-BEES) more info
	<input checked="" type="checkbox"/> Plant-pollinator community assembly across wildfire gradients (BURKLE-LAMANNA) more info
	<input checked="" type="checkbox"/> Pollinator interaction flexibility across scales affects patch colonization and occupancy (EMEC-UTB-ENT) more info
	<input checked="" type="checkbox"/> Predicting changes in bee assemblages following state transitions (UNM-MBA) more info
	<input checked="" type="checkbox"/> RL Minckley Insect and Plant Collection (RLMC) more info
	<input checked="" type="checkbox"/> Survey of bumblebees in central Alberta - 2018 (UAZC-BOMB) more info
	<input checked="" type="checkbox"/> University of California San Diego - Drought and Habitat Fragmentation on Native Bee Assemblages (UCSD-Bees) more info
	<input checked="" type="checkbox"/> Xerces Society - Bumble Bee Watch (Xerces-BOMB) more info

Canada

	<input checked="" type="checkbox"/> Bishop's University Insect Collection (BUIC) (BUIC-ODO) more info
	<input checked="" type="checkbox"/> Canadian National Collection (CNC-CNCC) more info
	<input checked="" type="checkbox"/> Insect Collection of Quebec (CIQ-ENT) (CIQ-ENT) more info
	<input checked="" type="checkbox"/> Insectarium de Montréal (IMQC) (IMQC-ENT) more info
	<input checked="" type="checkbox"/> Northern Biodiversity Program Coleoptera (2010-2011) (NBP-COL) more info

Occurrence Search Page (1 of 3)


 Welcome Evin! My Profile Logout Sitemap

Home >> Collections >> Search Criteria

Enter Search Parameters

Fill in one or more of the following query criteria and click "Search" to view your results.

Show results in table view

Taxonomic Criteria:

Include Synonyms from Taxonomic Thesaurus

Family or Scientific Name

Locality Criteria:

Country:
 State/Province:
 County:
 Locality:
 Elevation (m): to

Latitude and Longitude:

Bounding box coordinates in decimal degrees

Northern Latitude:	<input type="text"/> N <input type="button" value=""/>
Southern Latitude:	<input type="text"/> N <input type="button" value=""/>
Western Longitude:	<input type="text"/> W <input type="button" value=""/>
Eastern Longitude:	<input type="text"/> W <input type="button" value=""/>

Point-Radius Search

Latitude:	<input type="text"/> N <input type="button" value=""/>
Longitude:	<input type="text"/> W <input type="button" value=""/>
Radius:	<input type="text"/> Kilometers <input type="button" value=""/>

Collector Criteria:

Collector's Last Name:
 Collector's Number:
 Collection Date: -

Specimen Criteria:

Catalog Number: Include other catalog numbers and GUILDS

Limit to Type Specimens
 Limit to Specimens with Images
 Limit to Specimens with Genetic Data








Occurrence Search Page (2 of 3)



Welcome Evin! My Profile Logout Sitemap

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact

Home >> Collections >> Search Criteria >> Specimen Records

Species List Occurrence Records Maps

Dataset: All Collections

See Results in Table View

1 2 3 4 5 6 7 8 9 10 >> Last Page 1, records 1-100 of 28501611

Academy of Natural Sciences Entomology Collection - LepNet

	a <i>TREATI</i> grote	ANSP-ENT-64890	F. Haimbach	15 July 1910 to 15 July 1910	
ANS-ENT	United States, Massachusetts				
Full Record Details					
	a <i>TREATI</i> grote	ANSP-ENT-64889	L.J. Bottimer	12 August 1939 to 12 August 1939	
ANS-ENT	United States, Maryland				
Full Record Details					
	<i>Abaeis nicippe</i> (Cramer)	ANSP-ENT-145457	Morgan Hebard	10 December 1899 to 10 December 1899	
ANS-ENT	United States, Georgia, Thomas, [Hebard's boyhood winter residence - 711 S. Hansell St, Thomasville, GA], 88m				
Full Record Details					
	<i>Abagrotis alternata</i> (Grote, 1864)	ANSP-ENT-66657	Dr. Dietz		
ANS-ENT	United States, Pennsylvania				
Full Record Details					

Occurrence Search Page (3 of 3)

Details Comments Linked Resources Edit History

 Academy of Natural Sciences Entomology Collection - LepNet

[Share 0](#) [Tweet](#)

ANSP : ENT

Catalog #: ANSP-ENT-64890
Taxon: *a TREATI grote*
Family: Erebidae
Collector: F. Haimbach
Date: 1910-07-15 - 1910-07-15
Verbatim Date: 7-15 1910
Locality: United States, Massachusetts, Hyde Park
Life Stage: Adult
Preparations: Pinned
Occurrence Remarks: |

Usage Rights: CC BY-NC 4.0 (Attribution-Non-Commercial International)
Rights Holder: Academy of Natural Sciences
Access Rights: CC BY-NC (Attribution-Non-Commercial)
Record Id: 131cd752-e78b-4f2e-b035-a8b9a180d021
Occurrence ID (GUID): 131cd752-e78b-4f2e-b035-a8b9a180d021

For additional information on this occurrence, please contact: Jason Weintraub, Collection Manager (weintraub@ansp.org)
Do you see an error? If so, errors can be fixed using the Occurrence Editor.

Occurrence Search Result / Details (1 of 3)

Details Comments Linked Resources Edit History

No comments have been submitted

New Comment

Submit Comment

Messages over 500 words long may be automatically truncated. All comments are moderated.

Occurrence Search Result / Details (2 of 3)

Details Comments Linked Resources Edit History

Species Checklist Relationships

Specimen has not been designated as a voucher for a species checklist

Dataset Linkages

Occurrence is not linked to a dataset

Create New Dataset Relationship

New Dataset Name:

Notes:

Associated Occurrences [?](#)

Occurrence Search Result / Details (3 of 3)

Search Criteria

Include Synonyms

Family or Scientific Name

Taxa:

Country:

State/Province:

County:

Locality:

No shapes are selected on the map.

Collector's Last Name:

Collector's Number:

Collection Date: -

Catalog Number:

Other Catalog Number:

Limit to Type Specimens

Limit to Specimens with Images

Limit to Specimens with Genetic Data

Draw: None Base Layer: ESRI World Topo

Active Layer: None

Settings Tools Layers Delete Shapes

Spatial Module Search Page

Academy of Natural Sciences Entomology Collection - LepNet (ANSP:ENT)



Record Search Form

Collector:	Number:	Date:
Catalog Number:	Other Catalog Numbers:	
Entered by:	Date entered:	Date modified:
Processing Status: All Records <input type="button" value="▼"/> <input type="checkbox"/> With images <input type="checkbox"/> Without images		
Custom Field 1: <input type="button" value="--"/> <input type="button" value="Select Field Name"/> <input type="button" value="EQUALS"/> <input type="button" value="--"/>		
<input type="button" value="Display Editor"/> <input type="button" value="Display Table"/> <input type="button" value="Reset Form"/> Sort by: <input type="button" value="Select Sort Field"/> <input type="button" value="Ascending"/> <input type="button" value="Descending"/>		

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

Batch Edit Page (1 of 2)

Record Search Form

Collector:	Paige Chesshire	Number:	Date:
Catalog Number:	Other Catalog Numbers:		
Entered by:	Date entered:	Date modified:	
Processing Status:	All Records	<input type="checkbox"/> With Images	<input type="checkbox"/> Without Images
Custom Field 1:	~	Select Field Name	EQUALS
<input type="button" value="Display Editor"/> <input type="button" value="Display Table"/> <input type="button" value="Reset Form"/> Sort by: Select Sort Field Ascending			

Home >> Collection Management >> Occurrence Record Table View | 1-611 of 611 records |

Symbiont ID	Catalog Number	Family	Scientific Name	Author	Collector	Event Date	Verbatim Date	Identification Remarks	Identified By	Date Identified	Country	State/Province	County	Locality	Longitude	Datum	Georeference Sources	Habitat
3078970#	NAUF4A0081393	Colletidae	<i>Colletes kincaidi</i>	Cockerell, 1898	Paige Chesshire	2017-07-12	7/12/17		T. Griswold	2018	United States	Arizona	Coconino	MC4M	-111.3543	-111.732	WGS 84	Mixed Conife
3079562#	NAUF4A0079371	Megachilidae	<i>Megachile frigida</i>	Smith, 1853	Paige Chesshire	2017-06-01	6/1/17		T. Griswold	2018	United States	Arizona	Coconino	MC1M	35.2385	-111.738	WGS 84	Mixed Conife
3152670#	NAUF4A0081402	Megachilidae	<i>Megachile mellinarsis</i>	Cresson, 1878	Paige Chesshire	2017-07-12	7/12/17		T. Griswold	2018	United States	Arizona	Coconino	MC5M	35.3803	-111.6858	WGS 84	Mixed Conife
3152671#	NAUF4A0081494	Megachilidae	<i>Megachile mellinarsis</i>	Cresson, 1878	Paige Chesshire	2017-07-26	7/26/17		T. Griswold	2018	United States	Arizona	Coconino	SF6M	35.3568	-111.7173	WGS 84	Spruce-Fir; N
3152686#	NAUF4A0081503	Megachilidae	<i>Megachile relativa</i>	Cresson, 1878	Paige Chesshire	2013-06-26	6/26/13		T. Griswold	2018	United States	Arizona	Coconino	MC5M	35.3803	-111.6858	WGS 84	Mixed Conife
3152689#	NAUF4A0081504	Megachilidae	<i>Megachile relativa</i>	Cresson, 1878	Paige Chesshire	2017-07-13	7/13/17		T. Griswold	2018	United States	Arizona	Coconino	SF6M	35.3568	-111.7173	WGS 84	Spruce-Fir; N
3153711#	NAUF4A0081757	Apidiae	<i>Melissodes confusus</i>	Paige Chesshire	2017-07-26	7/26/17					United States	Arizona	Coconino	SF3M	35.3322	-111.6561	WGS 84	Spruce-Fir; N
3153712#	NAUF4A0081759	Colletidae	<i>Hyaleus annulatus</i> (Linnaeus, 1758)	Paige Chesshire	2017-06-29	6/29/17		T. Griswold	2018	United States	Arizona	Coconino	SF4M	35.3602	-111.7189	WGS 84	Spruce-Fir; N	
3153737#	NAUF4A0081763	Colletidae	<i>Colletes compactus</i>	Cresson, 1868	Paige Chesshire	2017-08-26	8/26/17		T. Griswold	2018	United States	Arizona	Coconino	PP6M	35.3889	-111.7251	WGS 84	Ponderosa P
3153738#	NAUF4A0081766	Megachilidae	<i>Dianthidium</i>	Cockerell, 1900	Paige Chesshire	2017-06-26	6/26/17	Dianthidium 101			United States	Arizona	Coconino	PJ8	35.514	-111.6232	WGS 84	Pinyon-Juniper
3153739#	NAUF4A0081774	Apidiae	<i>Meissodes tristis</i>	Cockerell, 1894	Paige Chesshire	2017-06-27	6/27/17				United States	Arizona	Coconino	PP5M	35.4162	-111.6716	WGS 84	Ponderosa P
3153740#	NAUF4A0079390	Megachilidae	<i>Osmia coloradensis</i>	Cresson, 1878	Paige Chesshire	2017-06-28	6/28/17		T. Griswold	2018	United States	Arizona	Coconino	MC3M	35.329	-111.739	WGS 84	Mixed Conife
3153742#	NAUF4A0081777	Megachilidae	<i>Osmia juncta</i>	Cresson, 1864	Paige Chesshire	2017-07-13	7/13/17		T. Griswold	2018	United States	Arizona	Coconino	SF3M	35.3322	-111.6561	WGS 84	Spruce-Fir; N
3153742#	NAUF4A0091778	Apidiae	<i>Meissodes perpolitus</i>	LaBerge, 1961	Paige Chesshire	2017-07-11	7/11/17				United States	Arizona	Coconino	PP5M	35.4162	-111.6716	WGS 84	Ponderosa P
3154049#	NAUF4A0081845	Apidiae	<i>Meissodes fasciatella</i>	LaBerge, 1961	Paige Chesshire	2017-08-25	8/25/17				United States	Arizona	Coconino	MC2M	35.3529	-111.7306	WGS 84	GeoLocate
3154047#	NAUF4A0081846	Colletidae	<i>Colletes</i>	Latreille, 1802	Paige Chesshire	2017-09-02	9/2/17	COL COL 103	KW Wright	2018	United States	Arizona	Coconino	PJ2	35.4737	-111.5932	WGS 84	Pinyon-Juniper
3154047#	NAUF4A0081847	Colletidae	<i>Colletes</i>	Latreille, 1802	Paige Chesshire	2017-09-02	9/2/17	COL COL 103			United States	Arizona	Coconino	PJ2	35.4737	-111.5932	WGS 84	Pinyon-Juniper
3154050#	NAUF4A0081848	Apidiae	<i>Eucera (Synhalonia)</i>	Paige Chesshire	2017-08-14	8/14/17	API EUCE SYN 001				United States	Arizona	Coconino	PP5M	35.4162	-111.6716	WGS 84	Ponderosa P
3154050#	NAUF4A0081849	Apidiae	<i>Eucera (Synhalonia)</i>	Paige Chesshire	2017-08-14	8/14/17	API EUCE SYN 001				United States	Arizona	Coconino	PP2M	35.4163	-111.6714	WGS 84	Ponderosa P
3154050#	NAUF4A0081850	Apidiae	<i>Eucera (Synhalonia)</i>	Paige Chesshire	2017-08-26	8/26/17	API EUCE SYN 001				United States	Arizona	Coconino	PP8M	35.3879	-111.6869	WGS 84	Ponderosa P
3170882#	NAUF4A0082469	Apidiae	<i>Meissodes confusus</i>	Paige Chesshire	2017-07-27	7/27/17					United States	Arizona	Coconino	MC4M	35.3543	-111.732	WGS 84	Mixed Conife

Batch Edit Page (2 of 2)

Label Printing Page (per Collection)

Colorado Plateau Museum of Arthropod Biodiversity

Home >> Control Menu >> Batch Georeferencing Tools

Query Form

All Countries	All States	All Counties
All Municipalities	All Processing Status	
Locality Term: <input type="text"/>		
<input type="button" value="Generate List"/>		

Return Count: --

Use query form above to build locality list

Deg. Min. Sec. Decimal

Latitude: N =

Longitude: W =

Error (in meters): Datum:

Footprint WKT:

Sources: georef batch tool 2021-06-23

Remarks:

Verification Status: reviewed - high confidence

Elevation: to meters to feet

Processing status: Leave as is

Note: Existing data within following georeference fields will be replaced with incoming data. However, elevation data will only be added when the target fields are null. No incoming data will replace existing elevational data. Georeference fields that will be replaced: decimalLatitude, decimalLongitude, coordinateUncertaintyInMeters, geodeticDatum, footprintWKT, georeferencedBy, georeferenceRemarks, georeferenceSources, georeferenceVerificationStatus

Statistics

Records to be Georeferenced
Total: 6473
Percentage: 8.4%

Batch Georeference Page (per Collection)



SCAN
Symbiota Collections of Arthropods Network

Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact

Welcome Evin! My Profile Logout Sitemap

Home >> Collection Management Panel >> List of Upload Profiles >> Specimen Loader

Data Upload Module

Colorado Plateau Museum of Arthropod Biodiversity
Last Upload Date: 03 April 2020 12:00:00

Skeletal File Import: Identify Data Source

No file chosen

Resource Path or URL:

* This option is for pointing to a data file that was manually uploaded to a server. This option offers a workaround for importing files that are larger than what is allowed by server upload limitations (e.g. PHP configuration limits).

Automap fields



Skeletal Text File Upload (1 of 2)



SCAN
Symbiota Collections of Arthropods Network

Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact | Welcome Evin! My Profile Logout Sitemap

Home >> Collection Management Panel >> List of Upload Profiles >> Specimen Loader

Data Upload Module

Test Collection
Last Upload Date: not recorded

Skeletal File Import

Source Field	Target Field
imgid	Select Target Field
occid	Select Target Field
originalurl	Select Target Field

* Unverified mappings are displayed in yellow
 * To learn more about mapping to Symbiota fields (and Darwin Core):
[SymbiotaOccurrenceFields.pdf](#)
[Loading Data into Symbiota](#)

Match on Catalog Number
 Match on Other Catalog Numbers

- Incoming skeletal data will be appended only if targeted field is empty
- If both checkboxes are selected, matches will first be made on catalog numbers and secondarily on other catalog numbers

Verify image links from associatedMedia field

Processing Status: Leave as is / No Explicit Setting

Skeletal Files consist of stub data that is easy to capture in bulk during the imaging process. This data is used to seed new records to which images are linked. Skeletal fields typically collected include file or current scientific name, country, state/province, and sometimes county, though any supported field can be included. Skeletal file uploads are similar to regular uploads though differ in several ways.

- General file uploads typically consist of full records, while skeletal uploads will almost always be an annotated record with data for only a few selected fields
- The catalog number field is required for skeletal file uploads since this field is used to find matches on images or existing records
- In cases where a record already exists, a general file upload will completely replace the existing record with the data in the new record. On the other hand, a skeletal upload will augment the existing record only with new field data. Fields are only added if data does not already exist within the target field.
- If a record DOES NOT already exist, a new record will be created in both cases, but only the skeletal record will be tagged as unprocessed



Skeletal Text File Upload (2 of 2)



SCAN
Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Home >> Collection Management Panel >> List of Upload Profiles >> Specimen Loader

Data Upload Module

Test Collection
Last Upload Date: not recorded

Manual DwC-Archive Import: Identify Data Source

No file chosen

 Automap fields



DwCA Upload (1 of 3)



SCAN
Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Home >> Collection Management Panel >> List of Upload Profiles >> Specimen Loader

Data Upload Module

Test Collection
Last Upload Date: not recorded

Manual DwC-Archive Import: Field Mapping

Source Unique Identifier / Primary Key (**required**): Core ID

Import Occurrence Records (view mapping)
 Import Identification History (view mapping)
 Import Images (view mapping)

Save Mapping

Verify image links

Processing Status: **Leave as is / No Explicit Setting**

Start Upload



DwCA Upload (2 of 3)

Data Upload Module

Test Collection

Last Upload Date: not recorded

Manual DwC-Archive Import: Field Mapping

Source Unique Identifier / Primary Key (required): Core ID

Import Occurrence Records (view mapping)

Source Field	Target Field
institutionCode	institutioncode
collectionCode	collectioncode
ownerInstitutionCode	ownerinstitutioncode
collectionID	Select Target Field
basisOfRecord	basisofrecord
occurrenceID	occurrenceid
catalogNumber	catalognumber
otherCatalogNumbers	othercatalognumbers
kingdom	Select Target Field
phylum	Select Target Field
class	Select Target Field
order	Select Target Field
family	family
scientificName	sciname
taxonID	Select Target Field
scientificNameAuthorship	scientificnameauthorship
genus	genus
specificEpithet	specificepithet
taxonRank	taxonrank
infraspecificEpithet	infraspecificepithet
identifiedBy	identifiedby
dateIdentified	dateidentified
identificationReferences	identificationreferences
identificationRemarks	identificationremarks
taxonRemarks	taxonmarks
identificationQualifier	identificationqualifier
typeStatus	typestatus
recordedBy	recordedby
recordNumber	recordnumber
eventDate	eventdate
year	year
month	month
day	day
startDayOfYear	startdayofyear
endDayOfYear	enddayofyear
verbatimEventDate	verbatimeventdate
occurrenceRemarks	occurrenceremarks
habitat	habitat
fieldNumber	fieldnumber
informationWithheld	informationwithheld
dataGeneralizations	datageneralizations

DwCA Upload (3 of 3)

This XML file does not appear to have any style information associated with it. The document tree is shown below.

```
<rss version="2.0">
  <channel>
    <title>SCAN Darwin Core Archive rss feed</title>
    <link>https://scan-bugs.org:443/portal/</link>
    <description>SCAN Darwin Core Archive rss feed</description>
    <language>en-us</language>
    <item collid="104">
      <title>ABS-ARTHARCH DwC-Archive</title>
      <image>http://scan-bugs.org/portal/images/collicons/arch.jpg</image>
      <description>Darwin Core Archive for Archbold Biological Station Arthropod Collection</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=104</guid>
      <guid>f52df103-0126-47fd-8836-934641444fc</guid>
      <emllink>https://scan-bugs.org:443/portal/content/dwca/ABS-ARTHARCH_DwC-A.eml</emllink>
      <type>DWCA</type>
      <recordType>DWCA</recordType>
      <link>https://scan-bugs.org:443/portal/content/dwca/ABS-ARTHARCH_DwC-A.zip</link>
      <pubDate>Thu, 29 Apr 2021 07:38:16</pubDate>
    </item>
    <item collid="71">
      <title>ANSP-ENT DwC-Archive</title>
      <image>https://scan-bugs.org:443/portal/content/collicon/ansp-ent.png</image>
      <description>Darwin Core Archive for Academy of Natural Sciences Entomology Collection - LepNet</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=71</guid>
      <guid>af7140c3-4aa2-41ac-b3e9-4c7415b3ce90</guid>
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      <recordType>DWCA</recordType>
      <link>https://scan-bugs.org:443/portal/content/dwca/ANSP-ENT_DwC-A.zip</link>
      <pubDate>Thu, 29 Apr 2021 07:38:16</pubDate>
    </item>
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      <description>Darwin Core Archive for Academy of Natural Sciences Entomology Collection - OrthopNet</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=228</guid>
      <guid>e4c5903a-a7ef-4adc-96b0-71aa79c16f5d</guid>
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      <recordType>DWCA</recordType>
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      <pubDate>Thu, 29 Apr 2021 07:38:17</pubDate>
    </item>
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      <image>http://scan-bugs.org/portal/content/collicon/blm-mlfo.png</image>
      <description>Darwin Core Archive for BLM Mother Lode Field Office: The Bees of Pine Hill Preserve</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=94</guid>
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    </item>
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      <description>Darwin Core Archive for The Broward College Insect Collection</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=172</guid>
      <guid>a875efbb-6377-47b2-9fb3-7500e7df8a02</guid>
      <emllink>https://scan-bugs.org:443/portal/content/dwca/BROW-BCIC_DwC-A.eml</emllink>
      <type>DWCA</type>
      <recordType>DWCA</recordType>
      <link>https://scan-bugs.org:443/portal/content/dwca/BROW-BCIC_DwC-A.zip</link>
      <pubDate>Thu, 29 Apr 2021 07:38:16</pubDate>
    </item>
    <item collid="18">
      <title>BYU-BYUC DwC-Archive</title>
      <image>http://scan-bugs.org/portal/images/collicons/BYU_logo_small.jpg</image>
      <description>Darwin Core Archive for Brigham Young University Arthropod Museum</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=18</guid>
      <guid>ad64ad57-a281-457e-b398-964ddd7e953</guid>
      <emllink>https://scan-bugs.org:443/portal/content/dwca/BYU-BYUC_DwC-A.eml</emllink>
      <type>DWCA</type>
      <recordType>DWCA</recordType>
      <link>https://scan-bugs.org:443/portal/content/dwca/BYU-BYUC_DwC-A.zip</link>
      <pubDate>Thu, 29 Apr 2021 07:38:16</pubDate>
    </item>
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      <image>https://scan-bugs.org:443/portal/content/collicon/byu-observ.jpg</image>
      <description>Darwin Core Archive for Odonata records from the Brigham Young University Arthropod Museum</description>
      <guid>https://scan-bugs.org:443/portal/collections/misc/collprofiles.php?collid=128</guid>
    </item>
  </channel>
</rss>
```

DwCA RSS Feed (all collections)

SCAN
Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact

Welcome Evin! My Profile Logout Sitemap

Home >> Collection Management >> Darwin Core Archive Publisher

Darwin Core Archive Publishing

Test Collection

Use the controls below to publish occurrence data within this collection as a Darwin Core Archive (DwC-A) file. A DwC-A file is a single compressed ZIP file that contains one to several data files along with a meta.xml document that describes the content. The occurrence data file is required, but identifications (determinations) and image metadata are optional. Fields within the occurrences.csv file are defined by the Darwin Core exchange standard.

RSS Feed: <https://scan-bugs.org:443/portal/webservices/dwc/rss.xml>

No data archives have been published for this collection

— Publishing Information —

The GUID source has not been set for this collection. Please go to the Edit Metadata page to set GUID source.

— Publish/Refresh DwC-A File —

Include Determination History
 Include Image URLs
 Redact Sensitive Localities

Create/Refresh Darwin Core Archive Archive cannot be published until occurrenceID GUID source is set

NOTE: all records lacking occurrenceID GUIDs will be excluded

DwCA Publishing (per collection)

Appendix D: Symbiota Taxa Pages

The screenshot shows the SCAN (Symbiota Collections of Arthropods Network) Taxonomy Explorer. At the top, there is a logo featuring a globe with a dragonfly and a scorpion, followed by the text "SCAN" and "Symbiota Collections of Arthropods Network". Below the logo is a navigation bar with links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, Contact, Log In, New Account, and Sitemap.

The main content area has a heading "Home >> Taxonomy Explorer". Below this is a search form with a text input field containing "Catocala", a checkbox labeled "Display authors" (unchecked), and a button labeled "Display Taxon Tree".

On the right side of the search form is a small image of a red insect, likely a member of the family Nymphalidae.

Below the search form is a detailed taxonomic tree for the order Lepidoptera. The tree starts with "Kingdom Animalia" and branches down through "Subkingdom Bilateria", "Phylum Annelida", "Phylum Arthropoda", "Subphylum Chelicerata", "Subphylum Hexapoda", "Class Entognatha", "Class Insecta", "Subclass Apterygota", "Subclass Dicordylia", "Subclass Monocondyla", "Subclass Pterygota", "Infraclass Neoptera", "Superorder Dictyoptera", "Superorder Holometabola", "Superorder Neuropterida", "Order Coleoptera", "Order Dermaptera", "Order Diptera", "Order Embioptera", and "Order Grylloblattodea".

The entire page is titled "Taxonomy explorer" at the bottom center.

The screenshot shows the SCAN website interface. At the top left is the logo featuring a globe with two insects (a fly and a butterfly) and the acronym "SCAN". Below the logo is the text "Symbiota Collections of Arthropods Network". The top navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, and Contact. On the right side of the top bar, there are links for "Welcome Evin!", "My Profile", "Logout", and "Sitemap". A photograph of a green beetle is visible in the top right corner.

The main content area displays information for the species *Catocala abacta*, which belongs to the family Erebidae. Below the species name is a link to its profile page: [Catocala abacta](#).

The page features several tabs at the top: "Synonyms / Vernaculars" (selected), "Images", "Image Sort", "Add Image", and "Descriptions".

A message "No common in system" with a green plus sign is displayed. Below it is a form for adding a new common name:

- New Common Name
- Common Name:
- Language:
- Notes:
- Source:
- Sort Sequence:
-

Synonyms

No synonym links

*Most of the synonym management must be done in the Taxonomic Thesaurus editing module (see sitemap).

ASU Biodiversity Knowledge
Integration Center

BON-EARTH
The Biodiversity Observation Network

iDigBio
Integrated Digital Biological Information

NSF

USDA

USGS
science for a changing world

Common name editor



SCAN
Symbiota Collections of Arthropods Network

Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact | Welcome Evin! My Profile Logout Sitemap

Home >> Taxonomy Tree Viewer >> **Taxonomy Loader**

Add New Taxon

Taxon Name:

Author:

Taxon Rank: Species

Unit Name 1:

Unit Name 2:

Unit Name 3:

Parent Taxon:

Notes:

Source:

Locality Security Status: No Security

Acceptance Status

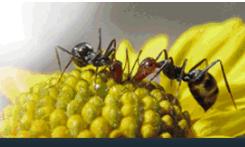
Accepted Not Accepted








New Taxon

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Home >> Taxonomic Tree Viewer >> Taxa Batch Loader

Taxonomic Name Batch Loader

This page allows a Taxonomic Administrator to batch upload taxonomic data files. See Symbiota Documentation pages for more details on the Taxonomic Thesaurus layout.

Taxa Upload Form

Flat structured, CSV (comma delimited) text files can be uploaded here. Scientific name is the only required field below genus rank. However, family, author, and rankid (as defined in taxonunits table) are always advised. For upper level taxa, parents and rankids need to be included in order to build the taxonomic hierarchy. Large data files can be compressed as a ZIP file before import. If the file upload step fails without displaying an error message, it is possible that the file size exceeds the file upload limits set within your PHP installation (see your php configuration file).

Upload File:

No file selected.
 Target Thesaurus: Default Taxonomic Thesaurus

ITIS Upload File

ITIS data extract from the ITIS Download Page can be uploaded using this function. Note that the file needs to be in their single file pipe-delimited format (example: CyprinidaeITISExample.txt). File might have .csv extension, even though it is NOT comma delimited. This upload option is not guaranteed to work if the ITIS download format change often. Large data files can be compressed as a ZIP file before import. If the file upload step fails without displaying an error message, it is possible that the file size exceeds the file upload limits set within your PHP installation (see your php configuration file). If synonyms and vernaculars are included, these data will also be incorporated into the upload process.

Upload File:

No file selected.

Clean and Analyze

If taxa information was loaded into the UploadTaxa table using other means, one can use this form to clean and analyze taxa names in preparation to loading into the taxonomic tables (taxa, taxstatus).

Target Thesaurus: Default Taxonomic Thesaurus








Taxon Batch upload

Taxon Editor (1 of 4)

SCAN
Symbiota Collections of Arthropods Network

Welcome Evin! My Profile Logout Sitemap

Home >> Taxonomy Tree Viewer >> **Taxonomy Editor**

Agapostemon angelicus Cockerell, 1924 [233769]

Taxonomic Placement

Status: **Accepted** Default Taxonomic Thesaurus

Family: Halictidae
Parent Taxon: Agapostemon

Synonyms

No Synonyms Linked to this Taxon

Change to Not Accepted

Accepted Name:
Reason:
Notes:

* Synonyms will be transferred to Accepted Taxon

Funding Logos:
 ASU Biodiversity Knowledge Integration Center
 BON-EARTH The Biodiversity Observation Network
 iDigBio
 NSF
 USDA
 USGS science for a changing world

Taxon Editor (2 of 4)

Quick Query Taxonomic Hierarchy

- Animalia
- Arthropoda
- Hexapoda
- Insecta
- Pterygota
- Neoptera
- Hymenoptera
- Apocrita
- Aculeata
- Apoidea
- Halictidae
- Halictinae
- Halictini
- Agapostemon
- Agapostemon angelicus

Taxon Editor (3 of 4)



SCAN
Symbiota Collections of Arthropods Network

Home Search Images Fauna Projects Statistics Other Networks Symbiota Contact Welcome Evin! My Profile Logout Sitemap

Home >> Taxonomy Tree Viewer >> **Taxonomy Editor**

Agapostemon angelicus Cockerell, 1924 [233769]

[Editor](#) [Taxonomic Status](#) [Hierarchy](#) [Delete](#)

Taxon record first needs to be evaluated before it can be deleted from the system. The evaluation ensures that the deletion of this record will not interfere with data integrity.

Children Taxa
 Approved: no children taxa are linked to this taxon

Synonym Links
 Approved: no synonyms are linked to this taxon

Images
 Warning: 395 images linked to this taxon

Vernaculars
 Approved: no vernacular names linked to this taxon

Text Descriptions
 Approved: no text descriptions linked to this taxon

Occurrence records:
 Warning, linked occurrence records exist:

- #378137
- #378138
- #378139
- #378140
- #378141
- #378142
- #378143
- #378144
- #378145
- #378146
- #378147
- #378148
- #378149
- #378150
- #378151
- #378152
- #378153
- #378154
- #378155
- #378156
- #378157
- #378158
- #378159
- #378160
- #378161
- #378162
- #378163
- #378164
- #378165
- #378166
- #378167
- #378168
- #391858

Taxon Editor (4 of 4)



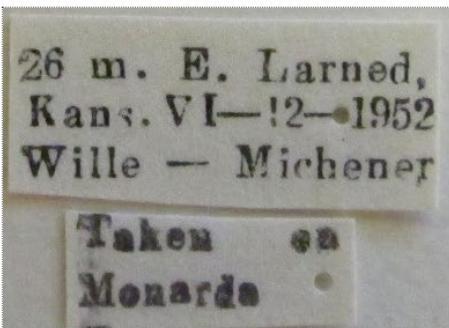
SCAN
Symbiota Collections of Arthropods Network



[Home](#) | [Search](#) | [Images](#) | [Fauna Projects](#) | [Statistics](#) | [Other Networks](#) | [Symbiota](#) | [Contact](#) | [Welcome Evin!](#) | [My Profile](#) | [Logout](#) | [Sitemap](#)

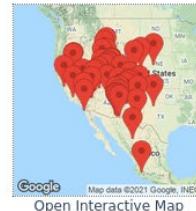
Agapostemon angelicus Cockerell, 1924 

Go to Encyclopedia of Life...
Source: ITIS_080509
Family: Halictidae



Description Not Yet Available

[Agapostemon angelicus image](#) [Agapostemon angelicus image](#) [Agapostemon angelicus image](#)



Open Interactive Map

[Agapostemon angelicus image](#) [Agapostemon angelicus image](#) [Agapostemon angelicus image](#)

[Click to Display
100 Total
Images](#)

[Web Links](#) [View Parent Taxon](#)













Taxon Profile Page

The screenshot shows the SCAN website interface. At the top left is the SCAN logo with a magnifying glass icon over a globe. The top right features a photograph of a green beetle on wood. The navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, and Contact. A welcome message "Welcome Neil! My Profile Logout Sitemap" is on the far right. Below the header, a breadcrumb trail shows "Home >> Specimen Management >> Taxonomic Name Cleaner". The main content area is titled "Batch Taxonomic Cleaning Tool". It contains a "Collection Selector" section with checkboxes for "Select / Unselect All" and "Colorado Plateau Museum of Arthropod Biodiversity (NAU-CPMAB)". A "Evaluate Collections" button is present. A note at the bottom of this section states "* Only collections with administrative access are shown". At the bottom of the page are logos for BON-EARTH, iDigBio, USDA, and USGS.

Batch Taxonomic Cleaning Tool

Appendix E: Symbiota Image Pages

The screenshot shows the SCAN (Symbiota Collections of Arthropods Network) website. At the top, there is a logo featuring a globe with a dragonfly and a scorpion, followed by the acronym "SCAN" in large letters. Below the logo, the text "Symbiota Collections of Arthropods Network" is visible. The top navigation bar includes links for Home, Search, Images, Fauna Projects, Statistics, Other Networks, Symbiota, and Contact. On the right side of the top bar, there is a welcome message "Welcome Evin! My Profile Logout Sitemap".

The main content area is titled "Image Search". It contains a search form with the following fields:

- Search Criteria: Includes "Collections" and "Scientific Name" dropdowns. A checkbox labeled "Include Synonyms" is checked.
- Photographers: A text input field.
- Image Tags: A dropdown menu set to "Select Tag".
- Image Keywords: A text input field.
- Date Uploaded: Two text input fields separated by a dash.
- Limit Image Counts: A dropdown menu set to "All images".
- Image Display: A dropdown menu set to "Thumbnails".
- Limit Image Type: Radio buttons for "All Images" (selected), "Occurrence Images", "Image Vouchered Observations", and "Field Images (lacking specific locality details)".

At the bottom of the search form, there is a "Load Images" button. Below the search form, there are several logos for partner organizations:

- ASU Biodiversity Knowledge Center
- BON-EARTH
- iDigBio
- NSF
- USDA
- USGS

Image search (1 of 2)

Image search (2 of 2)



Warning: This page is currently in BETA testing and may produce unexpected results.

The batch upload image module can only be used by individuals that have editing rights for their respective collection. Images must be jpgs, pngs, or gifs and compressed into a zip file. The zip file cannot be over 1GB. Each image should be less than 3mb. Please upload in the evenings or weekends if you have more than 100 images in a zip file. If you experience problems, save the log output from this page and email it to evin@scan-bugs.org.

Each image filename must include the DwC **catalogNumber** that is compliant with one of the formats we have on record for your collection or it will not be linked to the correct record. The file name should start with the **catalogNumber** followed by an underscore and whatever other codes or words you want to add (See example of additional codes that provide information about the image https://scan-all-bugs.org/?page_id=43).

Currently, a skeletal record will not be created. We will implement this option on a need-only basis.

We have created a table of **catalogNumber** formats for each collection based on what was available as of March 12, 2020. If you want to add a new format please contact evin@scan-bugs.org. **catalogNumber** formats that are not already associated with a record in the SCAN database will be rejected, even if you are establishing a new skeletal record with an image using the **catalogNumber** in the name of the file image.

For example, to upload images for the catalog number NAUF4A0007000, the following files could be compressed into a zip archive and uploaded. The letters following the underscore indicate Dorsal, Lateral and Ventral and are ignored:

```
NAUF4A0007000_D.jpg
NAUF4A0007000_L.jpg
NAUF4A0007000_V.jpg
```

In the log output two numbers will be referenced, the occurrence number (i.e., Symbiota ID in editor display table) and the collection **catalogNumber**. Please make sure that the **catalogNumber** in the record is printed on the specimen label in the exact same format. Otherwise there could be uncertainty in matching a specimen record with a specimen. For example NAUF4A0007000 could be interpreted differently than NAUF 4 A 0007000 or NAUF4A7000

It is your responsibility to upload the correct catalog number per image with the correct format. Any errors that result in erroneous records could take up to 2 weeks for the scan-bugs.org team to fix on your behalf.

Collection:

Image Archive: No file selected.

Logos: ASU Biodiversity Knowledge Integration Center, BON-EARTH, iDigBio, NSF, USDA, USGS

Batch upload

SCAN
Symbiota Collections of Arthropods Network

Home | Search | Images | Fauna Projects | Statistics | Other Networks | Symbiota | Contact | Welcome Neil! | My Profile | Logout | Sitemap

Species with Images

This page provides a complete list to taxa that have images. Use the controls below to browse and search for images by family, genus, or species.

Browse by Family
Browse by Genus
Browse by Species
A[B[C[D[E[F[G[H[I[J[K[L[M[N[P[Q[R[S[T[V[Z

Select a family to see species list.

- AACONIIDAE
- ACANALONIIDAE
- ACANTHOPIDAE
- ACARICOIDAE
- ACANTHOPODCTIDAE
- ACANTHOSOMATIDAE
- ACARIDAE
- ACARTOPTHALMIDAE
- ACCPITRIDAE
- ACARIDAE
- ACRIDIDAE
- ACROCERIDAE
- ACROPODIDAE
- ACTINOPODIDAE
- ADELGIDAE
- ADERIDA
- ADERIDAE
- AEODAE
- AEOLINOPRIDIAE
- AESPINIDAE
- AFROPODIDAE
- AETHRIDAE
- AGONIDIAE
- AGONOPRIDIAE
- AGELENIDAE
- AGONOXENIDAE
- AGYRTIDAE
- AGYRTIDIAP

Scientific Name Search

Search

Image Copyright Policy
Image Contributors
Image Search

Species Images Page, a legacy page that still has functionality not included in Image Search Page (e.g., select family, photo credits)