BCEENET
BIOLOGICAL COLLECTIONS IN
ECOLOGY AND EVOLUTION NETWORK

iDigBio Search Activity

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INTRODUCTION

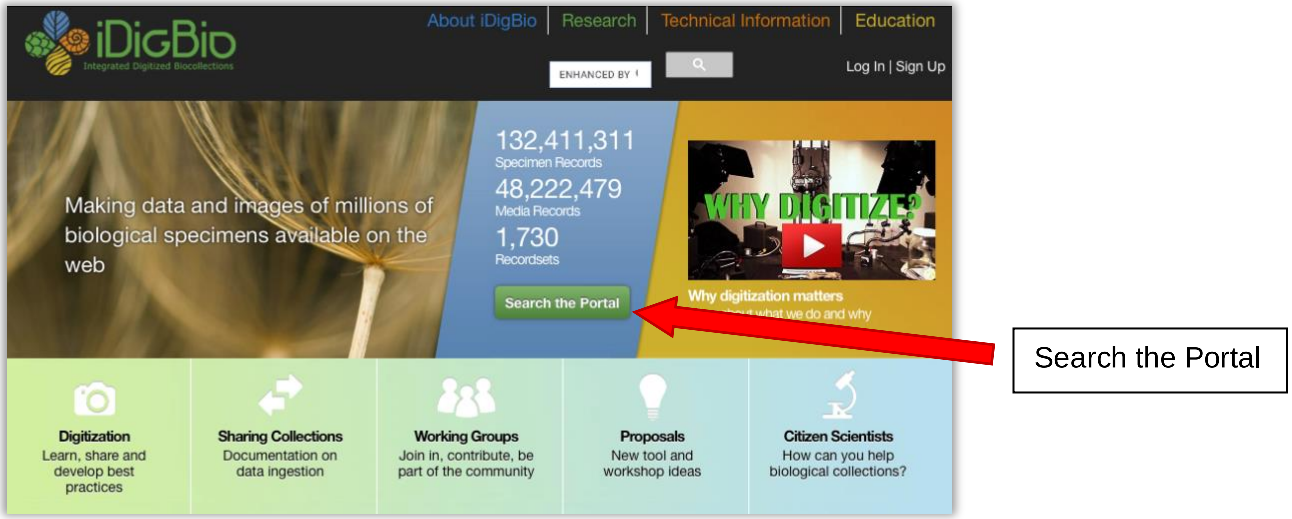
The iDigBio data portal is a central location to find and download digital specimen records from natural history collections. With over one hundred million specimen records, there is a tremendous amount of data available for use in research and education. This activity will walk you step-by-step through searching for and downloading specimen records on the iDigBio data portal.

After this activity, you will be able to:

- Explore the iDigBio search portal
- Locate specimen records for your species of interest
- Identify the subset of specimen records with multimedia files
- Download specimen records file for your species of interest

Step 1: Navigate to the iDigBio data portal

1. Navigate to the website iDigBio.org. It will look like the picture below. This is a great place to learn more about digital collections data research. It is a main hub for collections professionals, researchers, and educators to share information on the field of natural history collections data. Take a few minutes to look around.
2. Click the green "Search the Portal" button to navigate to the search page.



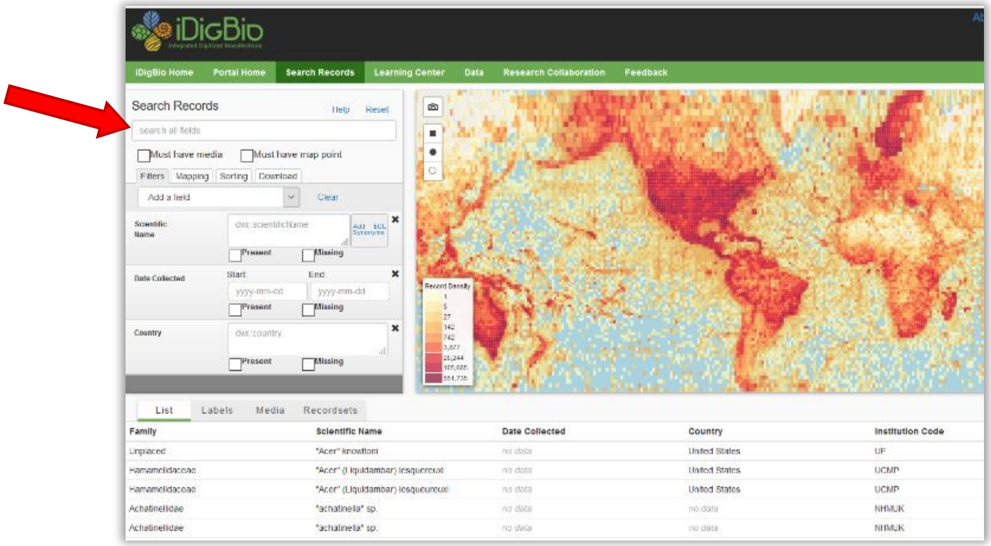
Making data and images of millions of biological specimens available on the web

Search the Portal

Trillo, P.A., Sorojsrisom, E., Jordan, C.N., & Krumm, J.L. (2022). Sexual dimorphism CURE: Exploring melanized wing patterns of Pieridae butterflies. BCEENET- Biological Collections in Ecology & Evolution Network, QUBES Educational Resources. https://qubeshub.org/publications/3250/1

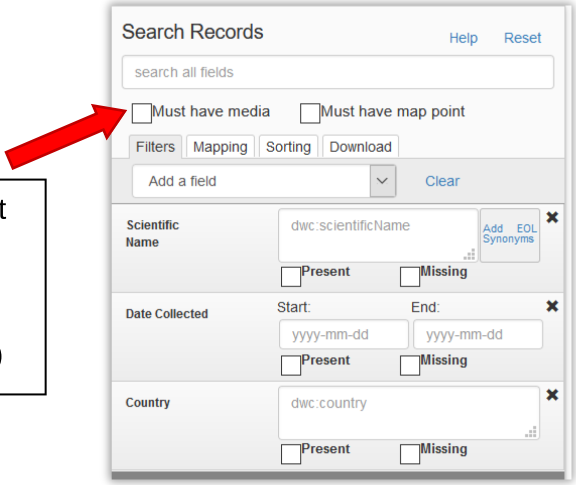
Step 2: Search the portal

1. For your first search, pick your favorite organism (animal, plant, fungus, etc.) and find its scientific name. You can look up the scientific name online if needed. The scientific name will have two parts. The scientific name for humans is *Homo sapiens*.
2. On the left side of the page, you will find a Search Records box, which contains multiple search fields. **Enter the scientific name in the top search field, labelled "search all fields".**



Family	Scientific Name	Date Collected	Country	Institution Code
Unplaced	"Acer" knowltoni	no data	United States	UF
Hamamelidaceae	"Acer" (Liquidambar) lesquereuxi	no data	United States	UCMP
Hamamelidaceae	"Acer" (Liquidambar) lesqueureuxi	no data	United States	UCMP
Achatinellidae	"achatinella" sp.	no data	no data	NHMUK
Achatinellidae	"achatinella" sp.	no data	no data	NHMUK

3. You will see the map will change, displaying the locations of the specimens found with known localities. At the bottom right of the map, you will see the total number of specimen records found.
4. Sometimes, you are only interested in specimen records with digital images or other multimedia files (like sound recordings of bird song). In the Search Records box, **select the box for "Must have media"**



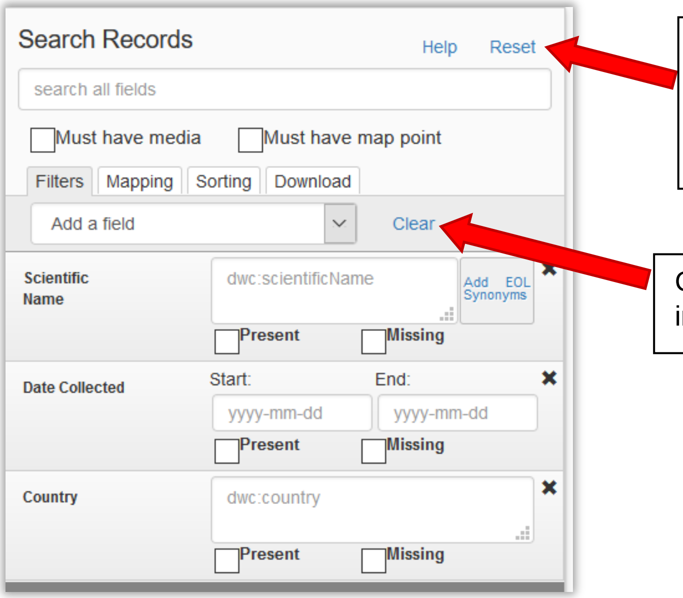
Click this box to limit search to specimen records that have multimedia files (digital images, etc.)

5. Look again at the number of records- the number will probably be smaller. Approximately 23% of the specimen records entered in iDigBio have associated multimedia records.

Step 3: Clear the search fields

So far, you have used “search all fields” to search for your species. Using this strategy, you will find the largest number of specimen records, but the search results will also include unrelated specimen records. For example, you may be searching for harbor seals. This type of search would find both harbor seal records and records of parasites collected from the intestines of harbor seals. You would need to remove these extraneous specimen records from your data set in your data cleaning process. We are going to search using different fields this time, so we need to clear the fields we have been using.

1. Find “Clear” and click on the word. The map will return to its original form.



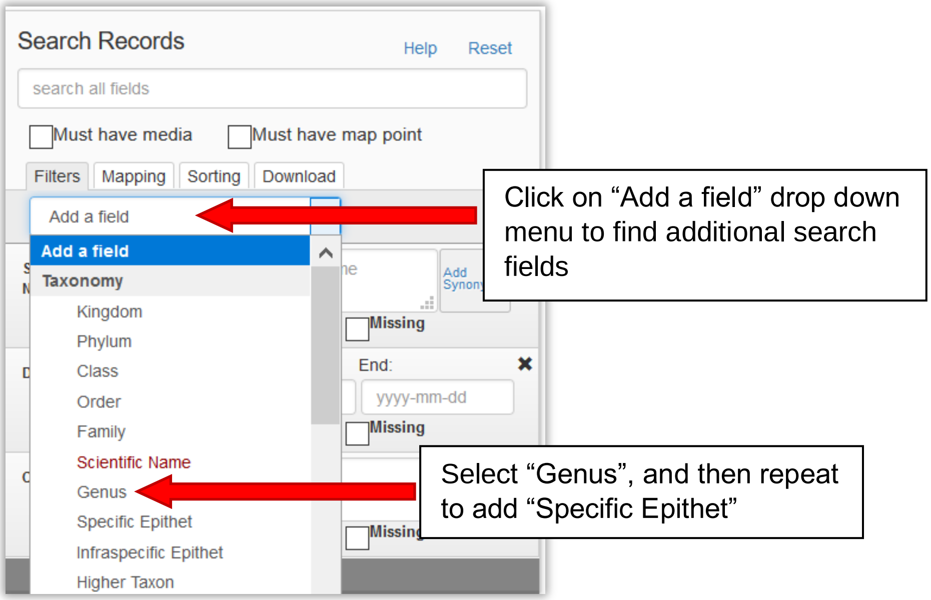
Reset: Will reset everything to original settings, including which search fields are displayed.

Clear: Will clear all entries in the search fields

Step 4: Searching the portal for a specific species

Using the drop-down menu, you can select specific search fields to add to your query. This allows you to create a directed search for the exact species name. The first part of a scientific name is the genus, the second part is the specific epithet. (For humans, the genus is *Homo* and the specific epithet is *sapiens*.)

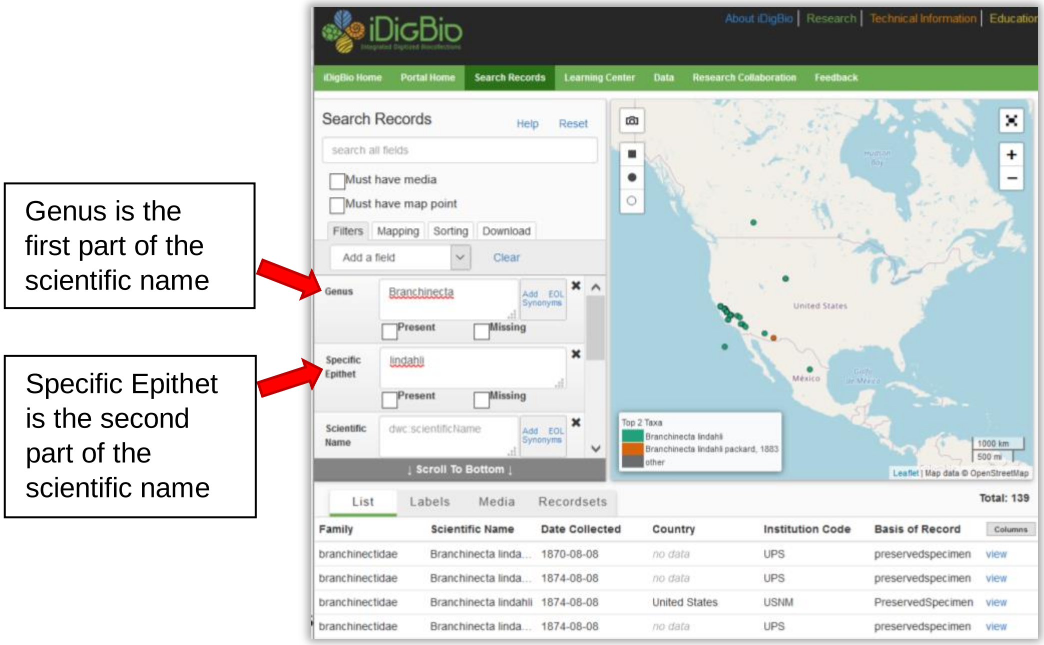
1. Find the drop-down menu for “Add a field” and select Genus. Repeat to add the field “Specific Epithet.”



Click on “Add a field” drop down menu to find additional search fields

Select “Genus”, and then repeat to add “Specific Epithet”

2. Next, enter the scientific name into your added fields. The example below is for the fairy shrimp *Branchinecta lindahli*.



Genus: Branchinecta

Specific Epithet: lindahli

Total: 139

Family	Scientific Name	Date Collected	Country	Institution Code	Basis of Record	
branchinectidae	Branchinecta linda...	1870-08-08	no data	UPS	preservedspecimen	view
branchinectidae	Branchinecta linda...	1874-08-08	no data	UPS	preservedspecimen	view
branchinectidae	Branchinecta lindahli	1874-08-08	United States	USNM	PreservedSpecimen	view
branchinectidae	Branchinecta linda...	1874-08-08	no data	UPS	preservedspecimen	view

Genus is the first part of the scientific name

Specific Epithet is the second part of the scientific name

3. Select “Must have media” to see how many of the specimen records have multimedia files.

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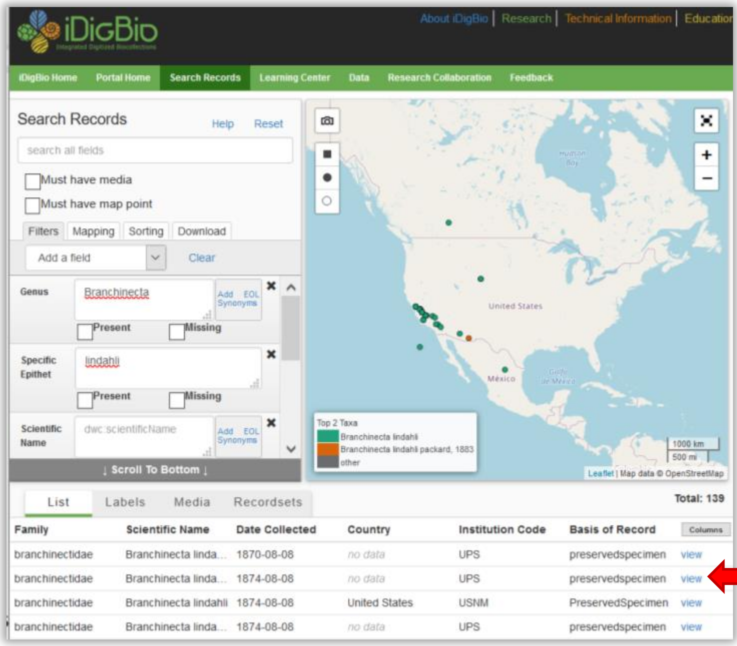
Step 5: Viewing specimen records

1. Below the displayed map and search fields, you should see rows of data. Each row represents a specimen record.



Genus: Branchinecta
Specific Epithet: lindahli
Scientific Name: dwc:scientificName

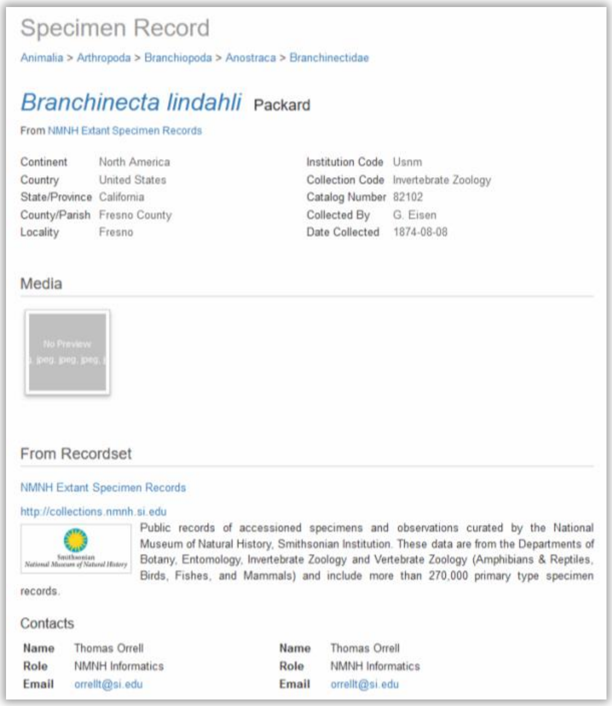
Total: 139

Family	Scientific Name	Date Collected	Country	Institution Code	Basis of Record	
branchinectidae	Branchinecta linda...	1870-08-08	no data	UPS	preservedspecimen	view
branchinectidae	Branchinecta linda...	1874-08-08	no data	UPS	preservedspecimen	view
branchinectidae	Branchinecta lindahli	1874-08-08	United States	USNM	PreservedSpecimen	view
branchinectidae	Branchinecta linda...	1874-08-08	no data	UPS	preservedspecimen	view

Click on “View” to view an individual specimen record

2. At the far right of each specimen record is the word “view”. Click “view” for one of the records.

3. Scroll through the record and find: the museum, herbarium, or collection where the specimen is currently located, what type of media record is available (if any), the type of resource, the date the specimen was collected, and the location where the specimen was collected.



Specimen Record

Animalia > Arthropoda > Branchiopoda > Anostraca > Branchinectidae

Branchinecta lindahli Packard

From NMNH Extant Specimen Records

Continent North America
Country United States
State/Province California
County/Parish Fresno County
Locality Fresno

Institution Code Usnm
Collection Code Invertebrate Zoology
Catalog Number 82102
Collected By G. Eisen
Date Collected 1874-08-08

Media

From Recordset

NMNH Extant Specimen Records

http://collections.nmnh.si.edu

Public records of accessioned specimens and observations curated by the National Museum of Natural History, Smithsonian Institution. These data are from the Departments of Botany, Entomology, Invertebrate Zoology and Vertebrate Zoology (Amphibians & Reptiles, Birds, Fishes, and Mammals) and include more than 270,000 primary type specimen records.

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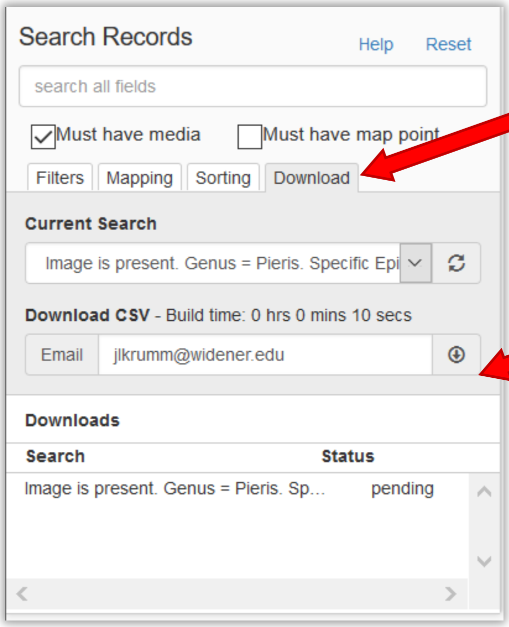
Step 6: Downloading the data file

1. Using the instructions above, search iDigBio for ***Pieris rapae*** specimen records with media.



☑ Must have media ☐ Must have map point

Current Search

Image is present. Genus = Pieris. Specific Epi

Download CSV - Build time: 0 hrs 0 mins 10 secs

Email: jlkrumm@widener.edu

Downloads

Search	**Status**
Image is present. Genus = Pieris. Sp...	pending

Click on the Download tab

Type in your email address and click on the download button

2. Click on the Download tab and enter your email address to download the specimen records.

3. You will receive an email with a link to the data files located by your search. Download the file folder.

4. The file folder will contain seven files. You will need to save **all** the files. The main file you will use is the **occurrence_raw.csv** file. This contains all the specimen data including latitude and longitude.

5. Open the occurrence_raw.csv file in Excel.

6. Your instructor will review the data in this file with you.

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