EXOTIC SPECIES SCAVENGER HUNT

A database research activity

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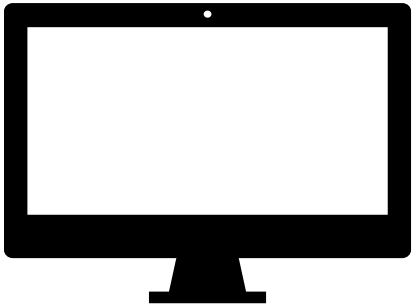
BEATY
BIODIVERSITY MUSEUM

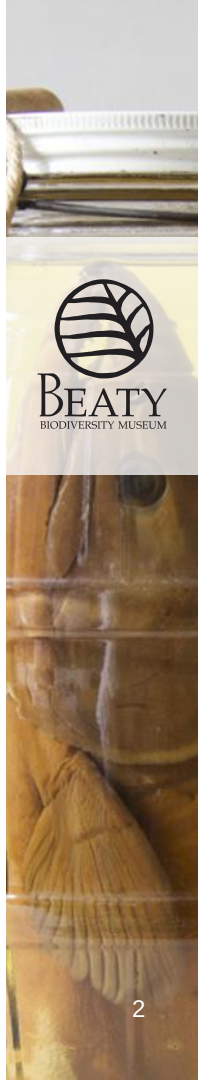
ACTIVITY OVERVIEW

In this activity, you'll dive into the Beaty Biodiversity Museum's Collection Database to discover exotic species.

The activity has two parts:

- **Find exotic species using the database**
  First, you'll learn how to use the database to search for exotic species kept in the Beaty Biodiversity Museum.
- **Research and analysis**
  Once you've chosen a species, you'll investigate the species further and do a deep analysis about different impacts the species brought to the new regions.





BEFORE GETTING STARTED…

- What comes to mind when you hear the term "invasive species"?
- What is your definition of invasive species?
  Exotic species?
- What is your standard of what impact is considered as "invasive" and what's not?
  Provide examples.

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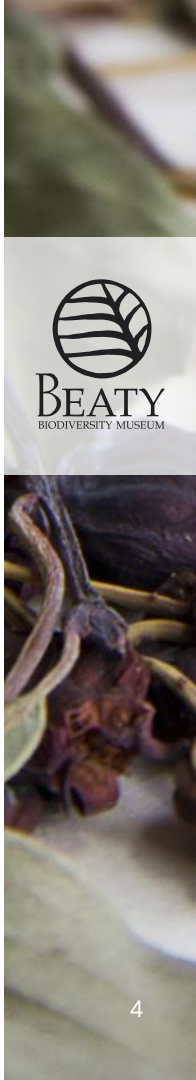
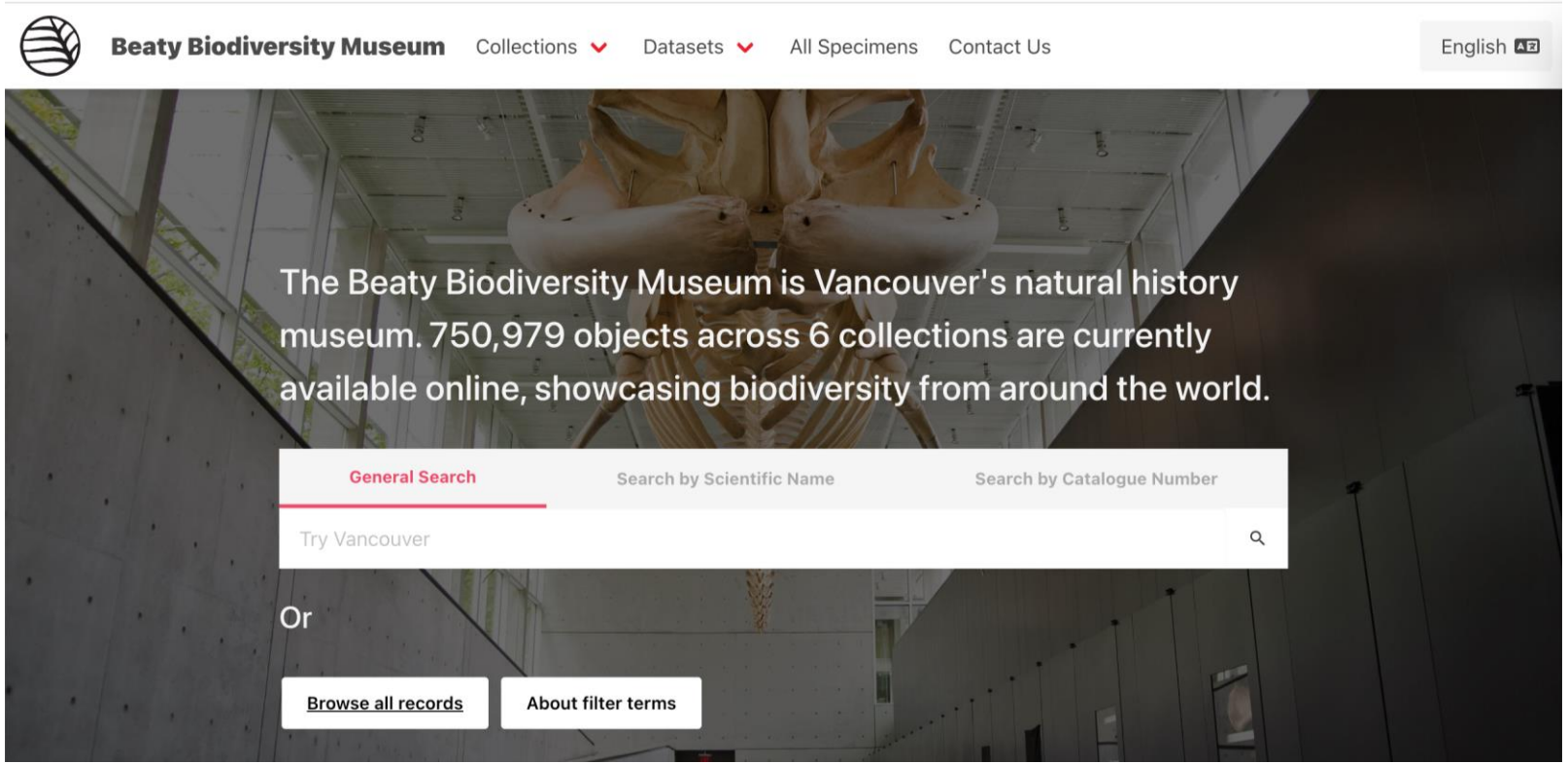
BEFORE GETTING STARTED…

- What is a database?
- What are some purposes of a database? Why might the Beaty Biodiversity Museum have created one?
- Who is it for?
- What kind of information is included in a database? Do you have any idea what information might be in the Beaty Biodiversity Museum Collection Database?
- How is it used?



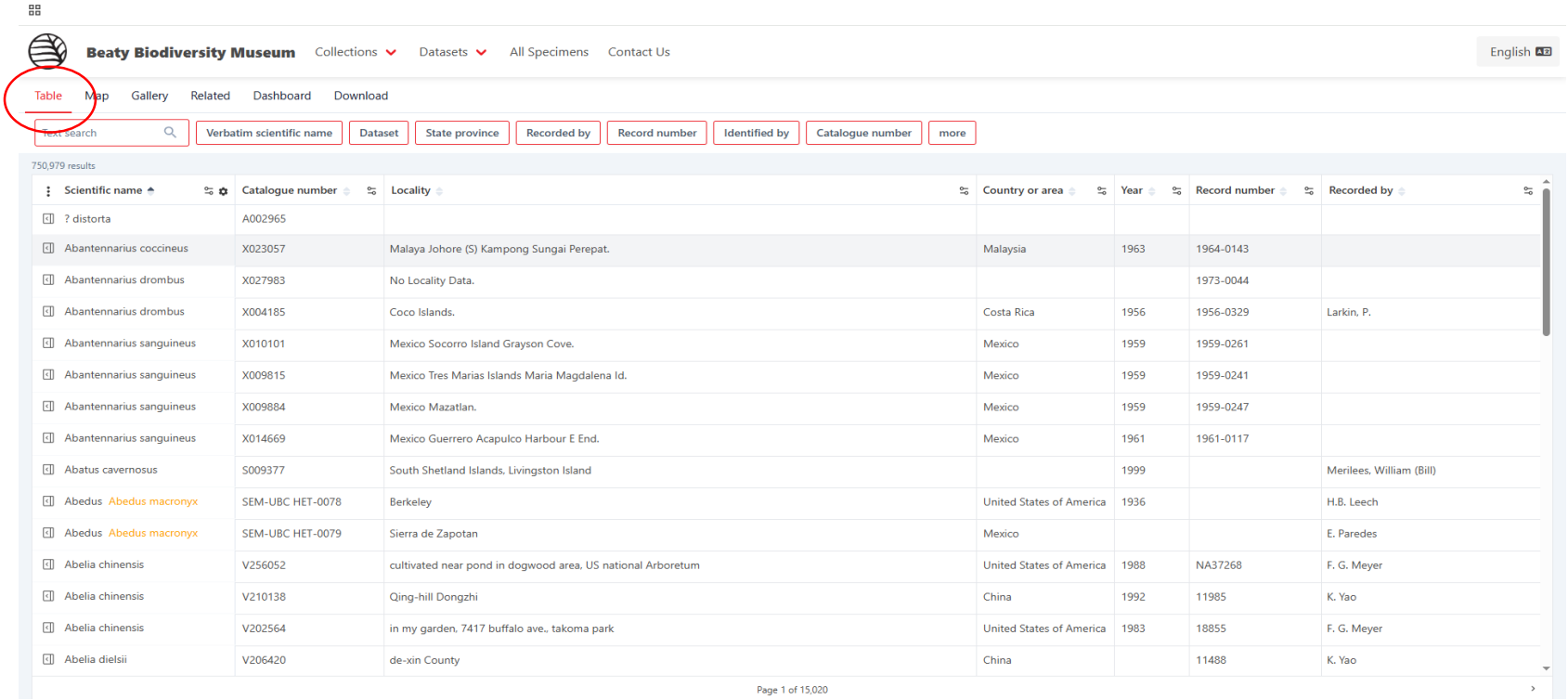
HOW TO USE THE DATABASE

Go to Beaty Biodiversity Museum Collection database: https://collections.beatymuseum.ubc.ca/



HOW TO USE THE DATABASE

Open the "All Specimen" tab; Make sure the page shows a "Table".



Beaty Biodiversity Museum | Collections | Datasets | All Specimens | Contact Us | English

Table | Map | Gallery | Related | Dashboard | Download

Text search | Verbatim scientific name | Dataset | State province | Recorded by | Record number | Identified by | Catalogue number | more

750,979 results

Scientific name	Catalogue number	Locality	Country or area	Year	Record number	Recorded by
? distorta	A002965					
Abantennarius coccineus	X023057	Malaya Johore (S) Kampong Sungai Perepat.	Malaysia	1963	1964-0143	
Abantennarius drombus	X027983	No Locality Data.			1973-0044	
Abantennarius drombus	X004185	Coco Islands.	Costa Rica	1956	1956-0329	Larkin, P.
Abantennarius sanguineus	X010101	Mexico Socorro Island Grayson Cove.	Mexico	1959	1959-0261	
Abantennarius sanguineus	X009815	Mexico Tres Marias Islands Maria Magdalena Id.	Mexico	1959	1959-0241	
Abantennarius sanguineus	X009884	Mexico Mazatlan.	Mexico	1959	1959-0247	
Abantennarius sanguineus	X014669	Mexico Guerrero Acapulco Harbour E End.	Mexico	1961	1961-0117	
Abatus cavernosus	S009377	South Shetland Islands, Livingston Island		1999		Merilees, William (Bill)
Abedus Abedus macronyx	SEM-UBC HET-0078	Berkeley	United States of America	1936		H.B. Leech
Abedus Abedus macronyx	SEM-UBC HET-0079	Sierra de Zapotan	Mexico			E. Paredes
Abelia chinensis	V256052	cultivated near pond in dogwood area, US national Arboretum	United States of America	1988	NA37268	F. G. Meyer
Abelia chinensis	V210138	Qing-hill Dongzhi	China	1992	11985	K. Yao
Abelia chinensis	V202564	in my garden, 7417 buffalo ave., takoma park	United States of America	1983	18855	F. G. Meyer
Abelia dielsii	V206420	de-xin County	China		11488	K. Yao

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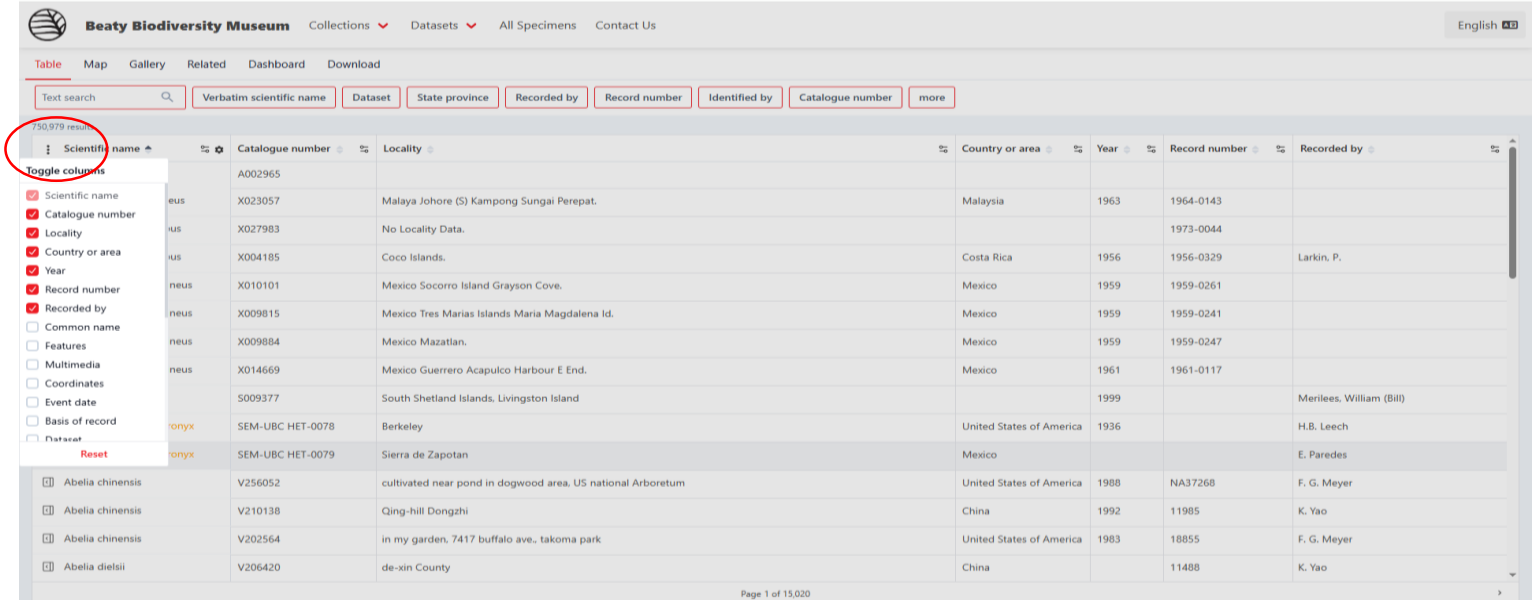
HOW TO USE THE DATABASE

Click the three dot icon beside "Scientific name".

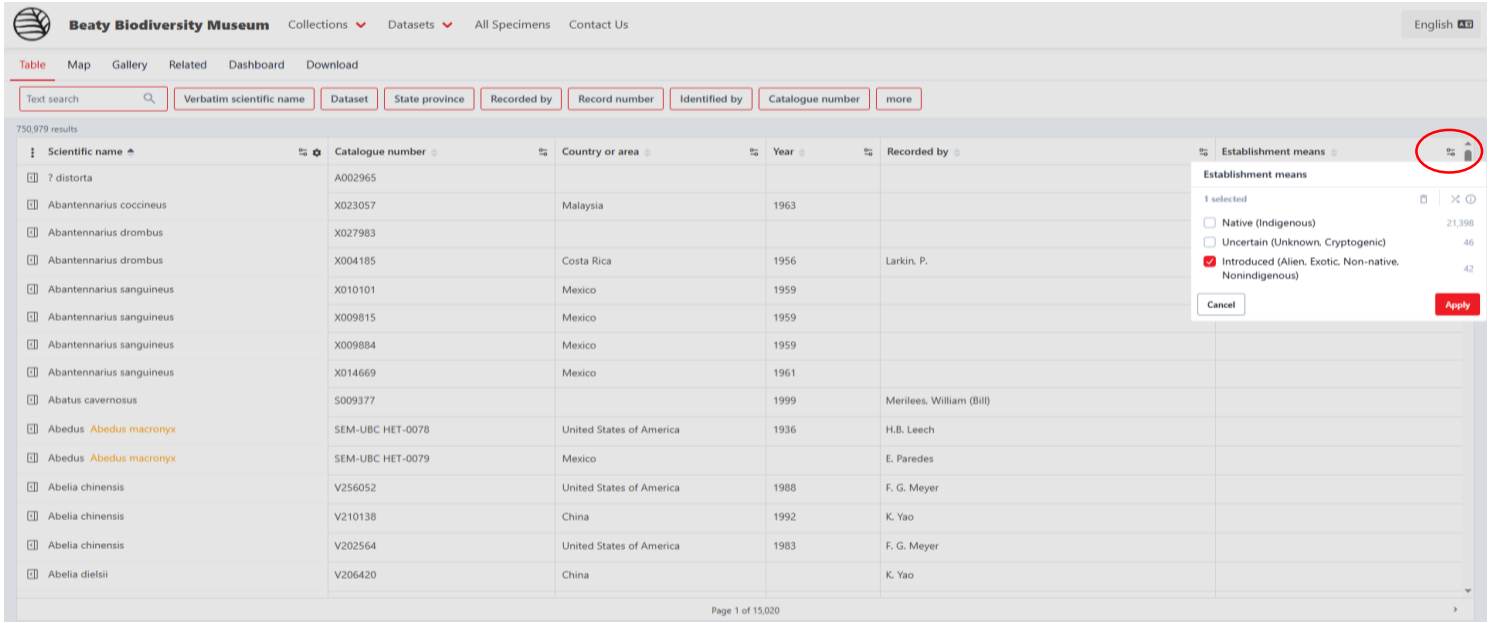
Check "Catalogue number", "Country", "Year", and "Establishment means". You may add any another columns that interests you. For example, "Recorded by", "Common name"



HOW TO USE THE DATABASE

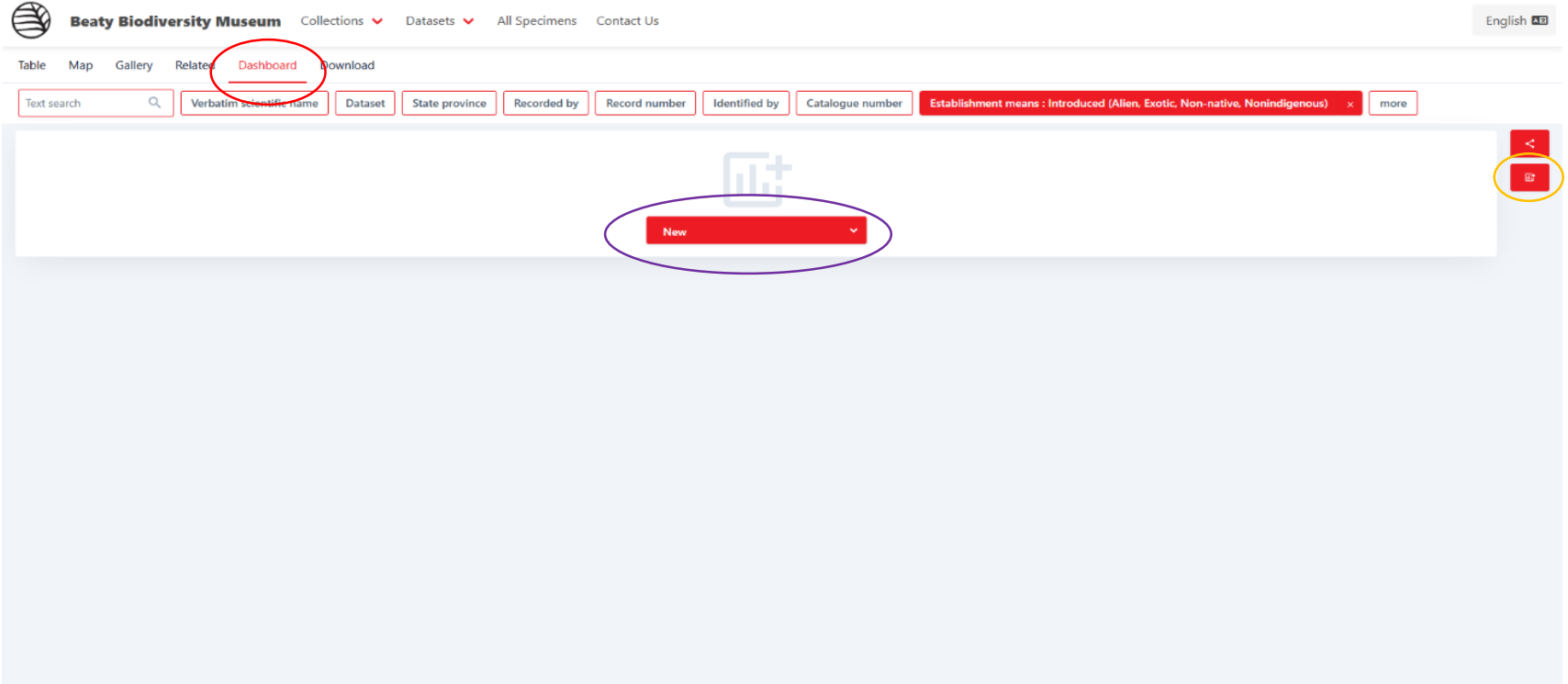
Click the filter icon beside "Establishment means" column.

Check "Introduced (Alien, Exotic, Non-native, nonIndigenous)" and press apply. There were 42 results when we ran this search in May 2025.



HOW TO USE THE DATABASE

Click the "Dashboard" tab and show different data sets in any way you like.



ONE EXAMPLE OF HOW TO USE THE DASHBOARD

- Click red bar that says "New"
- Select "Table" (You may be able to customize the table with the instruction above)
- Click red bar that says "New" again and select "Recorded by" (You may change the representation of graph into pie chart or bar graph)
- Click red bar that says "New" again and select "Year"
- Click red bar that says "New" again and select "State province" (You may change the representation of graph into pie chart or bar graph)
- Click red bar that says "New" again and select "Taxa" (You may change into different taxonomy by clicking the three dot icon. A default is family.)
- Click red bar that says "New" again and select "Statistics".

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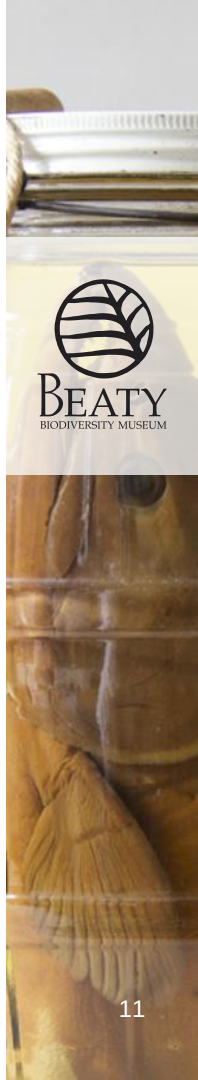
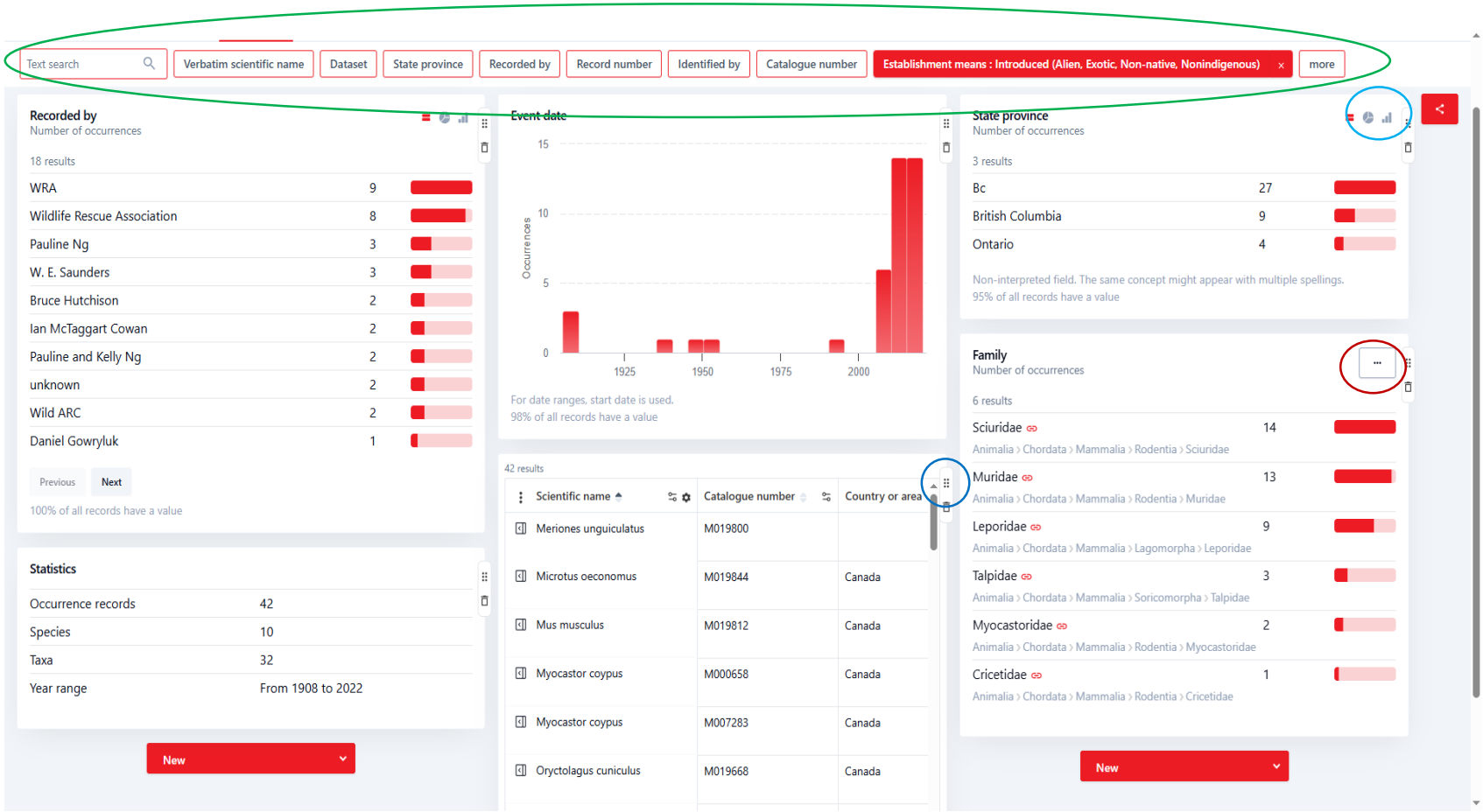
ONE EXAMPLE OF HOW TO USE THE DASHBOARD

You may also adjust the organization of the data

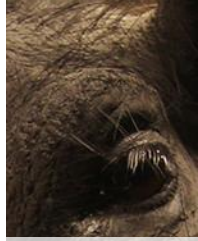
- Click the second red icon next to the first data that says "Add new group" to show different data horizontally.
- Change the order of data by dragging the data you want to move while pressing the six dot icon.
- Filter the data by clicking different tabs on top.




Text search
Verbatim scientific name
Dataset
State province
Recorded by
Record number
Identified by
Catalogue number
Establishment means : Introduced (Alien, Exotic, Non-native, Nonindigenous)
more
Recorded by
Number of occurrences
18 results
WRA 9
Wildlife Rescue Association 8
Pauline Ng 3
W. E. Saunders 3
Bruce Hutchison 2
Ian McTaggart Cowan 2
Pauline and Kelly Ng 2
unknown 2
Wild ARC 2
Daniel Gowryluk 1
Previous
Next
100% of all records have a value
Statistics
Occurrence records 42
Species 10
Taxa 32
Year range From 1908 to 2022
New
Event date
Occurrences
15
10
5
0
1925
1950
1975
2000
For date ranges, start date is used.
98% of all records have a value
42 results
Scientific name
Catalogue number
Country or area
Meriones unguiculatus M019800
Microtus oeconomus M019844 Canada
Mus musculus M019812 Canada
Myocastor coypus M000658 Canada
Myocastor coypus M007283 Canada
Oryctolagus cuniculus M019668 Canada
State province
Number of occurrences
3 results
Bc 27
British Columbia 9
Ontario 4
Non-interpreted field. The same concept might appear with multiple spellings.
95% of all records have a value
Family
Number of occurrences
6 results
Sciuridae 14
Animalia › Chordata › Mammalia › Rodentia › Sciuridae
Muridae 13
Animalia › Chordata › Mammalia › Rodentia › Muridae
Leporidae 9
Animalia › Chordata › Mammalia › Lagomorpha › Leporidae
Talpidae 3
Animalia › Chordata › Mammalia › Soricomorpha › Talpidae
Myocastoridae 2
Animalia › Chordata › Mammalia › Rodentia › Myocastoridae
Cricetidae 1
Animalia › Chordata › Mammalia › Rodentia › Cricetidae
New

QUESTIONS USING THE DATABASE DASHBOARD

What is the common name of the exotic specimen that was recorded by Laura Stewart?



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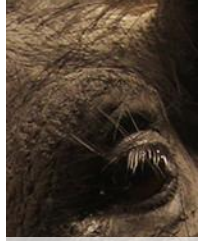
QUESTIONS USING THE DATABASE DASHBOARD

What is the common name of the exotic specimen that was recorded by Laura Stewart?

- Select "Laura Stewart" from "Recorded by" data
  It is on the second page. Filter the data from the top "Recorded by" tab. There should be only 1 result (at the time of May 2025)

- Common name is on the table data.
  If the "Common name column doesn't exist, add the column from the three dot icon besides "Scientific name"



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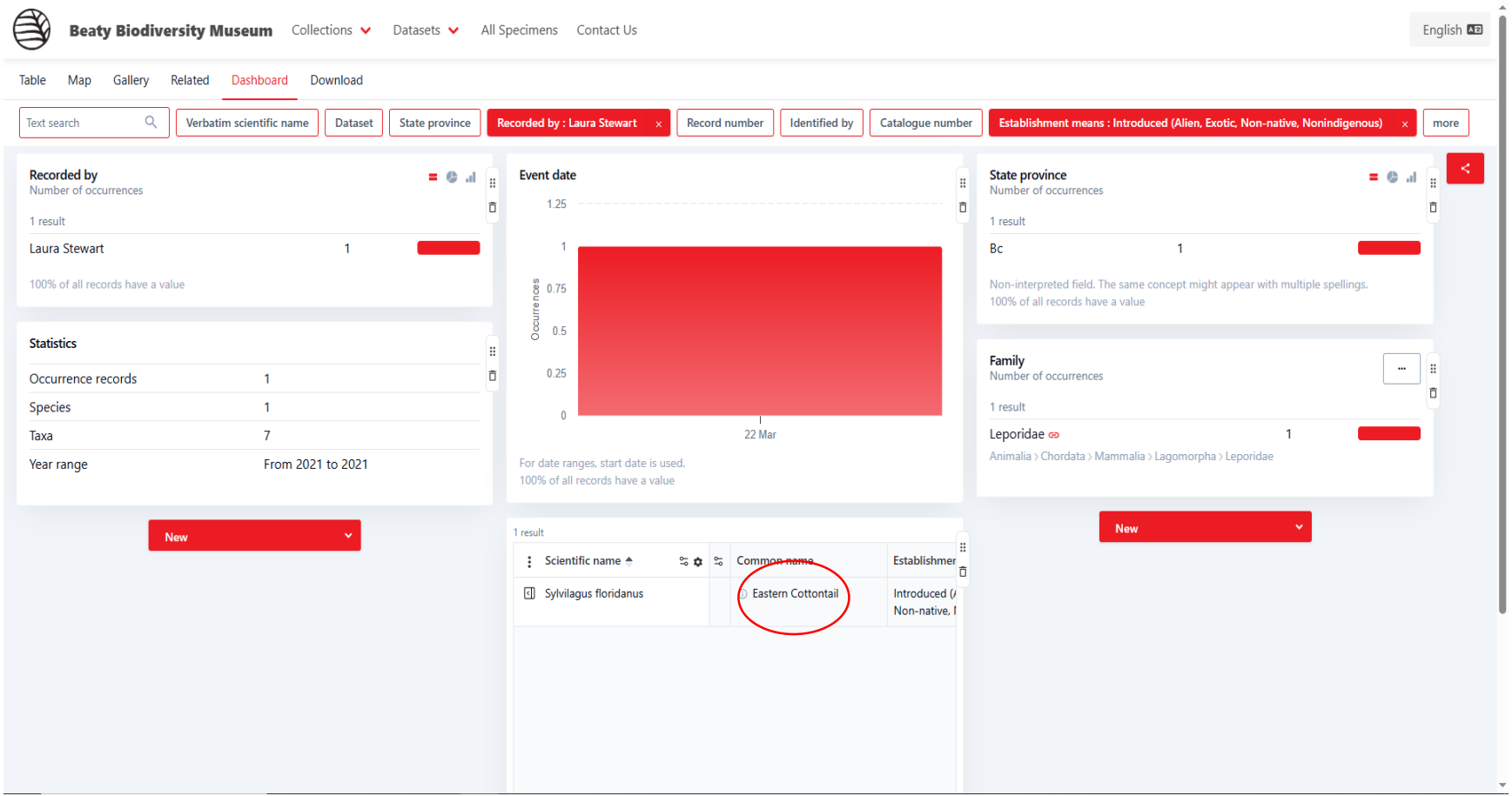
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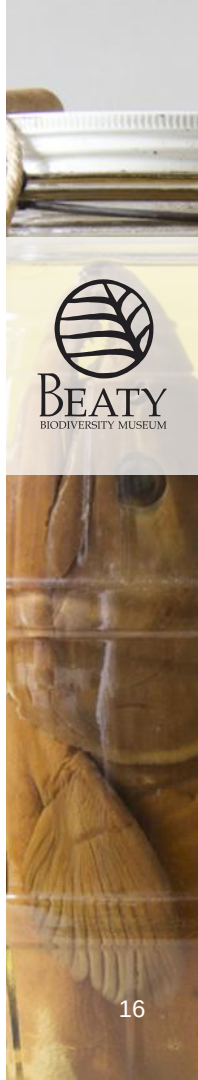
Collections
Datasets
All Specimens
Contact Us
English
Table
Map
Gallery
Related
Dashboard
Download
Text search
Verbatim scientific name
Dataset
State province
Recorded by : Laura Stewart
Record number
Identified by
Catalogue number
Establishment means : Introduced (Alien, Exotic, Non-native, Nonindigenous)
more
Recorded by
Number of occurrences
1 result
Laura Stewart 1
100% of all records have a value
Event date
1.25
1
0.75
0.5
0.25
0
Occurrences
22 Mar
For date ranges, start date is used.
100% of all records have a value
State province
Number of occurrences
1 result
Bc 1
Non-interpreted field. The same concept might appear with multiple spellings.
100% of all records have a value
Statistics
Occurrence records 1
Species 1
Taxa 7
Year range From 2021 to 2021
Family
Number of occurrences
1 result
Leporidae 1
Animalia › Chordata › Mammalia › Lagomorpha › Leporidae
New
1 result
Scientific name
Common name
Establishmer
Sylvilagus floridanus
Eastern Cottontail
Introduced (A
Non-native, I
New

QUESTIONS USING THE DATABASE DASHBOARD

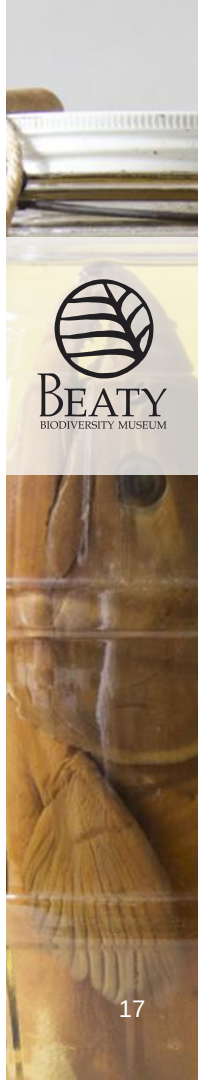
What is the genus of the exotic specimen that was recorded in 1957?

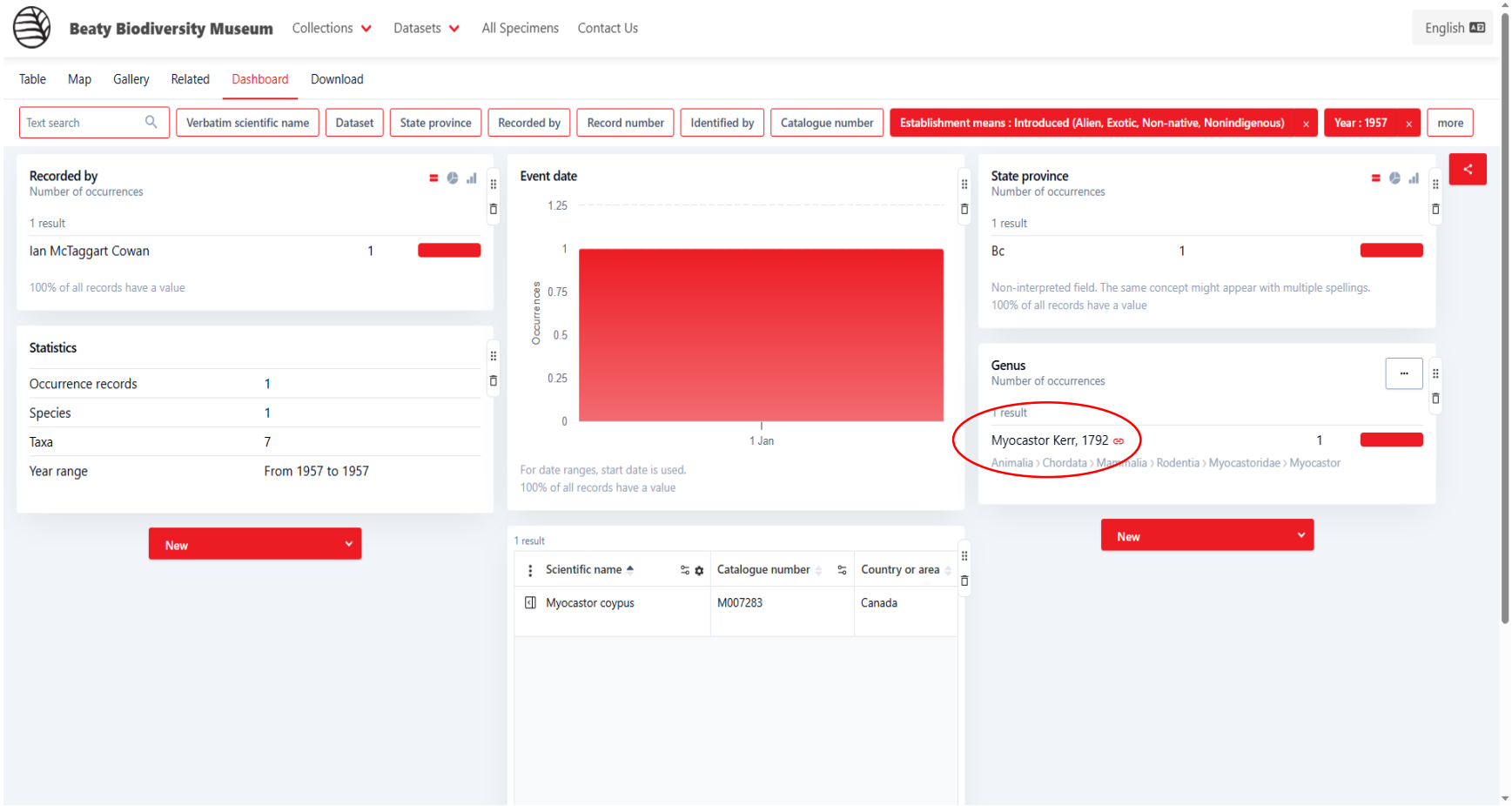


QUESTIONS USING THE DATABASE DASHBOARD

What is the genus of the exotic specimen that was recorded in 1957?

- Filter the data from the top "more" tab.
- Select "year" and type in 1957.
  There should be only one result at the time of May 2025.
- Go to taxonomy data and change the taxonomy from **Family** to **Genus** by clicking the three dot icon.

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English
Table
Map
Gallery
Related
Dashboard
Download
Text search
Verbatim scientific name
Dataset
State province
Recorded by
Record number
Identified by
Catalogue number
Establishment means : Introduced (Alien, Exotic, Non-native, Nonindigenous)
Year : 1957
more
Recorded by
Number of occurrences
1 result
Ian McTaggart Cowan 1
100% of all records have a value
Event date
1.25
1
0.75
0.5
0.25
0
Occurrences
1 Jan
For date ranges, start date is used.
100% of all records have a value
State province
Number of occurrences
1 result
Bc 1
Non-interpreted field. The same concept might appear with multiple spellings.
100% of all records have a value
Statistics
Occurrence records 1
Species 1
Taxa 7
Year range From 1957 to 1957
Genus
Number of occurrences
1 result
Myocastor Kerr, 1792 1
Animalia › Chordata › Mammalia › Rodentia › Myocastoridae › Myocastor
New
New
1 result
Scientific name
Catalogue number
Country or area
Myocastor coypus
M007283
Canada

QUESTIONS USING THE DATABASE DASHBOARD

What is the scientific name of the exotic species that is endangered according to IUCN (International Union for Conservation of Nature)? How many specimens are there?

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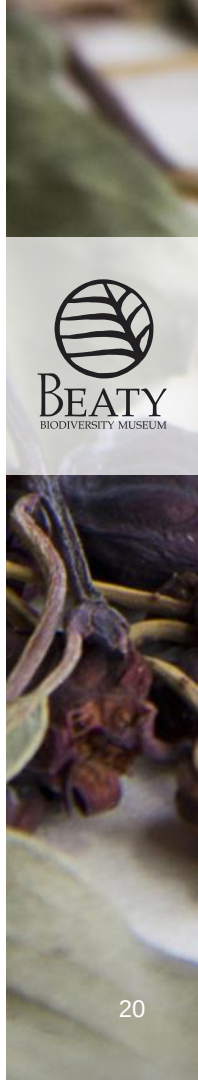
QUESTIONS USING THE DATABASE DASHBOARD

What is the scientific name of the exotic species that is endangered according to IUCN (International Union for Conservation of Nature)? How many specimens are there?

- Filter the data from the top “more” tab.
- Select "IUCN Global Red List Category" and select "Endangered".
- See the table data, and you will notice that they all have the same scientific name, meaning they are all the same species.
- See the statistics data, and find how many records are there.
  The data might vary depending on when you access to the database.



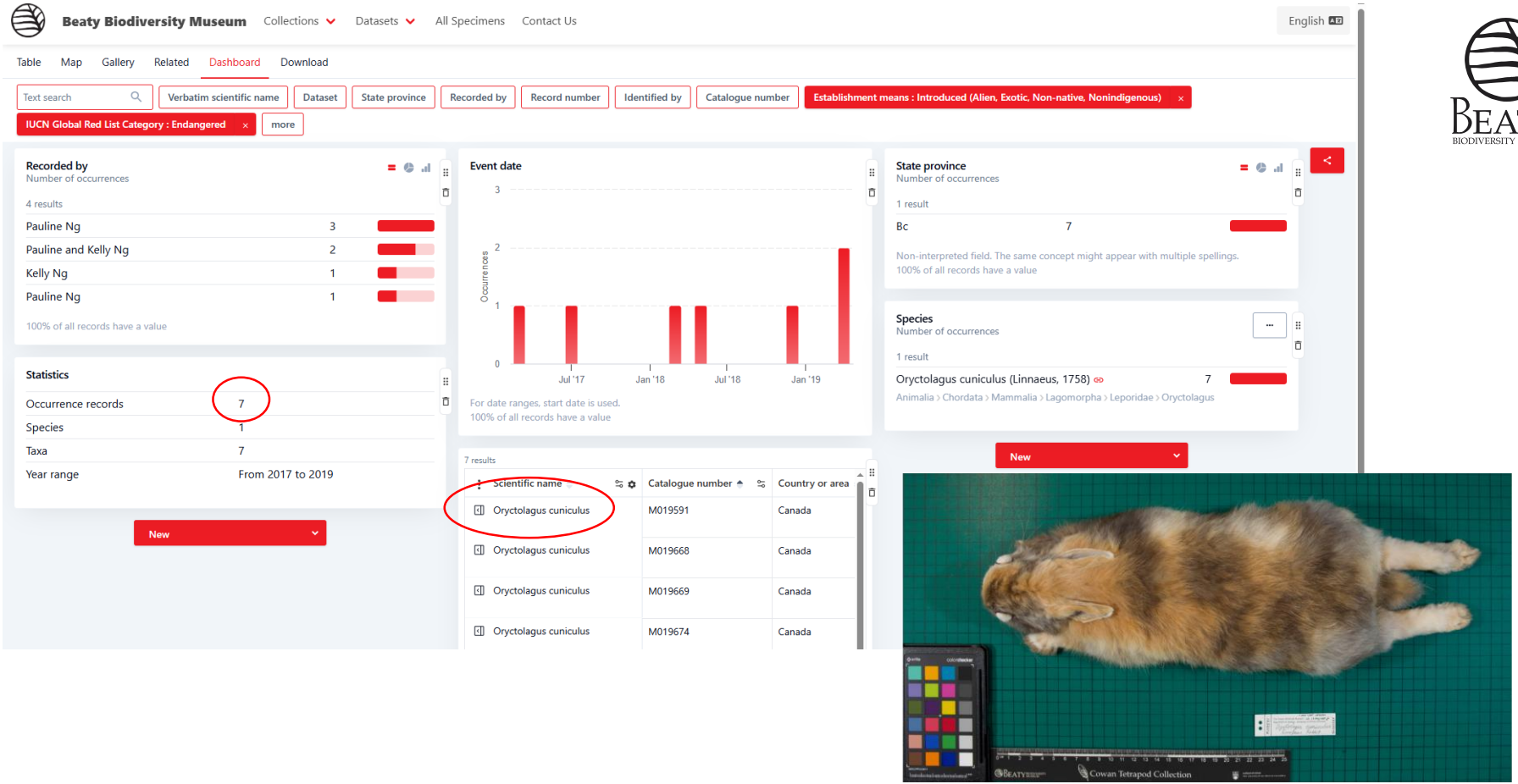
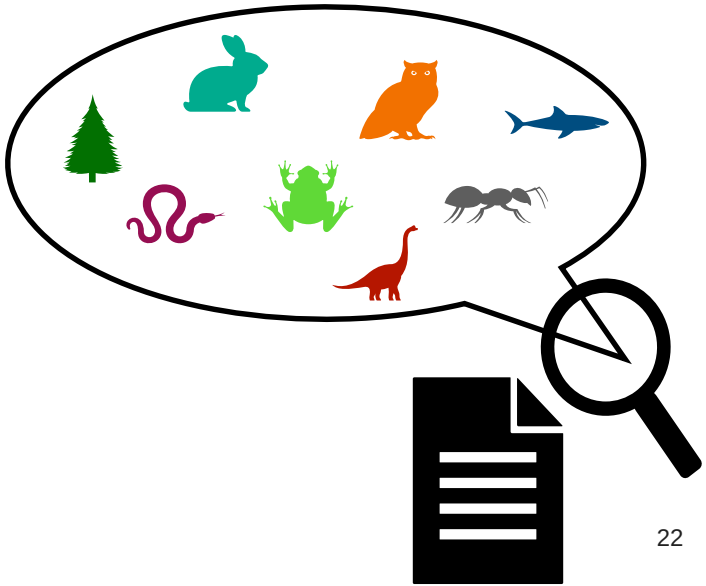


Figure 1: *Oryctolagus cuniculus* (European Rabbit) https://beaty.b-cdn.net/M019591.jpg

REFLECTION

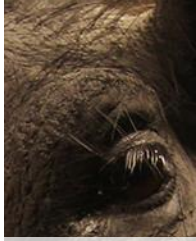
- Are your results showing different information from the screenshots here?
- What limitations did you find when using the Beaty Biodiversity Museum Collection Database?
  - Do you think there are any biases in the data?
  - Do you think the data is useful for the people other than biodiversity researchers?
  - What could be improved to expand the types of people using this database?



RESEARCH QUESTIONS

Choose a specimen from the data and answer following questions:

- Where did the specimen come from? Why did you choose the specimen?
- In what kind of environment did that species use to live? (Climate, geographical feature, temperature, moisture, ecosystem, prey and predators, etc.)
- When was the first time the presence of that species were sighted in your focus area?
- Why or how did it come to North America/Lower Mainland, if applicable.
- What environmental, cultural, social, economical, or political impact did the species bring to your focus area?
- Is it considered as invasive species? If yes, what led the species to increase its population and harm the local environment?
- What measures are taken by the government to limit the damage? Is it successful? What could we done to help?
- Is there any other exotic species that originate in the same region or country?



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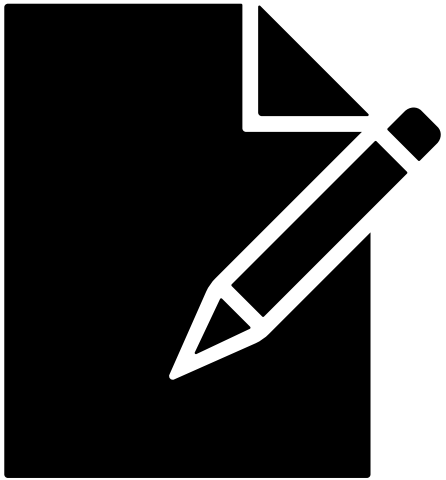
RESEARCH TASK

Present the results of your research with the following ways:

- Oral Presentation
- Essay
- Poster
- Website
- *Feel free to create any other artwork like story or drawing, but needs the teacher's approval beforehand.*



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