In-class Activity:
Behind the Glass: Exploring Specimen Donors

Description:
In this activity, students will explore the donors of the specimens recorded in the Beaty Biodiversity Museum Collection Database. They will investigate the details of how and why the specimens are kept in the museum, and some new information people learned from researching the specimens. The activity consists of two parts; the first is to learn how to find a donor using the database. The second is to do deep analytical research of the donor: their historical background, motivations for donations, ethical controversies or questions, and scientific developments from this specimen. The resulting research is shared with the class.

Duration: ~45 minutes, plus research and presentation time

Grade range: Grade 10+

BC Curricular Competencies:

- Consider the changes in knowledge over time as tools and technologies have developed. (Science 10)
- Assess and compare the significance of people, places, events, or developments at particular times and places, and determine what is revealed about issues of social justice in the past and present. (Social Justice 12)
- Identify and assess how human and environmental factors and events influence each other. (Physical Geography 12)
- Consider the changes in knowledge over time as tools and technologies have developed. (Environmental Science 12)
- Develop, demonstrate, and apply conceptual understanding through experimentation, inquiry, and problem solving. (Computer Science 12)

Learning objectives:
Understand the significance of museum specimens, specimen preparation, specimen care, and where they come from.
Explore historical contexts of specimens and the historical development of science through the analysis of donors.

Limitation:
This activity plan was created in May 2025. Please note that this database is updated on a daily basis, so the data presented here may differ from the data you see when you follow the directions as stated below.

Created for Beaty Museum Educational use by Shun Kurasawa, teacher candidate from the Faculty of Education at UBC.
All photos by Beaty Biodiversity Museum, 2025 unless otherwise noted.

Supplies:

- Presentation supplies for lesson
    - Each student to have their own internet-enabled device
    - Instructor to show slides on a larger screen/projector as they walk through the lesson as a class.
- Research materials
- Student project presentation materials

Lesson hook:
Before doing this activity, ask students where do they think exhibits and specimens in natural history museums come from. Some sources could be: purchasing from collectors or in auctions, forays or other collecting excursions, borrowing from other institutions for temporary display, donations, etc. One major way is through donation – either scientific donation or from private collections.

At the Beaty Biodiversity Museum, many of the specimens and display materials were donated by individuals for educational, display, and research purposes. Learn more about our collections and research here: https://beatymuseum.ubc.ca/research-2/ We hope this introductory discussion can stimulate students' interest towards donors and their historical backgrounds.

This activity revolves around a museum database. Ask students what they know about databases, and/or collections data. This is to make sure that all the students are on the same level of understanding about the database before learning about how to use it.
Possible questions could be;

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

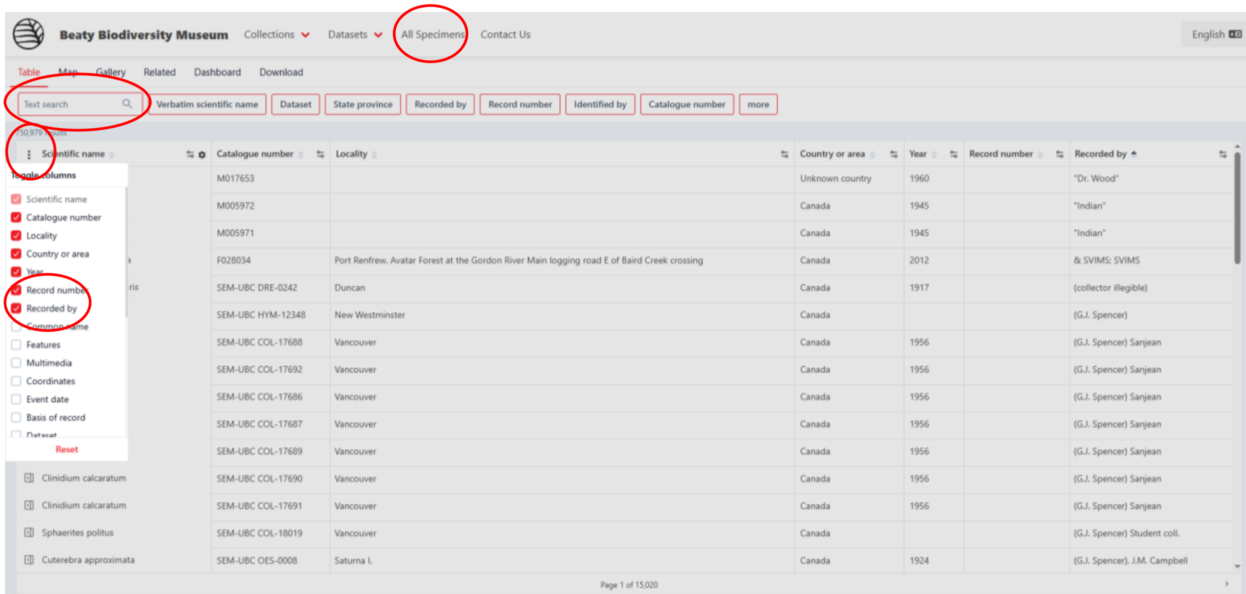
Procedure:

1. Go to the Beaty Biodiversity Museum Collection Database: https://collections.beatymuseum.ubc.ca/

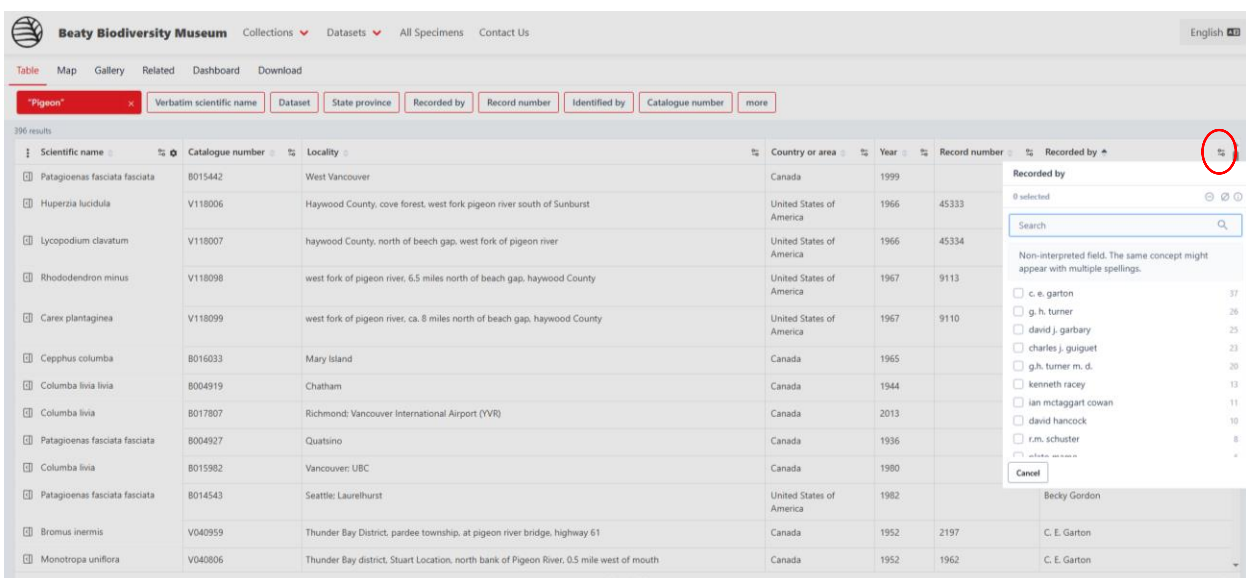
2. Choose a donor and find specimens related to that person.
   There are three ways to find a donor: a, b, and c below:

Created for Beaty Museum Educational use by Shun Kurasawa, teacher candidate from the Faculty of Education at UBC.
All photos by Beaty Biodiversity Museum, 2025 unless otherwise noted.

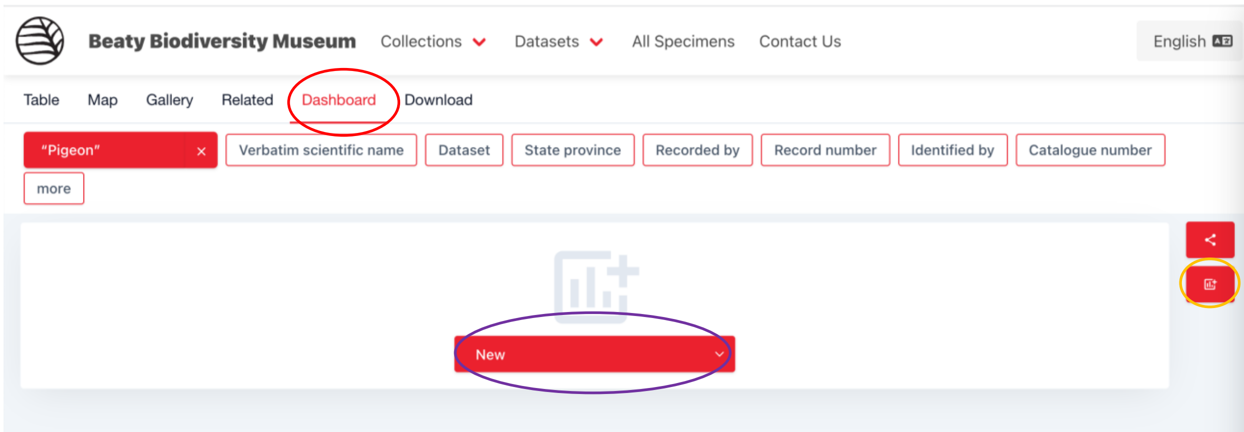
a. **Find a donor: Pick a favorite organism through "All Specimen" tab.**
Make sure the page shows a "Table".
1) Type a species name in "Text Search" box.
2) Click the three dot icon beside "Scientific name".
3) Check whether "Recorded by" is already included in the table. If not, check "Recorded by".
4) See the "Recorded by" column and look for a donor that attracts your attention. You may want to look at years while you look at names, too!



5) *You may also click the filter icon beside "Recorded by" to view all the donors without flipping over to next page.



6) * You may also go to "Dashboard" tab to view the data visually.



- Procedure of how to use the Dashboard;

I. Click red bar that says "New"

II. Select "Table" (You may able to customize the table with the instruction above)

III. Click red bar that says "New" again and select "Recorded by" (You may change the representation of graph into pie chart or bar graph)

IV. Click red bar that says "New" again and select "Year"

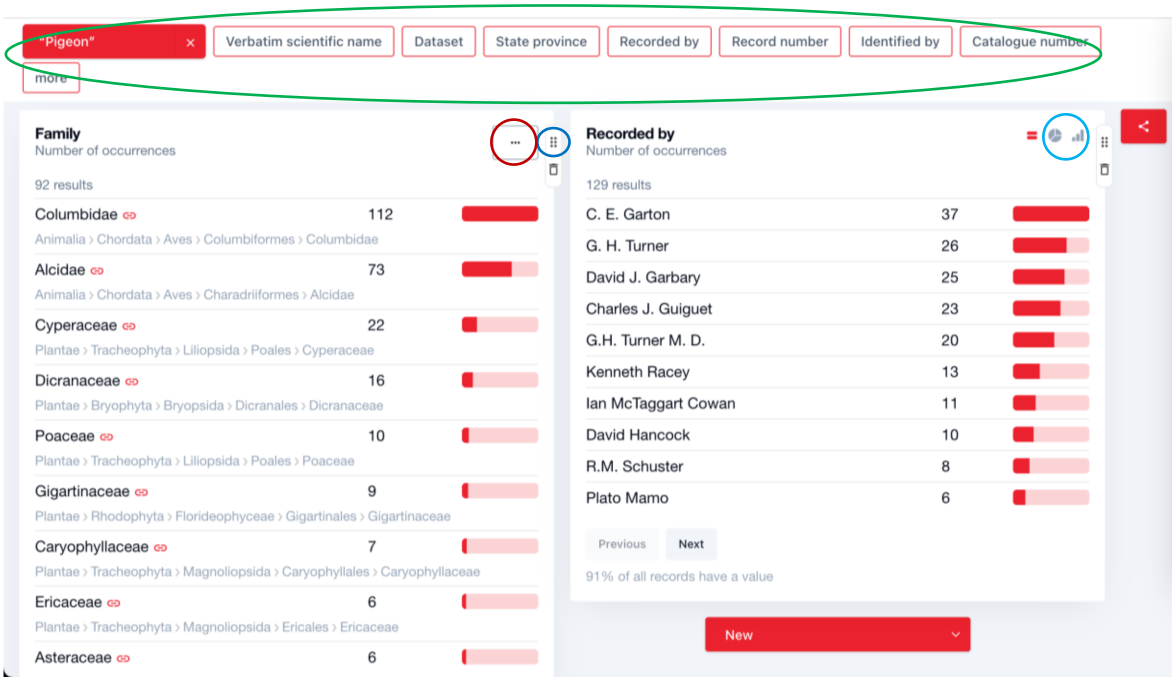
V. Click red bar that says "New" again and select "State province" (You may change the representation of graph into pie chart or bar graph)

VI. 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.)

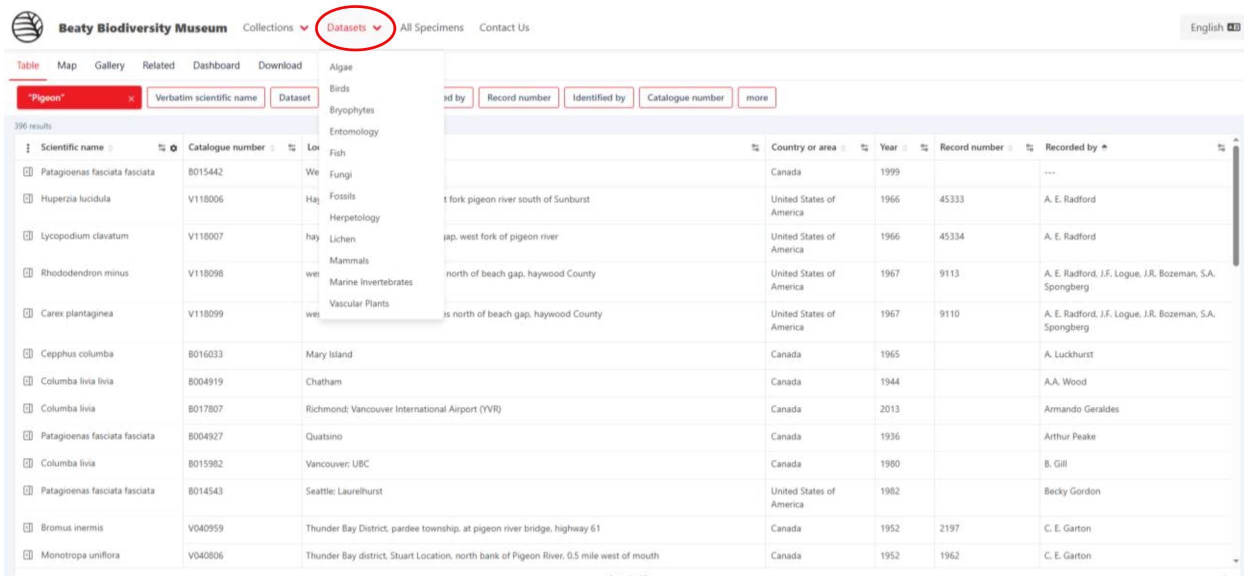
VII. Click red bar that says "New" again and select "Statistics".

VIII. *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.



b. Find a donor: Pick a favorite genre or type of organism through "Datasets" tab.
   - Follow the same step as "2)" and forward.



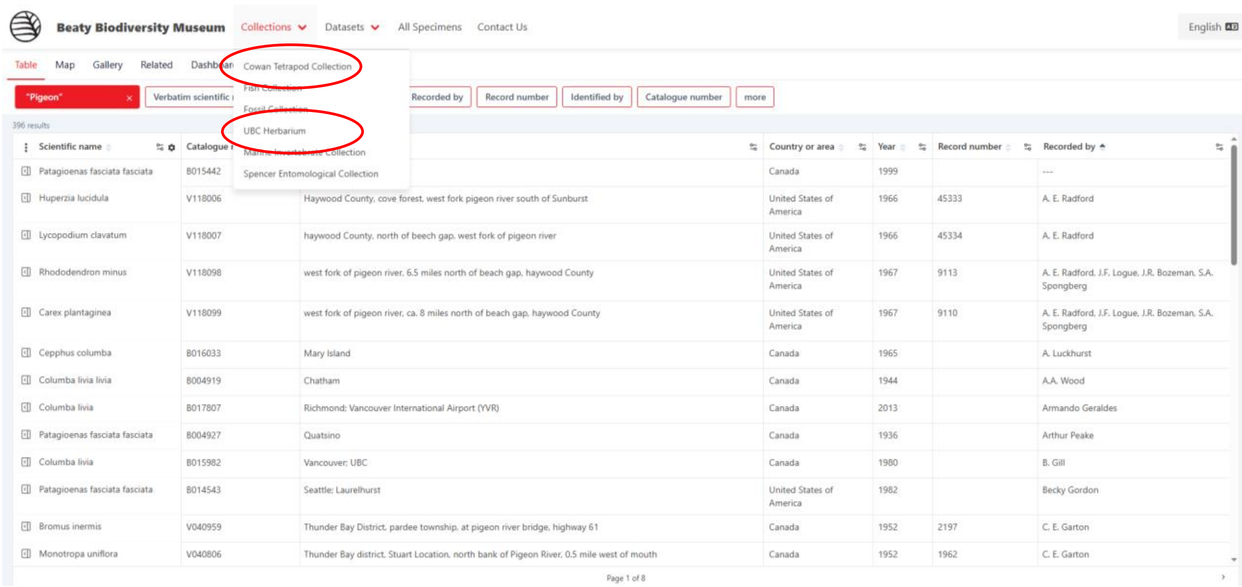
c. **Find a donor: Go to "Collections" tab and pick "Cowan Tetrapod Collection" or "UBC Herbarium"**

   i. There are websites for those two collections that includes some biographies of collectors. Read through some biographies and find someone that interests you.
      - Cowan Tetrapod Collection: https://beatymuseum.ubc.ca/research-2/collections/cowan-tetrapod-collection/contributors/
      - UBC Herbarium: https://beatymuseum.ubc.ca/research-2/collections/herbarium/history-of-the-herbarium/

   ii. Look for the name of the collector stated on the website by typing the name in "Text Search" box. Make sure the page shows a "Table". (Some of the collector's name does not exist in the database yet)

   iii. Find what specimen did the collector donate to the museum.

   iv. *You may go to "Dashboard" to view the data visually. Follow the same step as "I".



Created for Beaty Museum Educational use by Shun Kurasawa, teacher candidate from the Faculty of Education at UBC.
All photos by Beaty Biodiversity Museum, 2025 unless otherwise noted.

Research questions:

- Who is the donor for the specimen?
- What do you know about the donor?
  Include: Historical background, biography, when and why did the person donate the specimen, and other contributions they made to UBC or the museum.
- Has the environment this species lived in changed between when it was collected and now? How is it different and/or similar?
- Were there any ethical considerations taken when the specimen was collected at that time? Did this ethical standard change over time, and how?
- What other specimens did the donor record in the database? Do you think there may be more in the collection that have not been put into the database yet?
- To what extent did the collection of the specimens related to colonialism?
- How did this particular specimen contribute to the development of science and how did the contribution affect us? (Some ideas are: Did the classification of species change? Did the way the specimen get preserved change? Did this specimen support a PhD, key research project, etc.?)

Presentation:

There are several ways to present the results of your research. Assemble a research presentation and share it within the class!

1) Oral Presentation; Google slides, PowerPoint, Canva
2) Essay; Introduction, Body Paragraphs, Conclusion, Citation
3) Poster; Galley walk
4) Website; WordPress, Google Sites

Resources:

- Beaty Biodiversity Museum. (2025, March 27). *Beaty Biodiversity Museum collection database*. Retrieved from BEATY Biodiversity Museum collection: https://collections.beatymuseum.ubc.ca/
- Beaty Biodiversity Museum. (2023, November 29). *Researchers Revealed Mark Pitblado*. Beaty / Explore. Retrieved May 22, 2025, from https://explore.beatymuseum.ubc.ca/researchers-revealed/m_pitblado/
- The University of British Columbia. (n.d.). *Home | cIRcle UBC*. The University of British Columbia. Retrieved May 27, 2025, from https://circle.ubc.ca/
- UBC Science. (n.d.). *Cowan Tetrapod Collection Contributors | Beaty Biodiversity Museum*. Beaty Biodiversity Museum. Retrieved May 15, 2025, from https://beatymuseum.ubc.ca/research-2/collections/cowan-tetrapod-collection/contributors/
- UBC Science. (n.d.). *History of the Herbarium*. Beaty Biodiversity Museum. Retrieved May 15, 2025, from https://beatymuseum.ubc.ca/research-2/collections/herbarium/history-of-the-herbarium/

- UBC Science. (n.d.). *Kathleen Cole*. Beaty Biodiversity Museum. Retrieved May 20, 2025, from https://beatymuseum.ubc.ca/kathleen-cole/
- UBC Science. (n.d.). *Research*. Beaty Biodiversity Museum. Retrieved 5 27, 2025, from https://beatymuseum.ubc.ca/research-2/