



Data Science/Science Communication Contest

Are you interested in using your skills in data science, data analysis or data visualization with real-world data?

Are you interested in helping a group of citizen scientists?

Foray NL is a group of passionate mushroom enthusiasts (both professional mycologist and amateur mycophiles) who have been collecting data on mushrooms in the province for over 20 years.

Foray NL is sponsoring a contest for students to work with the data set (all of it, or a portion of it) to do one or more of:

- Data cleaning
- Data wrangling
- Data visualization
- Data analysis

WHO IS ELIGIBLE: Any student (full-time or part-time, graduate or undergraduate) in any discipline at any of Memorial University's campuses

WHAT TO DO: Carry out a project (big or small) that uses the Foray NL dataset. Creativity in data visualization is encouraged. Using the data to try to answer a mycological question is encouraged.

WHAT YOU WIN: All winners will be invited to present their work in a mini-conference setting at the Foray (fall 2024, exact dates and location TBD). This will give students a chance to present their work (poster or talk) to an enthusiastic audience and also see how data are collected in the field. Students will receive a small honorarium (\$150) for their participation. You will also be invited to publish your work in Foray NL's journal, *Omphalina*.

DEADLINE: Projects should be submitted by June 1, 2024. Successful applicants will be notified in July.

FOR MORE INFORMATION: Contact Dr. Yolanda Wiersma, Biology, St. John's campus
ywiersma@mun.ca

FORAL NL information: <http://www.nlmushrooms.ca/>

DATABASE: parts of the database are available on Mycoportal*
(<https://www.mycportal.org/portal/collections/index.php>).



*For an up-to-date database, please contact Dr. Wiersma

Mushroom images all in the Public Domain

BACKGROUND ON FORAY NL DATA

Foray NL is a non-profit organization that conducts amateur mushroom forays together with education and outreach opportunities.

Their main activity is an annual Foray. This happens in two parts; the first is 4-5 days of collecting with a small group (max 12 people) of mushroom experts, many of whom fly in from other parts of Canada or the world. This is known as the "Faculty Foray". Some faculty focus their collecting during this time period on a particular group of fungi that they have research interests in; others collect more broadly. Following this is a weekend "public Foray". The public goes out on designated trails for a morning, and collects. Each group has at least one Faculty expert with them. Over the weekend, the experts identify the species, and process the specimens. Specimens are dried, photographed and the collection information is entered into the database. Dried specimens are housed in the fungarium on the Grenfell Campus of MUN.

The Foray always happens in the fall, dates vary depending on availability of accommodations. They try to sample in the same part of the province two years in a row, to capture inter-annual variation. Over the twenty years of Foray NL's activities, they have managed to cover many parts of the province, including Labrador.

More information about the Foray is here: <http://www.nlmushrooms.ca/index.html>

List of Foray Reports: http://www.nlmushrooms.ca/foray_reports_all.html

Download the database (not fully up-to-date) here:
<https://www.mycportal.org/portal/collections/index.php>.

To access the data:

- Unselect all collections by clicking the "Select/Deselect all collections" box at the top
- Scroll down to select only "Foray Newfoundland and Labrador Fungarium (FNL)".
- Then click "Search" button.
- Do not put anything in the search fields, simply click the "Table Display" button and you can download the file with the button at the top

Metadata info for Foray NL database:

- Catalog Number: Foray NL's catalog reference number
- Family: taxonomic family that the species belongs to
- Scientific name: taxonomic name
- Collector: who collected it. May be full name or initials
- Date: Date collected
- Locality: particular trail/location of collection
- Decimal lat.: location of collection in latitude north (decimal degrees)
- Decimal long.: location of collection in longitude west (decimal degrees)

- Habitat: general description of habitat
- Substrate: what the fungus was growing on when found

Possible ideas for data analysis/visualization:

- Some individuals come to the Foray many years in a row. Are there similarities or differences in what taxonomic groups they collect over the years?
- How does fungal diversity change with how early or late in the fall the Foray happens?
- How similar or different is the diversity at the same locations in different years?
- Where is the hotspot of fungal diversity in the province?
- What do fungal diversity patterns look like in space and/or time?
- How do individual collectors' contributions change over time?
- What habitats are fungi commonly found in? Are there patterns by taxonomic group?
- What substrates are fungi commonly found on? Are there patterns by taxonomic group?