

Newfoundland and Labrador Volunteer Butterfly Survey



Please send the completed forms to:

Newfoundland and Labrador Volunteer Butterfly Survey

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--or--
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Newfoundland and Labrador Butterfly Survey is supported by:

Wildlife Division,
Government of Newfoundland and Labrador Department of Environment and Conservation

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This is a volunteer-based program and as such requires the dedication and commitment of people such as you to be successful. We would like to thank you in advance. This survey requires the collection of specimens to ensure that the records are taxonomically accurate. There is no specific field guide for this program yet. We are trying to compile one now but it will not be ready for this season. However the **Butterflies of Canada** (published in 1998 by University of Toronto Press) is an excellent aid and it is a beautiful addition to any personal library.



Objectives

This survey will give us information on the seasonal abundance and distribution of butterflies throughout the province. The continuation of this program over many consecutive years will allow us to monitor changes in the overall provincial abundance of butterflies and local butterfly populations. This will lead to more accurate identification of vulnerable, threatened or endangered species. These surveys will also provide accurate information needed for status reports and the preparation of recovery plans if any species are identified as threatened or endangered. The survey will yield useful information about secure species, e.g. range extensions, habitat preference, geographic distribution, and seasonal abundance.

Monitoring Protocol

How to submit records

For Each Butterfly record we need two things:

- 1) We need to verify the butterfly's identification by a **Preserved Specimen**
- 2) Information about the particular specimen. This can be recorded on:
 - **Data sheets**, you can fill out the Survey data sheets and send them in once they are completed with your specimens.

1) Collecting specimens:

If you are monitoring butterflies in a specific location, collect one or two of each species in that location. Butterflies can be tricky and often fly away just as you creep up behind them. Nets can be purchased from scientific supply companies for under \$40. You may be able to find one at the Newfoundland Insectarium. We have included the plans to make your own net if you need one. Once caught euthanize the butterfly in a wide mouthed glass jar with a little cotton or tissue dampened with some nail polish remover in the bottom. When the butterfly is deceased carefully wrap it in some tissue (bathroom tissue or tissue paper) and place it in an envelope. Then you may keep it in a safe dry place where it won't get crushed until you are ready to send in your results.

Butterflies are generally easier to pin and spread when they are fresh, but we will try to relax them and spread them after they are sent in.

Collect only one or two specimens of a particular species from the same location even if you observe them in that location several times. There are several butterfly species that look very similar and frequent the same habitats. When observing blues, sulfurs, skippers and painted ladies collect several specimens to help determine precisely which species are present. For repeated observations from the same place, continue to record the information as per the data sheets and refer to the original specimen that you collected (using the specimen number that you assigned your initial specimen (see below).

Please clearly label all specimens **separately**, even if from the same location and fill out a collection card for each, storing them separately in individual triangles or envelopes.

2) Completing Data sheets

Observer/ Contact Information

Please enter your **name**, **address**, **email address** and **telephone number**. It is important for us to be able to contact you.

Survey Info

Enter **Date**: Year (4 digit), Month (2 digit), Day (2 digit) format please, for example August 12, 2008 is entered like this... 2008 12 08 with spaces between: the year and month and the day and month. **Survey duration**: Approximately how long did you spend surveying for butterflies? **Location**: The nearest town, pond or other landmark preferably something from a topo map. **Latitude and Longitude**: if you are able to read it from a topo map OR; get the **full UTM** from a topo map or from a GPS unit, *please include the projection*. **Accuracy**: did you get your location (lat., long. or UTM) from a topo map or from a GPS unit. **Size of Sample site**: record in m² as accurately as possible. **Directional Information**: More precise information describing the location where observation was made. This will further help to find the established location, i.e. Route #, number of km east of the town XX or a 5 minute walk from sign (i.e., town sign or county sign) on bog adjacent to Route %\$.

Weather: Basic weather conditions affect the activity levels of butterflies. Use the beaufort scale for **wind**. Describe **precipitation** such as foggy or sunny, rain, snow or zero precipitation.

Beaufort Scale (wind speed in KPH)

0 smoke rises vertically (< 2Kph)

1 wind direction shown by smoke drift (2-5)

2 wind felt on face; leaves rustle (6-12)

3 leaves, small twigs in constant motion, light flag extended (13-19)

4 wind raises dust, loose paper, small branches move (20-29)

5 small trees in leaf sway, crested wavelets on island waters (30-39)

6 large branches in motion, whistling heard in wires (40-50)

Vegetation: Circle the most appropriate descriptors and add any additional information. If you found the butterfly in edge habitat was it a forest/meadow edge, forest/roadside edge, pond or shoreline edge, etc. If possible list the plant species present.

Number of Butterfly at the Site: Record how many individuals you actually see. Generally you will be observing adults. Few people can accurately identify larvae and pupae, however, if you have the knowledge to identify larvae and pupae please send in those observations on data sheets but please do not send specimens. This valuable information will add to our knowledge. Provide an estimate of **Density** (encounter rate) recorded as average area (m²) needed to see one adult butterfly for each species recorded at this site. This can be based on direct observation over the course of several consecutive days or in a single day. Please give a collected **Specimen** an **Id number**. The specimen number is **S-** followed by the initials of your first and last name, then **-2008**, and **-001** for your first specimen, 002 for your second, and so on, i.e. the ninth specimen collected by Jim Doe would be **S-JD-2008-009**. In **Comments** information on what plants butterfly were associated with or other observations such as mating or laying eggs is helpful.

Other Relevant Information: Any human disturbance in the area, i.e. ATV tracks; any environmental/ ecological hazards (chemical pollutants), urban or industrial developments. Ecological information about predators or anything else that you think might be influencing the butterflies.

How to Make Nets from <http://www.inhs.uiuc.edu/cwe/wwwtest/collect/HTML/d6.html>

Instructions are given below for making a standard sweep net. The size and shape can be changed according to the needs of the collector, the kind of collecting to be done, and the materials available. An aerial net can be made by following the same instructions but substituting white polyester netting for the muslin.

Materials Needed

Fine wire or hose clamp to secure net to handle

Handle - a large wooden dowel or discarded broom handle 30 to 40 inches long

Muslin - 1.5 yards of material, 36 inches wide

Sturdy wire - 4. 5-foot-long piece of wire (gauge no. 6 to no. 8) that can be bent into a rigid circle about 15 inches in diameter

Construction:

Net: Cut four muslin pieces with the dimensions shown in diagram A below.

Sew the pieces together around the curved edges. Fold a band as shown in diagram B below and sew around the hoop.

Hoop: Shape the hoop as indicated below, making one stem 1/2 inch longer than the other.

Handle: On opposite sides of the handle, gouge or chisel vertical grooves for the wire stems.

Assembly: Thread hoop into the handle grooves and fasten securely with hose clamp or with fine wires wrapped around the handle.

Use and Care

Insects can be captured with a net by dragging it through vegetation or by swinging it in the air.

Because nets are easily ripped, they should be kept away from barbed wire, briars, and thorny trees.

Also, they should be kept dry. Moisture rots the fabric, making it tear more easily. Many insects caught in a wet net are unfit for collection.

