

## Labelling and Storage of Specimens:

Containers (Whirl-Pak bags) for each collection event will be supplied to the National Parks and CANPOLIN associates. All pan and malaise trapped specimens must be stored in 95% ethanol in a freezer after removal from the field. All CANPOLIN Survey trap nests must be returned to the Packer Lab in the fall for winter storage and rearing. For each pan-trap transect collection event, 3 containers of specimens will be produced; one from the yellow pans, one from the blue pans, and one from the white pans. This should amount to 30-36 independently labelled containers of specimens per transect over the course of the season. For Malaise traps, each time the collecting vessel is emptied will represent a collection event that occurred over a 7-10 day period. All containers (Whirl-Paks) require a label written in *pencil* with the date, the time set and retrieved, the location (GPS co-ordinates), and the colour of pan. Any additional information is also welcome but not necessary.

All trap nested specimens should be sent to the Packer Lab (address included in original shipment) to be reared out. Specimens pan and malaise trapped by National Parks can be sent to the Packer Lab in Whirl-Pak bags for processing. All other specimens must be processed by the collecting institution/laboratory.

### Pinning:

- Refer to a standard entomological guide (e.g. Peterson Field Guides for Insects) for pinning instructions
- Additional information specific to bees can be found in Sam Droege's Handy Dandy Bee Manual ([link](#))

### Databasing and Labelling:

- Databasing of all specimens MUST be done at the time of labelling

All above information must be provided on BOTH the specimen label AND a database (i.e. excel spreadsheet)

In addition there must be a Global Unique Identifier on both the specimen label and the database entry for that specimen

- the Global Unique Identifier includes an Institution Code (a brief acronym for the institution the bees belong to), a collection code (a brief acronym to distinguish this particular collection within an institution that has multiple collections OR to distinguish this particular large collection event from other large collection event within a really large collection (to avoid duplication of Global Unique Identifiers if two events are being processed at the same time), and a Catalogue Number (a unique number for EACH BEE)
  - i.e. YORKU:PCYU:3659 = InstitutionCode:CollectionCode:CatalogNumber (for the Packer Laboratory)

- i.e. SFU:EEC:5933 = fictitious example for the Elle Laboratory
- NO TWO SPECIMENS anywhere in the world should have the same Global Unique Identifier

#### Databasing:

- Each of the above fields (Country, Province, Latitude, Longitude, etc, etc) must entered as a column heading for the datasheet
- each row will represent ONE specimen with it's appropriate locality information filling in the fields below each heading.
- Each SPECIMEN must be represented by it's own unique line
- For example, six *Halictus ligatus* collected at the exact same location and at the exact same time would be represented on six different lines of the datasheet, each with its own unique identifier number.

(see attached sample excel spreadsheet)

It is best to FIRST enter all the known data into an excel spreadsheet or other database program and then generate the locality labels FROM this database. This avoids having to type the data twice and greatly reduces the number of errors. Determination labels can be generated later as specimens are identified. Identification data should then be entered into the database, assuring that the determination is entered on the line of the spreadsheet that corresponds exactly to the specimen at hand (i.e. same Unique Identifier Number on specimen and data sheet). The search function of your program can be very useful in this.

The Biological Survey of Canada has prepared a “**Label data standards for terrestrial arthropods**” (and many other useful briefs) which are available for download at

<http://www.biology.ualberta.ca/bsc/english/briefs.htm>

Labelling Procedure: Note: that not all information in the database necessarily needs to be on the final label. Information on the label should minimally include: Country; Province; Location (MUST include GPS co-ordinates but can also include additional information such as Nation Park, as applicable); Date or Date Range; Collector(s); Collecting method. Please refer to the “**Label data standards for terrestrial arthropods**” for detailed instructions.

Below are instructions on how to print labels using the Mail Merge function of MS Word

If your institution already has its own method of generating labels directly from a database, please feel free to continue to use such method.

MS Word (97 - 2003):

- Close Excel spreadsheet
- Open Microsoft Word (97-2003)
- Click on 'Tools'
- Go to 'Letters and Mailings'
- Click on 'Mail Merge'
- A new panel will open on the right side of the screen
  - Under 'Select Document Type', select 'Labels'
- at the bottom of the panel click on 'Next: Starting Document' Under 'Change Document Layout' click on 'Label Options'
- In the 'Label Options' window that opens, beside 'Label Vendors' select 'Other/Custom'
  - If you have already created a custom label previously, select it from the list under 'Product Number', otherwise create one by clicking on the 'New Label ...' button
    - In the 'Label Details' window that opens, give your new label layout a name (e.g. "Locality Lables")
    - Set all parameters to fit your particular information and maximize the number of labels per page. Labels with a lot of information or long names on them will need greater height and width and therefore will fit fewer rows and columns per page
    - Hint: setting the 'Vertical Pitch' equal to the 'Label Height' and the 'Horizontal Pitch' equal to the 'Label Width' will give labels that are very close together and can ideally be cut with a single pass of the scissors saving time and effort
  - Click 'OK' to close the 'Label Options' window
- Under 'Select Starting Document' click on 'Use the Current Document'
- Click 'Next: Select Recipients'
- Under 'Select Recipients' click on 'Use an Existing List'

- Under 'Use and Existing List' click on 'Browse'
  - Browse to and select the Excel file that contains your database
  - Click 'Open'
  - Select the sheet that contains your data
  - Click 'OK'
- Select only the data entries for which you would like labels generated (boxes with check marks). If you would like a label for each row in the sheet, leave the the entire data sheet selected as is.
  - Click 'OK'
- Click 'Next: Arrange Your Labels'
- Under 'Arrange Your Labels' click 'More Items'
- In the 'Insert Merge Field' window that opens, select (double click on it or select it and click 'Insert') the headings for each of the fields you would like on your labels IN THE ORDER you would like them on your labels (eg. Country, Province, Locality, GPS, Date, Collecting Method, Collector(s), Global Unique Identifier). Include all data that for the purposes of the study would be useful to have on the label. Not all data in the data sheet needs necessarily be on the label.
  - The Global Unique Identifier should be the last item on the label.
- Click 'Close' when done
- Click on the square box with crossed arrows in it in the upper left hand corner of the document. This will select the entire document.
  - With the entire document selected, click on 'Format' at the top of the page and select 'Font' from the drop down menu
    - Click the 'Font' tab in the 'Font' window that opens
    - Type '4' in the 'Size' box to change your labels to 4 pt font
    - Select 'Tahoma' (or your preferred sans-serif font) in the 'Font' box
    - Click 'OK'
  - With the entire document still selected, click on 'Format' at the top of the page and select 'Paragraph' from the drop down menu
    - Click the 'Indents and Spacing' tab in the 'Paragraph' window that opens
    - Under 'Spacing', under 'Line Spacing' select 'Exactly'

- Under 'At' select '4pt'
- Click 'OK'
- Click in the first cell in the upper left hand corner of the screen
- Add spaces or commas, colons, semicolons and spaces between all fields you would like on the same line
  - NOTE: add the above or any additional text (eg. 'on:' or 'col') AFTER the '>>' of one field and BEFORE the '<<' of the next field.
    - Example 1: <<Country>>: <<Province>>, <<Locality>>
    - Example 2: <<Collecting Method>> col: <Collector>> on: <<Collected On>>
- Hit <Enter> before any field (BEFORE the '<<') that you would like to start on a separate line
  - NOTE: The text wraps automatically but the text in the 'Arrange Your Labels' view represents the field names (headings of the Excel database) and NOT the actual fields that will appear on the final label. These may not be the same size at all. For best results click back and forth between the 'Arrange Your Labels' view and the 'Preview Your Labels' view using the 'Next' and 'Previous' links at the bottom of the right hand panel. Make any desired changes in the 'Arrange Your Labels' view.
  - Always aim for labels that are clear but as compact as possible, with minimal white space at the end of any lines
- Once the layout of your labels is complete (or as often as you would like before that), in the 'Arrange Your Labels' view, under 'Replicate Labels' click the 'Update All Labels' button
- Click 'Next: Preview Your Labels'
- Once the preview view has been generated, scroll through your labels quickly to make sure everything looks alright. If there is a large variation in the length of the data entered in some of the fields (e.g. One location has a really long name), some modifications may be required
- Go back by clicking 'Previous' to make any changes
- Once the preview is satisfactory in the 'Preview Your Labels' view, click 'Next: Complete the Merge'
- Under 'Merge' click 'Print'
  - Note: print labels on card stock paper, NOT regular thinness paper
  - Note: printing from the top menu or by hitting '<Ctrl> p' might only print the first page of labels instead of the entire data sheet. Make sure you use the 'Print' link on the panel on the right.

- To save the labels word document make sure that you save it in the same folder as the Excel file it is pulling the information from and that you check through the labels carefully the next time you open the Word document as sometimes the merge is not completed properly upon re-opening.

#### MS Word (2007):

- Close Excel spreadsheet
- Open Microsoft Word (2007)
- Click on the 'Mailings' tab at the top of the page
- Click the 'Labels' button
- In the 'Envelopes and Labels' window that opens, select the 'Labels' tab at the top
  - Under 'Print' select 'Full Page of the Same Label'
  - Click the 'New Document' button
- Click on the 'Mailings' tab at the top of the page
- Click the 'Start Mail Merge' button and select 'Step by Step Mail Merge Wizard' at the bottom of the list
- A new panel will open on the right side of the screen
  - Under 'Select Document Type', select 'Labels'
  - at the bottom of the panel click on 'Next: Starting Document'
- Under 'Change Document Layout' click on 'Label Options'
- In the 'Label Options' window that opens, beside 'Label Vendors' select 'Other/Custom'
  - If you have already created a custom label previously, select it from the list under 'Product Number', otherwise create one by clicking on the 'New Label ...' button
    - In the 'Label Details' window that opens, give your new label layout a name (e.g. "Locality Lables")
    - Set all parameters to fit your particular information and maximize the number of labels per page. Labels with a lot of information or long names on them will need greater height and width and therefore will fit fewer rows and columns per page

- Hint: setting the 'Vertical Pitch' equal to the 'Label Height' and the 'Horizontal Pitch' equal to the 'Label Width' will give labels that are very close together and can ideally be cut with a single pass of the scissors saving time and effort
- Click 'OK' to close the 'Label Details' window
- Click 'OK' to close the 'Label Options' window
  - A warning will appear. Click 'OK'
- Under 'Select Starting Document' click on 'Use the Current Document'
- Click 'Next: Select Recipients'
- Under 'Select Recipients' click on 'Use an Existing List'
- Under 'Use and Existing List' click on 'Browse'
- A new 'Select Data Source' window will open
  - Browse to and select the Excel file that contains your database
  - Click 'Open'
  - Select the sheet that contains your data
  - Click 'OK'
- Select only the data entries for which you would like labels generated (boxes with check marks). If you would like a label for each row in the sheet, leave the the entire data sheet selected as is.
  - Click 'OK'
- Click 'Next: Arrange Your Labels'
- Under 'Arrange Your Labels' click 'More Items'
- In the 'Insert Merge Field' window that opens, select (double click on it or select it and click 'Insert') the headings for each of the fields you would like on your labels IN THE ORDER you would like them on your labels (eg. Country, Province, Locality, GPS, Date, Collecting Method, Collector(s), Global Unique Identifier). Include all data that for the purposes of the study would be useful to have on the label. Not all data in the data sheet needs necessarily be on the label.
  - The Global Unique Identifier should be the last item on the label.
- Click 'Close' when done
- Click on the square box with crossed arrows in it in the upper left hand corner of the document. This will select the entire document.

- With the entire document selected, click on the 'Home' tab at the top of the page
  - Type '4' in the font size box to change your labels to 4 pt font
  - Select 'Tahoma' (or your preferred sans-serif font) in the font type box
  - Under 'Paragraph' click the line spacing button and select 'Line Spacing Options ...' from the drop-down menu
    - Click the 'Indents and Spacing' tab in the 'Paragraph' window that opens
    - Under 'Spacing', under 'Line Spacing' select 'Exactly'
    - Under 'At' select '4pt'
    - Click 'OK'
- Click in the first cell in the upper left hand corner of the screen
- Add spaces or commas, colons, semicolons and spaces between all fields you would like on the same line
  - NOTE: add the above or any additional text (eg. 'on:' or 'col') AFTER the '>>' of one field and BEFORE the '<<' of the next field.
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- Once the preview view has been generated, scroll through your labels quickly to make sure everything looks alright. If there is a large variation in the length of the data entered in some of the fields (e.g. One location has a really long name), some modifications may be required
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