ANT DATABASING PROJECT PROTOCOLS

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MOREAU LAB

WRITTEN BY
GRACEN BRILMYER

LAB
2013

LAB POLICIES

- No food or open drinks in Collaborative Invertebrates Laboratory (Rooms 3308 & 3314) – All drinks must have lids

- You may eat in the Ant Lab (Room 3315) or Insects Library (Room 3307). Please feel free to use fridge & microwave in either room

- Throw all foods waste in bullet trash can (even food wrappers)

- Never prop open any doors

- Use paper towels sparingly

- Please respect people's desks and belongings in the Ant Lab

- Notify Gracen when the lab is running low on paper towels, labels, cotton, or is nearing the end of the cart

- NEVER DELETE ANYTHING on the spreadsheet (hiding columns is fine, but please never delete them)

Updated versions of this protocol can be found at:
www.moreaulab.org/resources

GETTING STARTED

- Forceps
- Alcohol FMNHINS numbers
- "FMNHINS##s assigned All label data entered into KE Emu" Labels
- Spare Jar (with 70% Alcohol in it)
- 70% Alcohol bottle
- Placeholder jar

PHYSICAL PROTOCOL

- Work left to right, front to back in trays of jars (shown below)
- Jars are in numerical order within a tray; NEVER MOVE TRAYS
- Jar numbers and jar taxon labels face forward
- When you remove a jar, replace it with your Placeholder Jar, so when multiple people have jars out, you will know which spot it came from

Blue Tray Labels indicate that entire tray has been databased

Jar numbers face forward

DATABASING PROTOCOL
& FORMATTING STANDARDS

1. Pick up jar following "Start Here" marker (note the jar number, placement in tray and if there are other jars out) and replace with your Placeholder Jar

2. Log on to any of the Ant Lab computers & open your Gregg Emu Workbook & Jar Spreadsheet (spreadsheets are accessible from any computer)

3. Record jar number and jar taxon in Jar Spreadsheet

4. Open Jar and pull out a vial

Note: Always keep jars lidded while working

5. Cut an FMNHINS # off (in numerical order, if possible) All Labels should be trimmed close to the text/number with the 'FMNHINS' on the top on the numbers (see example below)

6. Pull the cotton out of the vial, and place the FMNHINS # in the vial with the F facing towards the bottom of the vial, making sure it is visible up against the side of the vial (see example below). If the cotton is loose, add more cotton (in supply drawer) so that it is snug in the vial.

7. Fill the vial up and soak the cotton in 70% alcohol, and twist the cotton back in, leaving little or no air bubble. Do not push the cotton down to the bottom of the vial so that it is squishing the specimens, but make sure that it is firmly secure in the vial opening (that it won't fall out)

*One helpful trick is to gently submerge the vial and cotton in alcohol in the spare jar, and then twist the cotton back in - there are no bubbles, but be sure not to let any specimens escape!

FMNHINS numbers cut with 'FMNHINS' on top, and little to no extra white space around edges
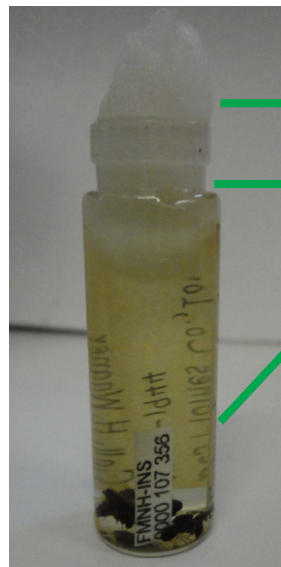
Cotton snug in top of vial

No air bubble

FMNHINS number in correct orientation, up against the side of the vial

Note: Always enter ALL information on label, even if you don't know where to put it

8. In your Gregg Emu Workbook, begin to enter **ALL** the label information into the following fields:

> Your spreadsheet will be checked periodically, anything highlighted in <mark>YELLOW</mark> should be discussed with supervisor, any problems discussed and not resolved should be highlighted in <mark>BLUE</mark>. Highlight any questions you have in <mark>RED</mark> and write **entire** label in **Label Notes** field

(All spreadsheet field names will be **bold**)

Column Letter — Description

A. **FMNHINS#** - Just *6-digit number* (no proceeding zeros) "106022"

D.-O. **Semaphoront 1-4** – *Dropdown.* Begin by entering each Semaphoront (Refer to Ant Castes paper) They should be entered in the following order if found:

1. Adult female - alate queens   2. Adult female - dealate queens
3. Adult female -workers   4. Adult males
5. pupae   6. larvae

For each semaphoront:

 # Wet 1-4 – *One number only*. Number of specimens of each caste. Unless you can easily & quickly count the exact number, estimate the number of each caste in increments of 5 or 10 (such as 25, 50, or 200)

Estimate 1-4 – *Yes or blank*. If number not estimated, leave blank

P. **Type** – Should probably never use this field, immediately notify someone if you see "type" on a label in a vial

Q. **Taxon** – *Genus species subspecies Only*
Subgenus and Author do not need to be included
Genus (capitalized) Subgenus (capitalized) species & subspecies (lowercase) Author (capitalized)

For example: *Camponotus (Camponotus) herculeanus* Linnaeus = *Genus (Subgenus) species* Author=
Enter into spreadsheet= Camponotus herculeanus
Aphaenogaster subterranea valida Wheeler =*Genus species subspecies* Author=
Enter into spreadsheet = Aphaenogaster subterranea valida

***Common Author Names: Wheeler, Mayr, Fabricius, André, Brown, Bolton, Creighton
(For Full list, See Ant Author List)

If it says: "Camponotus herculeanus var.", "var." goes in Identification notes
To check any taxonomy, go to: antcat.org

R. **Identified by** – *Names only*. Often follow"det." = "Determined by".
First initials (space) last name: R.E. Gregg (R.E._Gregg) A. Smith (A._Smith)

> **_ = space**

S. **Date Identified** – *Date only*. Gregg often did not use this, but if he did it will usually say something like: "Det. R. Gregg 1961" so '1961' would go as the Date Identified.

T. **Identification Notes** – Any extra information pertaining to the identification of the specimen, if verbatim, put in quotes ("var."). If there are addition organisms in the vial, add here as for example: "plus 2 termites", also this is the place where Host organisms are written

U. **Label Notes** –Any extra information on the label that you do not understand or don't know what field to put it in. Often used for when places are misspelled or illegible

Column Letter	Description

V.   **Previous Owners** – *Names only*. "Presented by" or "ex. Colln of" means that they were the previous owner. Enter name of owner: First initials (space) last name: A.M. Smith (A.M._Smith)

W.   **Previous Owners Numbers** – Usually not used unless another number is associated with the previous owner

X.   **Region** – *Dropdown.* Select the geographic region where the specimens were collected – refer to the Region Maps provided

Y.   **Continent** – *Dropdown.* Select from dropdown

Z.   **Country** – *Dropdown.* Select from dropdown

 * NEVER ASSUME any locality information except Continent & Country; even if you know a city is in a certain county, don't enter it unless it is on the vial label

AA.   **Province/State** – *Dropdown.* If you are not sure after Googling a place, ask someone

AB.   **County** – Only fill in if information is on label. Don't write 'Co.' or 'County' after county name

AC.   **City** – Or town. Only fill in if information is on label

AD.   **Precise Location** – For anything that doesn't fall into a concrete category or for names of places that could be multiple things (both a City and County, for example) or are smaller than the category of a city. All precise location info should be listed by the largest area to smallest area:
-Great Smoky National Park [larger], Bear Trail [smaller]
-6 mi E of San Juan (6_mi_E_of_City), then city does **NOT** go in City field
-Spell everything out that you 100% know:
Nat. PK or NP= National Park, Rd=Road
-Only abbreviate words if you don't know them
-If no collection information- "No Locality Data"

_ = space

AE.   **Elevation From Mt.** – *Number only*, given in Meters

AF.   **Elevation To Mt.** – *Number only,* in Meters, if there is a range (the '200' of 100-200 m); "at sea level"= 0

AG.   **Elevation From Ft.** – *Number only,* given in Feet

AH.   **Elevation To Ft.** – *Number only,* given in Feet, if there is a range (the '200' of 100-200ft)

AI.   **Latitude** – Decimals: 126.33 or -126.874 (a space in between the number and positive or negative)
  – Degrees/Minutes: 12 13 1 N or 12 13.25 N (only spaces in between numbers and N or S, no symbols)

AJ.   **Longitude** – Decimals: 126.33 or -126.874 (a space in between the number and positive or negative)
  – Degrees/Minutes: 12 13 1 W or 12 13.25 W (only spaces in between numbers and E or W, no symbols)

AK.   **Site Number** – *Number only.* Hardly used, consult someone before using this field. If your label has a number on it, it will usually go into the Collection Code field

Column Letter	Description

AL. **Habitat** – Refers to the ecological or environmental area, such as a type of forest. For Example:
> Oak-Pine forest
> Acacia grove
> shrub brush

AM. **Collection Method** – Refers to how it was collected. For Example:
> Under rock
> Along roadside
> At night
> Flight intercept trap or FIT
> In Log Stage 4 – this is a statement of how decomposed the log was
> Berlese (= Berl.)
> Tending Aphids
> Garden
> Forest margin

AN. **Collection Code** – *Name with number only*. If there is a number next to the collectors name on the label, this should go ALWAYS with the first initials and last name of the collector
> For Example: R.E. Gregg 175

AO. **Date Visited From** – *DayMonthYear Only*. Formatted to be DMMMYYYY.
Often written on labels Day-Month (in roman numerals)-Year: 2-IV-1965 = 2April1965
If there is no day, write MMMYYYY: Jul1977; If there is just a year write YYYY:1977
If it says "Summer 1979" – enter "Jun1979-"Aug1979"(From and To) and put "Summer 1979" in Label Notes
If it says "Spring 1979" – enter "Mar1979-"Jun1979"(From and To) and put "Spring 1979" in Label Notes

AP. **Date Visited To** – *DayMonthYear Only.* Even if collected on one day (not a range), this should be the same as the **Date Visited From.**

AQ. **Other Collection Numbers** – Any other numbers on the label, if Collection is already filled in

AR-AT. **Collector 1-3** – *Name Only.* Leg. & Coll. or Col. = collected by.
First initials and last name of the collector: R.E. Gregg (R.E._Gregg) A. Smith (A._Smith)

AU. **Expedition** – Write complete expedition name. For example: CNHM 1970 Madagascar Expedition
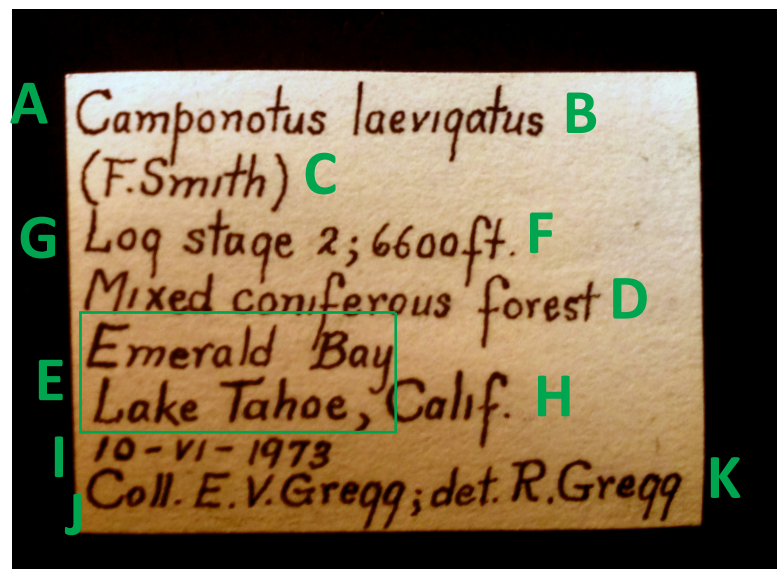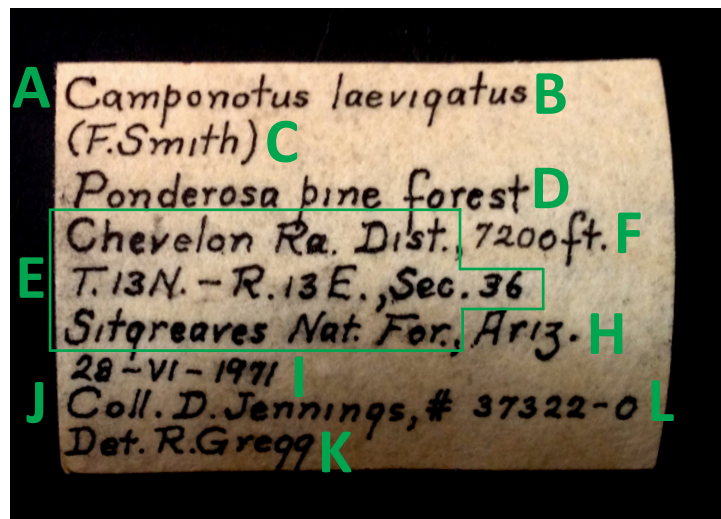
> **_ = space**
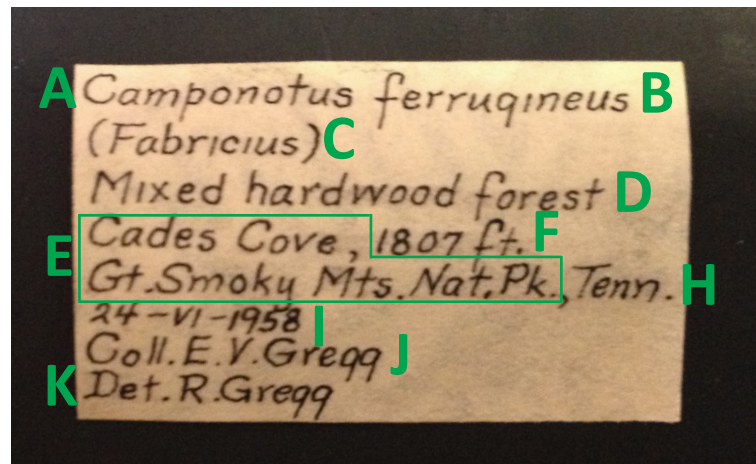
9. When finished with a vial, place it in your spare 70% ethanol jar (all vials will be moved into this spare jar for temporary storage, until all vials in the Gregg jar are complete)

10. Once all vials are entered, move them all back into the original jar (standing up as many as possible, then laying the extras on top. Don't force them in, they are glass and can break easily)

LABEL EXAMPLES

A. Genus
B. species
C. Author
D. Habitat
E. Precise Location
F. Elevation from
G. Collection Method
H. State
I. Date Visited From & To
J. Collector
K. Identified by
L. Collection Code

A Camponotus ferruqineus **B**
(Fabricius) **C**
Mixed hardwood forest **D**
E Cades Cove, 1807 ft. **F**
Gt. Smoky Mts. Nat. Pk., Tenn. **H**
24-VI-1958 **I**
Coll. E. V. Gregg **J**
K Det. R. Gregg

A Camponotus laeviqatus **B**
(F. Smith) **C**
Ponderosa pine forest **D**
Chevelon Ra. Dist. 7200 ft. **F**
E T. 13 N. - R. 13 E., Sec. 36
Sitgreaves Nat. For. Ariz. **H**
28-VI-1971 **I**
J Coll. D. Jennings, # 37322-0 **L**
Det. R. Gregg **K**

A Camponotus laeviqatus **B**
(F. Smith) **C**
G Log stage 2; 6600 ft. **F**
Mixed coniferous forest **D**
E Emerald Bay
Lake Tahoe, Calif. **H**
I 10-VI-1973
J Coll. E. V. Gregg; det. R. Gregg **K**

FINISHING TOUCHES

- **When finished with a jar:**

    A. Place a "FMNHINS##s assigned All label data entered into KE Emu" Label on the right side of the Jar Taxon Label (F- facing down)

    B. Fill the jar up completely with 70% alcohol

    C. Place the jar back in the correct location, jar number facing forward

A   C

- **When finished with a tray:**

    -Place the blue tray label in front of the white to indicate the entire row has been databased

- **When finished for the day:**

    -The 'Start Here' marker should be placed after the last jar finished (shown here)

    - Always finish a jar at the end of the day; jars should never be left partially databased.

    - Shut down your computer

The lab **must** be clean – put everything back where it came from at the end of each day.