



## Arthropod Sorting Lab Directions



### Pitfall Lab Materials

- forceps
- plastic weigh boats or trays
- arthropod identification pages
- pitfall lab data sheet and pencil
- microscope
- clicker for counting

### Pitfall Lab Directions

1. Write the site name and collection date from plastic bags and your name on the data sheet.
2. Take a plastic bag and write the trap number of that bag on the data sheet. Processing bags in order from 1 to 20 is the best procedure to follow to reduce the chances for error.
3. Before placing the trap contents under the microscope, remove any plant material or large chunks of wood but be careful that no arthropods are attached to them. In some cases, it is easier to remove the larger arthropods that can be identified with the naked eye and identify them first before looking under the microscope for the rest of the arthropods.
4. Write the trap number (e.g. 1), followed by the identification of one type of arthropod (e.g. Araneae), followed by the quantity (e.g. 3). For another type of arthropod in this bag, again, write the trap number (e.g. 1), followed by the identification (e.g. *Eleodes suturalis*), followed by the quantity (e.g. 2). Continue this until you have identified all the arthropods in this trap. Identify arthropods down to species, if possible. In many cases, however, a broader taxonomy is sufficient.

*Note:* When the number of arthropods is very large (e.g. >30), use the clicker to count them. Be sure the clicker is counting correctly, as sometime they can get jammed.

*Note:* We allow abbreviations of genus/species **ONLY** for *Armadillidium vulgare* and *Porcellio laevis*, which are 'Arm vul' and 'Por lae', respectively. Every other identification must have the full name spelled out.

5. Repeat these steps for all 20 bags for the site. If any bags are missing, write on the datasheet that this is the case and an explanation as to why, if provided. If there are zero arthropods in the trap, put the trap number, write a zero in the "Number in Trap" column, and write "No Captures" in the "Notes" column.
6. Transcribe pertinent comments listed on pitfall trapping field datasheet and/or plastic bag in the "Notes" column—for example: "lizard in trap," "trap not set," "*Eleodes suturalis* released," etc.
7. Fill in the "Page \_\_\_ of \_\_\_" section at the top of the datasheet.

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### Example of a complete datasheet

Page 3 of 4  
016  
May

Notes  
Lizard

10	Amygdala	1	1	tiny winged
10	Formica sp.	1	1	
12	Gryllidae	1	1	
11	Hemiptera	1	1	
12	Lepidoptera Larva	1	1	
13	Lycosidae	1	1	
13	Lepidoptera larva		5	
13	Eleodes subterranea	1	1	
13	Diplopoda	1	1	
13	Tetramorium sp.		8	
15	Lepidoptera larva	9+1	10	
14	Diplopoda	1	1	Lizard
14	Tetramorium sp.	12	12	
15	Tetramorium sp.		3	
14	Lepidoptera	20	20	
16	Blattella germanica	1	1	
16	Lepidoptera larva		4	
16	Diptera	1	1	
18	Callibaetis sp.	1	1	
18	Blattella germanica	1	1	
18	Lepidoptera larva	13	13	
19	Lycosidae	1	1	
19	Campoplex sp.	1	1	
19	Lasius sp.	1	1	
17	Lepidoptera Larvae	5	5	
19	Lepidoptera larva		4	
20	Lithobiomorpha	1	1	

Data entry: File: \_\_\_\_\_ Entry by: \_\_\_\_\_ Date: \_\_\_\_\_

### Resources

To minimize error, BEMP prefers to have one entomologist in charge of identifying arthropods for all our pitfall traps. Often, a UNM student will help the BEMP staff member, only identifying arthropods with direct supervision and confirmation from the BEMP entomologist.

Identifying arthropods is not easy, and takes a long time to get good at. The best source for identifying arthropods is dichotomous keys, of which there are several at the UNM arthropod sorting work station. There are also several books available:

- The Ants of New Mexico (Hymenoptera:Formicidae)
- Borror and DeLong's Introduction to the Study of Insects
- Spiders of North America-an identification manual
- Peterson Field Guides to Beetles, Insects & Ants of North America: A guide to genera

Also useful is our extensive voucher collections and our flip book of spiders in the bosque created by Matt Leister.



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Hanging on the wall at the work station is a rough identification cheat sheet. Use this only in the supervision of a BEMP expert arthropod staff member.

### Double Check Datasheet

- Double check that the species names are spelt correctly, and are easy to read.
- Ensure all identifications have the trap number.
- The code section will be filled in later, it's not necessary to have this filled out. *Note:* Often tallies are taken in the "code" section; **make sure these move over to the Number column!**
- Make sure all the notes from the field datasheet and on the bags themselves are accounted for on the lab datasheet.

### Clean Up

- Remove stickers from each bag and put the bags back in the larger plastic bag.
- Throw away all bugs except those that can be used for classroom education (freeze these to later be given to the Bosque School BEMPers).
- Ensure the microscope is off and properly stored.
- Bring both the field and lab datasheets back to the UNM BEMP office and place them on the Science Coordinator's desk.

This procedure document has been approved by \_\_\_\_\_

Date \_\_\_\_\_