

## **Insect Protocol**

***updated July 2013***

developed by Kitty LaBounty, Scott Harris, Mike Belitz

modifications will be made after discussions with Derek Sikes

### **Supplies:**

- Solo cups
- Aluminum pie plates
- Wire cut and bent to “U” shape or large garden staples (2 per trap)
- Sierra brand less-toxic (it’s low-toxicity not “non”) antifreeze for preservative (available at Napa) or pink RV-antifreeze which is also non-toxic but is 50% water so less good at preservation.
- Trowel
- Measuring tape
- Compass
- Tupperware (large, hard sided)
- Zip-lock bags/13 oz Whirl-Paks
- Permanent marker
- 1-liter yogurt container
- Strainer material such as military-grade mosquito netting or tea bags
- Fine sieve (less than 1 mm small)
- 70% Ethanol
- Vials

### **Methods:**

Transect runs East to West (true) through center of gap. Center of gap is 0 and negative numbers to the East, positive numbers to West

Pitfall traps every 3m starting at the center, extending across the entire gap and into the matrix a minimum of 21m

Use trowel to dig a pit in which the solo cup fits snugly. The rim of the cup should be flush with the level of the ground

Pour enough antifreeze in cup to cover the bottom (about 1”)

Secure aluminum rain roof

### **Sampling:**

After letting the traps run for the collection period (at least four days), empty each trap in the same order they were set up into a zip-lock bag. Try to avoid spilling dirt into the trap or into the zip-lock bag.

Refill cup with 1 inch of glycol. Recover with rain roof.

Data sheet for samples should note weather conditions and whether or not trap had insects.

Each zip-lock should include a label written on cardstock or write-in-the rain paper:

- line 1: country, state, location
- line 2: elevation, latitude & longitude in decimal degrees  
with +/- GPS accuracy if a GPS unit was used
- line 3: habitat description, dominant plant(s), collection method  
(eg hand coll., sweep net, pitfall trap, Malaise trap, etc.)
- line 4: date (start & stop dates for traps) with month abbreviated in letters,  
not numerals, & collector(s)
- line 5: trap & gap numbers

The final label inside each whirlpak should look like this:

USA: ALASKA: Starrigavan, Sitka  
el.6m, 51.26014°N, 179.07802°W ±3m  
Young growth forest, Vaccinium sp., pitfall trap,  
1AUG-5AUG 2013 D. S. Sikes  
T3 G1

Date should be recorded with a start and stop date like this: 12-16 JUL 2013

Store zip-lock bags in Tupperware container in refrigerator.

### **Processing**

At a sink, cut open the zip-lock using a fine sieve (less than 1 mm), capturing the antifreeze in a waste bucket to be properly disposed of.

Rinse the sample in water. Transfer the rinsed sample into a small petri-like dish and rinse the stragglers with 70% ethanol.

Move sample to dissecting scope and using forceps, sort and count the sample. Transfer each specimen into a vial with the data label and 70% ethanol.

On data spreadsheet, sort species using multiple species sorting technique. At least try to identify specimens to order.