

Making an Insect Collection

Goals

1. Use a classification key to identify organisms.
2. Gain experience in collecting organisms.
3. Become familiar with orders of insects.

Materials

1. Box to hold collected insects temporarily
2. Ethanol or isopropyl alcohol
3. Clear fingernail polish or Elmer's glue
4. 2 Killing jars (1 for freezing; 1 with ethanol/isopropyl alcohol to drown the bugs)
5. Materials for displaying insects (foam board and/or shadow box)
6. Mothballs (to keep live bugs away from the dried bugs)
7. Straight pins

Procedures

1. Catch as many different adult insects as you can without damaging them. Immature insects, such as nymphs and larvae of insects (grubs, caterpillars, and the like), are sometimes difficult to identify and often require special killing-and-mounting procedures. Do not collect these forms.
2. Kill the insects you catch.
 - Make a killing jar by following the directions below. You can kill many insects by placing them in your killing jar as soon as you catch them. Leave them in the killing jar until they are dead, but do not keep them in the jar for more than a couple of days.
 - You can kill beetles easily by dropping them into a small jar of ethanol or isopropyl alcohol (70-80%). Beetles sometimes survive in killing jars for long periods of time.
 - Do not place butterflies and moths into the liquid killing jar. Kill a butterfly or moth by putting them in an empty jar and placing the jar in the freezer for a day or two.
3. Mount the insects.
 - You can mount most insects by sticking a pin through the thorax and into a piece of cardboard. Make sure that the insects are suspended in the air on the pins and are not tacked against the cardboard. Be sure that an insect is dead before you mount it.
 - To mount beetles (order Coleoptera), place the pin through the right wing and abdomen, not through the thorax.
 - Mount tiny insects (such as mosquitoes, gnats, and fruit flies) onto small triangles of stiff paper. Touch a triangle of paper to a small drop of clear fingernail polish or Elmer's glue; then touch the polish on the paper to the insect. Pin the paper triangles to the cardboard.

4. Protect your mounted insects.
 - Children and friends may want to handle your specimens. Keep your collection away from children and allow friends to look but not to touch. Some insects are very fragile.
 - For temporary storage of your insects, glue a piece of thick, corrugated cardboard to the bottom of a box. (A shoe box works well.) Stick the pins with insects on them into the cardboard.
 - Protect your dead insects from hungry live insects by attaching mothballs inside the collection box. Loose mothballs may damage insects; therefore, put holes in a tiny box filled with mothballs, tape the box shut, and tape it into the corner of the storage box.

Ideas for Catching Insects

1. Look under stones and boards.
2. Collect mushrooms and put them in a closed jar. As the mushrooms dry, insects that were inside will come out.
3. Dig up and turn over a shovelful of earth. Watch it closely and capture the insects that scurry away.
4. Check around outdoor lights at night.
5. At night, put a light over a tub of water with a spoonful of kerosene in it. In the morning gather the insects from the tub
6. Collect caterpillars and grubs. When they become adults, kill and identify them.
7. Leave an open sandwich outside for an hour or two. Insects will be attracted to the food.
8. Attach an insect net to an automobile and drive along at dusk at about 25-30 mph. The net will trap many flying insects. This method works very well along country roads.
9. Use an insect net to capture flying insects. Disturbing bushes and tall grass will often arouse many flying insects.

How to Make a Killing Jar

For bugs that are hairy or scaly (this includes moths & butterflies) - place the bug in a jar and put the jar in the freezer. Allow these bugs to warm slightly (15-20 min) before mounting.

For bugs that are NOT hairy or scaly - put a small amount of ethanol or isopropyl alcohol in a jar and put the bug in the liquid. Mount immediately and allow the bug to dry while mounted.

Do not leave bugs in either the freezer or the liquid for longer than a couple of days unless they are still alive.