DRY MOUNTING OF INSECTS.

Originally given by Lewis Woollnough.

1 Acknowledgment

These notes describe a procedure based on one developed by Ernie Ives and I wish gratefully to acknowledge Ernie's work in this field.

2 Materials Required

1. A plastic cell mounted on a slide and with a paper-lined base, plus removable lid; these facilitate examination of the specimen under low powers of a compound microscope or a stereo-microscope (Small plastic boxes, with lids, such as are used for 'micro-mounts', are also useful containers but are really only suitable for stereo-microscopes).
2. A piece of non-glossy card coated on one side, with a layer of gum (acacia or tragacanth) that has been allowed to dry thoroughly.

2.1 Chemicals

Ethyl acetate, white vinegar, methylated spirits, cellulose thinners, gum acacia (or gum tragacanth) cleaning fluid (which is made up of meths:water, 1:3 plus a squirt of washing-up liquid).

2.2 Magnification

Some optical aid, especially when cleaning, manipulating, arranging and "putting up" smaller insects, will be necessary or even essential. A supported magnifying glass might be sufficient but the instrument of choice would be a stereo-microscope.

3 Procedure

1. Kill the insect, preferably with ethyl acetate which leaves it relaxed.

2. Transfer the insect to white wine vinegar (for a minimum of 24 hr). This acts as a fixative and will preserve the specimen indefinitely. Other fluids may be used; iso-propyl alcohol is one of these but it does tend to make the specimen hard and brittle.

3. Lay the insect, ventral side up, in a shallow dish and cover it with cleaning fluid. Using a soft brush, remove debris and spread the legs, antennae and mouth-parts.

4. Dry off surplus fluid from the insect on a tissue.

5. Take the previously-prepared piece of gummed card. Position the insect, dorsal side up, on the gummed side and arrange its appendages; all extremities of the insect (tips of antennae, mouth-parts and feet)

should be attached to the card by applying a minute drop of water to the appropriate place with a fine brush and gently holding the appendage in place until the glue "grabs". Note: it may be necessary to raise the head on a wedge of card to display the mouth parts clearly.

6. Place the card with the mounted specimen on a hot-plate (for 1hr., at least). Allow to cool and then move it through the following jars of chemicals:

7. Methylated spirits for dehydration (1hr. minimum).

8. Cellulose thinners for degreasing (1hr. minimum).

9. Methylated spirits for de-oiling and final dehydration (1hr. minimum).

10. Dry the card and specimen in air and store temporarily in a dust-proof place.

11. "Putting-up" the specimen in the mounted cell: The card on which the specimen is fixed tends to be curved; place it in a dish with the specimen uppermost and run a little water *under* the card and leave it to soak for a few minutes. (Do not flood the card and specimen). Test all parts of the insect that were fixed, using a damp brush, to ensure that all are loose; then carefully transfer the insect to the paper lining the bottom of the slide cell. A blob of gum should be placed centrally on the paper and the insect's abdomen placed on it. The insect will now be stiff but limited flexibility can be introduced to the appendages by moistening them; the mere addition of small drops of water will be sufficient to fix all the parts that were formally attached to the card - the glue already on them and size in the paper will be sufficient to re-fix them. Finally, air dry thoroughly before putting on the cover.

IMPORTANT

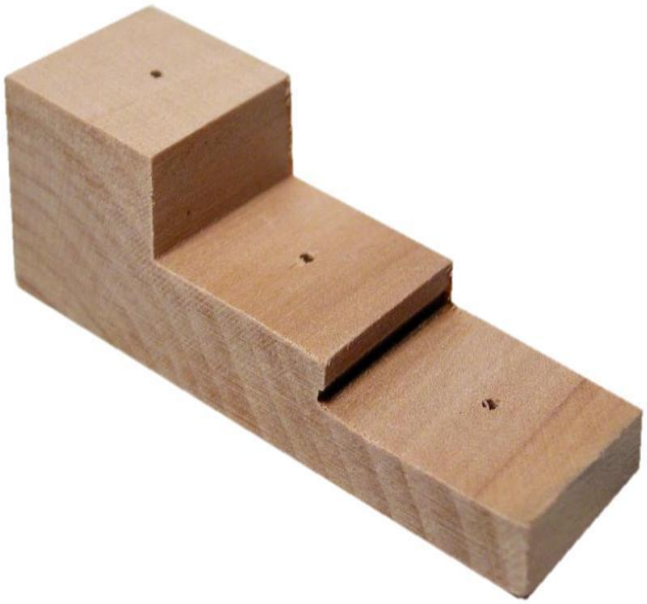
The oil and fat content of insects must be removed for dry mounting by degreasing and de-oiling. If this is not done thoroughly/ completely, the oil/fat will ooze through the exoskeleton of the insect and spoil the appearance and lead to putrefaction.

To achieve this takes a considerable time, more than we normally have.
So I suggest that we limit the time allotted for procedures No. 6 to No.10 to 30 minutes.

This means that as soon as you are able after the meeting, remove the insect from its final mounting and return to No. 6 and repeat the procedures to No. 11, giving them as much time as you can afford.
It won't matter how long the insect stays in Methylated spirit.

If you have small insects and you want to mount them in a ring on a slide then you must provide the slides with ring ready glued on and ventilation provided either between the ring and slide or in the lid.
However I will be concentrating on mounting for cabinet display and will provide the necessary card , pins and pinning block

A pinning block to make - 1inch wide, 3 inches long, 3 steps at 1inch - ¾ inch - ¼ inch. If you are handy with wood!



LABELS

There should be at least 2 labels
2nd Label
1. Genus. *Coleoptera*
2. Species. *Carabus violaceus*
3. Common name. *Violet Ground Beetle*

1st Label
1. Date collected
2. Where collected
3. Name of collector

Specimens pinned dry include insects mounted on insect pins or paper points on pins. Labels are positioned under the specimen on the pin. A locality label is on top, and a taxonomic identification label underneath the locality label. The labels should be oriented parallel to the longitudinal axis of the specimen, positioned to be read from the left side of the specimen. Pin labels should be small, generally close to a 1 cm by 2 cm rectangular label, with rows of text parallel to the long axis of the label. The print size should be small and clear. If computer generated, a font size of 5 or 6 should be used.