

APPENDIX 4

Killing Bottle and Rearing Container for Insect Samples

The Killing Bottle (Fig. 25):

The ideal killing bottle or agent kills rapidly, and does not affect such identifying features as colour and shape. For forensic purposes a liquid killing agent is satisfactory. Ethyl acetate is recommended. This agent is highly flammable and caution must be used.

A killing bottle can be constructed as follows: with an unbreakable glass (pyrex) jar, sealed with a tight lid or stopper, apply a layer of absorbent material to the bottom. This may be either plaster of paris (1.5 to 2.0 centimeters thick) which must be allowed to dry thoroughly before use, or a layer of felt (0.5 to 1.0 centimeters deep) covered with a layer of cotton wool. To this add a few drops of the killing agent, over which are placed a few sheets of blotting paper. When using the killing bottle, the following should be remembered: do not overcrowd, do not mix large and small, or soft and hard bodied insects, clean the bottle regularly with dampened cloth or cotton. If a killing bottle is not available, and cannot be constructed, live adult insects can be placed directly into 75 percent ethyl alcohol for preservation.

The Rearing Container (Fig. 25):

Successful rearing of insects requires that the natural environment be artificially approximated as closely as possible. Regulation of humidity and temperature is desirable. An adequate food supply is necessary for larval feeding, and pupation sites should be provided. Restrictions imposed by field procedures and conditions may prohibit the construction and maintenance of optimal habitats for rearing and temporary methods must be employed. These conditions will probably be less than ideal, and transfer of the insects to more suitable cages should be made as soon as possible. The following are recommended as temporary measures.

To a small box or glass vial add the insects and a small piece of moistened blotting paper. Adequate food for larvae should be provided. If pupae are recovered from the leaf litter or soil, this should be included. Seal with cotton or similar material to allow air circulation without rapid loss of moisture. Avoid extremes of temperature and direct sunlight. Be very careful when adding or removing material not to damage the eggs, larvae or pupae.

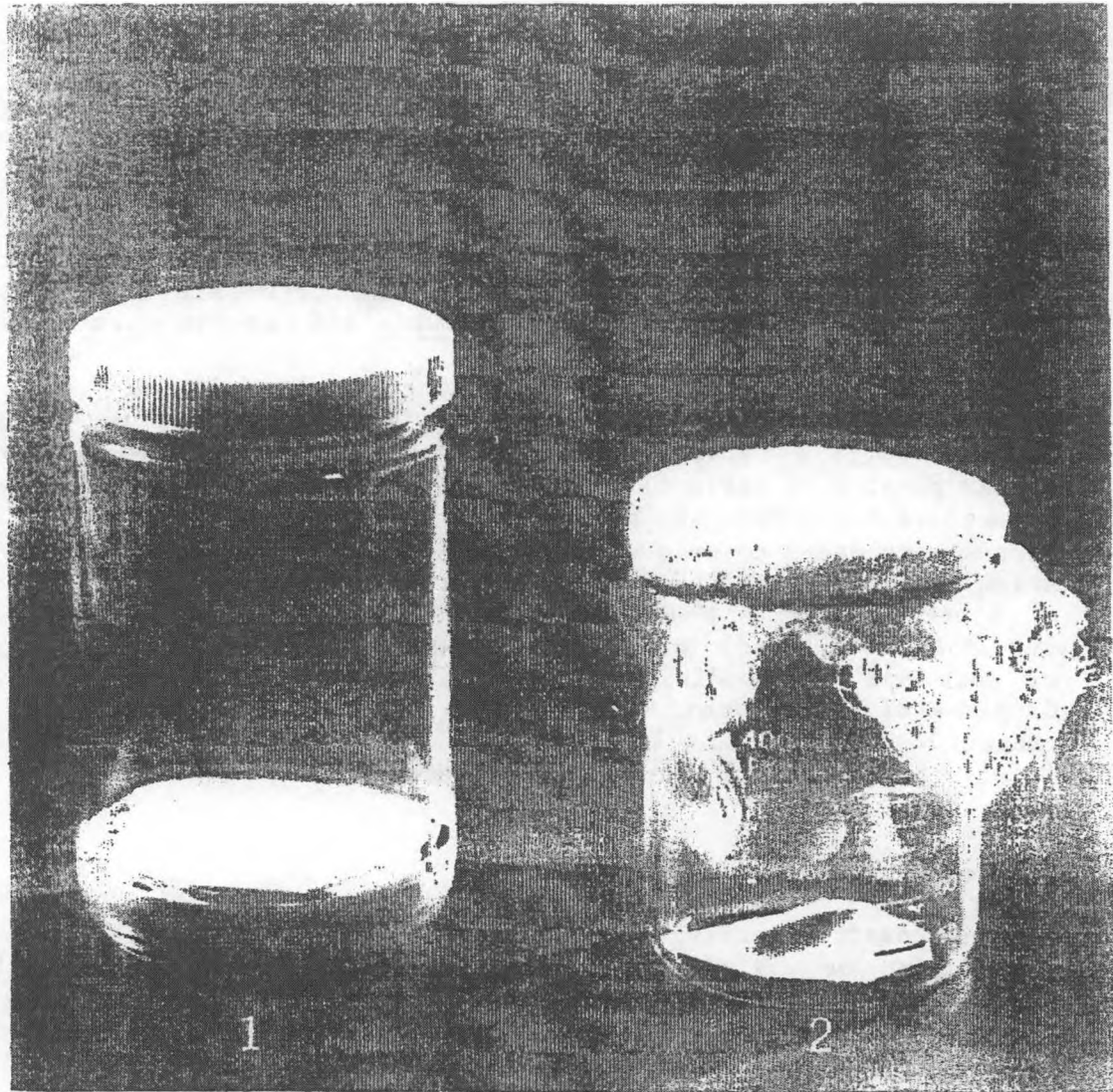


Figure 25. Simply-constructed examples of 1) insect-killing bottle and 2) rearing container.