

## TIPS ON SPREADING BUTTERFLIES AND MOTHS

### How to Mount Butterflies and Moths

Butterflies and moths are the most popular insects collected by students. Specimens of most of the orders of insects can be pinned and placed directly into the collection without special treatment. With butterflies and moths, however, it is necessary to expand their wings in order to show their markings.

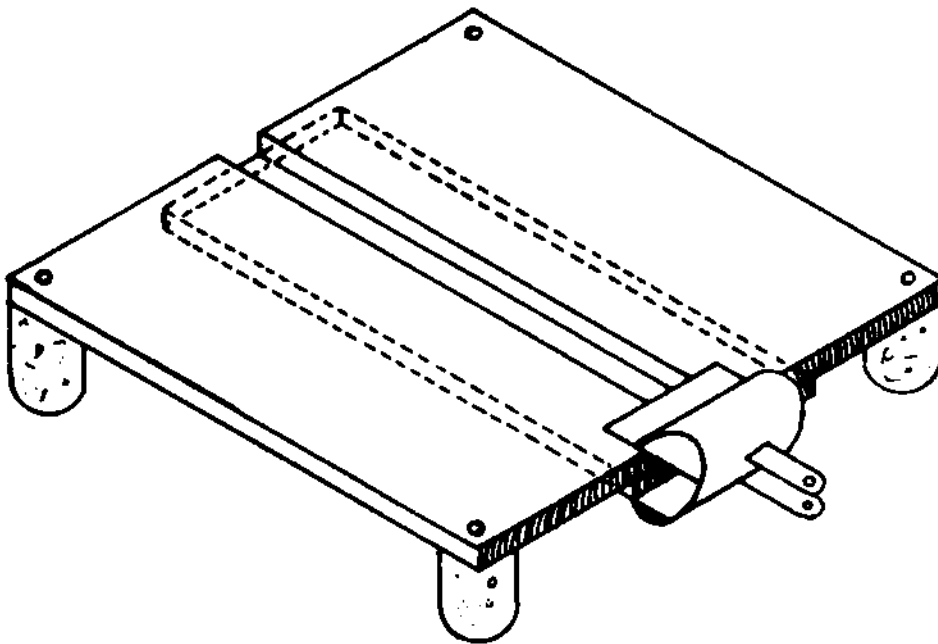
Specimens can be kept for years in glazed paper envelopes or homemade paper triangles and expanded at leisure during the winter.

### Relaxing Dried Specimens

Specimens to be mounted are placed in a relaxer which can be made by putting a layer of moistened paper toweling in any nearly airtight metal or glassware container for 24 hours. Squeeze enough moisture from the toweling so that it will not drip when the pressure is released. To hasten the relaxing process, it is well to place the moist toweling both above and below the specimens. Place 10-12 drops of carbolic acid or Lysol on the bottom of the relaxer to prevent mold.

### Equipment for Mounting Butterflies

In order to keep the wings in a uniform position a spreading board is used. This consists of two pieces of smooth board separated by a central groove. The base of the groove is made of a soft material such as balsa wood, through which the pins are thrust.



A homemade adjustable spreading board can be made from two paper clips, three balsa wood strips, four common pins and four corks.

Two paper strips more than half the length of the spreading board, and varying from 1/16 to 1/8 inch in width, should be cut for pinning along either side of the groove. Tracing cloth strips can be used many times. It is much easier to begin in the middle of the board and work towards one end. When half the board has been filled it can be turned around and beginning again at the middle, work towards the other end. The pins holding the ends of the strips should be slanted forward so that when the strip is pulled it will hold the wings down and not slip up on the pin.

Use forceps for handling specimens. There is less danger of removing scales from the wings if the butterflies are handled with “tweezers”.

For manipulating the wings mounting needles are preferred to insect pins. These can be made by dipping the heads of ordinary needles in melted sealing wax. When at the right consistency (the wax is too hot if smoking), a pear-shaped droplet will form, when the needle is removed. Drop the needles into a glass of cold water to harden the heads. Number 11 sharps are the best size needle for this purpose.

## Spreading

To spread a butterfly or moth, proceed as follows:

1. After 24 hours (48 hours for the larger moths and swallowtails) remove the specimens for the relaxer.
2. Squeeze the sides of the body with forceps, just below the wing bases.
3. This opens the wings so that a pin can be thrust into the thorax. About 1/2 inch of the head of the pin should remain above the body for ease in future handling.
4. Push the insect pin into the groove of the spreading board so that the bases of the wings are level with the top surface.
5. Flatten the wings by use of the strip which is pinned parallel to the groove of the board. Put a pin at the left side of the body to prevent it swinging out of line during manipulation of the wings.
6. Holding the left-hand strip loosely over the wings, insert the point of the mounting needle in back of the strong vein that is found just behind the front margin of the forewing. Move this wing forward toward the proper position but not so far as to permit the hindwing to slip out from beneath it. Hold it in position by lightly pushing the needle into the board.  
In a like manner, moving the hindwing forward. Two or three repetitions of this operation will bring both wings into the correct position. When in proper position, the rear margin of the front wing should be a right angles with the body. A small portion of the hindwing should lie beneath the front wing, although not enough to obscure important markings. The antennae should be parallel to the margins of the front wing.
7. When the wings on the left side are in the proper position, insert a pin at a point where it will pass through the strip and both wings.
8. Follow the same procedure for right side.
9. Strips of glass or microscope slides are placed over the wings to prevent them from curling while drying. Continue this procedure until half the board is filled.
10. The triangles or envelopes, which have written on them the date and place the specimens were taken, are put on a pin which can be thrust into the end of the board. To avoid confusion, these papers should be numbered to correspond with the position of their respective butterflies. The authors pencil A or B on the ends of the spreading board and then write A-1, A-2, etc. on the date torn from the triangle or envelope. Several labels can be prepared at one time and there is little danger of confusion.
11. Finish the other half of the board and place it in a warm dry place for 24 hours, after which the insects can be removed.

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Phillip E. Sloderbeck  
Entomology, Southwest

H. Leroy Brooks  
Pesticide Safety

George E. Lippert  
Crop Protection, Southeast

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