Miscellaneous methods

Parker, D.R. Method of carrying stocks. The early method of carrying stocks in this institution was to keep them in bottles, merely shaking them from the old one into the new one at each change, with occasional etherization and examination of them. Last year, however, we adopted a new method which seems to be more efficient. The stocks are now carried in vials, keeping one old vial and mating three new ones at each change. The four are fastened together by means of a rubber band to which is attached the tag label. The flies are etherized by means of the mass method of Altenburg.

The advantages of this system are: (1) The flies are examined at each change, and (2) by making 3 new vials the chances of loss by contamination are greatly reduced. It is possible by this method to practically rid all of the stocks of mites, provided there are no adverse conditions of temperature.

This method takes a bit more time than the older one, but it will perhaps repay the loss with better stocks. (Copied from DIS-4: 65).

Muller, H.J. Labelling of stock cultures. In place of the usual practice of Drosophila laboratories of pasting a label on each stock culture and writing the name of the stock anew at each transfer, I have for many years found it much quicker and less subject to error, if the designation of the stock is written once for all in ink or India ink on both sides of a cardboard tag which is affixed through its string to a rubber band that passes around the neck of the culture vessel. This tag is transferred to the new vessel when the flies are transferred, and it is best to have a separate tag for each culture vessel. (Copied from DIS-3: 52).

Hoover, Margaret E. Maintenance of stocks. Drosophila stock bottles are kept at Cold Spring Harbor in galvanized tin trays filled with soap solution to prevent spreading of mites, and are placed on wooden shelves constructed for this purpose. These shelves measure 36 x 11-1/4 inches. Four bottles can be placed in a row the width of the shelf and about fourteen bottles lengthwise without any crowding. Our cabinets have ten shelves each from the floor to the ceiling so that one cabinet will hold 140 cultures.

Following H.J. Muller's suggestion (DIS-3, 1935) stocks are labeled by using small celluloid or heavy cardboard tags on which the labels are written; an elastic band is looped through a hole punched in each tag and slipped over the neck of the bottle. With the transfer of cultures, the tags are dipped in carbon titrachloride to prevent the spread of mites and transferred to a new bottle. Heading each row of four bottles on

the shelves is a labeled celluloid tag hooked over the end of the tin tray by a card holder. The stocks are arranged on the shelves according to the listing in DIS.

Stocks are kept in 1/4 pint milk bottles. Paper milk caps with a flap are used as stoppers. Experience indicates that virilis stocks go better in small containers.

Muller, H.J. Supplying vials with paper. When numerous small vials have to be handled it is time consuming to prepare and insert paper for each one, although the presence of paper is helpful. For this purpose it is convenient to use white confetti, which can be purchased already prepared in considerable quantities. This is sifted between the fingers into the cultures en masse, as they stand still uncovered after having been seeded with yeast. (Copied from DIS-3: 52).

Brierley, Jean Method for handling vials in transfers of Active flies. I have found 30 by 100 mm. vials well suited to single pair matings. In my work it is necessary to transfer these pairs to fresh vials frequently, without etherization. The size of the vials makes it hard to hold their mouths in exact apposition during the transfer. To eliminate the chance of their slipping, I use a c-shaped metal band about 15 mm. wide, which slips over the end of the vial, protruding half its width beyond the mouth. The other vial fits into this half of the ring, and the two vials are held firmly together. Any metal will do, as long as it is fairly thin and quite flexible. It must be elastic enough to cling closely to the glass and adjust itself to the variations in sizes of vials. (University of Michigan).

Kaiser, S. Transfer of flies. We have obtained our best results in transfers by inserting into the food, cones made of towelling paper. Etherized flies come to in these cones without getting wet or dirty. The larvae creep up on the paper and pupate on it.

Stern, Curt Feeding flies kept temporarily in vials. Food (water-molasses-agar, filled into Petri-dishes, before cornmeal is added to the mixture used for bottles) is placed on a parallelogram-shaped piece of cardboard (size 42 x 25 mm. altitude 20 mm., thickness 1 mm.). These cardboard pieces are cheaper than paper spoons and are ordered per 5000 or 10,000 from stationery stores. The shape of the piece eliminates the danger of crushing flies (method suggested in 1931 by Dr. F. Koller, then in Berlin-Dahlem).

Oliver, C.P. Protection of cultures from mice. Mice have made necessary the use of a substitute for cotton plugs for cultures which are left outside a closed chamber. Paper milk