To a 60% acetic acid solution, add 30% (w/v) PVP-40 (polyvinyl pyrrolidone, m.w. about 28,000). After fixation in 60% acetic acid for several minutes (for phase microscopy) or after fixation and staining, transfer gland to a drop of the medium on a slide, with forceps or dropper. Add cover slip and press, or hit with reflex hammer. Indeed, orcein and perhaps other stains can be incorporated directly into the medium, so that the gland may be introduced right after fixation. Rotation or sliding of cover slip often straightens out the chromosomes. Plasdone C is similar to PVP-40. Higher m.w. PVP has poor viscosity/shrinkage properties. Lower m.w. PVP, expected to be better, distorts chromosomes badly.

We welcome information on use of polyvinyl alcohol (PVA), additional stains, opinions on concentration optima, and any other modifications. Preparations harden quickly, should last indefinitely. We developed this method at Harvard University, Cambridge, Mass.

A simple method to separate flies belonging to one sex from the other out of a culture bottle has been devised in our lab. The one sex to be discarded or to be isolated was sucked out of the culture bottle (with the help of a water suction pump) into the assembly shown in the Fig. The diameter of the drawnout tip of the glass tube (1) is to be such that only one fly could be sucked in at a time. If the separated flies are to be used again, the flask (5) is not filled with alcohol, instead a nylon net is fastened to the short glass tube (3b) to prevent the flies from getting sucked into the pump. Positions 2a and 2b are silicone tubings, position 4 a rubber stopper. The arrow shows the direction of the air stream.