A large amount of trustworthy information has been derived concerning the abundance, densities, distribution and behavior of the various chemical elements in the atmospheres of the sun and stars. For years to come no student concerned with these interesting matters can afford to overlook this important, vigorously written, and beautifully printed monograph.

JOHN Q. STEWART
PRINCETON UNIVERSITY OBSERVATORY

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A METHOD FOR MOUNTING SPECIMENS OF DROSOPHILA ON MICROSCOPIC SLIDES

MANY students of the genetics of Drosophila must have felt the need for a reliable method by which specimens could be preserved in their natural condition of coloration and structure. It is especially desirable to keep as permanent records unusual specimens, such as the various types of aberrant flies which are frequently sterile. With the view of meeting this need, the writer has experimented with various methods for mounting flies on microscopic slides. As a result of these efforts, a method has been found that not only preserves the life-like appearance of the fly, but also has every indication of giving preparations of a permanent character. The following brief description of this method is given with the hope that it may be found useful to other workers in the field. It is possible that the method can be employed for mounting other types of insects that are not well adapted to the usual pinning process.

A microscope culture slide with a depth of 1.5 mm has been found to be the best for Drosophila. The concavity is first covered with a thin layer of ever-ready mucilage or glue (Stafford's); then, working under a binocular microscope and with the aid of a pair of dissecting needles, the fly is arranged in the desired position in the center of the concavity. The glue hardens in a few minutes, and serves to hold the specimen in a definite position during the subsequent treatment. As soon as the glue is set the slide is placed in a jar containing equal parts of absolute alcohol and xylene (Baker's) and left for thirty minutes. It is then transferred to absolute alcohol and left for at least three hours. The preparation is completed by filling the concavity with Euparal (Grubler's) and applying a cover glass.

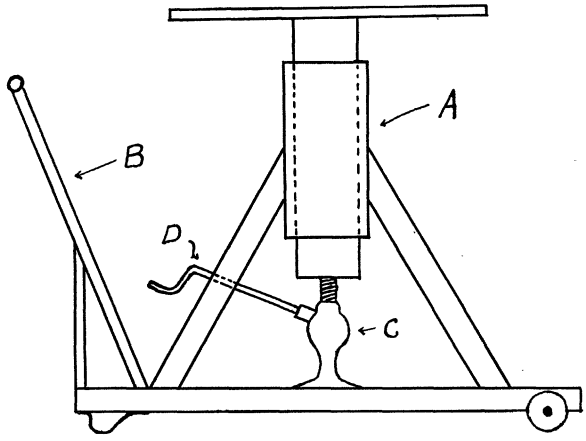
If the best results are to be obtained, it is necessary to take the following precautions: (1) The slide must be absolutely clean, otherwise the glue will crack loose and allow the fly to float off in the liquid. (2) The specimen to be mounted should be at least two days old. Newly emerged or young flies tend to become distorted in the alcohol-xylene mixture. (3) It is desirable to prevent the fly from making any movements before the glue has hardened. This can be done by holding a small wad of cotton, saturated with ether, just above the fly for the two or three minutes that it takes for the glue to set. These preparations have the advantage of permitting examination of both the upper and lower surfaces of the mounted specimen, and if it be desired, a drawing can be made at any time.

J. T. PATTERSON
AUSTIN, TEXAS

AN ADJUSTABLE APPARATUS STAND AND TRUCK

THE average laboratory apparatus stand is quite unwieldy with regard to height adjustment and mobility if the stand is loaded with a heavy piece of apparatus. It is true that some stands are equipped with rack and pinion for adjusting, but the cost is usually prohibitory.

In order to overcome these difficulties in case of a small spectrograph, which it was desired to move quickly from one part of the laboratory to another and to adjust in height, the scheme shown in the figure was adopted.



An ordinary laboratory stand A was mounted on a very low truck provided with rubber-tired wheels in front and sliders at the rear. A handle B was provided for easy manipulation. An ordinary automobile jack C was used as the means of raising the adjustable part of the stand The jack used was of the "double extension" type, giving a lift of about 8 inches. Since the height of the stand at the lowest point was arranged to be about that of an average