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A METHOD FOR RAPID IDENTIFICATION OF MOSQUITOES FROM LIGHT TRAP COLLECTIONS

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The method of rapid identification of mosquitoes from light trap collections, employs a foot-operated device for focusing a dissecting microscope and an especially constructed trough for holding mosquitoes within the field of vision on the microscope stage. By the use of these aids, the identification of large numbers of mosquito specimens is greatly expedited. Both hands remain free for manipulations on the microscope stage, and the eyes need not be shifted constantly between the oculars of the microscope and the specimens being identified. The focusing device also has been found useful in the preparation of mounts of larvae and of male terminalia, and for other items requiring a considerable amount of manipulation under magnification.

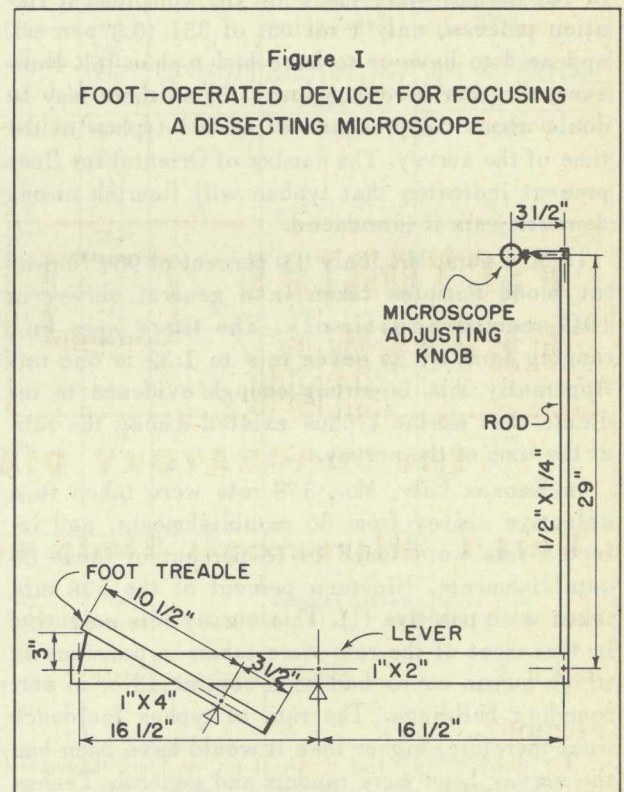
The foot-operated focusing device consists of a treadle assembly which rests on the floor and is connected by a lever and a rod to a clamp fastened around the focusing knob of the microscope. Figure 1 presents a diagram of the apparatus. Materials needed for construction are as follows:

Treadle: wood, 1 by 4 inches, 14 inches long, with the fulcrum 10½ inches from the point of connection to the lever. A small cleat may be added to prevent the foot from slipping off the treadle.

Lever: wood, 1 by 2 inches, the fulcrum 16½ inches from the connection to the treadle and 16½ inches from the connection to the rod.

Rod: wood, ½- by ¼-inch, 29 inches between connection with lever and clamp.

Clamp: metal, fashioned from an automobile radiator hose clamp, of sufficient length to permit attachment of the rod at a point 3½ inches from



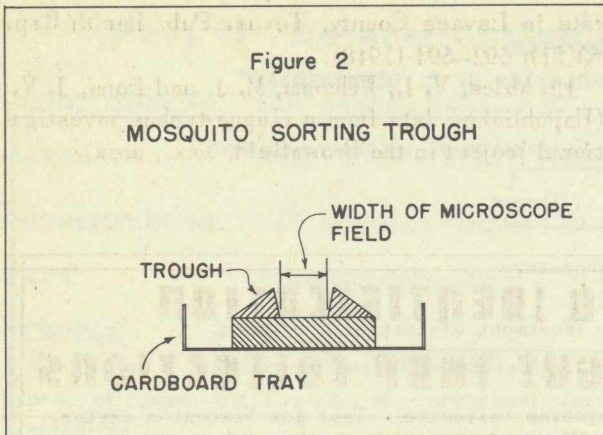
the center of the microscope adjusting knob.

Fulcrums of the treadle and lever are 8-penny common nails, fitting snugly into drilled holes.

Connector between the treadle and lever is of No. 12 iron wire, crank-shaped, the parallel sections being about 3 inches apart. One end fits snugly into a drilled hole in the lever and the other is held snugly to the treadle by staples.

The rod is connected to the lever and clamp by

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$\frac{1}{4}$ -inch stove bolts fitting drilled holes. The arm of the clamp is twisted 90 degrees so that it fits against the side of the rod.

With the foot device the microscope can be focused satisfactorily through a field $\frac{1}{4}$ -inch deep for magnifications up to about 50X. Focusing at

higher magnifications is not sufficiently exact for practical use.

The trough, shown in cross-section in figure 2, has a width equal to the diameter of the field of the microscope at low power and is $\frac{1}{4}$ -inch deep. It can be of any convenient length. The trough sets in a shallow cardboard tray made the same length as the trough and about 1 inch wider.

In use, the focusing device permits the microscope to be kept in focus while one hand is used to slowly move the trough across the stage and the other is used to manipulate the specimens. For sorting, one species may be left in the trough, a second placed in one compartment of the tray, while a third species may be placed in the other compartment. Rarer species may be set aside for later attention.

A design for a chin-operated device was described by E. S. Hegre and R. F. Blount, *Science*, 101: 126-127 (1945).



A SERIES OF FOUR MOTION PICTURES AND TWO FILMSTRIPS

THE LABORATORY DIAGNOSIS OF DIPHTHERIA

Part I Microscopic Study and Isolation of *C. Diphtheriae*

PRODUCTION NO.: CDC 4-088.0, Released 1950

DATA: Motion Picture; 16mm, Sound, Black and White, 13 Minutes, 480 Feet

PURPOSE

To depict: (1) the collection and treatment of initial specimens; (2) microscopic examination of initial cultures for presumptive evidence of diphtheria; (3) isolation of pure cultures; and (4) microscopic examination of these pure cultures.

AUDIENCE

Diagnostic laboratory technicians (bacteriology); public health and diagnostic laboratory directors; physicians; medical students; and nurses.

CONTENT

See Chart 1



C. diphtheriae colony — gravis strain on a cystine tellurite plate.