small numbers along the edges of the main canals, and in large numbers in the concrete drop structures (fig. 1). A total of 206 drop structures was located and examined in the survey area, of which 193, or 93 per cent, contained Simuliidae. Collections of *S. vittatum* and *S. griseum* larvae and pupae were made from several of the drops on July 22 and August 14, 1953.

In this particular area, irrigation water is delivered to the user under the rotation method whereby he receives water for definite periods of time and is without water during the intermediate periods. Consequently water was sometimes shut out of laterals for a period of several days. When this happened sufficient water usually remained in the concrete apron of each drop structure to permit the blackfly larvae and pupae to survive until the water was turned into the lateral again.

When water was not flowing in th lateral it was possible to estimate the de sity of the Simuliidae population in th concrete aprons. This was done b measuring a 1-foot square area on the sic of an apron and counting the number larvae and pupae attached to the concret In late August two 1-foot square are were sampled in 10 different aprons.

The larvae and pupae in these sampl ranged in number from 2 to 37 wi an average of 18 per square foot. Eac apron was found to measure approx mately 28.5 square feet so that the bree ing potential of a single drop structu was 513 Simuliidae. On this basis it estimated that the 206 drops contained excess of 105,000 blackflies.

The blackflies were identified by D Alan Stone of the Division of Insect D tection and Identification, Bureau Entomology and Plant Quarantine, Was ington 25, D. C.

A TECHNIQUE TO FACILITATE IDENTIFICATION OF MOSQUITOES IN LIGHT TRAP COLLECTIONS

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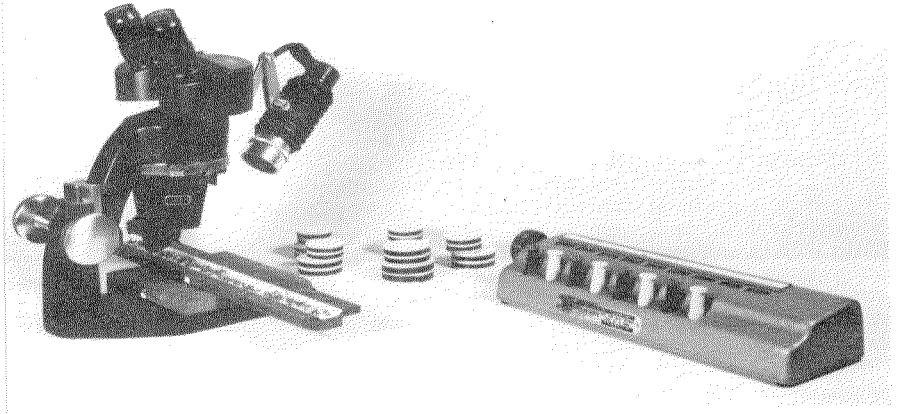
Light traps are used extensively for sampling adult mosquito populations; however, the large catches which are frequently taken make the routine task of identifying and counting the specimens a time-consuming and tedious process. The technique described below has greatly facilitated the processing of light trap collections of mosquitoes which have been made in connection with studies undertaken in irrigated areas of several western states.

The technique involves the use of (1) a wide-field stereoscopic microscope, (2) a manually operated stage consisting of a base plate and sliding horizontal troug and (3) a nine-unit laboratory counter The base plate of the manual stage is co structed so that it replaces the removab glass stage on the microscope. Mosquito from the light trap collections are thin scattered over the bottom of the troug which operates in the center of the fiel By slowly moving the trough beneath th objective the mosquitoes may be identifie and recorded on the laboratory count

[1] #A-2030 Clay-Adams Co., Inc. The tra name is used as a means of identifying th product. Its use does not constitute endorseme by the U. S. Public Health Service.



IG. 1. Stereoscopic microscope equipped with manual stage and nine-unit laboratory counter used for identifying and counting mosquitoes from light-trap collections.

fig. 1). Males and females of four pecies and their total can be recorded on he nine-unit counter. With a little prac- ice, the counter can be operated by touch, llowing undivided attention to be de- oted to the microscope field.

Construction details of the microscope tage are shown in figure 2. The trough nd base plate are constructed of ⅛" and ¼" tempered masonite glued together. The trough used in this laboratory is 12 nches long with 1-inch divisions. These livisions are useful in determining which nosquitoes have been identified in the vent of an interruption. The width of he trough is dependent on the field cov- ered by the combination of objectives and ye-pieces normally used for mosquito dentification. The sides of the trough are loped to prevent shadows and the bottom nay be painted white or black, depending n individual preference.

It has been estimated that the time re- quired to identify and count the mos- quitoes in the larger trap collections is re- duced as much as 50 per cent by the use of this technique. The technique removes much of the tedium of mosquito counting and reduces the handling of individual specimens. It may be used for unsorted trap collections where sorting, identifying, and counting are all accomplished in one operation. This technique is adaptable for use in handling other kinds of insects col- lected in light trap samples.

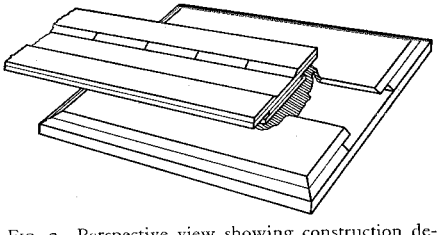


FIG. 2. Perspective view showing construction details of the manually operated microscope stage.