OPERATIONAL NOTES

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THE OPERATIONAL CLINIC AS PLANNED FOR THE AMCA MEETING IN CHICAGO, 1964, is progressing satisfactorily and it is the consensus that although this is a somewhat different approach to operational problems, the clinic will be very informative and certainly instructive. Those directly responsible for maintenance and service of field equipment are urged to make every effort to attend this session. Many suppliers of mosquito control equipment have already signified cooperation in this clinic.

LAKE COUNTY MOSQUITO ABATEMENT DISTRICT HAS SHOWN A FORWARD STEP THAT may be of interest to all insecticide people as well as mosquito control people. A. H. Camp reports that they had been having trouble with rust and other foreign materials clogging strainers and spray nozzles. It was determined that the foreign material in the strainers was from their tanks. Mr. Camp describes their procedure for remedying this, as follows:

"During our annual overhaul, we decided to cut the tops out of the steel tanks with the intention of applying a protective inside coating. The extent of metal pitting made salvage of these steel tanks seem inadvisable.

"We have built replacement tanks of ½ and ¾ inch exterior plywood, and coated them inside and out with fiberglass cloth and resin. Our tanks have a wide base and narrow top, making inside coating difficult. We got around this by building up each tank, except the top and back. This gave us room to work the inside lining and overlap the corners. Before any resin was applied, the necessary flange fittings were installed in the wood, and heavy bars for 'tie downs' were bolted into place. The inside of a partial tank was then coated and cured. We coated the unattached top and back with cloth and resin. When these were dry, we fastened on the back and glassed the seams. Finally the top was attached with resin in the seams. The entire outside of the tank was then coated with cloth and resin, giving what appeared to be a sturdy tank that would not cause any problems."

CATCHING OF ADULT MOSQUITOES BY THE AID OF A FLASHLIGHT. We have devised a practical method for the collection of adult mosquitoes, utilizing the Japanese Brush-flash light "Pilot Star" Art. No. 2111.

This equipment is operated on regular flashlight batteries of 1.5 v. and consists of:

(a) a vacuum motor brush.
(b) a flashlight.

With the aid of a special switch it is possible to switch over either to the light or vacuum brush. By a slight modification, we changed the vacuum brush into mechanical mosquito sucking equipment, by replacing the brush-hairs with a plastic cylinder on which a nylon net was fixed on the side directed to the vacuum motor. A glass tube was inserted through a rubber plug on the opposite end.

By putting the motor in action, mosquitoes could be easily sucked from their resting places into the cylinder, as shown in the photograph FIG. 1,

FIG. 1.—Mechanical suction apparatus for mosquitoes, operated by a hand torch.

and released later into a cage by opening the rubber plug.—Z. Saliternik, Jerusalem, Israel.

AN IMPROVED MOSQUITO LARVAE CONCENTRATOR. Large numbers of mosquito larvae must be collected at times in order to conduct certain experimental work. To facilitate this task, a simple but efficient larvae concentrator was developed (Fig. 1).

This collecting device is made from a one-gallon container with a ⅜-inch hole drilled about ⅓ of the distance from the top. A removable lid is equipped with an embroidery hoop which holds a circle of nylon organdy formed into a deep bag. In operation, water and larvae are dipped from the source and poured into the bag. Excess water flows out through the hole, which may be provided with a simple wire guard to prevent the bag from fouling the hole and restricting drainage. Larvae may be rinsed into a separate container for transportation, or the concentrating bucket may be used to carry larvae by stoppering the hole. The unit carries its own reservoir so the larvae are always in water. The use of the embroidery hoop simplifies replacement of the bag if it becomes torn or clogged.

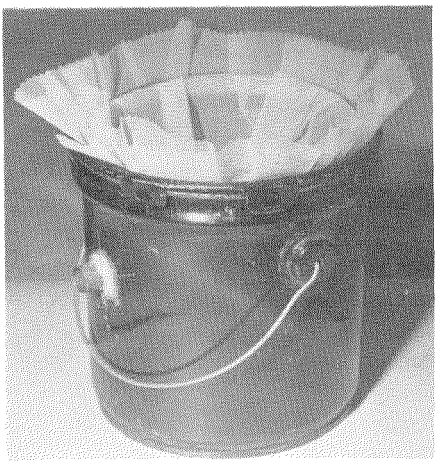

FIG. 1.—Mosquito larvae concentrator (T. D. Mulhern photograph).

One type of bucket and lid found to be satisfactory is available from the General Biological Supply House, Inc. (1963 catalog No. 310A801, Size A), but any plastic or rustproofed metal pail will do.—Don J. Womeldorf, Patricia A. Gillies and James R. Holten, California State Department of Public Health, Bureau of Vector Control.

ADAPTING THE THIOKOL SPRYTE TRACKED VECHICLE FOR LARVICIDING

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For many years the Monmouth County (New Jersey) Mosquito Extermination Commission was confronted with the increasing problem of controlling larval production on salt marshes altered by man's activities. Such changes as hydraulic fills, dry fills, and roadways intersecting existing drainage ditches were effected in order to develop marginal lands. The result, however, was a patch-work of small segments of marsh which could no longer be drained by conventional methods, and which were too large to larvicide by hand. Also, the softness of the ground excluded the use of wheeled vehicles, but did not warant the use of floating equipment. Obviously, something that could operate in conditions between these extremes was needed.

After much review and comparison of tracked vehicles that might be used in this work, it was decided to purchase a Thiokol Spryte. The decision was based on the performance of this machine on all types of work areas on which it was to be used, and upon the load space, and carrying capacity.

More detailed specification of the vehicle would be beyond the scope of this review inasmuch as how it was modified for larviciding is the main objective.

The first requirement was to fabricate larvicide tanks which could hold enough material to do an adequate area and not be so large so that the vehicle became cumbersome. Other tank requirements were: baffle-plates to prevent sloshing, an interconnecting pipe to equalize the load on either side of the vehicle, and clean-out ports and drains. The finished tanks are illustrated in the accompanying photograph (Fig. 1).

FIG. 1.—Thiokol Spryte with pump and tank, adapted for larviciding.

They are each of 44 gallons capacity and are easily removed so that the Spryte can be used for inspection or other purposes. For example, the cracks on hydraulic fills were eliminated in several locations during the winter by the Spryte pulling a conventional farming disk harrow.

The second requirement for the modification was to fabricate a system which applied the larvicide, and this was designed so that the entire operation could be performed by one man.

A Briggs and Stratton Model 6 BS four cycle motor was joined to a Sherwood gear pump (complete with pressure gauge, filter, and lanyard type shut-off valve). This assembly was shock-mounted on a plate which was affixed atop the right larvicide saddle tank (see photograph). Other small motor-pump combinations available in commercial models would be as satisfactory. However, the above were salvaged from worn-out equipment.

In order to mount the spraying head, a plate was bolted to the rear of the vehicle to which a 1" galvanized pipe elbow had been brazed (Fig. 2). To this is attached a 20" pipe nipple at the end of which is a boomless sprayer with a five orifice nozzle cluster. Another 13" nipple