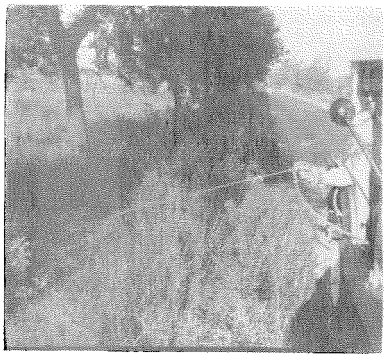

FIG. 2—Pistol wand treating a roadside ditch. The eight to ten foot distance is covered with ease.

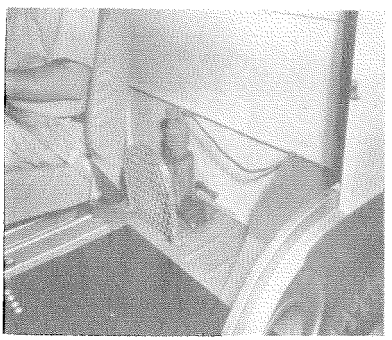

FIG. 3—1.44 CFM compressor mounted to the left of the operator and a copper tube taking the air to the rear tank. A check valve and pressure relief valve is included in this line.

starting and running them. The added weight of 400 pounds of solution caused many hours of down time and excessive clutch wear repair charges. Motorcycles are also dangerous to operate in heavy traffic in an urban area.

During the summer of 1966 The South Cook County Mosquito Abatement District put into operation two right hand-drive Kaiser CJ 5's for catch basin and roadside ditch spraying. For a pressure tank the same 25-gallon glass-lined well pressure tank was used with the addition of a small air compressor. The compressor was powered from the vehicles' rear power take-off and was located inside the cab to the left of the driver. The driver can shift the power take-off in and out to maintain about 70 lbs. maximum pressure. During normal basin work the pressure is maintained easily during travel between basins. A long basin wand is used and with the right door removed the driver can easily maneuver the vehicle for fast treating. The drivers quickly become accustomed to the right hand drive. No difficulties were encountered in traffic.

The same vehicle may also be used for roadside ditches, but in this case a pistol type (Gunjet (R) #22) is used with a 0003 orifice tip. The solid stream produced travels 8' to 10' to reach the ditch and the stream breaks up well @ 50 PSI to cover the surface of the water. On long ditches the driver occasionally has to pause for a pressure build-up.

The same power take-off compressor system is also being installed on Essick hydraulic spray units to replace the independent engine, saving operator's time and maintenance costs.

The cost of these right hand units was $2,350 for the vehicle plus an equipment outlay of less than $75.

An experienced operator can average 400 catch basins a day.

A METHOD FOR ACCURATE COUNTING OF BLACKFLY LARVAE (DIPTERA:SIMULIIDAE)

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Various methods have been used in the past to estimate the populations of blackfly larvae in streams, and several of these have been reviewed in the literature (1). Each of these methods involves counting larvae attached to natural substrata such as rocks or vegetation, or to plates or cones placed in the stream beforehand. It is difficult to make an accurate count of attached larvae in the field without so disturbing them as to affect the validity of the test. If they are counted *in situ* the changing refraction of fast water precludes accuracy, and if the objects are removed from the water for long enough to count a heavy infestation the larvae begin to detach themselves and leave the site on re-entry into the stream. The method here described is an attempt to overcome the obstacles to a precise measurement of results.

The prepared substrata consist of strips of hardboard, painted matte white on both sides, ruled in 1" squares on the upper surface, and fitted with an anchor of angle iron bolted firmly to one end. We used strips 10" x 3", but the size is optional. The angle iron is painted with luminescent orange to aid in recovery, and the station number is painted on it in black. The attached larval populations are recorded with a 35-mm camera on a tripod.

The plaques are placed in the creek bed at intervals of 0.1 mile and left until sufficient larvae have attached to warrant a test. They are dropped in suitable riffles, and the downward projection of the angle iron, coupled with its weight provides secure anchorage. Stations are marked by using a spray-can of luminescent orange paint on nearby rocks or trees.

Immediately before each test all plaques are

photographed. In order to reduce detachment of larvae to a minimum, the camera is first set up nearby and focussed on a card lying on the ground. When the light has been measured and all adjustments made, the plaque is removed from the stream, placed on the card, photographed, and returned to its former position in a matter of seconds. If care is taken to return it to the exact spot and position it formerly occupied, disturbance of the larvae is minimal. The resulting negatives may be processed when convenient, enlarged to any suitable degree, and the attached larvae may be counted in the laboratory with great accuracy.

After the application of the larvicide, the process may be repeated at any desired interval for the assessment of results.

References

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Aedes atlanticus DYAR AND KNAB, FEEDING ON TURTLES [1]

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The acceptance of reptilian hosts by *Aedes* mosquitoes has been of interest to many investigators. Reptiles have been suggested as possible overwintering hosts of arboviruses and limited reptilian feeding in nature has been suggested by bait trap studies. Several observations involving *Aedes canadensis* (Theobald) feeding on turtles are found in the literature, but reptilian acceptance under natural conditions is not clear for most other species. During recent investigations in southern New Jersey, *Aedes atlanticus* Dyar and Knab was observed feeding on turtles.

Aedes atlanticus has been reported from New Jersey (Headlee, 1945) but is only rarely encountered. Larvae have only been found in woodland pools late in the season following summer rains and light trap catches have been minimal. Relatively little, therefore, is known of its habits in the state. The species is common in the southeastern United States where the adult females are cryptic with those of *Aedes tormentor* Dyar and Knab. The females have been described by Carpenter and LaCasse (1955) as persistent human biters, while Michener (1947) and King *et al.* (1960) stated that they bit severely in daylight hours, often in open sunlight.

[1] Paper of the Journal Series, New Jersey Agricultural Experiment Station, Rutgers–The State University, Department of Entomology & Economic Zoology.

Recent observations in southern New Jersey indicated that *Aedes atlanticus* will accept reptilian hosts. Following heavy rains late in August, numerous turtles basking in rain pools were observed being attacked by mosquitoes. In all cases *Aedes canadensis* was the major species encountered but on three separate occasions, *Aedes atlanticus* was also included. On August 25, 1967, 3 specimens were taken from an eastern box turtle, *Terrapene carolina carolina* along with 187 *Aedes canadensis*. Three additional specimens were included with 79 *Aedes canadensis* taken from a spotted turtle, *Clemmys guttata* on the same day. Four days later, a single *Aedes atlanticus* was collected from a box turtle with 126 *Aedes canadensis*.

One of the seven *Aedes atlanticus* collected was fully distended with blood. The specimen was included in the serological testing program currently being conducted on the feeding habits of New Jersey mosquitoes. Tests indicated that the specimen had taken its blood-meal from a turtle host. *Aedes atlanticus,* therefore, was shown to be not only attracted to turtles in these observations, but capable of taking a full blood-meal as well.

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OCCURRENCE OF *Aedes infirmatus* D. & K. IN ARIZONA

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A single male *Aedes infirmatus* was collected in a New Jersey light trap at Fort Huachuca, Arizona by James O. King on the night of August 31, 1966. This was a cool night during which only one other specimen was taken (a *Culex tarsalis* male).

It is believed that this species has not been reported previously from Arizona, and is a new state record. Dr. Alan Stone states that it has been found previously as far west as El Paso, Texas. The male terminalia slide has been placed in the collection of the National Museum.

The author is indebted to Colonel Stanley J. Carpenter and Dr. Alan Stone for verification of identification.