

method, a total of 36 mosquitoes engorged and were force-mated. Of these, 24 produced egg rafts, with a total of 6 hatching. From these six egg rafts a substantial number of first generation (F₁) laboratory reared *C. melanura* adults were obtained. A total of 17 egg rafts have been collected from the F₁ generation, with 8 hatching (45.5 percent hatch rate). At the time of writing over half of the F₁ adults are still alive, and pupation and adult emergence is occurring in the F₂ generation. Even though considerable additional work is required to determine the requirements of this species, colonization is now believed to be possible.

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A SLOW SPEED SPEEDOMETER

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The Desplaines Valley Mosquito Abatement District, Lyons, Illinois, acknowledges the importance of accuracy in calculating pounds of insecticide per acre and has taken steps to increase efficiency in the calculation of dispensed toxicants.

The general foreman and mechanic adapted a tractor speedometer to a pick-up truck used in the night fogging operation. The advantage of using the Stewart-Warner Tractor Speedometer kit No. 366 A.U. is its low speed registration. This model is calibrated in 2/10 m.p.h. on the speedometer which has a range of 0 to 10 m.p.h. The odometer is calibrated on 1/10 and 1/100 mi. Its primary use is to facilitate control of the slower speed, e.g. maintaining 4 m.p.h., which does not record accurately on the conventional tachometer. It is important to note that the slow speed instrument is used in conjunction with the conventional tachometer.

With a few minor changes in the Stewart-Warner kit and the addition of a microswitch the unit was installed on the front wheel of our pick-up as shown in Figure #1. The small wheel which travels on the tire (the tire representing the ground) is spring-loaded to prevent any possible bounce (Figure #2). When the wheel is

engaged and riding on the tire the microswitch activates the small light over the speedometer dial and not only illuminates the dial but also serves as a signal that the speedometer wheel is engaged (Figure #3).

The speedometer has a range from 0 mile per hour to 10 miles per hour. The question immediately arose about speeds in excess of 10 miles per hour and possible damage to the instrument. The company representative assured us that the truck could attain a speed of 15 miles per hour for a short distance, such as crossing an intersection or railroad crossing.

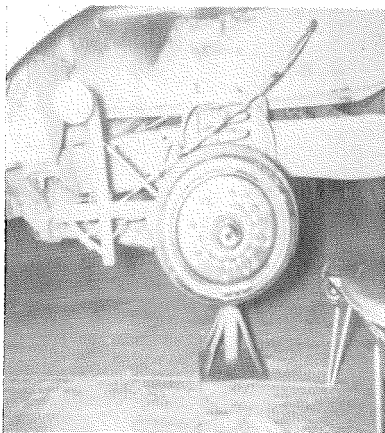


FIG. 1.—Speedometer wheel mounted on front wheel of pick-up.

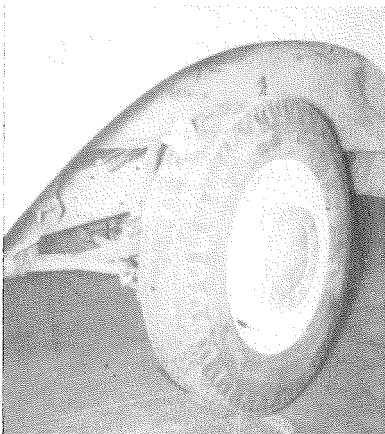


FIG. 2.—Wheel in position against tire.



FIG. 3.—Installation of dial and light on instrument panel.

We are thoroughly convinced that, according to our records of comparison, we have been consistently accurate in computing the amount of toxicant per acre being fogged by our test truck. We plan on installing the slow speed speedometer on all of our fogging trucks for next season. However, we have plans to relocate the microswitch from the wheel arm adjacent to the truck wheel to a point beneath the instrument panel in the truck cab.

CHIRONOMIDS AS POSSIBLE CARRIERS OF COLIFORM BACTERIA

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Recently a 125-acre lake in central Florida became polluted, purportedly from overflowing septic tanks. Estimation of the coliform group density (M. P. N. index per 100 ml.) ranged as high as 2,000. The water was declared unsafe and

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restrictions were placed on swimming, fishing, or boating in the lake, until the coliform group density had dropped again to the safe limits of less than 100. People living in the vicinity of this polluted lake were concerned that the numerous chironomid midges, primarily *Glyptotendipes paripes* Edwards, which were emerging nightly from this lake, might be capable of carrying the coliform bacteria. Steinhaus and Brinley (1957) reported that chironomids emerging from sewage ponds would contaminate agar plates with bacteria when they walked on them and therefore could be a potential health hazard.

Adult *G. paripes* were collected from the sides of the lake front homes. A standard membrane filter test for the presence of the coliform group was run on these insects immersed in distilled water. This technique is described in the 1955 edition of the "Standard Methods for the Examination of Water."

The results from these tests were negative; thus the adults of *G. paripes*, which emerged from a polluted lake, were not found to be carriers of coliform bacteria on the surfaces of their body. Unfortunately, the meconia of the midges were not checked. Water samples taken from this lake at the same time the chironomids were collected, were also run using the same test. The water samples had an average coliform density of 2000.

According to Nielsen (1962), the peak of *G. paripes* emergence normally takes place within 2 hours after sunset, consequently the midges which are most troublesome to the homeowners the following morning are 8 to 10 hours old. Nielsen also states that only the females, 24 hours old and having already laid their eggs, are positively phototropic and will therefore invade homes in the evening seeking the light. Since *Escherichia coli* is very sensitive to desiccation and these insects were 8 hours old, it is doubtful that *G. paripes* would be much of a health hazard as a mechanical carrier of coliform bacteria.

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