in the tarpaulin test. Figure 1 shows the uniformity of distribution in the 20-m² plot. Uniformity of distribution was also evident in the small scale area studies at both the high and low dispersal rates. Uniformity of application was quantitatively verified by the presence of relatively small variability in the counts made at the high and low treatment rates.

The following operating conditions for adequate distribution were considered optimum:

Vehicle Speed: 5–10 mph
Dispenser height: 6–12 m
Nozzle Angle: 30–45°

The Buffalo Turbine Model CS Turbulence Air Sprayer-Duster is currently available and is utilized across the state in wide distribution projects. Based on the findings in this evaluation and the availability of this equipment through standard procurement channels, this dispenser unit is the equipment of choice for large-scale ground application of the pelleted formulation of Durban 10 GS.

The utilization of this equipment is its very nature self-liming. Weight and size restrict its use in areas which are not accessible. For limited and/or remote area control it would be advantageous to have a motorized backpack, a manual dispersal unit, or an aerial dispersal unit capable of applying pelleted pesticide formulations. Efforts are presently underway at the US Army Medical Boarding School Laboratory to develop suitable backpack and aerial dispersal equipment for this purpose.

INITIAL RECORD OF Aedes tormentor IN KENTUCKY

Edward S. Saugstad
US Army Medical Command
Fort Knox, KY 40121

Although Aedes atlanticus Dr and knab has been confirmed as occurring in Kentucky by Covell (1968) (a larva collected in 1961, identified by Dr. P. J. Christain, University of Louisville; not an adult as indicated in Table 1 of this reference (Covell, D. V., Jr., 1977, Pess. Comm.), no choice relative and frequent associate, Aedes tormentor Dr and knab had not been recorded from Kentucky prior to 1976. Collection records (provided courtesy of CPT H. A. Hartias, USALI/A, Regional Division South, Fort Meade, MD 21052) from Fort Campbell, KY, some 200 km south of Fort Knox, show 41 adult Aedes atlanticus-larvae collected in light traps from 1962 to 1976. Additional records of atlanticus-larvae from Fort Campbell included an adult biting in 1958, and a larva collected in 1974. It seems rather odd that the latter was not identified as atlanticus, as atlanticus and tormentor are readily distinguished in this stage; whereas the adult females are virtually identical.

During the course of an expanded mosquito surveillance program at Fort Knox, a few larvae identified as Aedes tormentor were collected from shallow, leafy, shaded, temporary woodland pools near the Van Voorhis housing area at Fort Knox. The initial collection (Fort Knox, No. 60547) was made 4 June 1976, in a small (<1 m², 10 cm deep), shaded, leafy woodland pool. The second collection (Fort Knox, No. 60547) was made 7 June 1976, from a similar temporary pool about 500 m NNW of the first pool. Associated species collected were Aedes vexans (Wagner) and Psorophora columbiae (Dray and knab). Other collections made at these sites from 24 March through 2 July, 1976, were negative for Aedes tormentor. Numerous collections from other shaded temporary pools made from March through November were likewise negative for Aedes tormentor, although a single Aedes atlanticus larva was collected from a large (ca. 25 m x 10 m x 35 cm) shaded temporary pool in early July. This appears to be the first record of Aedes atlanticus from Fort Knox.

Two larvae from collection No. 60547 were killed and preserved in alcohol; the remainder individually reared to adults. The preserved larvae were sent to the USNM, mounted in balsam and conserved as Aedes atlanticus tormentor. One specimen was deposited at the USNM.

Aedes tormentor has been previously recorded from 3 states, bordering Kentucky, namely, Illinois (Carpenter 1968, Missouri (Carpenter and LaCasse 1955) and Ohio (Hill, 1958). It appears to be widely distributed in the southeastern United States, but usually occurs in fewer numbers than Aedes atlanticus (Carpenter and LaCasse 1955; King et al 1965). The larvae have been reported from temporary woodland pools, usually associated with Aedes atlanticus and Aedes vexans (Hill). Little is apparently known of its relationships with man, but as Aedes atlanticus has been implicated in vectoring some California group arboviruses (Taylor et al 1971), it should not be discounted as unimportant.

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