



FIG. 3.—The stopcock is opened to drain larvae from the funnel. After larvae are removed, the pupae are drained into a separate container.

into groups of equal numbers, and returned to the rearing pans. The pupae on the water surface are now removed by allowing the remaining water to drain onto the embroidery hoop; they are then placed in a separate container.

The water taken from the funnel is rechilled by the addition of ice cubes for a few seconds and then returned to the funnel. The process is repeated until the pupae from all pans have been collected. Using this instrument, two men can harvest 20,000 pupae in less than 1 hour, whereas the time needed for 2 men to pick this number of pupae with the old bulb pipette method is about 8 hours.

The cold water method of separating pupae from larvae was tested on *Aedes aegypti* (L.) and *Aedes taeniorhynchus* (Wied.) and the separation was not complete. Some of the pupae do not float after they become inactive in the cold water, therefore, the mechanical pupae separation method of Fay and Morlan (1959) is recommended for these two species.

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#### OCCURRENCE OF *Aedes abserratus* (FELT AND YOUNG) AND *Culiseta morsitans* (THEOBALD) IN INDIANA

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Larvae of *Aedes abserratus* (Felt and Young) were collected in three localities in northern Indiana during the spring of 1966. First and second instar larvae of this species were taken near Mongo, in Lagrange County, and near Fremont, in Steuben County, on March 26. Third and fourth instar larvae of *A. abserratus* were collected in sphagnum pools in Pinhook Bog, in La Porte County, on April 9. Evidently *A. abserratus* is distributed across the northernmost tier of counties in Indiana.

Larvae of *Culiseta morsitans* (Theobald) were collected at Pinhook Bog on May 1, 1966. These larvae were taken in dark, flooded recesses at the bases of tamarack scattered throughout the bog. Some of these recesses were too small to accommodate a pint-sized dipper, and collections were made with a rubber syringe.

On the April 9 collection, larvae of *Aedes canadensis* (Theobald) and *Aedes excrucians* (Walker) were associated with *A. abserratus*. On the May 1 collection, larvae of *Culiseta melanura* (Coquillett) were associated with *C. morsitans*, and outnumbered *C. morsitans* approximately ten to one. Larvae of both species of *Culiseta* were fourth instar and evidently had overwintered in the larval stage.

All larvae collected were transported to the laboratory, where rearings were completed and identifications confirmed in the adult stage. So far as it is known, there are no previously published accounts of the occurrences of *A. abserratus* and *C. morsitans* in Indiana. This brings the present total of recorded species of mosquitoes in Indiana to 44 (Siverly, 1966a, 1966b).

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