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ATTACHMENT OF FIRST INSTAR *Simulium damnosum* (DIPTERA:SIMULIIDAE) LARVAE TO OLDER LARVAE

GEORGE J. BURTON [1]

National Cancer Institute Bldg. 37, Room 1D21
National Institutes of Health, Bethesda
Maryland 20014

First instar larvae of *Simulium damnosum* Theobald, the vector of onchocerciasis in Ghana, usually remain attached to the same substrate upon which the egg mass was laid by the female fly. They feed by browsing upon whatever microorganisms are growing on the substrate, such as diatoms or desmids, or trap plankton with their cephalic fans. The substrates are usually of plant origin, such as leaves, stems, twigs, or roots trailing in the current, but may also include stones, rocks, or the cement or concrete faces of dam spillways (Burton and McRae, 1965), dams proper, bridge abutments, or other supports.

Among a collection of older *S. damnosum* larvae made at Nangodi on the Red Volta River, Upper Region, Ghana, a large, closely-packed mass of mature larvae was found with many first instar larvae attached to their bodies (Fig. 1). Apparently the young larvae had either migrated on to the older ones by laborious locomotion along the grass stem substrate, or else had been deposited among the older larvae by the current. Under the microscope the young larvae were seen behaving as if they were on a normal substrate. They were outstretched in a feeding position, their cephalic fans opening and closing at intervals, trapping food particles and carrying them to the mouth, the microorganisms being raked off by the mandibles. The author is not aware that this type of attachment has been recorded before.

[1] These observations were made while the author was assigned to the National Institutes of Health (U.S.A.)—National Institute of Health and Medical Research (Ghana) Joint Research Program, Accra, Ghana.

FIG. 1.—First instar *Simulium damnosum* larvae attached to two older larvae which had themselves been attached to a grass stem along with a dense mass of other older larvae similarly affected (x7.8)

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A FIRST RECORD OF THE OCCURRENCE OF *Culiseta* (*Culicella*) *silvestris minnesotae* BARR (DIPTERA: CULICIDAE) IN NEW YORK [1]

ROBERT G. MEANS
New York State Museum & Science Service
AND
F. CHRISTIAN THOMPSON
1st U.S. Army Medical Lab, Fort George G. Meade

The male and female of *Culiseta minnesotae* were described by Barr in 1957 and the larva and pupa by Price in 1958. This species was later grouped with *C. silvestris* Shingarev as a morphologically and geographically distinct subspecies by Maslov (1964) in his revision of *Culiseta*.

Barr listed several Minnesota counties as the known distribution for *C. minnesotae* and stated

[1] Published by permission of the Assistant Commissioner, New York State Museum and Science Services, Jour. No. 131.