HELEIDOMERMIS SP. (NEMATODA: MERMITIDAE) INFECTING CULICOIDES VARIIPENNIS (DIPTERA: CERATOPOGONIDAE) IN ALABAMA

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On May 6, 1985 a number of Culicoides variipennis (Coquillett) larvae were collected from mud beside a watering trough in a horse pen at Auburn, Alabama. The larvae were held in water for several days then preserved in 80% isopropanol. Subsequent examination revealed nematodes extruding from the anus of several larvae. Some nematodes appeared to have penetrated the abdominal body wall.

Adult male and female nematodes were sent to taxonomists for identification. There is some question as to the species to which these nematodes belong. They have been identified as Heleiodomermis vivipara Rubtsov, but may actually belong to a new species of Heleiodomermis recently described from California to which the nematodes collected by Mullens and Rutz (1982) in New York are now considered to belong (Poinar and Mullens, in press). Average length of females was 14.8 mm (range = 12.2-16.0, n = 6), and average length of males was 5.9 mm (range = 4.2-6.7, n = 7). Females were larger than H. magnapapula (as H. vivipara) collected by Mullens and Rutz (1982) (t = 3.65, P < 0.01), but males were not different in size (t = 0.22, P > 0.01) when our measurements were compared to their published values.

Eighty-four C. variipennis larvae were dissected. Parasitism of larvae was 51%. Mullens and Rutz (1982) found the average parasitism by Heleiodomermis to be 7.1% and 9.8% at two different sites in New York, however, parasitism in individual collections ranged as high as 54%. Gafurov and Saidalieva (1984) reported parasitism by H. vivipara ranging from 20 to 35% at two different sites in the USSR.

Heleiodomermis vivipara has been collected from the Karelian ASSR, Tadzhik SSR, and Uzbek SSR in the USSR, where it parasitizes both larvae and adults of the following Culicoides species: C. circumscribantus Kieffer (Gafurov and Saidalieva 1984, Saidalieva 1985), C. desertorum Gutsevich (Saidalieva 1985), C. nubeculosus Meigen (Glukhova 1967, Rubtsov 1974), C. puncticollis (Becker) (Glukhova 1967, Gafurov and Saidalieva 1984, Rubtsov 1974, Saidalieva 1985), C. salinarius Kieffer (Gafurov and Saidalieva 1984), and C. stigma (Meigen) (Glukhova 1967, Rubtsov 1974). In New York and Virginia, H. magnapapula parasitizes larvae of C. variipennis (Mullens and Rutz 1982).

This record of Heleiodomermis from Alabama represents a range extension far to the south of previously collected specimens. Voucher specimens of Heleiodomermis sp. have been placed in the Auburn University Entomological Collection.

REFERENCES CITED


