

SOD WEBWORMS: THE LARVA OF
MICROCRAMBUS ELEGANS (CLEM.)
(PYRALIDAE: CRAMBINAE)

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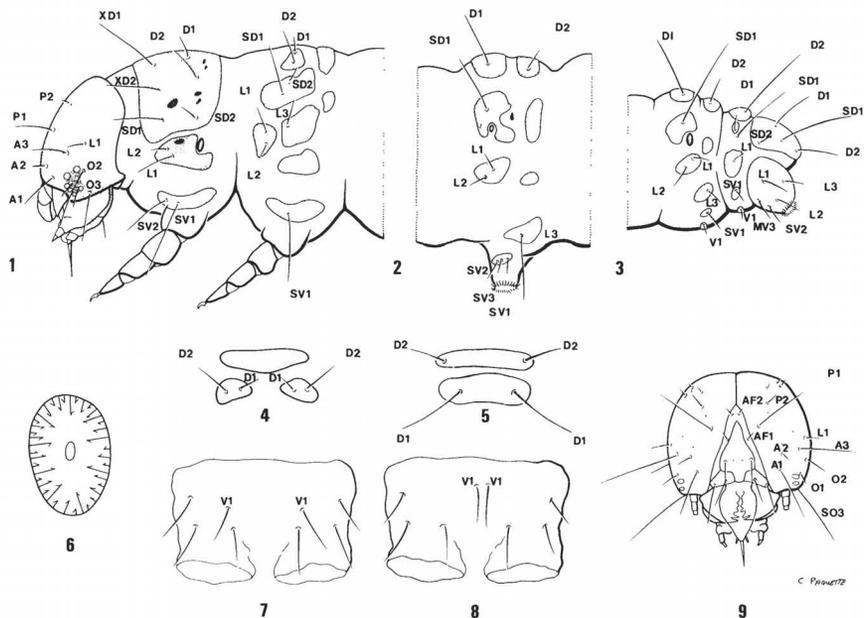
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ABSTRACT. Diagnostic characters of *Microcrambus elegans* (Clem.) larvae are given. The long flight period in S North America suggests there are several generations annually; in the north there appears to be only one. The larvae were reared artificially on corn silk.

Larvae of Crambinae are primarily grass feeders; some species severely damage lawns, meadows, and pastures. They have also been recorded damaging corn, oats, and wheat. Larvae of some species also feed on moss. Collections of adults are being made in E Ontario and W Quebec to obtain gravid females and to rear larvae from their eggs.

There are nine North American species of *Microcrambus*. None of the larvae have been described. *Microcrambus elegans* is the commonest and most widespread North American species of the genus. It occurs from Quebec S to Florida, and W to Kansas and Mississippi. In the northern part of its range, it flies from mid-June to late August, and probably only one generation occurs. In the south, it flies from March at least until October; there are probably several generations. *M. elegans* flies in late afternoon, early evening, and at night, coming commonly to light after dark. Adults appear in July and the first half of August in W Quebec and E Ontario.

Moths were captured by flushing them from grass. Females were confined in 28 ml (7 dram) 2.9 × 6.5 cm plastic vials with snap caps for oviposition. Strips (1.0 × 5.0 cm) of lightly moistened blotting paper were placed in vials to supply drinking water and humidity. Females readily oviposited in these containers. Adults remained alive for up to one week, and, in most cases, oviposited several times, depending on the freshness of the female, laying between 20-40 eggs each time. Eggs were laid singly, not covered by a sticky substance, and were easily transferred to 4.5 × 4.5 × 1.8 cm clear plastic boxes with tight fitting lids. The bottom of each box was covered with blotting paper which was lightly moistened daily using a spray bottle, and the eggs were examined at this time for visible changes. About 50 eggs were placed in each rearing container. The boxes were kept out of the sun. The eggs had an incubation period of seven to nine days at room temperature. The eggs are oval, creamy white when first laid, gradually turning yellow-orange at eclosion. Taxonomic and morphological



FIGS. 1-9. Larva of *Microcrambus elegans*, except where noted. **1**, Lateral view of head, prothorax and mesothorax; **2**, Lateral view of abdominal segment 4; **3**, Lateral view of abdominal segments 8, 9 and 10; **4**, Dorsal view of meso- and metathorax showing extra dorsal plate without setae; **5**, Dorsal view of abdominal segments 2-8 showing fusion of pinacula; **6**, Triordinal crochets; **7**, Ventral view of abdominal segment 10 of pyraustine larva showing setae V1; **8**, Ventral view of abdominal segment 10 of crambine larva showing setae V1; **9**, Anterodorsal view of head.

characters of the eggs as well as scanning electron micrographs of chorion sculpturing were given by Matheny and Heinrich (1972). When changes in the egg indicated that eclosion was about to occur, food was provided. Just enough food to cover the bottom of the rearing box was best; otherwise the first instars were difficult to locate.

Females from which eggs were obtained were deposited as voucher specimens in the Canadian National Collection (CNC). Some of the larvae were reared to adulthood so that male genitalia could be examined for positive identification. In general, however, the moth can be recognized by the brown horseshoe-shaped mark on the center of its folded wings. For detailed description and illustrations of the adult, see Felt (1894), Klots (1968), and Mauston (1970).

Larvae of *M. elegans* were successfully reared on corn silk, which, besides being nutritious, remains fresh longer than cut grass, and is tender enough for young larvae to bite. The clear hue of corn silk has an advantage over grass when it becomes necessary to find the first

instars, which are less than 0.5 mm long. The species of grass with which *M. elegans* is normally associated are not known.

DESCRIPTION

Hinton's (1949) system is used for the setae. Larvae of Crambinae can be recognized by the following characters: two prespiracular setae on prothorax (Fig. 1); a single transverse plate without setae posterior to dorsal pinacula on mesothorax and metathorax (Fig. 1); only one lateral seta on abdominal (A) segment 9 (Fig. 3); setae V1 on A10 half as far apart as on A9 (Fig. 8), as far apart or more than in most Pyralidae (Fig. 7); crochets triordinal, forming a complete circle (Fig. 6).

The larvae of *M. elegans* can be distinguished from other Crambinae by having pinacula D1 fused on dorsum of A1 to 8, and pinacula D2 fused on dorsum of A2 to 8 (Fig. 5), usually fused on dorsum of A1, but not always. The following description of last instar *M. elegans* includes only essential characters. Length 8–10 mm (N = 15). Head yellowish brown without markings. Stemmatol area black. Head setae as illustrated (Fig. 9). Body pale. Pinacula distinct, light brown. Prothoracic shield brown, with scattered dark spots. An extra dorsal plate without setae on mesothorax and metathorax (Figs. 1, 4). Two extra lateral plates without setae on mesothorax and metathorax (Fig. 1). Pinacula D1 fused on dorsum of A1 to 8 and pinacula D2 fused on dorsum of A2 to 8 (Fig. 5), usually fused on dorsum of A1, but not always. Pinaculum SD1 surrounding spiracle on A2 to 7 (Fig. 2). Two extra lateral plates without setae on A1 to 7 (Fig. 2), only one on A8 (Fig. 3). A black pit posterior to spiracle on proleg-bearing segments, probably indicative of tonofibrillary platelet (Fig. 2).

Material examined. Quebec: Lac-Ste-Marie, female collected 25 July 1984, 3 mature larvae, rearing SA-84-27, CNC Voucher 68. Ontario: 10 km W Richmond, female collected 1 Aug. 1984, 12 mature larvae, rearing SA-84-34, CNC Voucher 69.

LITERATURE CITED

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