Kurtomathrips morrilli Moulton Has Wings in Hawaii

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The hitherto supposedly apterous genus *Kurtomathrips* Moulton (Thysanoptera: Thripidae) comprises two very similar species, *K. morrilli* Moulton (1927) and *K. unicolor* Bailey (1961). Although the former is best known as a pest of cotton, both species have been collected repeatedly on other plants in North America, and both presumably breed on more than one host plant and over a wide range of ecological conditions. It is surprisingly, therefore, that winged forms have not been found in either species on the continent but that they have appeared in *K. morrilli* in Hawaii, where the species is a recent adventive, restricted to the island of Oahu and to the warmer and drier portion of the range of a single host plant, *Pluchea odorata* (L.) Cass.

On this weed, within what is now the Campbell Industrial Park, the present author has collected 17 winged females on various occasions since 1954. All were resting on the lower surface of a leaf, next to the midrib and nearly hidden by the dense pubescence characteristic of the plant. Ten seemed freshly emerged from the pupal stage and seven emerged from that stage in vitro. In the process of mounting them, 4 of the 17 specimens were lost or destroyed, and there remain in the author's possession only 13. One of these was collected in April 1954, three in June and one in July of the same year, one in February and two in November 1955, and five in July 1964. The following description is based upon these specimens.

Kurtomathrips morrilli Moulton (fig. 1).

Macropterous female: Body and antennae colored as in apterous forms. All body and wing setae colorless. Wings white in nature, in balsam mounts almost colorless; beset with microtrichia which are denser on the fore wings and make them relatively more opaque.

Head as in apterous forms, without ocelli, with deeply emarginate vertex and stout curved setae set in protruding tubercules. Eyes occupying somewhat less than half the head length, strongly protruding, with about 14 relatively large dorsal facets interspersed with microsetae of which only the bases can be distinguished at high magnification.

Pronotum as in apterous forms. Mesonotum with a pair of strong flat setae widely separated on transverse midline; with sparse, faint striae, transverse on sides and joining to form a reticulum on disk. Metanotum with a pair of strong

flat setae approximate on transverse midline; with faint longitudinal striae on sides, joining to form reticulae on both posterior quadrants of the sclerite.

Wings well developed, reaching end of abdomen in expanded specimens, shaped as in illustration; front and hind pair bearing sparse, long, straight fringe hairs on both margins; front wings bearing about 12 thin intercalated spines on fore margin. On hind wing, veins are not distinguishable; on front wing, hind vein is faint and disappears near middle of wing. The front vein is marked only by denser and longer microtrichia than on disk of wing; it starts near base of wing and fades in distal fifth; it bears four sword-shaped setae evenly spaced on caudal fourth, one sharply pointed seta on either side of midpoint, and a noticeably long, sharp seta on distal fifth. There is a strong, swordlike seta on front margin of fore wing near base. Wing scale bears two broad, swordlike setae on fore margin near end, and a pair of long, hairlike setae at end.

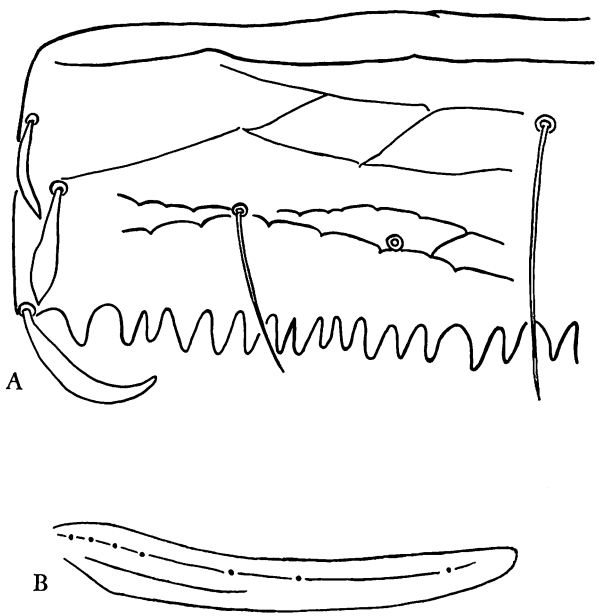

FIGURE 1. *Kurtomathrips morrilli,* macropterous female: a, left half of seventh abdominal tergite; b, diagram of right wing, showing position of veins and setae.

Abdomen ovate, relatively longer and narrower than in apterous forms. Tergites I to VIII with about 30 large blunt teeth along posterior margin; with a distinct stria more or less parallel to front margin and several weaker confluent striae forming irregular reticular cells on posterior half of tergite; some striae bearing microtrichia which appear as angular prolongations of the striae. Tergites II to VIII bear a large swordlike seta on posterior angles, two similar but smaller setae along lateral margins, a pair of long, sharp setae near meson, and a pore

and smaller sharp seta caudad and laterad of each central seta. On tergite I, the central pair of setae are swordlike, otherwise the arrangement is similar. Sternites are not scalloped; each one bears a row of six sharp microsetae near posterior margin and a similar row along transverse midline. Segments IX and X are similar to those of the apterous female.

Measurements in millimeters: total length 0.860; head length 0.070; width across cheeks 0.075; width across eyes 0.090; eye length 0.040; pronotum length 0.090, anterior width 0.095, posterior width 0.145; abdominal segment X length 0.045, width at base 0.050, width at end 0.030; wing length 0.520, greatest width 0.065.

Antennal segments (in microns)	1	2	3	4	5	6	7	8	Total
Length	----	26	26	26	31	33	9	9	160
Width	19	24	14	16	16	14	4	3	

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