

A New Genus and Species of Pseudococcidae from Haleakala, Maui¹

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The new species of mealybug described below is an example of the unusual and divergent forms which are to be found among the endemic Hawaiian pseudococcids. The present species cannot be placed in any of the known genera of mealybugs, and a new genus is therefore proposed to accommodate it.

Genus *Tomentocera*, new genus

Type of genus: *Tomentocera haleakala*, new species.

Recognition characters: Body broadly oval; antennae 7-segmented; legs moderately small; tarsal claws without a toothlike projection on inner margin. Anal ring at posterior apex of body, cellular, bearing 6 setae; ventral circulus absent; dorsal ostioles not discernible. Anal lobes slightly protuberant, each with a well-developed cerarius consisting of a well-defined sclerotized area bearing numerous conical setae arranged in an oblique band along posterior margin of preanal abdominal segment, with a few trilocular pores between bases of conical setae; filamentous accessory setae absent. Anterior cerarii less well defined, each consisting of several loosely grouped conical setae without associated sclerotized areas or trilocular pores. Dorsum with numerous large tubular ducts, each with a poorly defined oral rim, and a strongly sclerotized disclike inner apex; each duct giving rise to a curled hairlike filament of glassy wax in living insects. Tubular ducts absent on venter; multilocular disc pores absent; trilocular pores present on dorsum and venter. Body setae short and sparse.

The distinguishing features of *Tomentocera* are the strongly developed, multi-spined anal lobe cerarii; the loosely grouped conical setae distributed along the body margins anterior to the anal lobes; and the numerous tubular ducts of an unusual type which are distributed over the dorsum. The tubular ducts resemble somewhat those characteristic of the monotypic Hawaiian *Nesococcus* in that the inner apices are strongly sclerotized, although the ducts are longer and narrower in *Tomentocera*. However, in *Nesococcus* the conical setae are restricted to a single pair on each anal lobe cerarius. The unusual form of the anal lobe cerarii in *Tomentocera* suggests a possible relationship with certain species placed by Beardsley (1957) in the genus *Pedronia* Green (for example, *P. acanthocauda* Beardsley and *P. crypta* Beardsley). These species lack tubular ducts of any sort, however.

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Toментocera haleakala, new species (fig. 1).

Adult female. Body at maturity broadly oval, length of slide-mounted specimen

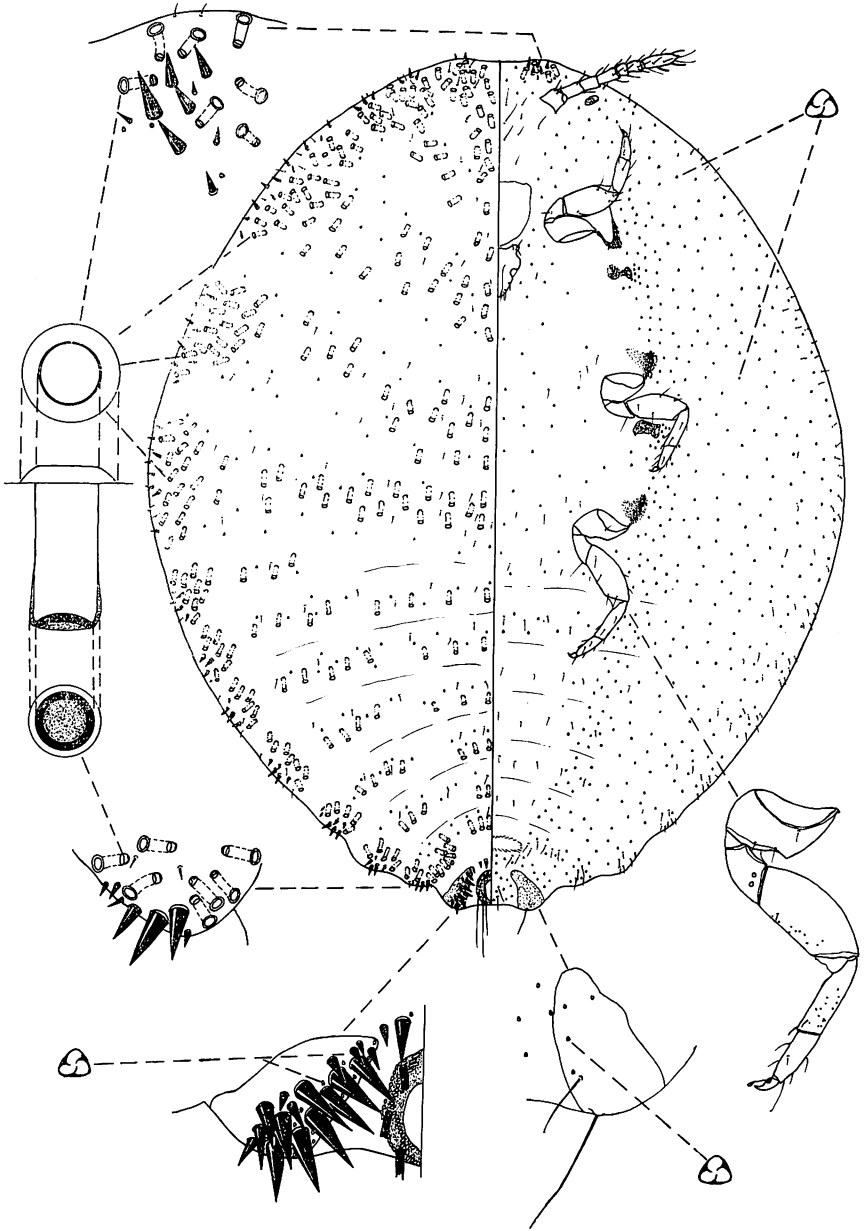


FIGURE 1. *Toментocera haleakala*, new species, dorsal and central aspects and details of adult female.

about 2.0 mm., maximum width about 1.6 mm. Derm largely membranous; venter becoming partly sclerotized in old individuals, particularly in area bounded by legs and mouthparts, and along anterior and posterior margins of abdominal segments. Antennae 7-segmented, about 335 μ long. Legs small; hind femora about 165 μ long, hind tibiae about 120 μ long; hind tarsi about 75 μ long; hind tarsal claws about 30 μ long; hind femora and tibiae with a few small translucent spots or micropores on upper surface distributed as indicated in figure. Labium 3-segmented, about 135 μ long. Anal ring cellular, about 75 μ wide, bearing 6 setae about 150 μ maximum length. Eyes well developed, basal cone strongly sclerotized; paraocular discoidal pores absent. Circulus absent. Dorsal ostioles not discernible.

Anal lobes each with a large well-developed cerarius consisting of a well-defined elongate sclerotized area bearing 6-10 large conical setae about 40 μ maximum length plus 6-10 smaller conical setae of various sizes, arranged in a band along paranal margin of sclerotized area and extending from apex of anal lobe about three-fourths distance to mediodorsal axis anterior to anal ring. One or two additional conical setae present on each side mesad of sclerotized area, immediately in front of anal ring. A few trilocular pores distributed between bases of conical setae along margin of sclerotized area; filamentous accessory setae absent. Abdominal segments 2-8 each with a pair of marginal cerarii consisting of 5-10 loosely grouped conical setae of various sizes, up to about 36 μ maximum length, without associated trilocular pores or slender accessory setae, and with the surrounding derm unsclerotized. Similar conical setae scattered on margins of each thoracic segment, but not forming discernible cerarii. Conical setae of margin of each side of head in three loose groups of 6-10 setae; "ballooning" of bodies of gravid females sometimes displacing groups of conical setae on thorax and head partly or entirely onto ventral margin of specimens. Venter of each anal lobe with a moderately large, well-defined sclerotized area; anal lobe seta short, about 75 μ in length.

Dorsum with very numerous (around 400) large tubular ducts. Each duct about 7-8 μ oral diameter, with a very weakly developed oral rim about 11-12 μ outside diameter; about 20-24 μ deep. Inner apex of each duct terminating in a strongly sclerotized disc, and without a discernible internal filament. Tubular ducts absent on venter, except where marginal dorsal ducts have been displaced by ballooning in some gravid females. Multilocular disc pores absent. Trilocular pores present on dorsum and venter; very sparsely scattered on dorsum between bands of tubular ducts; more numerous on venter in areas laterad of appendages, with a somewhat more concentrated sublateral longitudinal band of pores running just laterad of an imaginary line through outer margins of coxae; relatively sparsely distributed in midventral areas. Body with a few small setae, mostly 10-12 μ long, sparsely scattered on dorsum and venter; a few longer setae present around vulva (up to 35 μ long) and on venter of head anterior to mouthparts (up to about 75 μ long).

Male: Unknown. The species is apparently bisexual as sperm bundles are present in several specimens of the type series.

Described from 7 slide-mounted specimens. Holotype and 1 paratype on one slide: Maui, Haleakala Crater near Kapalaoa Cabin, 7,000 ft., July 13, 1963,

J. W. Beardsley, on *Coprosma montana* twigs. Five paratypes on 3 slides; same data as holotype. Holotype slide deposited in U.S. National Coccid Collection, Washington, D.C.; paratypes in Bishop Museum, and University of Hawaii, Honolulu.

Living mealybugs of this species were mottled brown and tan in color and resembled closely the bark of the host twigs on which they were found. In most specimens the dorsal derm was marked characteristically with a pair of submedian longitudinal dark bands; each band being irregularly narrower intersegmentally, and the two bands sometimes coalescing at their points of greatest breadth. The margins of the body were fringed with a short tomentum of fine, curled wax filaments, and a similar wax tomentum was present on the dorsum in a mid-dorsal longitudinal band and elsewhere in unrubbed specimens. Each of the curled strands of glassy wax which formed this tomentum was found to arise from a single dorsal tubular duct.

REFERENCE

- BEARDSLEY, J. W. 1957. The Genus *Pedronia* Green in Hawaii, with Descriptions of New Species (Homoptera: Pseudococcidae). PROC. HAWAIIAN ENT. SOC. 16(2):218-231.