October 1986

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Alotype description of the male scale
Sclerosoccus chilensis (Homoptera: Coccoidea: Asterolecaniidae)

by

P. L. Lambdin

Descriptions of species in the genus Sclerosoccus are primarily based on the female morphology
(McKenzie 1956, Lambdin 1980). The lack of descriptions for males is attributed to their brief seasonal
appearances (lasting only a few hours) and their small size that makes collection of adult specimens
difficult. As a result, adequate descriptions for only a few males of Asterolecaniidae are available
for comparisons. Of those species where males are known, most descriptions are of the tests or general
morphological aspects (Russell, 1941). The most
comprehensive descriptions for adult males in the
family were provided for Asterolecanium proteae
(Gilliame 1968) and for two species of Grammocococcus (Miller and Lambdin 1978).

The genus Sclerosococcus contains 4 species
found in the Neotropical Region where they feed on
bromeliad hosts. Until now, no reference was made as
to the existence of males of the species. My objective
was to provide a description of the adult male
of this rare species to better define the taxa.

Measurements and illustration were made by micro-
scope examination of the alotype male. Terminology
used to describe the external morphology, with
few exceptions, was adapted from Theron (1958). All
measurements are presented in micrometers.

Sclerosoccus chilensis Lambdin

Adult Male (Fig. 1): Elongate, tapering toward posterior end; slide mounted specimen 1560u long, 320u wide at mesothorax.

Head: Triangular, midcranial (mcr), postoccipital
(pocr) ridges well developed.
MIDCRANIAL ridge bar-like, restricted to venter and
without lateral arms, 65 long.
Postoccipital ridge bifid laterally, 86 long.
Gena (g) represented by bulging membranous area of margin.
Preocular ridge (procr) originates behind dorsal simple eye
and articulated with scape (scp). Postocular
ridge (pocr) heavily sclerotized, c-shaped, positioned anterolateral to dorsal simple
eye and associated with last midcranial seta forming a
curved submedial row; a pair of postoccipital setae
on or near postoccpital ridge near bifidation, and
a pair of genal setae (ga) on each side near fold.

Thorax: Pronotal ridge (prnr) not discernible and pronotal
sclerites absent; pleural ridge (pl1r) well
developed, articulates with coxa; prosternum (stn)
represented by narrow median ridge bifid posteriorly.

Mesothorax most developed region of thorax;
represented dorsally by 3 major areas: (1) prescutum (pscr) heavily sclerotized, rectangular, delimited
posteriorly by prescutal suture that extends anterolaterally into the the c-shaped prescutal ridges
and fuses anteriorly with mesoprephragma, 70 long,
82 wide; (2) scutum (sct) represented by narrow membranous strip between prescutum and scutellum (scl)
that extends lateral of these structures into sub-
margin where anterolateral area joins the prealar
(pra); (3) scutellum (scl) rectangular, connects with postalar by oblique rodlike structures, trian-
gular membranous area between scutellum and
postnotum (pn2).

Basisternum (stn) heavily sclerotized with furca
(f). Mesopleural ridge (pl1r) extends from coxa ob-
liquely to base of wing process. Mesothoracic
spiracle (sp) on submarginal; 30 long, 14 wide, atrial
opening 7 in diameter; no pores associated with
spiracles.

Metathoracic sclerotization lacking except for the
much reduced pleural ridge (pl1r). Basisternal area
difficult to distinguish, represented by weakly
sclerotized, transverse marginal ridge (mrg) that
fades out medially. Spiracles similar to those on
mesothorax. A pair of minute setae in submedial
area.

Wings and hamulohalterae absent. Legs similar in
shape, 5-segmented; legs increase in size anteriorly
to posterioiy as follows: prothoracic 511, mesotho-
racic 390, and metathoracic 723 long respectively.

Legs with numberous setae; 2 types present. hairlike pradominant.

Abdomen membranous, tapering posteriorly, with
long sclerotized analgaus (anl). Segmentation dis-
tinct. Dorsally, segment I with a pair of sub-
marginal and submedial setae, but segment II through

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VII with 2 pairs in each area; segments V and VI with a marginal seta on each side, setae needlelike, 8 (5–12) long. Ventrally, fused segments I–II with a submedial seta, segments III–VI with a pair of tacklike setae, 3 (3–5) long. Segment VII with ca. 12 pores (mp) on submargin: 1 trilocular, 8 quadraloculor, and 3 quinquiloculor. Pregenital segment VIII without setae. A pair of setae (gts) on venter ca. 45 long, and on dorsum 40 long. Aedeagus (ad) 576 long, consists of penial sheath (ps) and style (st), latter 486 long; no setae or sensilla on the penial sheath.

Discussion

The general morphology of the male is consistent with that for species of the lecanoid group. Although this occid has some primitive traits (e.g., the retention of multilocular pores in clusters on the 7th abdominal segment), it is distinguished by many specialized features, notably the elongated aedeagus, lack of wings and hamule, and well-developed thoracic region. The aedeagus of *S. chilensis* is longer and more narrow (length/width ratio 6.4) than those recorded for species of *Grammococcus* (0.8–1.0). The head differs by having a distinct postoccipital ridge as opposed to dorsal sclerites and by having lateral ocelli. Setae are present on the thoracic segments of *S. chilensis* but absent on *A. proteae*, *G. adetocorymbus*, and *G. corymbus*. In addition, *S. chilensis* is distinguished by segmental setae on abdomen in eight longitudinal rows on dorsum and four longitudinal rows on venter.

REFERENCES CITED


