

Acmaeodera pubiventris Horn (Coleoptera: Buprestidae): a polytypic species or a superspecies?

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Abstract. *Acmaeodera pubiventris* Horn was studied in detail and, without rejecting that it may be a superspecies, I concluded it is a polytypic species comprised of *A. p. pubiventris*, *A. p. lanata* Horn, *A. p. yumae* Knull—these generally have been considered as full species—and a new subspecies, *A. p. panocheae*, described herein. It is suggested that *A. p. yumae* could be a megasubspecies. Detailed comparisons are made, variation is discussed, and biological and distributional data are provided. *A. p. lanata* is recorded from Mexico (Baja California) for the first time.

Introduction

I have studied *Acmaeodera pubiventris* Horn, and the group of species to which it is most closely related, off and on for about 35 years and now consider it a polytypic species comprised of four subspecies, three of which appear to be peripheral isolates of the much more widespread and variable parent form, *A. p. lanata* Horn. In the ensuing analysis the reader is urged to keep that in mind, as the law of priority (*A. pubiventris* is the older name) may appear to cause a contradiction of reality. The species is common and ranges widely over much of the southwestern United States, extending to northwestern Mexico. The first two subspecies are discussed together for reasons of history, close relationship, convenience, and ease of comparison. Collection codens follow Arnett et al. (1993).

Acmaeodera pubiventris pubiventris Horn
new status
Figure 1

Acmaeodera pubiventris Horn, 1878:9; Fall, 1899:12;
Van Dyke, 1919:188-189 (part).

Acmaeodera pubiventris lanata Horn
new status
Figures 2-6

Acmaeodera lanata Horn, 1880:148; Fall, 1899:11;
Van Dyke, 1919:188-189 (part; synonymy).

Acmaeodera biedermanni Skinner, 1903:239; Van
Dyke, 1919:189 (synonymy); Barr, 1975:414 (syn-
onymy).

Horn (1880) described *A. lanata* and related it to
A. pubiventris. Fall (1899) discussed the close rela-
tionship of the two and stated, "... but it may well be

doubted if *pubiventris* is anything more than a local
race of the more widely diffused *lanata*." Van Dyke
(1919) considered them "...phases of one species,"
stating that "*A. lanata* Horn is but a vittate form of
the other, as Mr. Fall surmised." However, he based
his opinion on specimens of *A. mojavei* Westcott,
which he misidentified as *A. pubiventris* (Westcott,
1971). Following Van Dyke's (1919) lead, Chamber-
lin (1926) placed *A. lanata* as a synonym of *A.*
pubiventris; however, Leng and Mutchler (1927)
erred by listing the synonymy in reverse. Most
subsequent authors have treated these taxa as
distinct species. Barr (1975) discussed the synonymy
of *A. biedermanni* under those names and incorrect-
ly attributed a trinomial, *A. pubiventris lanata*, to
Van Dyke (1919), who had treated it only as a
"phase".

Westcott (1966) considered *A. pubiventris* and *A.*
lanata in detail. They and *A. yumae* Knull were
believed to be a superspecies within a group of 10
species defined as the "*pubiventris* species complex"
with *A. pubiventris* and *A. yumae* being quite uni-
form in appearance and restricted in range, *A.*
lanata being highly variable and widespread. In a
later work (Westcott, 1971), without reference to
superspecies or complexes, I compared *A. pubiven-*
tris and *A. lanata* to other species in the "complex,"
some newly described. In both works I employed the
ovipositor as a taxonomic character. However, it
proved useful to separate members of the superspe-
cies only from their outside relatives. Most of the
species, including all members of the "superspecies,"
use as hosts primitive gymnosperms in the genus
Ephedra (joint-fir), as was alluded to by Barr (1969)
for *A. pubiventris*.

I suggested (1966) the possibility that *A. lanata*
and *A. pubiventris* are only subspecifically distinct;
however, I stated that "...no intermediate popula-
tions have been found which would suggest the