

NEW WESTERN POLYPHYLLA (COLEOPTERA- SCARABAEIDAE).

BY MONT A. CAZIER, University of California, Berkeley, Calif.

The author would like to express his appreciation to Dr. E. A. Chapin of the United States National Museum for the privilege of studying the Casey types in his charge. Thanks are also due R. P. Allen and E. R. Tinkham for specimens supplied.

Polyphylla squamiventris Cazier, sp. nov.

Relatively small, narrow; head and clypeus black, pronotum piceous, elytra dark reddish-brown; head clothed with hair and squamae, clypeus with squamae, pronotum squamose except for a few setae on anterior portion of disk, elytra sparsely squamose and without complete discal vittae. Head black, vertex impunctate, shining, front rather densely clothed with mixture of broad white squamae and long yellow setae, eyes bordered with dense white squamae, canthus prominent, densely clothed with squamae and yellow setae; clypeus with posterior side margins elevated above front and gradually sloping toward clypeal disk, front margin strongly reflexed at right angles with rest of clypeus and at least twice as high as side margins, outer angles prominent and sharp, disk with squamae separated by about one-half own lengths, punctures confluent or nearly so, lateral and front margins more densely clothed with broad white squamae; labrum deeply emarginate; terminal segment of maxillary palpi with flattened area, not impressed; antennae small, funicular segments plus scape approximately three-fourths length of club. Pronotum with side margins evenly rounded, straight behind, widest at middle, front angles strongly produced; median longitudinal impression and oblique lateral vittae densely clothed with overlapping, white, stout (one-half longer than wide) squamae, remainder of disk sparsely clothed with stout (one-third longer than wide) white squamae, each squama lying in a broad, round, irregularly placed puncture, side margins with squamae more dense than on disk; middle of lateral one-third with a large ovoid impunctate depression, surrounded posteriorly by rather dense squamae; front and side margins with row of long setae, anterior portion of disk with few long setae arising from large punctures. Elytra narrowly widening to apical two-

fifths, gradually rounded apically; squamae small, white, robust (generally one-fourth longer than wide), irregularly, sparsely scattered over elytra except for narrow, dense band on suture, basal two-thirds of scutellum, humeri from scutellum to umbone, and an indication of a dense vitta just inside humeral umbone, and on outer apical angles; surface with irregular, shallow, rugosities, devoid of hair. Pygidium as long as broad, squamae separated by about their own lengths, most sparse medially, apically with few setae. Beneath thorax densely clothed with long brown hair except for metasternal-epimeron, and meso-episternum and inflexed pronotum which are densely squamose, apical three-fourths of abdominal segments densely clothed with squamae, forming a solid patch of white on each segment laterally, medially more sparse and not reaching side margins, apical segment sparsely squamose, with few setae along outer margin; legs piceous, sparsely squamose and pilose, anterior tibiae deeply tridentate, middle tibiae shallowly tridentate or with external processes, claw deeply cleft, tooth blunt and nearest base. Length 21 mm, width 9.7 mm.

Holotype male in the author's collection, taken at Presidio, Texas, (Rio Grande) June 1929 by E. R. Tinkham to whom the author is indebted for the privilege of making known the species.

Polyphylla squamiventris, although distinct from all other known species, appears to be most closely allied to *cavifrons* Lec. and keys to this species in both Fall's and Casey's keys. It can be readily distinguished from this species, however, by its shorter antennal club, unimpressed terminal segment of maxillary palpi, more deeply cleft labrum, more robust squamae of pronotum and elytra, more pronounced pronotal vittae, by the extremely dense squamose condition of the ventral abdominal segments and its smaller size and narrower shape. In the matter of vestiture *squamiventris* is most nearly like *hammondi* Lec. but it can be easily separated because of its much shorter antennal club, lack of clypeal setae, prominent front and hind angles of pronotum, transverse basal arrangement of squamae on scutellum and by the dense abdominal squamae.

From all the remaining species in the genus, *squamiventris* can be distinguished by its deeply tridentate anterior tibiae, a character that is somewhat variable, but which never is as pronounced in the bidentate group as in *squamiventris*. It is distinct from all others, except the species described below, by its very small antennal club and by the dense squamae on the venter of the abdomen. The latter character seems to be quite variable in other species and may prove to be so in *squamiventris*.

***Polyphylla alleni* Cazier, sp. nov.**

Small, narrow; head and clypeus black, remainder rufous; squamose throughout, setigerous punctures confined to front of head and clypeus and disk of pronotum. Head black, front rather densely, setigerously punctate, punctures separated by about one-half their own widths, sides densely clothed with robust squamae; clypeus nearly on same plane with front, densely punctate, punctures separated by about one-third their own widths, side margins only slightly reflexed, front margin narrowly reflexed, disk shallowly concave; labrum deeply emarginate, terminal maxillary palpal segment shallowly impressed on basal two-thirds; antennae small, scape and funicular segments three-fourths as long as club. Pronotum rufous, disk irregularly, sparsely punctate with setigerous and squamose punctures, lateral vittae obscure apically, dense at base; lateral margins more densely squamose than disk; sides evenly rounded, angles not produced. Elytra narrow, widest at apical two-fifths, gradually rounded apically; surface shallowly, irregularly rugose, two discal vittae prominent but interrupted and irregular and not attaining apex, submarginal vittae prominent and less interrupted than discal vittae, sutural vittae indistinct and irregular except at extreme apex, post-humeral vittae appearing at irregular intervals; squamae of vittae more robust than those of intervals and much more dense; scutellum densely squamose at extreme base, apically with median longitudinal vitta. Pygidium densely clothed equally with narrow, elongate squamae and short robust squamae. Beneath thorax densely clothed with long brown pile except for sparsely squamose inflexed pronotum; abdominal segments densely squamose on apical third, basal two-thirds sparsely squamose and hairy; legs sparsely squamose and hairy, anterior tibiae feebly bidentate at extreme tip. Length 18.7 mm., width 9 mm.

Holotype male in the author's collection, taken at Tube City, Arizona, July 3, 1937 by Mr. R. P. Allen, after whom the author gratefully names the species.

Polyphylla alleni was previously referred to by the author¹ as *opposita* Csy., but since studying Casey's types it has become apparent that it represents a species distinct from *opposita*. *P. alleni* is superficially most closely related to *sobrina* Csy. but it can be readily separated by its small size, narrow shape, and extremely

¹ Cazier, Mont A. 1938, Pan. Pac. Ent. 14: 163.

small antennal club. The smallest male *sobrina* available has the antennal club one-third longer than in *alleni*. In both Fall's and Casey's keys *alleni* will key out with *opposita* but it can be readily distinguished by its smaller size, rufous color of abdomen, smaller antennal club and lack of hair on the elytra.

Polyphylla decimlineata modulata Casey.

In most of the larger collections of *Polyphylla* taken from the San Joaquin and the Sacramento Valleys of California and various localities in Oregon there are numerous specimens of a small form that is generally associated with *decimlineata*. A close study of numerous specimens of this form has convinced the author that it represents at least a distinct subspecies of *decimlineata*. A recent study of the types seems to indicate that Casey described this variation from Oregon as *modulata*. Fall² places *modulata* as a synonym of *crinita* Lec. but it appears to the author that *modulata* is more linear and not nearly so robust as *crinita*, pile on pronotum not so long nor dense, vittae generally more narrowed and irregular and the size smaller. From *decimlineata* it is distinguished by its small size, narrow form, shorter antennal club which is about two-thirds as long as in *decimlineata*, and by the narrow vittae. It occurs with *decimlineata* in many localities but in a number of places has been taken in the absence of that species. The hair on the pronotum may or may not be present in this form and all gradations have been taken, however, when present it is not as dense as it is in most of the *crinita* specimens.

Attention is drawn to the new catalogue issued by the General Biological Supply House. This is really a great catalogue, not only in point of size, but in a high degree in the illustrations. There is in this a series of magnified photographs of minute life forms. These are really very fine and beautifully printed.—J. R. B.

² Fall, H. C. 1928, Proc. Ent. Soc. Wash. 30: 34.



Cazier, Mont A. 1939. "New western Polyphylla." *Bulletin of the Brooklyn Entomological Society* 34, 199–202.

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