

NEW GENERIC SYNONYMIES IN THE EPICAUTINA (COLEOPTERA: MELOIDAE: MELOINAE)

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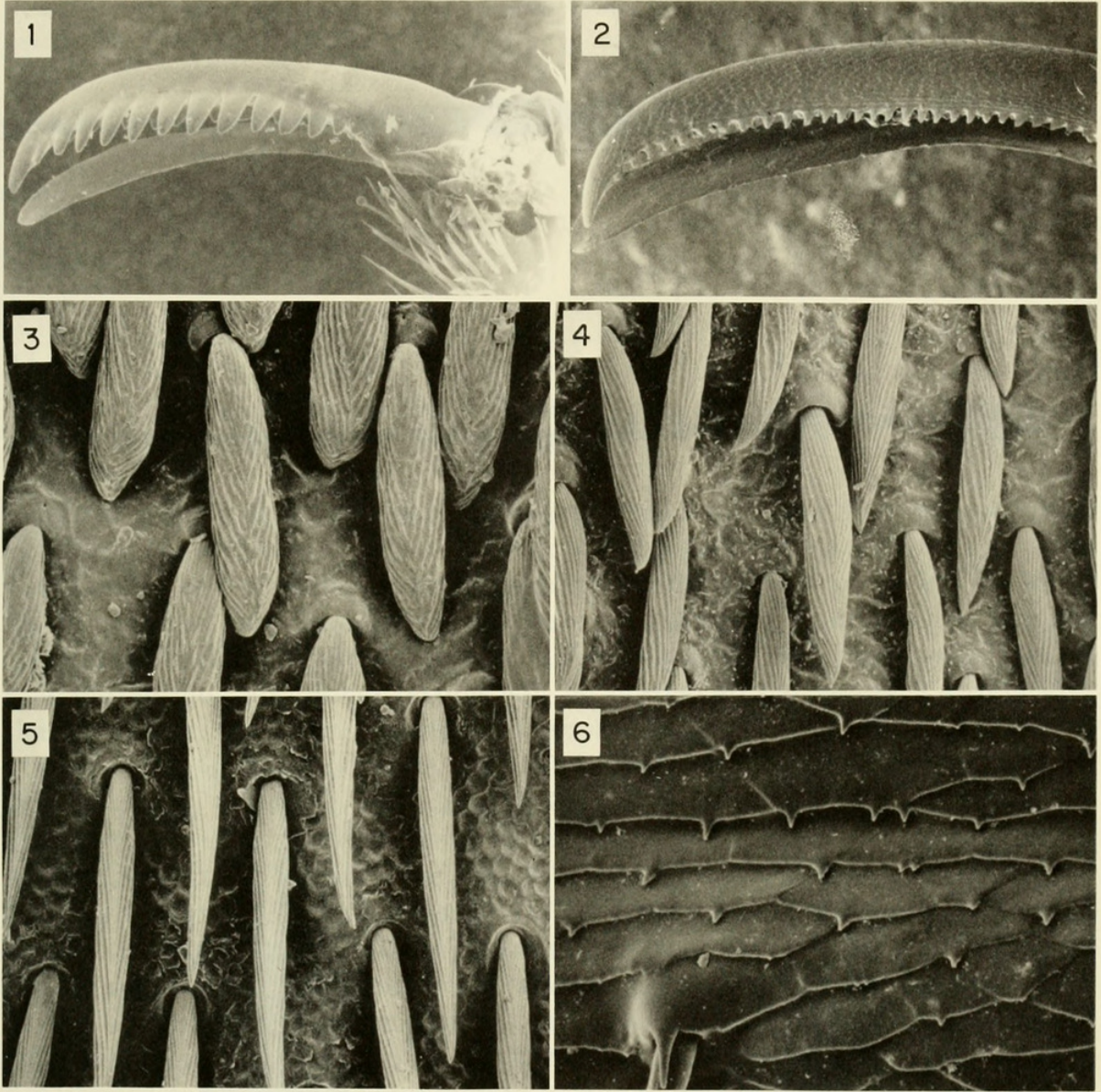
Abstract.—*Anomalonychus* Saylor and *Pleuropompha* LeConte are herein treated as junior synonyms of *Epicauta*. No important features can be marshalled to justify continued generic status. The single South American species included in *Anomalonychus* is most similar to the *laevicornis* group of *Epicauta*, a small assemblage of species from southern Mexico. The two species historically placed in *Pleuropompha* are most closely related to *Epicauta delicata* Mathieu and members of the *vittata* group of *Epicauta*.

The most recent classification of the Meloidae (Kaszab, 1969) recognizes six epicautine genera. Revisionary studies of New World *Epicauta* now underway indicate that generic status for two of these, *Pleuropompha* LeConte and *Anomalonychus* Saylor, is not justified. Both are herein reduced to junior synonyms of *Epicauta* Dejean (NEW SYNONYMIES).

The recognition of *Pleuropompha* and *Anomalonychus* has been supported only by the excessive weighting of a few characters. Generic status for both could be tolerated as long as defining characters were considered unique, and relationships to the subdivisions of *Epicauta* remained unclear. It is now possible to hypothesize the affinity of *Pleuropompha* and *Anomalonychus* species to subgroups of *Epicauta*. Also, their "diagnostic" features are now known to occur in *Epicauta*. In my opinion, an argument for continued generic status can no longer be made.

Anomalonychus is a replacement name by Saylor (1940) for *Anomalonyx* Denier (1935) (*nec* Weise, 1903). Denier based this genus on the Brazilian species *Epicauta fumosa* Germar. He considered the genus similar to *Epicauta* except for the presence of denticulate claws (Fig. 1). Kaszab (1952) also utilized antennal structure as a distinguishing feature. Similar modifications of claws and antennae are now known in species of the *laevicornis* group of nominate *Epicauta*.

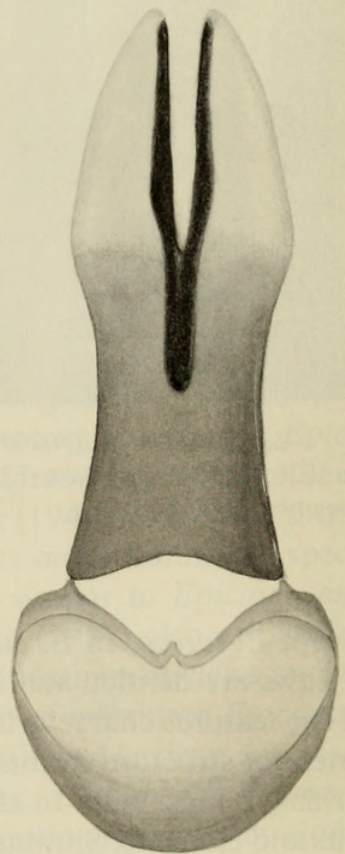
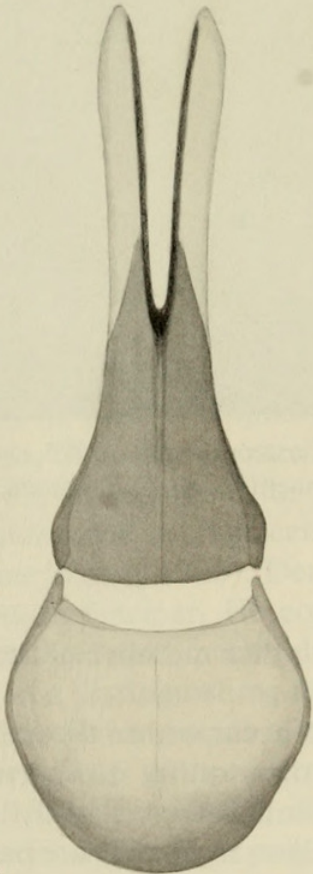
The *laevicornis* group is composed of four southern Mexican species, *E. curvicornis* (Haag-Rutenberg), *E. laevicornis* Werner, *E. hubbelli* Werner and *E. teresa* Mathieu (Pinto, in prep.). Members of the group are relatively elongate and slender blister beetles, and have long, filiform antennae with segments I-V (VI) modified in males. Segments I-V are subglabrous and shiny (Fig. 7) in males of all species. In *E. hubbelli* and *E. curvicornis* some of the modified segments are distorted; in *E. teresa* and *E. laevicornis* they are simply elongate and slightly inflated. Other pertinent features of the group include the moderately enlarged maxillary and labial palpi of males, and a concave metasternum in males of all



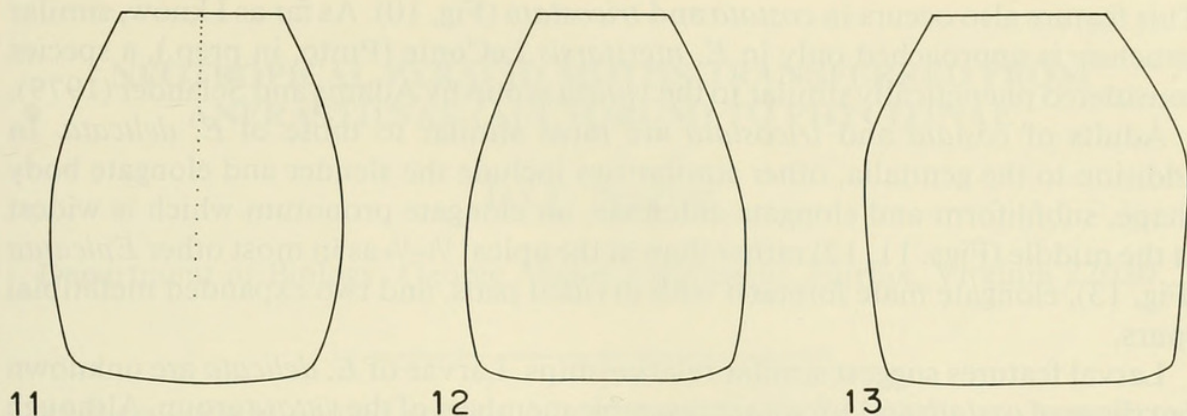
Figs. 1-6. 1-2, adult claw. 1, *Epicauta fumosa* (130 \times). 2, *E. curvicornis* (160 \times). 3-5, elytral setae. 3, *E. costata* (720 \times). 4, *E. tricornata* (720 \times). 5, *E. abadona* Skinner (540 \times). 6, *E. costata*, tergite of abdominal segment IV (1800 \times).

species except *E. teresa*. In *E. curvicornis*, but in no other member of the group, the tarsal claws are denticulate (Fig. 2).

Most of the features characterizing *Anomalonychus* occur within the *laevicornis* group. Antennal structure in males of *fumosa* is similar to that in *E. teresa* and *E. laevicornis* (cf. Figs. 7, 8). In all three species segments I-V are slightly inflated, subglabrous and elongate. Similarly, the denticulate claws in *fumosa* are paralleled by those in *E. curvicornis* (cf. Figs. 1, 2). In both, numerous teeth occur on the ventroanterior and ventroposterior margin of each claw. Also, *fumosa* and members of the *laevicornis* group are similar in body shape and size, and the metasternum is concave in at least some populations of *fumosa*. The metasternum is distinctly concave in males that I have examined from Rio de Janeiro and Espirito Santo, Brazil, but not in representatives from Nova Teutonia, Brazil. Other dif-



Figs. 7-10. 7-8, male antenna (anterior view). 7, *Epicauta teresa*. 8, *E. fumosa*. 9-10, male gonoforceps (dorsal view). 9, *E. tamara* Adams and Selander. 10, *E. costata*.



Figs. 11–13. Pronotum (dorsal view). 11, *Epicauta costata*. 12, *E. delicata*. 13, *E. abadona*.

ferences between these populations suggest that more than a single species is involved. The only characteristic of *fumosa* not found in the *laevicornis* group is the presence of both suberect and recumbent clothing setae on the elytra. All of the elytral setae are recumbent in the latter. Additionally, *fumosa* males lack the enlarged palpi of the *laevicornis* group. Although generic status for *fumosa* clearly is inappropriate, additional testing will be needed to determine if similarities shared with the *laevicornis* group are homologous.

Pleuropompha was erected by LeConte (1862) for *Lytta costata* LeConte. A second species, *tricostata*, was added by Werner in his 1943 revision of the genus. Both species occur in southwestern North America. *Pleuropompha* has been distinguished from *Epicauta* by the costate elytra and the squamiform setae on the head, pronotum and elytra (Figs. 3, 4). No other adult distinctions are known. Larval and internal adult anatomy do not differ from *Epicauta* and fail to support generic separation (MacSwain, 1956; Gupta, 1965; Pinto, 1977). Courtship behavior is distinctive in both species, but the difference is little more than an embellishment of patterns known in *Epicauta* (Pinto, 1973).

Although the character combination of elytral costae and squamiform dorsal setation in *costata* and *tricostata* remains distinctive there is no basis for weighting these traits excessively. Costate elytra also occur in the unrelated South American species *Epicauta costipennis* Borchmann, and the dorsal setae of *tricostata* are clearly intermediate to the highly squamiform setation in *costata* and more typical clothing setae in numerous *Epicauta*. Interestingly the squamiform setae in both species retain a microstructure similar to that of their unmodified homologues in other *Epicauta* (cf. Figs. 3–5).

In my opinion, the species of *Pleuropompha* belong to the nominate subgenus of *Epicauta* where they are most similar to *Epicauta delicata* Mathieu, a rare northern Mexican species, and species of the *vittata* group as defined by Adams and Selander (1979) and Agafitei and Selander (1980). Both adult and larval anatomical details support this placement. One of the most striking similarities is in male genitalic structure. As pointed out in Mathieu (1983), *E. delicata* and members of the *vittata* group possess incompletely sclerotized gonostyli. In these species there is a narrow strip of sclerotization that runs along the medial surface of each gonostylus (Fig. 9). All other surfaces are membranous and unpigmented.

This feature also occurs in *costata* and *tricastata* (Fig. 10). As far as I know, similar structure is approached only in *E. nigratarsis* LeConte (Pinto, in prep.), a species considered phenetically similar to the *vittata* group by Adams and Selander (1979).

Adults of *costata* and *tricastata* are most similar to those of *E. delicata*. In addition to the genitalia, other similarities include the slender and elongate body shape, subfiliform and elongate antennae, an elongate pronotum which is widest at the middle (Figs. 11, 12) rather than at the apical $\frac{1}{3}$ – $\frac{1}{4}$ as in most other *Epicauta* (Fig. 13), elongate male foretarsi with divided pads, and two expanded metatibial spurs.

Larval features suggest similar relationships. Larvae of *E. delicata* are unknown but those of *costata* and *tricastata* resemble members of the *vittata* group. Although these evaginations are best developed in the posterior $\frac{1}{2}$ of the tergites in *costata* and *tricastata* (Fig. 6), they also occur on at least some of the anterior reticulations. Evaginated cuticular reticulations on the anterior $\frac{1}{2}$ of the abdominal tergites are characteristic of the *vittata* group. Also a short terminal seta on antennal segment III (ca. $\frac{3}{4}$ as long as segment II) occurs in the *vittata* group and in *costata* (Pinto, 1977), and the presence of three setae on segment II of the labial palpi, a trait distinctive to most *vittata* group species but not other *Epicauta* according to Adams and Selander (1980) occurs in *tricastata* (MacSwain, 1956; Pinto, 1977).

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