

A NEW SPECIES OF *ELEODES* FROM COLORADO
(COLEOPTERA: TENEBRIONIDAE)

CHARLES A. TRIPLEHORN

Department of Zoology and Entomology, The Ohio State University, Columbus 10

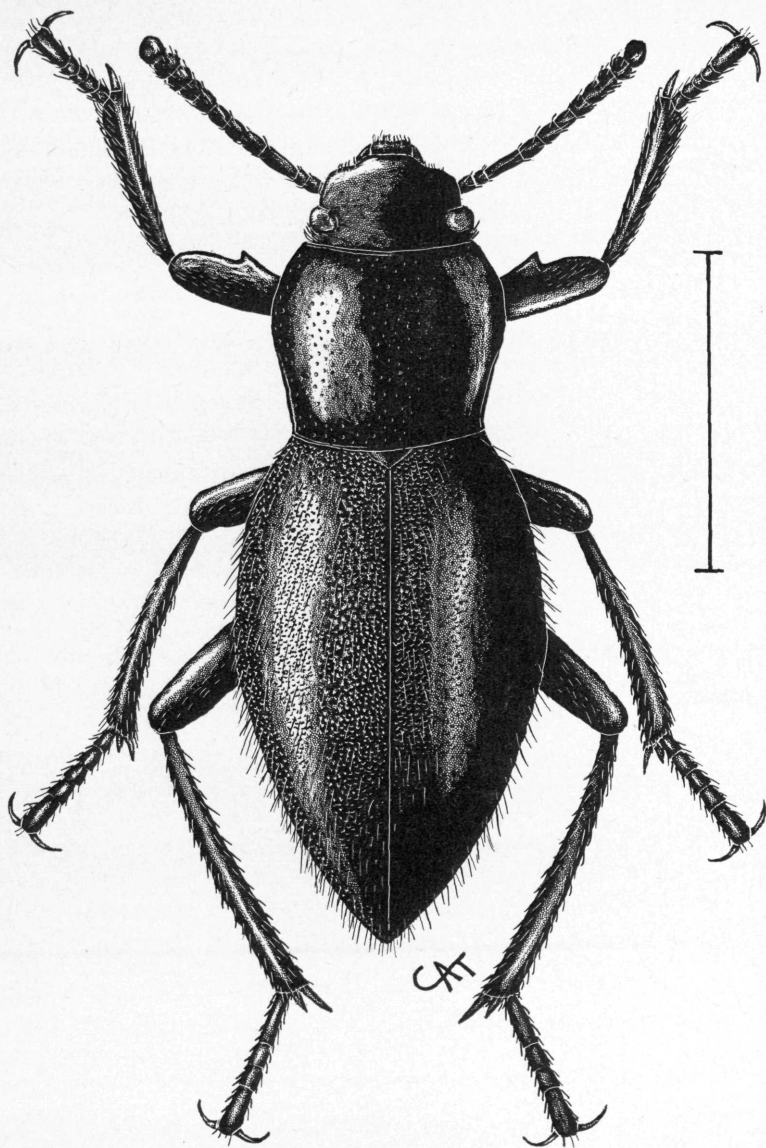
A large series of the following species has been on hand for a number of years. Since no further specimens have been encountered and no immediate extensive work on the Genus *Eleodes* is contemplated, it seems advisable to describe this rather remarkable beetle at this time.

***Eleodes* (*Litheleodes*) *hirtipennis* NEW SPECIES**

DESCRIPTION

Elongate, fusiform (male) to robust and broadly oval (female), subopaque, elytra densely clothed with moderately long setae. Head twice as broad as long, slightly convex, finely and sparsely punctured, each puncture with a conspicuous brownish seta projecting cephalad. Antennae relatively short and stout, segments 5-7 subequal in width and length, segments 8-10 broader than long, terminal segment obliquely quadrangular. Pronotum subquadrate, broadest at anterior third, lateral margins arcuate, straight to broadly sinuate behind, briefly sinuate just behind apex; anterior margin truncate, angles rectangular, not prominent, basal margin arcuate, angles obtuse; disc moderately and uniformly convex, surface finely and sparsely punctured, each puncture with a minute, inconspicuous, easily removed seta. Scutellum smooth, impunctate. Elytra elongate-oval, broadest about the middle, base feebly emarginate, contiguous to the prothoracic base which it scarcely exceeds in width; humeri acute and slightly prominent anteriorly, embracing basal angles of pronotum; lateral margin evenly arcuate, apex narrowly rounded, especially in male, not produced; disc moderately convex, strongly and broadly rounded laterally; entire surface including inflexed portions uniformly finely and densely papillose with a suggestion of longitudinal striae, densely clothed with long, conspicuous brownish setae. Epipleura moderately narrow, broad at base beneath humeri, thence gradually narrowing to apex, not quite visible from above at humeral angle; surface sparsely and minutely punctured, punctures feebly asperate. Legs densely clothed with conspicuous setae, coarsely spinose on tibiae and ventral surfaces of tarsi, much finer on femora; tibial spurs large and subequal in size on middle and hind legs; inner tibial spur of prothoracic leg much larger than outer spur; all tarsal claws large, as long as or longer than apical tarsal segment on which they are borne.

Male.—Ovate-fusiform, somewhat elongate and narrow; anterior femora armed with a distinct tooth; inner prothoracic tibial spur large and tapering gradually to apex. Length: 10.2 to 14.0 mm; width: 4.3 to 5.7 mm.



Eleodes hirtipennis new species (Male). Line equals 5 mm.

Female.—Ovate, robust; anterior femora mutic or only feebly sinuate on distal fourth; inner prothoracic tibial spur larger and broader than that of male, parallel-sided throughout most of length. Length: 10.8 to 14.9 mm; width: 5.0 to 6.8 mm.

TYPES

The entire type series of 79 specimens was collected at Great Sand Dunes, Alamosa Co., Colorado, July 20–21, 1954, by H. E. and M. A. Evans. Holotype, ♂, allotype and paratypes are deposited in the collection of The Ohio State University; paratypes distributed to the United States National Museum, Museum of Comparative Zoology at Harvard University, California Academy of Sciences and Cornell University.

DISCUSSION

The placement of this species in existing subgenera has been difficult. The toothed anterior femora of the male and mutic femora of the female suggest *Litheleodes*. The large and sexually dimorphic inner tibial spurs of the prothoracic legs are as those of members of the *E. quadricollis* section of the Subgenus *Melaneleodes*. In this group, the inner spur of the protibia is decidedly thickened in both sexes but more strongly so in the female. On the other hand, the anterior femora are mutic in both sexes of all species of *Melaneleodes*. Long, more or less erect hairs are uncommon in *Eleodes* except for the Subgenus *Tricheleodes* to which the present species apparently bears no close affinity. Hairs are found in *Litheleodes* however. *Eleodes lecheri* Blaisdell, a member of this subgenus, has similar hairs but much more sparsely arranged. Neither male nor female genitalia are very useful in separating closely related species of *Eleodes*, however, the female genitalia are used in dividing the genus into subgenera (Blaisdell, 1909). The female genitalia and general facies of *E. hirtipennis* appear to fit the general pattern found in other species of *Litheleodes*.

The subgenus *Litheleodes* was reviewed by Blaisdell (1942) who divided it into three groups. *E. hirtipennis* clearly belongs to the *E. granulata* group, characterized by strongly sculptured and more or less granulate, muricato-tuberculate or simply tuberculate elytra. Unlike other members of this group, however, the present species has the anterior femora distinctly dentate ventrally in the male and frequently strongly angulate in the female.

The only species which approaches *E. hirtipennis* in the abundance of long conspicuous setae clothing the elytra is *E. lecheri* Blaisdell. Through the courtesy of Mr. Hugh B. Leech of the California Academy of Sciences, I was able to study four specimens (three females and one male) of the type series of the latter species from Verdi, Nevada. *E. lecheri* may be characterized as follows: the tarsal claws are shorter than the terminal tarsal segment on all legs; the entire dorsal surface is uniformly feebly shining in luster; the lateral margins of the pronotum are broadly arcuate; the anterior femora are never toothed ventrally but are at most angulate in the male, unmodified in the female; the hairs of the elytra all arise from discreet, well-separated, minute papillae which are smooth and shining but inconspicuous except at high magnification; the setae are absent from inflexed portions of the elytra; the inner tibial spurs of the prothoracic leg are not conspicuously enlarged.

In contrast, *E. hirtipennis* has large tarsal claws, fully as long as or longer than the terminal tarsal segment on each leg; the pronotum is virtually glabrous and strongly shining while the elytra appear much duller in luster; the lateral margins of the pronotum are much less arcuate than in *E. lecheri* and are feebly sinuate before the base; the basal margin is also much more strongly arcuate; the anterior femora are armed with a prominent ventral tooth in the male and are strongly angulate in the female; the hairs of the elytra arise from both elevations and depressions of the densely and irregularly, finely convoluted surface; the inflexed portions of the elytra are also densely hairy.

This species is apparently an extreme modification of the general *E. lecheri* line of evolution and should follow the latter in the checklist of species of the Genus *Eleodes*, the most recent being that of Tanner (1961).

REFERENCES

- Blaisdell, F. E. 1909. A monographic revision of the Coleoptera belonging to the tenebrionide tribe Eleodini inhabiting the United States, Lower California, and adjacent islands. U. S. Nat. Mus. Bull. 63: 1-524, pls. 1-13.
- . 1942. Miscellaneous studies in the Coleoptera, No. 6 (Melyridae and Tenebrionidae). Trans. Amer. Ent. Soc. 68: 129-149.
- Tanner, V. M. 1961. A check-list of the species of *Eleodes* and descriptions of new species (Coleoptera: Tenebrionidae). Great Basin Nat. 21(3): 55-78.