

A Review of the Genus *Acnaeus**

(Coleoptera-Dascillidae)

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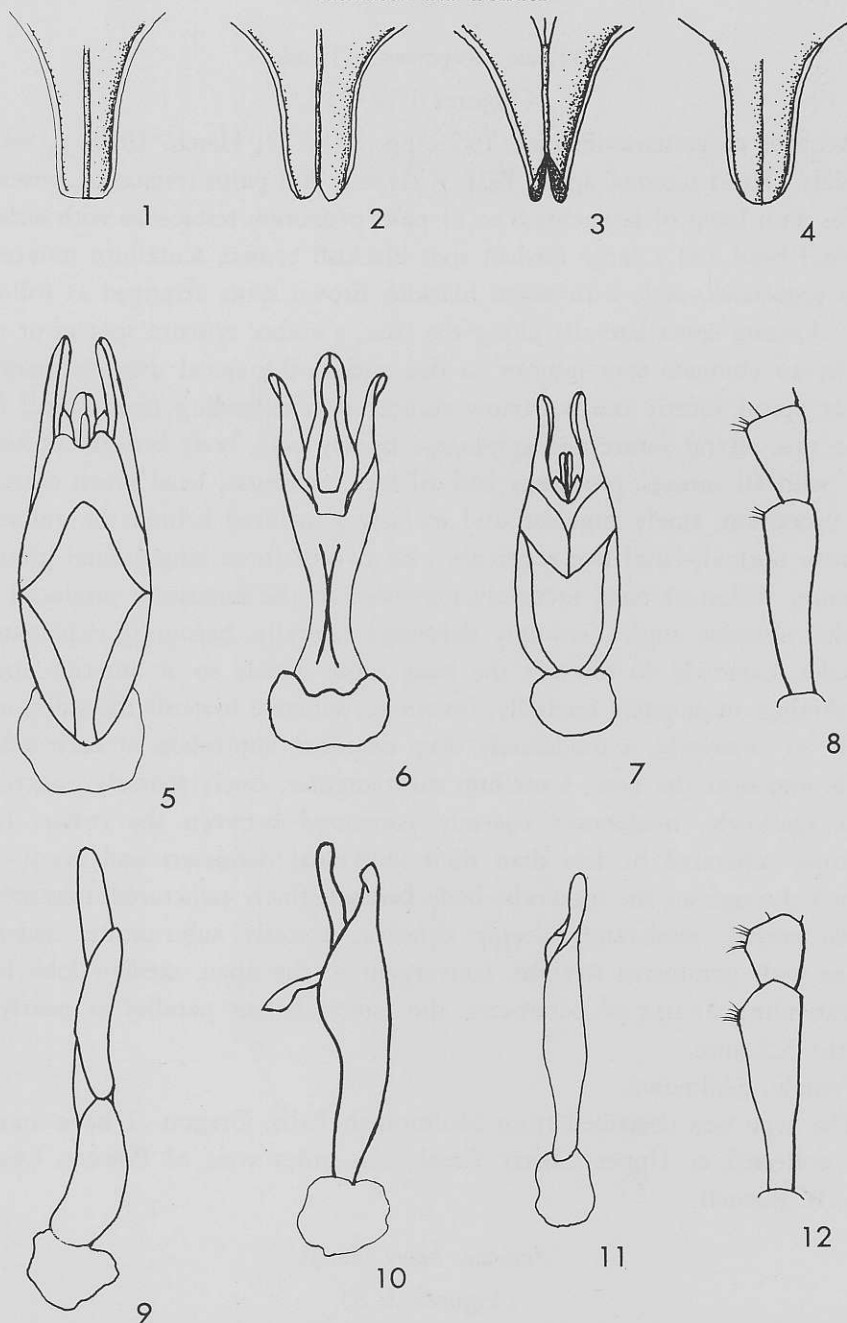
THE GENUS *Acnaeus* was erected by George H. Horn in 1880 for the female of his *Acnaeus quadrimaculatus*, being placed by him in the family DASCILLIDAE. He redefined the genus with characters for the male of the species in 1881. Leng (1920) retained the genus in the DASCILLIDAE. Fender (1953) described *Acnaeus oregonensis*. Chandler (1956) removed the genus to the PSEPHENIDAE on the basis of larval characters and the presence of trochantins in the adults, intimating that this genus and the genus *Ectoparia* might well be placed in a separate family. Hatch (1961) retained *Acnaeus* in the DASCILLIDAE. I prefer to follow the lead of the most recent author.

Acnaeus Horn

Horn, 1880, Trans. Am. Ent. Soc., VIII:98; 1881, 1.c., IX:86-87; Fender, 1951, Proc. Ent. Soc. Wash., 51:271-272; Chandler, 1956, Aquatic Insects of California. Chap. 13, pp. 365-366, fig. 13:58d; Hatch, 1961, Beetles Pacific Northwest. III:98, pl. XXV, fig. 4.

Broadly ovate, widest at apical third, blackish brown variously ornamented with testaceous areas, more or less shining above, finely decumbently pubescent, head finely scabrous to finely punctate, narrowed between antennae and usually prolonged into a slight beak, maxillary palpi with antepenultimate segment as long as last two combined; pronotum more than twice as wide as long, widest at or near the base, side margins distinct, bases of pronotum, scutellum and elytra finely serrulate, elytra with vaguely defined coarse punctures and numerous fine granules on the puncture floors, two or three poorly defined costae, first two costae connected near the middle by an oblique costa; prosternum narrow, depressed between the coxae, mesosternal process broadly concave; antennae with the third segment longer than first two combined and apically widened and flattened, segments 4 to 11 short and subserrate in the female, in the male with segment 4 with a short branch and segments 5 to 11 strongly flabellate. Type of genus, *Acnaeus quadrimaculatus* Horn.

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Figures 1-4, mesocoxal processes of *Acnaeus* species: 1. *A. oregonensis* Fender; 2. *A. beeri* Hatch; 3. *A. quadrimaculatus* Horn; 4. *A. burnelli* Fender. Figures 5-7, aedeagi of males of *Acnaeus* species, dorsal view: 5. *A. oregonensis*; 6. *A. quadrimaculatus*; 7. *A. burnelli*. Figure 8, antennal segments 3 and 4 of female of *A. beeri*. Figures 9-11, aedeagi of males of *Acnaeus* species, lateral view: 9. *A. oregonensis*; 10. *A. quadrimaculatus*; 11. *A. burnelli*. Figure 12, antennal segments 3 and 4 of female of *A. quadrimaculatus*.

Acnaeus oregonensis Fender

(Figures 1, 5, 9)

Acnaeus oregonensis Fender, 1951, pp. 271-272; Hatch, 1961, p. 98.

Male. Head piceous, apical half of clypeus and palpi testaceous, antennae piceous with bases of segments 6 to 11 pale, pronotum testaceous with anterior marginal bead and a large median spot blackish brown, scutellum testaceous, elytra testaceous, each with seven blackish brown spots arranged as follows: three elongate spots laterally along the base, a rather obscure spot at or near middle, an elongate spot interior to this and at the apical third, a marginal spot at apical fourth and a narrow sutural stria extending from apical fifth to the tips, elytral suture and epipleurae largely pale, body beneath brownish black with all sutures, prothorax and all legs testaceous; head much narrower than pronotum, finely rugulose and sparsely punctured behind the antennae, antennae normal, basal two segments with two or three longitudinal grooves; pronotum widest at base, arcuately narrowed to the anteriorly produced and rounded anterior angles, strongly depressed laterally, becoming explanate at the sides, narrowly so towards the base, more widely so at anterior angles, disc shining, impunctate medially, becoming punctate towards the sides, more closely so anteriorly, a moderately deep diagonal impression at each side of middle and near the base; scutellum subtriangular, finely sparsely punctured; elytra shallowly, moderately coarsely punctured between the costae, these punctures separated by less than their individual diameters and evenly distributed throughout the intervals; body beneath finely punctured, mesosternal process widely moderately deeply concave, apically subtruncate, aedeagus furcate with parameres straight, convergent to the apex, median lobe bifid, not extending to tips of parameres, the lateral halves parallel or nearly so. Length: 3.5 mm.

Female. Unknown.

The type was described from Multnomah Falls, Oregon. I have another male collected at Upper Cherry Creek, ten miles west of Powers, Oregon by B. B. Burnell.

Acnaeus beeri Hatch

(Figures 2, 8)

Acnaeus beeri Hatch, 1961, p. 98.

Male. Unknown.

Female. Head blackish brown, clypeus feebly paler, palpi and basal two antennal segments testaceous; pronotum testaceous with an anterior blackish brown spot of irregular shape; scutellum testaceous; elytra testaceous, orna-

mentations blackish brown consisting of a large subcutellar spot extending posteriorly in a subsutural vitta, an irregular angulate oblong stripe extending from the humerus to beyond the middle and lateroapical and subapical spots, sutural margin pale; pronotal and elytral epipleurae and prothorax beneath testaceous, mesothorax and metathorax testaceous medially, becoming blackish brown with margins narrowly testaceous, legs testaceous, procoxae feebly clouded exteriorly and protibiae feebly clouded medially; head dull, finely scabrose and finely punctured, clypeus shining and finely punctured, front quadrate, shorter than normal for the genus, first antennal segment without fine longitudinal grooves, third segment subparallel sided, widest at or very near the apex, fourth segment subrhombic, widest apically, segments 5 to 10 serrate, 11th ovate; pronotal side margins subparallel or feebly convergent behind the basal fourth, disc micropunctate medially, more coarsely so towards and on the explanate anterior angles, suborbicularly elevated medially with a rather shallow oblique impression behind and towards each side of the elevation; scutellum transverse, two thirds as long as wide, finely sparsely punctured; coarse punctures of elytra of uneven size and depth, obscurely defined, usually separated by more than their individual diameters; body beneath microreticulate, finely rather sparsely punctured, mesosternal process widely moderately deeply concave, apically incised, the tips rounded, the incision not seemingly triangular. Length: 4 mm.

Known only from the female type collected 5 to 15 miles east of Cascadia, Oregon, July 23, 1940 by V. Roth and F. Beer.

Acnaeus quadrimaculatus Horn

(Figures 3, 6, 10, 12)

Acnaeus quadrimaculatus Horn, 1880, p. 98; 1881, pp. 86-87; Fender, 1951, pp. 271-272; Hatch, 1961, p. 98, pl. XXV, fig. 4.

Male. Head and pronotum blackish brown, the latter with anterior angles rather narrowly testaceous, lateral margins evanescently paler; scutellum blackish brown; elytra blackish brown, testaceous markings confined to three variously confluent vittae and a subtrifoliate subapical spot; prothorax testaceous beneath, pronotal epipleurae testaceous anteriorly, blackish brown behind, elytral epipleurae pale to apical third, blackish brown to apices, metasternum and abdomen blackish brown, the latter with lateral margins narrowly testaceous; legs testaceous, coxae blackish brown with apices testaceous; head feebly shining, scabrous to finely closely punctured, clypeus shining, smooth and sparsely punctured, front elongate, first antennal segment without fine longitudinal grooves; pronotum shining, depressed at sides, margins nar-

rowly reflexed posteriorly, more widely so anteriorly, sides arcuately convergent from obtuse hind angles to the arcuate, anteriorly produced front angles, disc finely punctured medially, more coarsely so towards the anterior angles; elytra shining, coarsely punctured on the intervals, these punctures rather evenly spaced and separated by less than their diameters; mesosternal process broadly concave, seemingly triangularly incised at the apex, the tips abruptly obliquely bent down internally; aedeagus apically forked, the parameres sinuately divergent to the tips, median lobe shorter than parameres, seemingly bifid, with opaque struts connected by a hyaline membrane, struts apically convergent, the tips contiguous, a descending apically recurved ventral appendage originating near the middle. Length 3.5-4 (av. 3.66) mm.

Female. Similar to male, third antennal segment less strongly compressed and triangular, widest behind the apex, segments 4 to 11 serrate, size somewhat larger. Length 4.5-5 (av. 4.75) mm.

12 males and 3 females were examined, all from Oregon: Gunaldo Falls, Yamhill Co.; Sourgrass Creek, Yamhill Co. These two localities are separated by less than a quarter of a mile, Gunaldo Falls being on a tributary of Sourgrass Creek. The specimens at Gunaldo Falls were flying high and in sunlight, requiring the use of a net. The Sourgrass Creek specimens were collected flying a few inches above a heavily shaded seepage area and were knocked down by hand. They could not be seen flying in to the seepage area nor were they crawling on herbage or the mud. I was unable to ascertain their origin.

Acnaeus burnelli Fender, new species

(Figures 4, 7, 11)

Male. Black, antennae piceous, pronotal lateral margins narrowly and anterior angles widely testaceous; elytra each with a median oboval testaceous spot and an antepical oval testaceous spot; prothorax beneath, trochanters and apices of coxae, femora, tibiae and tarsi narrowly paler; pubescence cinereous, short, fine and obscure; shining, head finely closely punctured, clypeus more sparsely so, front elongate in front of and concave between the antennae, antennae normal, basal segment without fine longitudinal grooves; pronotum more than twice as wide as long, widest at about basal sixth, hind angles obtusely rounded, sides arcuately converging to rounded and feebly frontally produced anterior angles; scutellum triangular, about four fifths as long as wide, sparsely punctured; elytra finely punctured, the intervals outlined by rows of large irregular punctures, median portions of the intervals without coarse punctures; body beneath finely rather sparsely punctured, abdominal sternites a little more coarsely so, mesosternal process entire, moderately widely

concave and with a median longitudinal sulcus, apically rounded; aedeagus widest near middle, apically furcate, the parameres sinuate, median lobe much shorter than the parameres, bifid, parallel sided. Length 4 mm.

Female. Unknown.

Holotype male. Upper Middle Creek, 15 miles s.w. of Powers, Oregon, July 11, 1960, collected by B. B. Burnell for whom it is named.

Key to Species of Acnaeus

1. Elytra predominantly testaceous, the markings black to blackish brown...2
- 1'. Elytra predominantly black to blackish brown, the markings testaceous...3
2. Coarse elytral punctures more obscure, separated by more than their individual diameters; mesosternal process apically incised*beeri* Hatch
- 2'. Coarse elytral punctures more evident, separated by less than their individual diameters; mesosternal process apically subtruncate
.....*oregonensis* Fender
3. Elytral markings irregular in outline, coarse elytral punctures evenly distributed throughout the intervals; mesosternal process apically incised
.....*quadrimaculatus* Horn
- 3'. Elytral markings regular in outline, coarse elytral punctures confined to edges of the intervals; mesosternal process apically rounded
.....*burnelli* Fender, new species

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