STUDIES ON THE COLEOPTERA OF THE PACIFIC NORTHWEST I

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The author is working on a handbook of the Coleoptera of the Pacific Northwest. It is his intention to publish under the above title such bibliographic and taxonomic notes, including new species, as come to his attention, in order that the pages of his book may be kept free from such specialized material. Unless otherwise noted, the specimens on which these studies are based are in the collection of the author at the University of Washington.

CICINDELIDAE

CICINDELA LIMBALIS var. ELDORENSIS Csy.

This species is cited by Blackwelder in the Fourth Supplement to the Leng Catalogue (1939, p. 7) from "Ore." in error. The type locality is Eldora, Colorado.

CICINDELA COLUMBICA Hatch

Hatch, Univ. Wash. Publ. Biol. V, 1938, p. 234. I am now convinced this form has no special affinity with *bellissima* Leng. It most closely resembles *repanda* Dej., from which it is distinguished by the obtusely rather than subrectangularly angulate median elytral band.

CARABIDAE: CARABINAE

SCAPHINOTUS (PSEUDONOMARETUS) MERKELI Horn.

Roeschke, Ann. Mus. Nat. Hungarici V, 1907, p. 161, regards *idahoensis* Webb as a geographical race. I find the *merkeli*-form from the western portion of St. Joe National Forest, a point between the type locality of *idahoensis* near Moscow and the western portion of Coeur d'Alene National Forest, whence I have a least subtypical *idahoensis*. Accordingly, I reduce *idahoensis* to the status of a variety.

SCAPHINOTUS (NEOCYCHRUS) ANGULATUS Harris var. MARITIMUS Van Dyke

Van Dyke, Ent. Amer. XXIV, 1944, p. 12, reports this black phase of *angulatus* from Port Angeles, Olympic National Forest,

Hoquiam, and Melbourne, and regards it as a geographical subspecies. I have a single specimen from Seattle, where typical *angulatus* occurs, so that I suspect it is a nongeographical variety.

CYCHRUS (CYCHRUS) RICKSECKERI LeC.

In view of the fact that the range of this form (Idaho north of Coeur d'Alene and adjacent portions of Washington, British Columbia, and Montana) is separated by three or four hundred miles from that of *hemphillii* Horn, I suggest we return to LeConte's original conception of it as a distinct species.

CARABUS (MEGODONTUS) VIETINGHOFFI Ad.

Horn, Can. Ent. VIII, 1876, p. 127, says "this species is found in Alaska and extends its habitat *towards* British Columbia . . ." (italics mine), but this is an insufficient basis for listing it *from* British Columbia as is done by Breuning, Mon. Gatt. Carabus, 1935, p. 1212, and Blackwelder, Fourth Suppl. Leng Cat. Col. Am. n. of Mex., 1939, p. 11.

BLETHISA OREGONENSIS LeC.
(*columbica* Csy.)

Horn, Trans. Am. Ent. Soc. V, 1876, p. 247, distinguished *oregonensis* from *B. multipunctata* L. on the basis of the smooth ventral surface of the prothorax. Casey, Can. Ent. XLI, 1909, p. 277, described *columbica* with the prosternal side pieces punctate behind. My series shows variation from the virtually impunctate condition to one in which the side pieces are densely punctate except along the apical margin, a close approach to my examples of *multipunctata,* in which the entire side piece is densely and in part confluently punctate.

Notiophilus lanei Hatch, *sp. n.*

Dark bronze above, shining, elytra at times with an obscure lateral pale vitta that is usually apical but may be nearly entire, below shining black, the four basal antennal segments and legs, especially the tibiae, somewhat paler; head with front with five entire striae between the broad lateral grooves, the vertex opaquely alutaceous; pronotum three-fifths as long as wide, the sides broadly feebly arcuate in front, feebly sinuate before the rectangular hind angles, the disc broadly impunctate, the margins coarsely punctate or punctato-rugose, the basal impressions large and densely punctate and alutaceous; elytra coarsely punctato-striate, the second

and third striae fine towards apex, the second stria equidistant between the first and fifth, the apex alutaceous and with two ocellate punctures, the second to sixth intervals not or just visibly alutaceous, the third interval with a single dorsal puncture behind the basal fourth; length 4.5 - 5 mm.

Type and six *paratypes*: PIERCE, IDAHO, August 30, 1933; M. H. Hatch. One paratype: Waha, Idaho, August 31, 1933; M. H. Hatch; one paratype: Bobs L., B. C., June 13, 1939. Named in honor of Mr. M. C. Lane, with whom the specimens were taken.

In Fall's key, Psyche XIII, 1906, p. 82, this species comes between *simulator* Fall and *novemstriatus* LeC. From both of these and from *sylvaticus* Esch. it is distinguished by the position of the second elytral stria midway between the first and fifth. From *simulator* it is distinguished further by its more coarsely punctate more deeply impressed elytral striae and from *novemstriatus* by its larger size. Feebly vittate examples are distinguished from the strongly vittate *sylvaticus* by the virtually smooth or very feebly alutaceous second to sixth elytral intervals, which are evidently alutaceous in that species.

LEISTUS FERRUGINOSUS Mann.

According to Bänninger's key, Ent. Mitteil. XIV, 1925, p. 332, this species belongs in the subgenus *Leistophorus* Reitter and not in *Leistidius* Daniel, as Bänninger surmizes (p. 335). I can discover no reason for maintaining *nigropiceus* Csy., Mem. Col IV, 1913, p. 45, as distinct. Both are amply distinct from the European *L.* (*Leistidius*) *piceus* Froh., recorded probably on the basis of an adventitious specimen from Fitchburg, Massachusetts by LeConte, Trans. Am. Ent. Soc. V, 1875, p. 169.* In *piceus* the elytral humeri are oblique and virtually obsolete, the sides of the pronotum in front of the obtuse hind angles obliquely sinuate. *Ferruginosus* has the humeri well developed and arcuate, the sides of the pronotum in front of the sharply rectangular hind angles subparallel and strongly sinuate.

Nebria melanaria Hatch, *sp. n.*

Black, head between eyes with two rufous spots; pronotum with side margins widely reflexed, with a seta-bearing puncture at each hind angle and along either lateral margin in front of middle (seta broken in paratype), the side margins obliquely slightly

*C. H. Frost (*in litt.*) states that he knows of no other specimens from New England.

divergent in front of the acute hind angles; elytra with well developed humeri, the finely punctate striae finely impressed, the intervals flat or feebly convex, the third and seventh intervals with three to five dorsal punctures, these sometimes producing a subcatenate appearance, the fifth interval without or with a single dorsal puncture; abdominal sternites three to five with two or three seta-bearing punctures on each side of the middle along the posterior margin; length 10.5 - 11 mm.

Type and *paratype* male: GLACIER NATIONAL PARK, MONTANA, Going-to-the-Sun Chalet, August 26, 1939, M. H. Hatch. Except for its black color, this species resembles *gebleri* Dej., with specimens of which it was taken under stones on the beach of St. Mary Lake. It may be a variety of that species, but I know of no other instance in which one of the metallic species of *Nebria* loses its metallic color. In Hatch's key, Pan-Pac. Ent. XV, 1939, pp. 117-122, it runs to *trifaria* LeC. and *vandykei* Bänn., from which it is distinguished in part by its smaller size, more prominent elytral humeri, and less strongly catenate elytral intervals.

Dyschirius subpunctatus Hatch, *sp. n.*

Black, shining, above bronzed or cyanescent, base of antennae and legs more or less rufous; head with clypeus broadly emarginate, the bottom of the emargination feebly arcuate to evidently lobed, the front finely transversely impressed; pronotum globose, as long as wide, the apical and basal transverse impressions and the median line evident; elytra not margined at base, eight striate, the first seven well impressed, obsolete towards extreme base, well impressed at apex, finely sparsely punctate at base, impunctate behind middle, the third interval with an ante-median and a posterior setigerous puncture near the third stria, the humeri well developed; protibiae not dentate without; length 3.8 - 4.7 mm.

Type and 62 *paratypes*: VANTAGE, WASHINGTON, April 24, 1936, M. H. Hatch. 12 paratypes: Lyons Ferry, Wash., September 16, 1930, M. H. Hatch. 16 paratypes: Cicero, Fort Canby, Kittitas, Ocean Park, Orting, Renton, Vantage, and Vila in Washington. Four paratypes: Condon, Multnomah Falls, Salem, Tygh Valley in Oregon. The Vantage and Lyons Ferry specimens were obtained by washing water over sand banks by the river.

Distinguished from the eastern *sphaericollis* Say by the smaller punctures of the elytral striae.

Dyschirius thompsoni Hatch, *sp. n.*

Black, shining, legs and antennae more or less obscure rufous; head with clypeus broadly emarginate, the bottom of the emargination nearly straight, the angles prominently narrowly lobately rounded, the front with a deep transverse impression that is narrowly interrupted at middle; pronotum quadrately globose, nine-tenths as wide as long, the apical transverse impression and median line feeble, the basal transverse impression deep; elytra not margined at base, seven striate, the sutural stria deeply impressed, striae two to seven finely impressed, obsolete towards extreme base and feeble towards apex, finely distantly punctate on basal half, evanescently punctate behind middle, without dorsal punctures, the humeri well developed; protibiae more or less finely dentate without; length 2.75 - 3 mm.

Type and five *paratypes*: CONDON, OREGON, June 20, 1938, M. H. Hatch. Two paratypes: Lyons Ferry Wash., September 16, 1930, M. H. Hatch; Walla Walla, Wash., IV-1-10-1943, flying M. C. Lane. This species appears to run most closely to *aratus* LeC. from California in LeConte's key (Bull. Brooklyn Ent. Soc. II, 1879, pp. 18, 31), which is described with the "clypeus sharply bidentate." Named in honor of Prof. B. G. Thompson of the Oregon State College, whose guest I was when the type series was collected and to whom I am indebted for numerous other entomological favors.

Dyschirius alternatus Hatch, *sp. n.*

Piceous black, shining, elytra and abdomen black, legs and antennae more or less rufous; head with clypeus broadly emarginate, the bottom of the emargination straight, the angles prominently produced and acute, the front with a transverse impression; pronotum globose, nearly as long as wide, the anterior transverse impression and the median line feeble, the transverse basal impression distinct; elytra not margined at base, seven striate; the sutural stria distinctly impressed; second, third, and fourth striae feebly impressed; the striae coarsely distantly punctate on basal half, the striae beyond the second virtually effaced apically; fifth, sixth, and seventh striae unimpressed series of punctures; first third, fifth, and seventh intervals and impressed marginal stria with series of minute setigerous punctures; humeri well developed; protibiae minutely dentate without; length 2.25 mm.

Type: GRAND COULEE, WASHINGTON, Dry Falls, May 1, 1937, M. H. Hatch. Runs to the eastern *setosus* LeC. in LeConte's key (l.c.) from which it is separated by its smaller size.

CLIVINA FOSSOR L.

elongata Randall, Boston Jour. Nat. Hist. II, 1938, p. 34.
var. ♀ *collaris* Hbst., Jeannel, Faune de France 39, 1941, p. 257.

This widely distributed Palaearctic species was apparently introduced over a century ago at Boston, Mass. (Randall, l.c.). It has since been recorded from Cincinnati (Dury, Jour. Cinc. Soc. Nat. Hist. II, 1879, p. 162), Montreal (Fall, Ent. News XXXIII, 1922, p. 162), and Mobile (Loding, Geol. Surv. Alab. Mon. 11, 1945, p. 12). In northeastern North America it is still apparently rare, since C. H. Frost writes me that the only American examples in his collection are two specimens of *collaris* taken at Stoneham, Mass., around 1902 to 1908 and two specimens of *fossor* from Dartmouth, Nova Scotia taken in 1947. This species was taken first in western Washington in 1937 (Bothell), in 1938 at Juanita Beach near Seattle, at Seattle in 1941, at Renton near Seattle in 1944. Fall's notes will enable its tolerably certain recognition. In addition I have found the anteriorly feebly arcuate distinctly convergent side margins of the pronotum useful in distinguishing it from *impressifrons* LeC. and *oregona* Fall. Specimens approximating the *collaris*-form are present in my series.

SCHIZOGENIUS DEPRESSUS LeC.

I find the rufous and black forms together so regularly in Oregon and Washington that I suspect that the black *litigiosus* Fall is simply a color phase of *depressus*.

A NOTE ON SIREX AREOLATUS (CRESSON)

(Hymenoptera, Siricidae)

In removing some small (10 inches in diameter) Douglas fir stumps which had been buried for about a year by a loose fill, a number of individuals of this species were found in the pupa stage and some recently transformed adults. Some of the pupal cells were in the soggy sapwood, but some of the larvae had emerged from the wood and transformed in the soil.

Such a procedure seems strange for Siricidae and no such habit seems to have been reported.

Perhaps it is merely a case of our observations not having been very thorough.—W. J. CHAMBERLIN, *Oregon State College.*