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SOME NOTES ON CERCYON, WITH DESCRIPTIONS OF THREE NEW SPECIES.

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Some recent correspondence with Mr. Chas. Liebeck of Philadelphia has led to a critical exmaination of certain of our species of Cercyon, the results of which it seems desirable to make known.

More than half (14 out of 25) of the Cercyons recorded in the Leng List are more or less common European species, and in most cases the identity of the North American and European forms can scarcely be questioned. Some exceptions however have been noted. Specimens carefully compared by Mr. Liebeck and found to be identical with the *melanocephalus* and *lugubris* of the Horn collection have been sent me for examination. These, on comparison with the best European descriptions and with authentic European representatives of the species in my collection, prove conclusively that the *melanocephalus* and *lugubris* of the Horn Synopsis[1] are not the true European species of these names.

In the *melanocephalus* of Horn the palpi are said to be entirely pale. In the true *melanocephalus* they are black or dark brown. Ganglbauer, in his Käfer von Mitteleuropa, IV, p. 278, observes this fact and remarks in a foot note that *C. melanocephalus* Horn=*nanus* Melsh and can not be the *melanocephalus* of Linnæus. The intimation here that the species should be known as *nanus* Melsh is of course based on the published American synonymy. In the Crotch List of 1873, and the Henshaw List of 1885, both *melanocephalus* L. and *nanus* Melsh appear.

[1]Trans. Am. Ent. Soc., XVII, Oct. 1890.

In Horn's paper of 1890 *nanus* is set down without remark as a synonym of *melanocephalus* but on what grounds it is impossible to say. There is not now a single discoverable example of any of Melsheimer's species of Cercyon either in the Melsheimer or Le Conte Collections. It is understood that Le Conte was free to transfer to his own Collection anything he wished from the Melsheimer Collection, and he himself has somewhere stated that he possessed the authentic types of Melsheimer, Haldemann and Ziegler. There are now in the Le Conte Collection specimens bearing name labels (in Le Conte's hand) of three of the Melsheimer species—*maculatus*, *mundus* and *minusculus*—but nothing bearing the name *nanus* Mels. So far as discoverable there is nothing in the label, type of pin or style of mount, to indicate that any of these specimens came from the Melsheimer collection; if any such there are they must have been remounted by Le Conte.

It follows that in the case of *nanus* at least, there is no recourse but the original description, and this I do not hesitate to say does not agree with the *melanocephalus* of Horn. Melsheimer's diagnosis is rather brief but he describes his insect as "deep glossy black" and remarks that the antennæ are piceous. *Melanocephalus* Horn is on the other hand rather dull in lustre, the elytra, as in the true *melanocephalus* and *pygmæus*, rufous or yellowish with a scutellar triangular black cloud which may spread over the greater part of the disk but never involving the entire lateral and apical margins; furthermore the antennæ are pale.

Fortunately however there is no need to consider *nanus* in this connection, for a careful study of descriptions convinces me that Horn's *melanocephalus* is really another of the European species—*terminatus* Marsh—which has hitherto not been recognised in our fauna. This is of the same type and a close ally of *melanocephalus* and *pygmæus*, differing from the former in the smaller size, entirely pale palpi and antennæ, and the absence of the metasternal line extending obliquely forward to the front angles. The specimens sent by Liebeck as agreeing with Horn's *melanocephalus* all possess precisely these characters,

and fit in all other respects Ganglbauer's description of *terminatus*.†

In passing it may be well to say that Horn is in error in saying that *pygmœus* may be distinguished from *melanocephalus* by its pale epipleura. The Epipleura are normally blackish in all three of the species here mentioned, which may be readily separated as follows.

Metasternal area extended by an oblique line toward the anterior angle.

Size much larger—2.2 to 3 mm., palpi blackish. . . . . *melanocephalus*

Size much smaller, always less than 2 mm., palpi yellowish to brownish, the terminal joint darker. . . . . *pygmœus.*

Metasternum without oblique line extending forward from the central area; antennæ and palpi pale; length about 2 mm. *terminatus.*

Although I have seen no native specimens, it is by no means unlikely that *melanocephalus* L. may have been found or may yet occur in America.

Cercyon opacellus new species.

This is the species described as *lugubris* Payk. in the Horn Synopsis, but the two seem to me quite certainly distinct, nor am I able to identify our North American form with any other European species. In *lugubris* Payk. the head and prothorax are strongly shining, the surface polished without trace of alutaceous sculpture, the elytra alutaceous and conspicuously dull. In our species the entire upper surface is always finely alutaceous, the head and thorax scarcely more shining than the elytra; the form is also appreciably more convex. Horn's description is entirely characteristic and need not be repeated. Whether the true *lugubris* Payk. (*convexiusculus* Steph.) really occurs with us I am unable to say. I have as yet seen no American examples.

†Since writing the above I have received from Mr. Arrow of the British Museum a specimen of *terminatus* carefully compared by him with Marsham's type, which completely substantiates my conclusions.

Cercyon minusculus Melsh.

In Horn's synopsis of the genus this species of Melsheimer is for the first time relegated to synonymy and declared to be the same as the European *granarius* Erichs. Careful comparisons by Mr. Liebeck with the series of four specimens (Mass., Pa., D. C.) in the Horn collection upon which his conclusions were based, and by myself with the series of *minusculus*, so labelled, in the Le Conte collection shows them to be identical. These and all examples of the very considerable series in the collections of Mr. Liebeck and myself agree in the strikingly deep and sharply impressed elytral striæ, especially toward the apex. A European specimen of *granarius* in my own collection has the elytra much less deeply striate and the interspaces very finely punctulate, whereas in *minusculus* the punctures of the interspaces are much more distinct and scarcely at all finer than those of the prothorax. *Granarius* and *minusculus* are indeed closely allied, but so far as the evidence at hand goes I consider their identity unlikely, or at least unproven.

Cercyon connivens new species.

A small species of the *lugubris—granarius—minusculus* type. Form rather broadly oval, slightly attenuate behind, very strongly convex, black, the sides of the prothorax very narrowly tinged with rufous, the elytra with a sharply defined apical pale space which extends froward along the outer margins to about the middle. Head and thorax polished, densely moderately finely punctate, elytra finely alutaceous and duller, a little more shining however along the suture, the striæ impressed and entire, a little deeper at sides and apex; interspaces sparsely punctulate, the punctures finer than those of the prothorax but quite distinct. Beneath piceous or rufopiceous, legs and antennæ reddish brown, palpi a little paler; meso—and metasternal plates very densely and unusually coarsely punctate.

Length 1.6 to 2 mm.; width 1. to 1.3 mm.

Of this species I have seen a considerable series from Camden, Gloucester and Anglesea, New Jersey, mostly collected by

Mr. Liebeck and a single specimen from Wakefield, Mass. taken by myself. One of the Camden specimens is selected as the type; it bears date "xi-23."

From *minusculus* the present species differs in being less broadly obtusely rounded behind; from both *minusculus* and *granarius* by the sharply limited apical pale area and the distinctly alutaceous surface sculpture of the elytra; from *opacellus* by the non-alutaceous head and thorax, and distinctly punctate elytral interspaces, and from all allied forms by the more coarsely densely punctured sternal areas.

C. connivens is really by its polished head and thorax and alutaceous elytra more nearly allied to *lugubris* than to any of the above mentioned species, and perhaps most closely of all to *subsulcatus* Ray of the European fauna. The latter however is said to have the elytral interspaces not or scarcely detectably punctate, which statement is not properly applicable to our species.

Cercyon californicus new species.

Oval, a little attenuate posteriorly, form nearly as in *tristis* but slightly less convex. Black, prothorax with either the entire side margin or (typically) with only a spot at the front angles paler; Elytra with a distinctly limited pale area which extends forward along the side margins at least to the middle, and often quite to the base. Head and thorax distinctly alutaceous, finely numerously punctate; elytra visibly but as a rule somewhat less distinctly alutaceous than the thorax, striæ fine and very lightly impressed, becoming obsolete just before the apex; interspaces sparsely punctulate, the punctures generally a little finer than those of the prothorax; eighth interspace uniserially punctured. Body beneath piceous, the epipleura paler in those examples in which the pale color of the apex extends forward to the humeri; legs reddish brown to piceous brown; palpi brown with the last joint darker; antennæ rufotestaceous, the club piceous. Mesosternal area evenly oval, twice as long as wide, rather coarsely punctured; metasternal area more finely sparsely punctate.

Length 1.8 to 2.4 mm.; width 1 to 1.3 mm.

California—Elsinore Lake 8-22-17 (type); Pomona; San Diego; San Francisco. All collected by the writer. Although slightly less convex than most species of Horn's category "13" this species by all essential characters belong there and should stand next to *tristis*, from which and all others of the group it differs by having the prothorax more noticeably alutaceous than the elytra. In one example from Pomona the alutaceous sculpture is equally developed over the entire surface.

The species belonging to Horn's category "13" (except the very distinct *navicularis*) may with advantage be retabulated as follows:

Entire upper surface alucateous.
- Alutaceous sculpture equally developed on thorax and elytra; form shorter and more convex (Eastern U. S.).*opacellus.*
- Alutaceous sculpture as a rule a little more distinct on the thorax; size a little larger, form evidently less convex (California). ..... *californicus.*

Head and thorax polished, elytra distinctly alutaceous.
- Elytral striæ extremely fine, scarcely impressed, obsolete toward the apex. ..... *tristis.*
- Elytral striæ entire.
  - Elytral interspaces very finely to scarcely visibly punctulate.
    - Striæ fine..... *lugubris.*
    - Striæ much stronger. ..... *subsulcatus.*
  - Elytral interspaces distinctly punctate, striæ well impressed.. ..... *connivens.*

Entire surface shining and with at most but feeble traces of alutaceous sculpture on the elytra.
- Elytral apex with sharply defined pale area. . . . .*floridanus.*
- Elytral apex at most only diffusely and obscurely paler, often scarcely at all so.
  - Elytral striæ fine, the interspaces much more finely punctate than the prothorax. ..... *granarius.*
  - Elytral striæ sharply and deeply impressed, the punctures of the interspaces nearly as coarse as those of the thorax ..... *minusculus.*

Cercyon maculatus Melsh.

Analis Horn nec Paykull., *indistinctus* Horn.

The *C. maculatus* of Melsheimer is given in Horn's synopsis as a synonym of *analis* Payk. The species which Horn thus describes is undoubtedly Melsheimer's *maculatus* as accepted by Le Conte but is an entirely different thing from Paykull's *analis*. The latter is a narrower, blacker, more attenuate species, resembling more in general aspect the species of the *lugubris* group than it does *maculatus* and allies. According to the books *analis* constitutes the subgenus Paracercyon Seidl., differing from all other European species in having the metasternum angularly emarginate between the middle coxæ for the reception of the point of the mesosternal plate. Mr. Liebeck writes me that there are three examples of the true *analis* (Phila. Neck) in the Horn series of *analis* but he is of the opinion that these have been added since the Horn Revision.

The characters upon which *indistinctus* Horn was founded, viz —the color of the elytral apex and the punctuation of the eighth interspace, are variable and lie within the limits of variation of *maculatus*. Specimens identical with the type series of *indistinctus* have been sent me by Mr. Liebeck and I do not hesitate to confirm his opinion to this effect.