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DINAPATE WRIGHTII and its larva.

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DINAPATE n. g. (Bostrychinæ)

Form cylindrical, rather massive; head rather large, inferior; eyes round, prominent; clypeus truncate, labrum transverse ciliate in front; mandibles stout, pyramidal, acute at tip; maxillæ ciliate at tip, the palpi moderate in length, slightly ciliate, the last joint elongate-oval; mentum transverse, emarginate (ligula and palpi absent in my specimens); antennæ inserted between the eye and base of mandibles, ten-jointed, first joint as long as the next four, second as wide as long, joints three to seven broader than long, obconical, slightly flattened, last three joints forming a loose club which is as long as joints two to seven together and more than twice as wide, the joints of the club wider than long; thorax very convex, oboval, broader than long with asperities antero-laterally; scutellum oval at tip; elytra not flattened, the extreme tip sinuately truncate; prosternum very short in front of the coxæ, these ovate, contiguous, the cavities confluent and very narrowly enclosed behind; middle coxæ moderately separated, the mesosternum oblique; metasternum moderately long, the episterna wide, parallel, the posterior coxæ very narrowly separated; abdomen with five equal segments; legs moderate, the tibiæ dilated and strongly dentate externally; tarsi rather slender, nearly as long as the tibiæ, the first joint short, second as long as the fifth, second and third short and equal, last joint with a rather long onychium, the claws strong and arcuate; body winged.

The characters given above indicate a genus closely related to *Bostrychus* and *Amphicerus*, and like the latter without frontal margin, but with a slight projection over the base of the antennæ. The head is not so completely inferior as in those genera nor are the first two joints of the antennæ as short in comparison with the next five. The most striking difference, however, is in the structure of the tibiae with the outer edge strongly dentate.

The first fragments of this genus received by me consisted of a hind body and a head without mouth parts, excepting the mandibles. Supposing the head (which I now know to be larval) to belong to the fragments of body, the genus has been characterized in verbal remarks made before the Academy of Natural Sciences as eyeless, and therefore the largest blind Coleopter known. The discovery of additional material enables me now to correct an error which has unfortunately appeared in print.

D. Wrightii n. sp.—Black, shining, beneath brown sparsely pubescent; head broader behind the eyes, finely punctate, a vague median frontal impression; thorax oboval broader than long, nearly as wide as the elytra, very convex, densely granulate in front and posteriorly, roughly asperate at the sides anteriorly; elytra parallel, declivous posteriorly, the apices sinuately truncate, the sutural angle acute, the disc vaguely bicostate, the costæ terminating in tuberculiform elevations (♀) or with the inner costa prolonged in a spine (♂), the surface above with shallow cribrate punctures, the sides smoother and with two indistinct costæ beneath the humeral umbone; legs moderate, femora sparsely punctate; body beneath rather finely punctate, the abdomen more densely and with pale brownish pubescence. Length 1.50 – 1.86 inch; 38 – 47 mm.

The measurements are taken from the apex of the elytra to the anterior margin of the thorax; the smaller specimens are females. A size is thus indicated exceeding any *Bostrichide* known.

For the fragments in my possession I am indebted to the untiring exertions of Mr. W. G. Wright, of San Bernardino, Cal., a zealous Botanist, for whom neither the privations incident to an exploration of the Mojave Desert nor the jealous watchfulness of the Indians, seemed to have had any terrors.

Mojave Desert, California.

As the habits of this insect and its larva are now being investigated by Mr. Wright, I refrain from mentioning any matters of this character, as comparatively little is known except its food plant. It is to be expected that in the near future we will have full details from him. Should it prove to infest but the one plant it is likely to be at all times rare, and possibly to disappear.

DESCRIPTION OF LARVA.

FORM robust, convex, the ventral surface flat, gradually narrower from the prothoracic to the last segment, the last four segments recurved, their ventral surface in contact with that of the preceding segments; color whitish, consistence soft.

SEGMENTS twelve; three thoracic, nine abdominal.

PROTHORAX large, massive, somewhat narrowed in front, flat above, yellowish white, a dorsal and two lateral fuscous spaces, the latter including an elevated serrate line; spiracle large, fusiform in outline.

MESO- and METATHORACIC segments consisting of a dorsal and infero-lateral piece, the latter as seen from the side larger; these segments without spiracles.

ABDOMINAL segments. The first two consist of two dorsal pieces, the division indicated by a fold merely, the spiracles in these segments smaller than the prothoracic and situated in a rhomboidal depression between the dorsal and infero-lateral plates; segments three to eight gradually less distinctly divided on the dorsal portion, the spiracles in each gradually smaller and situated at the lower end of the dorsal division. Last segment obtusely ovate, scarcely plicate dorsally and without spiracle, the anal opening ventral and longitudinal.

SPIRACLES. Of these there are nine on each side, all functional; the first is situated at the side of the prothoracic segment, the others in the first eight ventral segments; they gradually decrease in size from the first to the last.

LEGS on the three thoracic segments nearly equal, with four articulations, the femoral piece longer, the tibia terminated by a small cleft claw, the under portion of which is short; surface of legs rather hairy.

HEAD very deeply inserted in the prothorax; the exposed portion dark chitinous, the internal ovate flattened on the under side, the anterior margin of head forming a thickened projection, the clypeus hemi-hexagonal with a chitinous border.

LABRUM transverse, ciliate, the anterior margin arcuate.

MANDIBLES stout, pyramidal, the apices chisel shaped, transversely wrinkled above; behind the base of the mandibles an oval tubercle of the side of the head.

MAXILLÆ with a large, irregularly quadrangular, basal piece, surmounted by an oval lobe, the inner edge of which is truncate, the surface densely ciliate; the palpi 3-jointed, the first largest, obovate, second narrower and shorter, the third slender, subuliform.

MENTUM trapezoidal, the sides arcuate, apex truncate, face obliquely impressed each side; the submentum broader, of the same general form; palpi similar to the maxillary, but much swollen, the ligula concealed by them, semi-circular, the palpi and ligula rather densely pilose.

ANTENNÆ small, situated near the base of the mandibles above the oval tubercle, 3-jointed, the first joint short, cylindrical, second narrower and longer, the third small, slender and bisetose at tip.

This larva reproduces the form and nearly all the details of *Apate capucina* as published by Perris (Ann. Fr. 1850, pl. xvi, 1). The antennæ are there described as 4-jointed, but the conical basal piece as described seems rather to be the protuberant connecting membrane.

The other parts figured by Perris are rather diagrams than real illustrations. The accompanying figures will give a fair idea of the imago and the larva, obviating the necessity for a very detailed description.

The head of the larva is remarkable in its size and the perfection of the mouth parts. It is entirely without trace of visual organs, although it is probable that the post-mandibular tubercle becomes the eye in the imago.

It is probable that the larva figured on the accompanying plate is fully grown. Two specimens were kindly sent me by Mr. W. G. Wright, one of which will be placed in the Museum of Comparative Zoology at Cambridge, for the use of those who have occasion to study the instructive series of larvæ there accumulated.

DESCRIPTION OF PLATE I.

- Fig. 1.—*Dinapate Wrightii*, upper view of the female, natural size.
Fig. 2.—Lateral view of the male, natural size.
Fig. 3.—Antenna of female, the club joints partly restored, enlarged.
Fig. 4.—Posterior leg of male, viewed from beneath, showing the arrangement of the teeth in three series, enlarged.
Fig. 5.—Larva, natural size.
Fig. 6.—Head of larva probably male, much enlarged.
Fig. 7.—Antenna of larva, enlarged.
Fig. 8.—Maxillæ, mentum and adjacent parts of larva much enlarged.
Fig. 9.—Mandible, upper view, enlarged.
Fig. 10.—Mandible, inner side, enlarged.
Fig. 11.—Front leg of larva, enlarged.
Fig. 12.—The claw of front leg, showing its cleft structure, much enlarged.

