

CONTRIBUTIONS TO THE KNOWLEDGE OF THE
DORYLAIDAE.

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(With 5 figures.)

Since the appearance of my paper concerning the Formosan Dorylaidae (Annal. Mus. Nat. Hung., X. 1912. pag. 285—299.) I have received from Mr. H. SAUTER some additional specimens, amongst which were three new ones and one which I described in my previous paper from a badly preserved specimen. I discovered this species in the recently acquired material and am able to complete its description; besides, I must change the name of it. The fourth new species I am describing here belongs to the Neotropical Region.

On this occasion I also change the following names in the genus *Dorylas*:

acuticornis MALLOCH (*nec* ZELL.), Smithson. Miscell. Coll., LX. No. 1. pag. 2. fig. (1912) into **cuspicornis** m.,

appendiculatus BRUNETTI (*nec* CRESSON), Rec. Ind. Mus. Not., VII. pag. 485. (1912.), into **prolatus** m.,

brevis BRUNETTI (*nec* CRESSON), Rec. Ind. Mus. Not., VII. pag. 491. (1912.), into **artus** m.,

flavomaculatus STROBL (*nec* HOUGH), Mitteil. Naturw. Ver. Steiermark, XLVI. 1909. pag. 113. (1910), into **flavonotatus** m.,

trochanteratus MALLOCH (*nec* BECK.), Proc. Unit. Stat. Nat. Mus., XLIII., pag. 297. fig. 9. (1912) into **columbianus** m.

1. *Dorylas lentiger* nov. nom.

Syn. *Dorylas mutilatus* KERT. (*nec* LÖEW), Annal. Mus. Nat. Hung., X. pag. 295. (1912).

The description of this species was made from a badly preserved specimen, as the head was greasy and the tip of the abdomen missing. Since then I have received three males in a very good state of preservation and so am able to complete my description.

To begin with I must state that I wrongly placed the species in my Key of the Formosan *Dorylas* (Ann. Mus. Nat. Hung., X. 1912. pag. 288.), as the scutellum is not bare, but bears some tiny hairs on its hind margin. Therefore it comes near to *D. gigas* from which it differs at first sight by its smaller size.

Eyes touching for about half the space between the vertex and the antennae. Frons dull black but in the middle a very little raised, with a

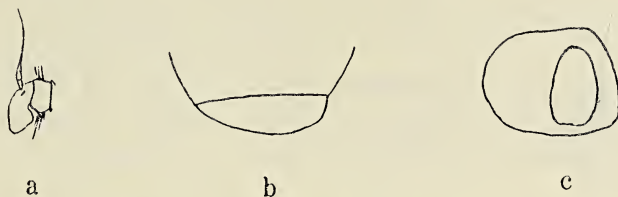


Fig. 1. *Dorylas lentiger* KERT. ♂.

a antenna, *b* hypopygium from above, *c* hypopygium from behind.

shining black callus towards the upper part. Vertex black. Back of the head light greyish.

Abdomen dull black, the only parts shining being the greyish pollinose hindmargins and the greater part of the hardly pollinose fifth segment, which bears on the disc two circular depressions, and is $1\frac{1}{2}$ times as long as the fourth. Hypopygium very small, only a third as long as the fifth segment, brownish pollinose; depression fairly large, oval, on right side.

The hind femora are bare and shining behind, but not in front, which was a mistake in my description.

All three males come from Formosa, Kankau (IV. V., 1912.).

The name *mutilatus* KERT. had to be changed for this name had already been used by LOEW for an African species.

2. *Dorylas pullvillatus* n. sp. ♂.

Eyes touching for more than half the space between the vertex and the antennae. Vertex and frons black, but it is possible that the latter is also covered by greyish white tomentum like the face, as the head is a little greasy. Back of the head dull black and well puffed out, brownish grey on the upper half with many very tiny bristles. Antennae blackish brown on the basal joints, but yellowish brown on the third joint; the second joint bears some long bristles above and beneath, the longest of which extend beyond the end of the third joint; the third joint is short, pointed but not rostrate; arista black, the thickened base yellowish. Proboscis orange.

Thorax dull brownish, bare, but a few tiny hairs occur in the notopleural region. Scutellum dull, of the colour of the thorax, with many very distinct black bristly hairs round its margin. Metanotum greyish pollinose.

Abdomen dull velvet-black with greyish-white bands on the hind-margin of the segments; first segment dull greyish with a line of long black bristles laterally; the second to the fifth velvet-black, the greyish-white band on the second occupies the fourth part only, on the third the third,

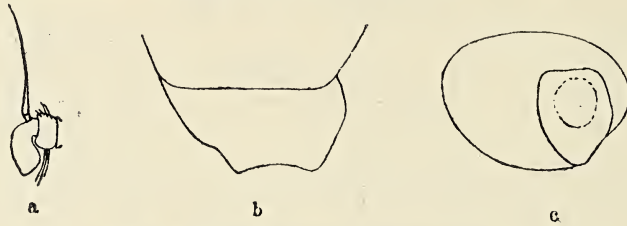


Fig. 2. *Dorylas pulvillatus* n. sp. ♂.

a antenna, *b* hypopygium from above, *c* hypopygium from behind.

on the fourth more than the third and on the fifth the half, of the length of each segment. On the fifth segment near the middle in the grey colour there are two round impressions. Genitalia rather small with a heart-shaped depression.

Legs rather dull orange, the femora only a little shining, coxae and the last joint of the tarsi blackish. Front and middle femora with a tiny serration on more than the tip half, and the hind femora with two rows of strong bristles on the tip half. Tibiae with rows of black bristly hairs, and the hind tibiae have a strong bristle at the middle on the outside. The apical half of the hind tibiae in front with a conspicuous excavation which does not bear any bristles at all, being quite bare.

Claws very long, curved, and darkened on the tip; pulvilli yellow, very well developed, broad.

Wings conspicuously long, slightly darkened brownish about the disc; stigma long and brown, being about twice as long as the next segment of the costa; middle cross-vein placed before the middle of the discal cell (40:100) Squamae small, pale brownish. Halteres yellow, dull.

Length about 6.1 mm; wings 8.1 mm.

One male from Formosa, Kankau (V. 1912).

This species may be easily known by its size, which brings it near to *adventicius* KERT. and *gigas* KERT. It differs from the first by its being a stout species with an incomplete fork on the discal vein, and from the second by the yellow legs. *D. excellens* KERT. has a quite differently coloured abdomen.

3. *Dorylas roralis* n. sp. ♂ ♀.

Male. Eyes touching for less than half the space between the vertex and the antennae. Frons and face glistening silvery white; vertex shining black; back of the head light greyish but towards the occiput a little brownish, well puffed out, with many tiny black hairs in irregular rows. Antennae black on the basal joints, but brownish glossed with silver on the third joint especially at its pale tip; the second joint bears only a very short bristle beneath; the third joint is long and has a beak. Arista black, thickened about the base.

Thorax dull brownish on the disc, the part in front of the scutellum with grey pubescence. Pleurae and metanotum greyish. Scutellum brownish a little shining, the tiny hairs round its margin indistinct.

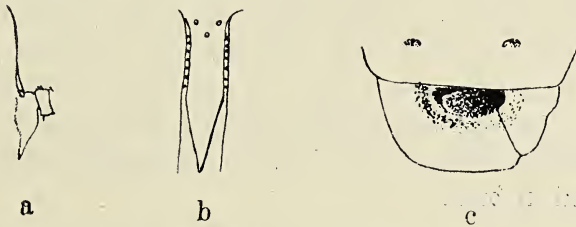


Fig. 3. *Dorylas roralis* n. sp.

a antenna, *b* upper part of the frons of the female, *c* hypopygium of the male from above.

Abdomen seen from above dull black, from the side dull greyish; first segment with dense light greyish pubescence; fifth segment only a little longer than the fourth, on the right longer than on the left, bearing two depressions. Hypopygium large, longer than the fifth segment; with a large depression at the base above, and divided into two asymmetrical parts, the right of which is smaller, shining, and bears a small almost circular depression on its right side, the left not very densely brownish pubescent with some tiny erected hairs, but bare and shining at the base.

Legs black, except the tip of the femora, the basal third of the tibiae, and all the tarsi, but the last joint of these latter darkened. Femora dull, covered with greyish tomentum, only the hind pair shining behind; the middle femora only with a tiny serration on the tip half. Pulvilli and claws yellow, the latter black on the tip half.

Wings not conspicuously long, with indistinct alula, uniformly darkened; stigma brown, about half as long as the next segment of the costa (12:22); middle cross-vein at the basal third of the discal cell (12:39). Squamae small, yellowish. Halteres dull brown, the style yellowish.

Female. Very similar, but the greyish tomentum is more extended on the disc of the thorax. Frons with parallel sides, glistening silvery white on the lower third, the upper part elevated shining black, bordered with small dimples at its sides, and ending in an acute projection in the white pubescence. Beak of the third antennal joint longer.

Abdomen greyer but all dull; the sixth segment shorter than the fifth. Belly dull black. Ovipositor short, the thick and stout basal part shining black, only a little shorter than the thin almost straight brownish-yellow point which bears a few yellow hairs at its base and reaches with its tip the hind-margin of the third abdominal segment.

Legs similar to those of the male, but in one specimen paler, the tibiae being also yellowish at their tip.

Length about 2.5 mm; wings 2.8 mm.

Four males and three females from Formosa, Tainan (VI. 1912).

Very closely allied to *nudus* KERT. but differs in the female sex by the quite differently marked frons and antennae, and otherwise coloured abdomen and legs; from *monas* PERK. at first sight by the different coloration of the abdomen; from *helluo* PERK. by the markings of the frons, differently coloured antennae etc., but the hypopygium seems to be very similarly shaped in both.

4. *Dorylas separatus* n. sp. ♂.

Eyes touching for about half the space between the vertex and the antennae. Frons velvet black with a very fine middle stripe of brownish-grey tomentum, which becomes wider and forks at the middle of frons; the two branches of the fork not reaching the antennae. Face dull black, in some lights greyish. Proboscis brownish. Back of the head light greyish becoming, towards the occiput, more pale brownish. Vertex black, only a little shining. Antennae black, the third joint covered by brownish tomentum; the second joint bears three short bristles; the third being somewhat pointed at the tip, but not sharp, nor drawn out; arista black, shining and thickened about the base.

Thorax dull pale brownish, but black on the fore margin; bare, but a few tiny black hairs occur behind the humeri and along the sides; pleurae greyish; scutellum dull pale brownish with tiny but distinct black hairs round its margin. Metanotum greyish.

Abdomen dull velvet black, only the greyish pollinose hind-margins a little shining; the grey side-spots extend on to the disc along the hind-margins; the basal segment almost entirely grey without bristles laterally; second and third with very small grey hind-margins appearing as a fine

line; on the fourth the grey colour occupies more than a third, on the fifth more than three quarters of the length of the segment; the fifth segment twice as long as the fourth. Hypopygium rather small, shorter than the fourth segment, dusted, brown, scarcely shining, bearing some erect hairs, and with an indentation at the fore-margin and a small, circular depression on the left side.

Legs dull greyish black, but the tips of all the femora, the base of the tibiae, and all the tarsi, yellow; the last tarsi darkened on the upper side;

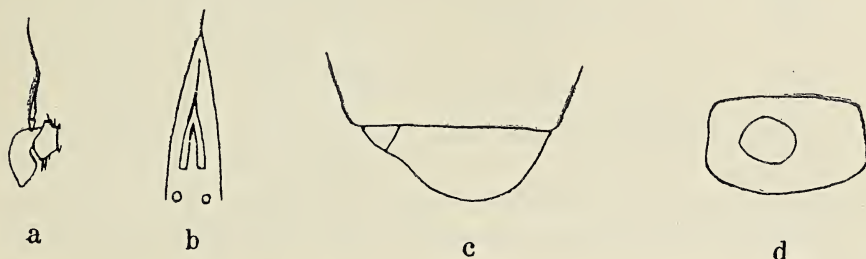


Fig. 4. *Dorylas separatus* n. sp. ♂.

a antenna, *b* frons, *c* hypopygium from above, *d* hypopygium from behind.

the hind femora are shining and bare behind. The middle femora only with a tiny serration on the tip half. Pulvilli and claws yellow, the latter black at the tip.

Wings not conspicuously long, with distinct alula, equally darkened, only the basal part of the subcostal and marginal cell hyaline; stigma brown, about three times as long as the next segment of the costa; middle cross-vein placed a little before the middle of the discal cell (28 : 60). Squamae small, yellowish. Halteres dull, blackish-brown.

Length about 3.8 mm; wings 4 mm.

One male from Formosa, Kankau (IV. 1912).

This species is very closely allied to *D. lentiger* KERT., but differs from it by the quite differently marked frons, differently shaped hypopygium, not so deeply darkened wings and by not having two indentations on the fifth abdominal segment.

5. *Dorylas graciosus* n. sp. ♂.

Eyes touching for less than half the space between the vertex and the antennae. Frons yellowish-white, the face glistening white; vertex black, shining, though covered with very fine greyish tomentum; back of the head light greyish but becoming, towards the occiput, brownish, well

puffed out, bearing many tiny black hairs in irregular rows. Antennae black on the basal joints, but yellowish-brown with silver white tomentum on the third joint; the second joint bears only a very short bristle beneath;

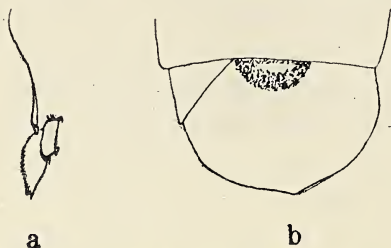


Fig. 5. *Dorylas gratiosus* n. sp. ♂.
a antenna, b hypopygium from above.

the third joint is not very long, distinctly pointed though hardly rostrate. Arista black, thickened about the base.

Thorax dull coffeebrown in the disc, bare with three not very conspicuous small black ones which are abbreviated in front and distinguished from the surface of the disc by being a little shining and not pubescent. Pleurae greyish, metanotum lighter. Scutellum of the same colour as the dorsum of the thorax, the hairs round its margin not very conspicuous.

Abdomen dull coffeebrown a little shining towards the last segments, with grey side spots which do not extend on to the disc only on the first and fifth segments leaving the basal part free of the greyish tomentum; the basal segment has four small black bristly hairs near the sides; fifth segment one and a half times as long as the fourth; hypopygium about as long as the fifth segment, a little shining, the greater part covered with exceedingly minute pubescence, bearing also some tiny erect hairs, and with a depression above at the base, it is divided into two asymmetrical parts, the right of which is larger and bears a small, nearly triangular depression on the right.

Legs dull, mainly orange, but the femora are black except at the tip and more extensively at the base, besides, the trochantères are black and greyish white pruinose, and the last joint of the tarsi darkened. Hind femora bare and shining behind; middle femora with a tiny serration on the tip third. Pulvilli and claws yellow, the latter black at the tip.

Wings not conspicuously long, slightly darkened; stigma brown, about as long as the next segment of the costa; middle cross-vein placed at about the basal third of the discal cell (21:56), just under the end of the mediastinal vein. Alula present. Squamae small yellowish. Halteres brown, dull, the style yellowish.

Length about 4 mm; wings 3.9 mm.

One male from Paraguay.