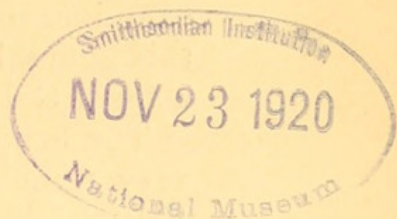


THE ANNALS
AND
MAGAZINE OF NATURAL HISTORY.
[NINTH SERIES.]

No. 35. NOVEMBER 1920.



LI.—On the Oriental Members of the Coleopterous Group
Macroductylides (Melolonthidæ). By GILBERT J. ARROW,
F.Z.S., F.E.S.

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IN his classification of the Melolonthidæ ('Genera des Coléoptères,' vol. iii.) Lacordaire noted as a remarkable fact that an Indian insect, *Dejeania alsiosia*, Bl., was the sole known non-American representative of the great Sub-tribe Macroductylides. In the Ann. & Mag. for 1907 (ser. 7, vol. xix. p. 436), I announced that *Dichelomorpha ochracea*, placed by Burmeister in the Hoplides, was really congeneric with *Dejeania*, and that the latter name having been pre-occupied must be replaced by *Dichelomorpha*. I also referred to this genus a species (*D. marginata*, Nonfr.) wrongly described as a *Hoplia*. The number of described species allied to these is now fairly considerable, but they have been generally misplaced, so that the utmost confusion still prevails amongst them.

Dichelomorpha ochracea, described by Burmeister in 1855, was again described by Boheman in 1858 as a species of *Dichelus* (*chinensis*, Boh.), and in 1900 Fairmaire transferred it under that name to yet another genus, which he named *Sinochelus*, adding two more species, which also belong to *Dichelomorpha*. In 1881 Sharp described a species from

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Sumatra (*D. crassa*, Sharp) and placed it in another Hopline genus, *Dichelhoplia*, and Fairmaire in 1898 followed him by adding a species from Tonkin to that genus (*D. fusco-picta*). Dalla Torre's recent Catalogue of the Melolonthinae, while naturally omitting these errant forms, has collected nine in all under the name *Dichelomorpha*, but two of these (the "*Plectris*" *punctuligera* and *glabrilinea* of Walker) have certainly no connection with it. I have referred to these in my paper on the "Melolonthine Beetles of Ceylon" (Ann. & Mag. Nat. Hist. (8) xviii. 1916, p. 430).

But this does not exhaust the errors of which these insects have been the victims, for a genus, *Diphycerus*, formed by Fairmaire for two species from China and placed by him in still another section of the Melolonthinae, proves upon examination to be closely related to *Dichelomorpha*. Of this genus I have here described three additional species and a third Oriental genus is also characterized.

The genus *Dichelomorpha* will certainly prove to comprise very numerous forms. A few of those contained in the British Museum are here named and described. It is possible that others than those I have mentioned may have been wrongly ascribed to other genera, but I have appended a list of all at present known to me. These insects have in common a number of peculiar features, chief of which are the mobile but symmetrical claws, those of the front feet generally differing a little from the rest, and the remarkable interlocking of the pronotum and scutellum, the base of the former being notched on each side, sometimes deeply and sometimes only minutely, to receive the anterior angles of the scutellum, which is sometimes also notched in the middle to receive a median process of the pronotum. *Diphycerus* differs from *Dichelomorpha* in having this interlocking mechanism much more strongly developed, as well as in its very sharp and slender claws, which are cleft upon the front feet alone.

A marked characteristic of the group is the great disparity between the sexes. The females have sometimes little resemblance to the males and are generally less numerous. In the male the legs are generally very stout, the abdomen short and hollowed beneath, with the ventral segments free and the pygidium rather long and narrow. In the female the legs are comparatively slight and feeble, the abdomen is large, rotund and rigid, and the pygidium short and broad. In some species of *Dichelomorpha* the 5th ventral segment is enormously enlarged in the female and

the pygidium proportionally reduced, so that the ventral orifice becomes actually dorsal in position.

Although so generally confused with the *Hoplides* these insects are quite distinct. They are closely related to the South American genus *Ceraspis*, which also exhibits most of their characteristic features. They are distinguished from the *Hoplides* by the possession of six exposed ventral segments, symmetrical claws, and the normal complement of tibial spurs—that is, one upon each front tibia and two upon each of the others.

The Oriental species of the group known to me are :—

DICHELOMORPHA, Burm.

Syn. *Dejeania*, Blanch., *Sinochelus*, Fairm.

<i>alsiosia</i> , Blanch. (<i>Dejeania</i>).	India.
<i>arana</i> , sp. n.	Borneo.
<i>assamensis</i> , sp. n.	Assam.
<i>borneensis</i> , Brenske (<i>Dejeania</i>).	Borneo.
<i>brenskii</i> , Nonfr. (<i>Dejeania</i>).	Siam.
<i>cinctipennis</i> , Fairm. (<i>Sinochelus</i>).	Tonkin.
<i>crassa</i> , Sharp (<i>Dichelhoplia</i>).	Sumatra.
<i>delauneyi</i> , Fleut. (<i>Dejeania</i>).	Annam.
<i>felina</i> , sp. n.	Annam.
<i>fuscipicta</i> , Fairm. (<i>Dichelhoplia</i>).	Tonkin.
<i>limbata</i> , Fairm. (<i>Sinochelus</i>).	E. China.
<i>lineata</i> , Arrow (<i>Dejeania</i>).	Burma.
<i>marginata</i> , Nonfr. (<i>Hoplia</i>).	Burma.
<i>multicolor</i> , sp. n.	Indo-China.
<i>nigra</i> , Brenske (<i>Dejeania</i>).	Borneo.
<i>nitidicollis</i> , sp. n.	Indo-China.
<i>ochracea</i> , Burm. (<i>Dichelomorpha</i>).	S. China.
<i>chinensis</i> , Boh. (<i>Dichelus</i>).	
<i>pallida</i> , sp. n.	Malay Peninsula.
<i>pulchella</i> , sp. n.	Tonkin.
<i>rufipennis</i> , sp. n.	Tenasserim.
<i>uniformis</i> , sp. n.	Indo-China.

DIPHYCERUS, Fairm.

<i>alcedo</i> , sp. n.	Sikkim.
<i>davidis</i> , Fairm.	E. China.
<i>jucundus</i> , sp. n.	Tibet.
<i>reitteri</i> , Sem.	China.
<i>tonkinensis</i> , sp. n.	Tonkin.

XENOCERASPIS, gen. nov.

<i>dispar</i> , sp. n.	Sikkim.
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Dichelomorpha assamensis, sp. n.

Fusco-brunnea, opaca, supra ubique coriaceo-rugosa, setis brunneis et griseis dense vestita, capite, pronoto partim, scutello, elytrorumque sutura et lineis tribus longitudinalibus setis pallidis ornatis; modice elongata, capite brevi, clypeo lato, margine arcuato, reflexo, pronoto longitudine parum latiori, lateribus medio angulatis, antice et postice fere rectis, valde contractis; elytris 4-costatis, lateribus pone humeros leviter dilatatis, deinde paulo contractis, apicibus haud penicillatis; pygidio corporeque subtus ubique dense et æqualiter griseo-pubescentibus; tibia antica fortiter bidentata; antennis tarsisque sat gracilibus, unguibus minute fissis:

♂, brunnea, elytris griseo-lineatis:

♀, grisea, elytris brunneo-lineatis.

Long. 11-14 mm.; lat. max. 5-7 mm.

ASSAM: Silhet, Chandkhira.

There are six males in the British Museum, and the Brussels Museum contains a single female. It is the largest species of the genus known to me.

The upper surface is very densely clothed with velvety pubescence, but a small patch near the base of the pronotum on each side may be partly or entirely denuded. In the male the brown pubescence predominates and there is a pattern of yellowish-grey setæ, which form five small patches at the base of the pronotum and clothe the scutellum, the elytral suture, and the three discoidal costæ upon each elytron. In the female the grey setæ predominate, covering the pronotum (except for two or three partially denuded areas on each side), the scutellum, and the elytra, with the exception of four dark stripes on each.

The abdomen of the male is strongly arched, the pygidium narrow, and the claws are very minutely cleft. In the female the abdomen is moderately convex, the pygidium broad, the legs are very short, and the claws are less deeply cleft. The antennæ are rather long and slender in both sexes.

D. assamensis resembles *D. alsiosia*, Bl., but is darker in colour and has much more conspicuous markings. The clypeus is deeply excavated, but less deeply than in *D. alsiosia*, the pronotum is more convex, its sides less sharply angulated in the middle, straight and not sinuated from the angle to the base, and the hind angle very obtuse.

Dichelomorpha multicolor, sp. n.

♂. Brunnea, supra densissime squamosa, subtus cum pedibus sat dense et longe flavo-pubescent; elongata, convexa, opaca, capite brevi, dense flavo-setoso, margine fortiter reflexo, arcuato; pronoto distincte transverso, densissime punctato et minute brunneo-setuloso, antice et lateraliter setis luteis, postice medio setis albidis majoribus ornato, lateribus fortiter arcuatis, angulis anticis fere obsoletis, posticis obtusis; scutello dense albido-squamoso; elytris dense brunneo-squamosis, marginis suturalis dimidio posteriori maculaque irregulari mediana albo-squamosis, lineis 2 vel 3 externalibus, basi, medio et apice confusis, pallide fulvis ornatis, sutura ante extremitatem utrinque fulvo-penicillata, lateribus paulo ante medium dilatatis; pygidio dense pallide flavo-setoso; tibia antica valde bidentata, antennis tarsisque gracilibus, unguibus minute fissis.

Long. 12 mm.; lat. max. 6 mm.

INDO-CHINA: Upper Mekong R., Vieng Vai (*R. Vitalis de Salvaza*, May).

I have seen only a single male. It is evidently allied to and not unlike *D. delaunayi*, Fleut., but the elytral pattern is more complicated, consisting of elongate scales or setæ of three different colours, brown, yellow, and white, in addition to which those clothing the head and the front and side margins of the pronotum are of a much richer yellow hue and the disc of the pronotum, except a small triangular white mark in front of the scutellum, is nearly black. The scutellum is white, as well as the posterior half of the elytral suture, dilating at the anterior end into an irregular transverse median patch. The general surface of the elytra is chocolate-brown, but the front and hind margins are buff-coloured and are connected upon the outer half by longitudinal streaks of the same colour, which become confused in the middle. Just before the end of the elytral suture there is a rather long tuft of golden hairs. The pygidium is clothed with rather close-lying buff-coloured setæ and the legs and lower surface bear long coarse hairs of the same colour.

Dichelomorpha pulchella, sp. n.

♂. Brunnea, supra densissime squamosa, subtus cum pedibus ubique sat longe pubescens, capite prothoracisque marginibus (basi excepto) flavis, hujus disco fere nigro, macula basali grisea, scutello griseo, elytris brunneis, basi fasciaque postmediana per suturam continuata et cum basi internexa griseis; elongata,

convexa, opaca, capite rugoso, margine rotundato, leviter reflexo ; pronoto densissime punctato sed haud dense setoso, pilis longis interspersis instructo, lateribus antice et postice valde contractis, vix arcuatis ; elytrorum lateribus ante medium leviter dilatatis, sutura ante apicem longe flavo-penicillata ; pygidio coriaceo-punctato, modice dense fulvo-setoso, pilis longis erectis interspersis, apice subnudo ; tibia antica valde bidentata ; antennis tarsisque gracilibus, unguibus minute fissis.

Long. 8.5-9.5 mm. ; lat. max. 4.5 mm.

TONKIN : Dap Kan (*R. Vitalis de Salvaza*, April).

I have seen only male specimens.

Chocolate-brown, the head clothed with orange-coloured setæ, the pronotum nearly black, bordered in front and at the sides with similar orange setæ, the elytra decorated with irregular grey basal and median patches united by a narrow longitudinal stripe on each side and also extending along the suture. The scutellum and a small patch just in front of it are of the same shade.

This species has a very close resemblance to *D. multicolor*, but is rather smaller, the scales of the upper surface are of less contrasted colours, and the lateral and hind margins of the elytra are dark. The clypeus is rather longer and more rugose, and its front margin is less strongly reflexed. The pronotum is more strongly contracted behind, and its disc bears fairly numerous long erect hairs set at nearly equal distances amongst the minute setæ. The elytra are less strongly dilated near the middle of the lateral margins. The pygidium is less finely and closely clothed and is rather longer, narrower, and more vertical.

Dichelomorpha felina, sp. n.

♂. Brunnea, supra densissime squamosa, subtus cum pedibus ubique sat longe pubescens, capite prothoracisque marginibus et linea mediana (hac basi grisea) flavidis, disco utrinque nigro, scutello elytrorumque linea suturali postica, secunda a basi fere ad marginem tertiamque a medio ad apicem pertinentibus, duabus basalibus brevibus aliaque mediana brevi, griseis ; elongata, cylindrica, opaca, capite antice rotundato, reflexo, pronoto dense setoso, pilis brevibus erectis interspersis instructo, lateribus ante medium rotundato-arcuatis, antice et postice valde contractis, fere rectis ; elytris lateraliter vix dilatatis, ante apicem flavo-penicillatis ; pygidio angusto, dense griseo-squamoso ; tibia antica fortiter bidentata, tarsis antennisque gracilibus, unguibus minutissime fissis.

Long. 7.5 mm. ; lat. max. 4 mm.

ANNAM : Keng Trap (*R. Vitalis de Salvaza*, May).

Of this also I have seen only the male, a single specimen.

It is a species closely related to *D. multicolor* and *pulchella*, especially the latter. It is smaller, narrower, and more cylindrical in shape, and the pronotum is without the long erect hairs occurring in *D. pulchella*. The coloration and pattern are similar, but the pronotum, in addition to the yellow border, has a median line of grey setæ by which the black disc is divided into two patches, and the pale scales of the elytra form irregular longitudinal stripes, the first extending from the middle of the suture to the apex, the second from the base to beyond the middle of the elytron, and the third from the middle to near the extremity. There are two other very short longitudinal bars at the base, of which the outermost reappears just before the middle. The pygidium (in this sex) is narrow and densely clothed with grey scales.

Dichelomorpha nitidicollis, sp. n.

♂. Rufa, capite pronotoque nigris, capite, pronoti lateribus, scutello elytrisque sat dense flavo-setosis; sat angusta, capite crebre punctato, margine rotundato, reflexo; pronoto nitido, sat crebre, antice et lateraliter creberrime, punctato, disco pilis griseis erectis sat parce vestito, lateribus antice fortiter arcuatis, postice fere rectis, valde contractis; elytris lateraliter leviter arcuatis, ante apices longe sat late fulvo-penicillatis; pygidio sat dense fulvo-setoso, corpore subtus pedibusque longe fulvo-hirsutis; antennis tarsisque gracilibus, tibia antica sat fortiter bidentata, unguibus minutissime fissis.

Long. 8 mm.; lat. max. 4 mm.

UPPER MEKONG R. : Houei Sai (*R. Vitalis de Salvaza*, May).

Only a single male specimen is known. It is reddish brown, with the head and pronotum black, and clothed with rather long yellow hair beneath and with minute yellow setæ above, except upon the disc of the pronotum, which is shining black and bears only a thin clothing of erect short hairs amongst which longer hairs are scattered. The lateral margins bear close-set orange setæ, and there is a minute grey tuft at the middle of the base. The scutellum and elytra are fairly closely covered with buff-coloured setæ, which are sparser on the anterior part of the elytra and much less conspicuous at the sides. There is a rather broad ante-apical fringe of long yellow hairs crossing the suture,

and a few scattered erect hairs extend forward from this in a line parallel with the outer margin. The pygidium is moderately closely covered with close-lying elongate setæ of the same colour.

Dichelomorpha rufipennis, sp. n.

Castaneo-rufa, capite pronotoque disco infuscatis, capite, pronoti lateribus, elytrorum maculis vagis basali et laterali pygidioque setis fulvis minutis, pronoti macula parva basali, scutello, elytrorum sutura postice et macula mediana transversa setis pallidioribus sat dense vestitis, corpore subtus sat dense fulvo-vestito; modice elongata, parum convexa, capite et pronoto densissime punctulatis, clypeo brevi, margine arcuato, fortiter reflexo, pronoto quam longitudine paulo latiori, lateribus fortiter arcuatis, angulis omnibus obtusis; elytris sat longis, modice nitidis, ante medium dilatatis, ad suturam postice sat longe fulvo-penicillatis, angulis apicalibus paulo rotundatis; antennis tarsisque gracilibus, unguibus minute fissis.

Long. 10-11 mm.; lat. max. 6 mm.

TENASSERIM Mts., Siam Border (*K. G. Gairdner*).

Two male specimens are all that I have seen of this. It is a rather large species, and its chestnut-red elytra are in well-marked contrast to the black pronotum, of which the front and side margins are also reddish. The scales with which the upper surface is decorated are of two shades of yellow, pale upon the inner part and deep orange upon the outer. The pronotum is almost circular in its outline and relatively longer than in the four species just described, and the elytra are not long in proportion, their sides being distinctly dilated near the middle. *Dejeania bremskei*, Nonfr., so far as can be judged from the description, resembles *D. rufipennis*, but the twice-stated dimensions indicate an insect much larger than any species of the genus at present known to me. Nonfried's statement that the claws of *D. bremskei* are entire is most probably incorrect.

Dichelomorpha uniformis, sp. n.

Obscura, supra fusco-brunneo- vel olivaceo-brunneo-squamosa, pronoto griseo-circumdato, corpore subtus pedibusque griseo-hirsutis; parum elongata, capite brevi, clypeo nudo, nitido, grosse punctato, margine truncato, reflexo; pronoto transverso, convexo, lateribus arcuatis, haud angulatis, angulis anticis et posticis obtusis; elytris ante medium leviter dilatatis, postice setis nonnullis erectis parce instructis, haud penicillatis; tibia antica bidentata, unguibus omnibus sat profunde fissis:

♂, latior, pygidio densissime fulvo-squamoso, angusto, verticali, pedibus crassis, tarsis intermediis abbreviatis, posticis elongatis, antennis modice elongatis :

♀, pygidio brevi, minus dense griseo-setoso.

Long. 6-6.5 mm. ; lat. max. 3.5 mm.

INDO-CHINA, LAOS : Luang Prabang, Xieng Khouang (*R. Vitalis de Salvaza*, April and May).

Although very different in appearance, owing to the dark colour of the scales with which the upper surface is clothed, this species is nearly related to *D. ochracea*, Burm., and of similar size and shape. It is of a very short and compact form, especially in the male, the upper surface clothed with very densely packed dark setæ, paler at the extreme edge of the pronotum and with a few longer outstanding setæ placed in rows upon the posterior part of the elytra, the lower surface clothed with decumbent whitish hairs.

The male and female as usual differ considerably. The pygidium is densely clothed with yellow scales in the male and has less closely packed grey setæ in the female. In the male the legs are very stoutly formed (although the front tibia is rather less massive than in that sex of *D. multicolor* and *pulchella*), the middle tarsi are short and thick and the hind tarsi long and slender. The club of the antenna is of moderate length only.

Dichelomorpha pallida, sp. n.

Rufa, corpore supra squamis pallide flavis, subtus pedibusque setis griseis dense vestita, pronoti linea mediana, scutello singulique elytri parte mediana pallidioribus, humeris minus dense vestitis, rufis ; parum elongata, convexa, capite fusco-rufo, rugoso, erecte setoso ; pronoto medio dilatato, lateribus antice et postice fortiter contractis, fere rectis, angulis omnibus obtusis ; elytris ante medium leviter dilatatis, postice haud penicillatis :

♂, pedibus validis, tibiis anticis acuminatis, haud dentatis, tarsis intermediis brevissimis, crassis, posticis elongatis ; pygidio elongato, verticali, dense fulvo-squamoso ; antennis modice elongatis :

♀, pedibus minus crassis, tibia antica extus minute dentata ; pygidio lato, minus dense flavo-setoso.

Long. 9-10 mm. ; lat. max. 4-5 mm.

MALAY PENINSULA : Penang (*Lamb*).

Allied to *D. ochracea*, but larger and a little more elongate in shape. The body is densely clothed above with bright yellow scales, which are of a paler tint upon the median line of the pronotum, the scutellum, and the median part of each

elytron. The legs and lower surface are clothed with rather thick greyish-yellow pubescence, through which the reddish colour of the integument is visible. At the shoulders of the elytra the scales change to narrow setæ, which also leave exposed the red underlying surface.

In the male the legs are extremely massive, the front tibia is without the usual strong lateral tooth but tapers to a point at the extremity, the middle tarsi are extremely short and the hind tarsi moderately long, but less slender than in *D. ochracea*. The abdomen is very strongly contracted in this sex, the pygidium long, vertical, and densely clothed with yellow scales.

In the female the front tibia has a very small and inconspicuous lateral tooth, all the tarsi are moderately slender, and the pygidium is broad and clothed with grey setæ.

Dichelomorpha aranea, sp. n.

Brunnea, squamis brunneis et griseis dense vestita, clypeo, pronoti margine angusto, vitta mediana antice abbreviata, scutello, elytrorum sutura postice lineisque utrinque duabus longitudinalibus pygidioque griseo-squamosis, pronoto et elytris sat parce setis erectis nonnullis brevibus albis instructis, corpore subtus pedibusque dense griseo-hirsutis; parum elongata, clypeo antice rotundato, reflexo, pronoto lato, lateribus medio dilatatis, antice et postice fere rectis, valde contractis; elytris post humeros dilatatis, deinde angustatis, postice haud penicillatis; tibiis anticis valde bidentatis:

♂, pedibus robustis, anticorum unguibus fassis, clava antennali modice elongata:

♀, pedibus minus robustis, tarsis sat gracilibus, unguibus omnibus fassis, segmento ventrali quinto permagno, pygidio parvo.

Long. 5-6.5 mm.; lat. max. 3-3.5 mm.

N. BORNEO, SARAWAK: Puak (*G. E. Bryant*, April, May).

This evidently resembles the very insufficiently described *D. borneensis*, Brenske, but it is smaller, and the pale border of the pronotum is not confined, as in that species, to the front and lateral margins. As in *D. borneensis*, the pronotum and elytra bear pale scattered scales standing out from the rest, those upon the elytra being arranged in longitudinal rows. The upper surface is closely clothed with brown scales, replaced by white scales at the margins of the pronotum and an incomplete median line, as well as upon the scutellum and three longitudinal lines upon each elytron, the first bordering the suture and abbreviated anteriorly.

The white lateral border of the pronotum is a little dilated at the hind angle, and the median line is also dilated at the base and is sometimes not produced far beyond it.

This is a much more elongate species than *D. ochracea*, *uniformis*, and *pallida*. The prothorax is rather large relatively and strongly contracted both in front and behind, producing a narrow-waisted form.

The above description applies only to the male. In this sex the front claws alone are cleft, but in female specimens, which I believe to belong to the species, all the claws are cleft, in addition to which there are no pale markings upon the upper surface, the 5th ventral segment is greatly enlarged, and the pygidium much reduced.

Diphycerus tonkinensis, sp. n.

Niger, elytris interdum castaneis; ovatus, compactus, capite crebre granuloso, erecte griseo-piloso, clypeo breviter semicirculari; pronoto convexo, dense varioloso, basi lævi lineaque basali mediana elevata, pilis longis erectis sparsuto setisque flavidis prope latera et angulos posticos vestito, antice angustato, angulis anticis fere acutis, posticis rectis, lateribus post medium angulatis; scutello antice nitido, utrinque dense flavido-squamoso, squamis elongatis, convergentibus; elytris profunde sat crebre punctatis, squamis elongatis nonnullis albidis vestitis; pygidio magno, setis albidis adpressis æqualiter haud dense vestito; corpore subtus, propygidio pedibusque setis longioribus et densioribus similiter vestitis:

♂, minor, pedibus antennisque longissimis, prothorace antice attenuato, abdomine toto tecto:

♀, major, magis ovata, antennis pedibusque modice gracilibus, abdomine postice haud tecto.

♂. Long. 5.5 mm.; lat. max. 3 mm.

♀. Long. 7-8 mm.; lat. max. 4 mm.

TONKIN: Chapa (*R. Vitalis de Salvaza*, May, June);
LAOS: Pak Lay (*R. V. de Salvaza*, Nov.).

This is very similar to the typical species, *Diphycerus davidis*, Fairm., of Eastern China, the pronotum of which is less densely punctured. It appears to resemble still more the second Chinese species, *D. reitteri*, Sem., of which only the female has been described. In that sex of the new species the tuft of scales upon the scutellum is yellow, instead of white, and the scales are erect and not decumbent.

The two sexes differ considerably, as in all these insects. The male is much smaller than the female, with the prothorax attenuated in front, the abdomen and elytra much

shorter, the legs and antennæ very long and slender, and the club of the latter as long as the footstalk. The pygidium is inclined inwards and the abdomen greatly contracted and completely covered by the elytra. In addition, the elytra of three females collected by M. Vitalis are of a deep red colour, whilst those of the males are black.

Diphycerus alcedo, sp. n.

♂. Niger, elytris cyaneis, nitentibus; parvus, brevis, totus griseo-hirtus; capite rugoso, clypeo parum brevi, antice truncato, labro porrecto; pronoto convexo, antice valde attenuato, quam longitudinem vix latiori, densissime varioloso, erecte nigro-piloso, lateribus setis albidis adpressis ornatis, basi nitido, medio profunde bi-inciso, angulis omnibus acutis; scutello antice nitido, impresso, utrinque setis flavidis convergentibus ornato; elytris brevissimis, conjunctim subrotundis, post humeros valde dilatatis, ubique setis minutis decumbentibus pilisque erectis longis nigris vestitis; pygidio modice, corpore subtus, propygidio pedibusque densius albovestitis, pedibus antennisque longissimis.

Long. 5 mm.; lat. max. 3 mm.

SIKKIM: Darjeeling, Kalimpong, Peshoke (April, May).

This little insect, of which I know the male only, is remarkable for the extreme abbreviation of its hind-body, the elytra, which cover the much-contracted abdomen, being conjointly as broad as they are long. The pronotum, on the other hand, is narrow and attenuated in front, and the clypeus is longer than in the other known species. Instead of being rounded in front this is truncate, and the labrum is extruded and placed almost in the same plane. The maxillæ are furnished with long and prominent tufts of hair.

The peculiarity of the mouth-structure renders it probable that a new genus may ultimately have to be made for this species, but it is desirable to await the discovery of the female in view of the great disparity between the sexes of these insects.

Diphycerus jucundus, sp. n.

♂. Æneo-niger, elytris fulvis, basi et sutura obscuris; oblongus, parum convexus, ubique griseo-hirsutus, corpore supra pilis longioribus fuscis intermixtis instructo; capite dense, clypeo grossius granulato, hoc late transverso, truncato; pronoto quam longitudinem paulo latiori, modice convexo, antice angustato, coriaceo, basi vittaque mediana antice evanescenti lævigatis, baseos medio profunde bi-inciso, angulis omnibus fere rectis; scutello

cordiformi, lævi, antice bilobato, medio leviter impresso, lateribus albido-setosis; elytris inæqualiter haud profunde aut crebre punctatis, setis brevibus albidis vage aggregatis prope suturam ornatis pilisque longis obscuris sat parce interspersis; pygidio subnitido, longe hirsuto; corpore subtus pedibusque ubique sat dense albido-pubescentibus.

Long. 5-6 mm.; lat. max. 2.5-3 mm.

TIBET: Siao-lou.

Of this species also I have seen only males. There is little superficial resemblance to the other species of the genus. It is a more oblong and less convex insect, clothed both above and beneath with long erect hair. There is a slight metallic green lustre, except upon the head (which is densely rugose and opaque, with the clypeus straight in front and very short) and the bright yellow outer part of the elytra. The scutellum is smooth and bears only an external fringe of white setæ, and the elytra are decorated in the sutural region with vaguely-indicated clusters of similar but not erect setæ. The pronotum and elytra are less strongly sculptured than in the preceding species, and the elytra are less dilated behind the shoulders and only slightly narrowed behind. The pygidium is clothed with very long hairs. The antennæ, as usual in the male, are very slender and the legs are moderately long.

XENOCERASPIS, gen. nov.

Corpus elongatum, antice angustatum, parum convexum, haud squamosum. Clypeus brevis. Oculi parvi. Prothorax angustus, antice paulo attenuatus, basi utrinque exciso et angulatim producto. Scutellum latum, postice haud acuminatum. Elytra paulo deplanata, postice separatim rotundata. Abdomen postice haud tectum. Antennæ graciles, 10-articulatæ. Pedes robusti; tarsi longi, unguibus validis, æqualibus, pedis antici fissis, reliquis integris. Tibia antica bidentata. Coxæ posticæ extus prominentes. Abdomen subtus 6-articulatum.

♂. Pedes robustiores, tarsi intermediis valde contractis et incrassatis, femoribus posticis majoribus, tibiisque intus late angulatim productis, calcaribus nullis.

Although closely related in all essentials to *Dichelomorpha* this genus is very different in its general aspect. It is not clothed with scales, but with rather coarse hairs and setæ. The interlocking mechanism of the pronotum and scutellum is much more developed than in *Dichelomorpha*, the base of the pronotum being furnished with two angular projections

fitting into deep notches formed between the scutellum and elytra. Between the two projections is a rounded lobe, and the excisions between this and the former are not sharp but rounded. The prothorax is much narrower than the elytra, but is relatively broad behind and narrow in front. Both front and hind angles are sharp, especially in the male. The scutellum is broad, almost transverse, extremely blunt behind. The elytra are rather flat, with a prominence at the shoulder but dilated behind it, separately rounded at the extremity and not covering the abdomen behind. The latter is not long, and consists of six visible segments ventrally. The front coxæ are very prominent vertically, the hind coxæ produced and prominent laterally, the front tibiæ have two not very acute teeth and all the tarsi are long, except the middle ones in the male. The claws are long, stout, and symmetrical, not blunted at the tips, those of the front feet cleft and the rest entire. The antennæ are slender in both sexes, joints 2 and 7 stout and all the rest elongate.

In the male the legs are much stouter than in the female, the front tibia is narrower and the teeth much closer together, the middle tarsus is very strongly contracted, its 2nd, 3rd, and 4th joints saucer-shaped, but each angularly produced externally, the hind coxa is broader and more exposed laterally, the hind femur thickened and a little arched, the hind tibia produced into a broad angular plate internally and without terminal spurs. The abdomen is not arched, the pygidium is broad and the propygidium not exposed.

In the female the abdomen is very convex beneath, the propygidium and pygidium are exposed and the latter is very oblique.

Xenoceraspis dispar, sp. n.

Rufo-castaneus, corpore subtus nigro, pedibus rufis, genubus infuscatis; capite crebre rugoso-punctato, clypeo brevi, lato, margine reflexo, fere recto, pronoti lateribus post medium angulatis, antice fere rectis, valde contractis, postice sinuatis; scutello lævi, nitido, utrinque minutissime punctulato, flavo-setoso; elytris alutaceis, flavo-setosis:

♂, pronoto dense punctato-rugoso, minute pallide setoso, basi medio albo-penicillato, lateribus post medium fortiter angulatis, antice valde contractis, angulis posticis productis; elytris sat nitidis, parce et minute pallido-setosis; pygidio lævi, nitido, detecto:

♀, pronoto paulo breviori, angulis minus acutis, dorso densissime fulvo-hirto, pilis longioribus obscuris sparsis; elytris ubique setis griseis haud minutis vestitis; propygidio et pygidio similiter vestitis, detectis.

Long. 8·5–10 mm.; lat. max. 4·5–5 mm.

SIKKIM: Gopaldhara, Rungbong Valley (*H. Stevens*).

The two sexes of this interesting insect are remarkably dissimilar. The male is only very thinly clothed with pale setæ on its upper surface, but with a conspicuous tuft on each side of the scutellum and one in the middle of the base of the pronotum. The elytra are gently expanded at the sides, the pygidium is smooth and shining and not covered by the elytra.

In the female the pronotum is very densely clothed with a uniform erect golden-yellow pubescence, with a narrow median line of a paler yellow and very long erect dark hairs thinly distributed amongst the rest. The elytra are moderately closely clothed with rather coarse decumbent yellow hairs, with similar long dark hairs scattered thinly amongst them, and the pygidium and propygidium are similarly clothed and both exposed. The pronotum is less narrowed in front, with its front, hind, and lateral angles less sharp than in the male.

LII.—*Description of a new Genus and Species of Cicadidæ from Cuba.* By W. L. DISTANT.

A SPECIMEN of this interesting genus and species was recently sent to me by Mr. Ashton of Sydney among other Cicadidæ from Australia and various neotropical localities for identification. The latter he had received from Herr Rolle, a well-known dealer in Berlin, and I have placed the type in the collection of the British Museum.

JUANARIA, gen. nov.

Body robust, somewhat short; abdomen in male about as long as space between apex of head and base of cruciform elevation; head broad, including eyes narrower than base of mesonotum, ocelli considerably farther apart from eyes than from each other, face somewhat strongly convex, a little prominent above; pronotum with the lateral margins ampliased, medially angulate, anterior femora spined beneath near apices; abdomen short and broad, above centrally longitudinally arched; tympanal coverings imperfect, inwardly



1920. "On the oriental members of the Coleopterous group Macroductylides (Melolonthidae)." *The Annals and magazine of natural history; zoology, botany, and geology* 6, 441–455.

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