

XLI.—Notes on Ruteline Coleoptera and Descriptions of a few new Species in the British Museum. By GILBERT J. ARROW, F.Z.S., F.E.S.

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[Plate VIII.]

THE wonderful silvery insect *Plusiotis melior*, Roths. & Jord., proves on close examination to be the normal phase of the previously-named *P. optima*, Bates, the unique type of which is a beautiful fiery crimson. The non-acute apex of the pygidium, in which the describers of *P. melior* believed a structural difference to be found, is a characteristic of the female of the species. Exactly similar red phases occur in other beetles in which the same silvery and golden colouring prevails normally—for example, the Australian *Anoplognathus parvulus* and *aureus*. The metallic lustre is also liable to disappear in patches, as though by abrasion, leaving a red-brown surface, and the type of *Anoplognathus concinnus*, Blackb., is an abnormal specimen of *A. aureus*, Wat., in which the golden colour is entirely absent from the greater part of the surface, lingering only upon the back of the head, the hinder part of the elytra, and the middle of the sternum.

Whether these abnormalities are due to accident of some kind or merely to immaturity it is not possible to say. A metallic-red colour seems to be very exceptional as a normal condition in beetles, although individual specimens so coloured commonly occur amongst species typically of some shade of metallic green—for example, in the common Rosechafer (*Cetonia aurata*) a red variety is occasionally found. In non-metallic green beetles a corresponding red variety also occurs exceptionally. In one or two instances in which a metallic-red colour is normal (e. g., *Poroppleura bacca*) it was found by the late C. O. Waterhouse that prolonged exposure to light in the British Museum galleries had changed the colour to a bright metallic green, so that it seems possible that the occasionally-found red specimens may be individuals which have not attained their mature colouring. On the other hand, I have described one remarkable insect (*Anomala imperialis*) of which the female is metallic green and the male a deep crimson.

The following is another species, hitherto undescribed, of a beautiful golden colour:—

Plusiotis magnificus, sp. n. (Pl. VIII. fig. 1.)

Splendide viridi-aureus, clypeo, prothoracis lateribus pygidioque rufo-cupreis, pedibus corporeque subtus fusco-rufis; elongato-ovatus, nitidus, metasterno (medio excepto) longe et sat dense abdominisque lateribus parce fulvo-pubescentibus; capite minute punctato, clypeo parabolico, margine parum reflexo, integro; pronoto sat brevi, crebre et minute, lateribus densius, punctato, marginibus lateralibus arcuatis, angulis omnibus acutis; scutello subtiliter punctato; elytris grosse inæqualiter punctatis, linea juxta suturali; pygidio dense transversim ruguloso; processu mesosternali acuto, sat valido, metasterno dense ruguloso et longe hirsuto, medio lævi, nitido.

Long. 31 mm.; lat. max. 16 mm.

PANAMA: Chiriqui.

A single male specimen was contained in the collection bequeathed by the late Alexander Fry to the British Museum. It appears to be most nearly related to *Plusiotis aurigans*, Roths. & Jord., but is entirely shining above, without opaque clypeus, pygidium, or prothoracic borders. The mandibles are uniformly rounded externally and not deeply sinuated as in *P. aurigans*.

The colour is a pale greenish gold above, with the clypeus, forehead, sides of the pronotum, and the pygidium coppery red, and the legs and lower surface dark pinkish brown. The head and pronotum are rather finely but unevenly punctured and rather rugosely at the sides, the elytra coarsely and irregularly pitted, and the pygidium finely and closely transversely rugulose.

Although, as already stated, *Anoplognathus concinnus*, Blackb., is not a distinct species, *A. brevicollis*, Blackb., treated in Ohaus's recent Catalogue (which is very incomplete) as a synonym of *A. nebulosus*, Macl., is quite distinct. The elytra do not taper at the extremities, but are furnished with sharp spines at the angles, and the clypeus of the male is longer, broader in front, and almost straight at the sides, where it is not distinctly reflexed.

The following are undescribed species of this genus in the Museum collection:—

Anoplognathus pallidus, sp. n. (Pl. VIII. figs. 4 & 5.)

Testaceus, lævissime metallescens, scutello elytrisque pallide flavis, marginibus omnibus (pronoti et elytrorum lateribus exceptis)

corpore subtus tarsisque brunneis; ovatus, parum convexus, nitidus, pronoto subtilissime punctato, lateribus coriaceis, angulis anticis acutis, posticis fere rectis, basi medio emarginato; scutello fere impunctato; elytris sat crebre et æqualiter punctatis, punctis nonnullis seriatis, apicibus paulo productis et divergentibus; pygidio rugoso, undique griseo-hirto; processu mesosternali longo, acuminato:

♂, clypeo crebre punctato, subquadrato, margine antico leviter dilatata, reflexa, medio leviter incisa, pygidio detecto, obliquo, tibiis anticis obsolete tridentatis:

♀, clypeo rugoso, parum brevi, arcuato, elytris extus ante medium leviter dilatatis, apicibus magis productis, pygidium tegentibus, tibiis anticis acute tridentatis.

Long. 26-29 mm.; lat. max. 15-17 mm.

NORTHERN TERRITORY OF AUSTRALIA: Macdonnell Range, Hermannsburg (*H. J. Hillier*).

Although considerably larger and without sharply pointed elytra, there is a distinct similarity in colour, sculpture, and general form between this species and *A. acuminatus*, Ohaus. It is dark purplish brown beneath and very pale above, especially upon the elytra, with an extremely faint bluish metallic lustre, which upon the latter changes to golden green. The extremities of the elytra are produced and minutely serrated, but rounded instead of acuminate at the tips.

The clypeus of the male is longer and broader than that of *A. acuminatus*, with the front margin minutely notched in the middle and less strongly reflexed. That of the female is of the usual rounded shape, but not very broad.

One male and three females were sent at different dates by Mr. Hillier.

Anoplognathus aurora, sp. n. (Pl. VIII. fig. 6.)

Aureo-flavus, refulgens, corpore subtus, pygidio tarsisque æneo-viridibus, elytris, femoribus tibiisque roseo-metallicis; elongatus, parum convexus, corporis subtus lateribus sat longe ac dense griseo-pubescentibus, processu mesosternali longo et acuto; prothoracis disco minute punctato, lateribus subtiliter rugosis, angulis anticis acutis, posticis paulo obtusis, basi medio emarginato; scutello fere impunctato; elytris sat crebre et æqualiter punctatis, punctis nonnullis seriatis, apicibus productis, separatim rotundatis, minute serratis; pygidio rugoso, fere nudo:

♂, clypeo subquadrato, margine antico paulo dilatato, arcuato, reflexo.

Long. 28-30 mm.; lat. max. 14-15 mm.

N.W. AUSTRALIA : Tambrey (*W. H. Cusack*).

I have seen only three males of this species. It resembles the preceding species, but is more brilliantly coloured, more elongate in shape, with the elytra of the male (the female is unknown) more produced at the extremities, and the pygidium naked except for a few scattered minute setæ.

The lower surface of the body, the pygidium and tarsi, are deep coppery green, the femora and tibiæ are metallic crimson and the upper surface orange, with a beautiful golden lustre, showing greenish reflections, replaced upon the elytra by a delicate pink tinge. With the exception of the outer edges of the pronotum and elytra, all the margins are narrowly outlined with greenish black. It is an unusually elongate species, with a long acute mesosternal process, and the produced apices of the elytra are minutely serrated. The sculpture of the upper surface is almost as in *A. pallidus*.

Anoplognathus antiquus, sp. n. (Pl. VIII. figs. 2 & 3.)

Obscure brunneus, fronte, pronoto, scutello elytrisq. fulvis, clypeo rufo, nigro-marginato, frontis medio nigro-vittato, pronoto scutelloque anguste nigro-marginatis, illo ante medium nigro-bipunctato; ovalis, convexus, parum nitidus, undique griseo-setosus, processu mesosternali brevi, obtuso; clypeo crebre rugoso, fronte grosse punctato, medio longitudinaliter carinato, vertice minus crebre punctato; pronoto fortiter punctato, lateribus densius, medio leviter sulcato, marginibus bene arcuatis, angulis anticis fere acutis, posticis obtusis, basi leviter trisinuato, medio haud emarginato; scutello bene punctato; elytris grosse ac rugose punctatis, haud productis, angulis suturalibus haud rotundatis; pygidio crebre rugoso:

♂, clypeo producto, antrorsum leviter angustato, margine antico paulo dilatato, arcuato, reflexo.

Long. 22-24 mm.; lat. max. 13 mm.

NEW SOUTH WALES : Richmond River.

This is a rather isolated species, with a superficial resemblance to *A. velutinus*, Boisd., but no close relationship to any known species. Its very short blunt mesosternal process ranges it with the *flavipennis* group, with which it has no other special point of resemblance. The brownish-yellow colour of the upper surface, together with the clothing of white setæ and the coarse irregular sculpture, produce an appearance more like that of *A. velutinus* than any other, although the broadly produced clypeus of the male renders the resemblance less in that sex. The pair of

black spots on the anterior part of the pronotum, about equidistant from each other and the lateral margins, and the longitudinal black mark between the eyes, are features quite peculiar to the species. There is an exceedingly feeble greenish sheen upon the dark parts of the body, but this is hardly perceptible upon the upper surface.

Fruhstorferia curta, sp. n. (Pl. VIII. figs, 8 & 9.)

Pallide flava, mandibulis, antennis, vertice, tarsis elytrorumque vittulis marginalibus rufo-brunneis, capite, pronoto, elytrorum extremitatibus pygidioque subtiliter setosis, pectore longe et dense flavo-hirto; late ovata, convexa, capite opaco, parce punctato, ante oculos late dilatato, pronoto lato, minute haud crebre punctato, lateribus fortiter arcuatis, angulis anticis acutis, posticis rotundatis, basi trisinuato; scutello sat crebre punctato; elytris irregulariter sat minute, prope suturam crebrius et fortius punctatis:

♂, clypeo truncato, haud reflexo, mandibulis productis, recurvatis, acuminatis, margine externo dentato, pronoto fortiter dilatato et convexo, toto opaco, elytris opacis, regione suturali paulo nitido:

♀, clypeo majori, recurvato, bilobato, pronoto minus convexo, elytrorum lateribus opacis, marginibus externis ante medium paulo incrassatis.

Long. (mandibulis exceptis) 15-16.5 mm.; lat. max. 9-9.5 mm.;
♂, mandibulæ long. max. 3 mm.

INDO-CHINA: Upper Mekong R., Pou Mi. (Nov., Dec.).

Examples of both sexes of this curious insect were found by M. R. Vitalis de Salvaza. It is as distinctive in its aspect as any species yet known of this remarkable genus, of which every species seems to differ entirely both in shape and coloration from all the rest. It is the smallest species hitherto described and is peculiar also for its pale yellow colour, relieved only by inconspicuous brown markings, its very broad and compact outline, and the dull, unreflecting upper surface of the male.

The colour is a pale lemon-yellow, with the antennæ, tarsi, organs of the mouth, vertex of the head, apical margins of the elytra, two or three longitudinal marks near each shoulder, sometimes a small spot on each near the apex of the scutellum, and another at the base between the latter and the shoulder of a reddish-brown colour. The abdomen of the male is also of this colour.

The body is very short and stout, with the head very broad in front of the eyes, the prothorax broader than the elytra at the shoulders, the hind angles rounded and the base

distinctly lobed before the scutellum. The puncturation of the pronotum is fine and scattered, that of the scutellum stronger and closer, while the elytra are rather strongly and closely punctured in the sutural region and more finely and sparingly elsewhere. The legs are short and not very stout, and the prosternum is not at all elevated behind the front coxæ.

The male is relatively broader than the female, with the upper surface opaque, except upon the scutellum and the sutural region of the elytra. The mandibles are produced, curved upwards, and toothed at the outer edge, as in *Fruhstorferia yunnana*, Ohaus, and the clypeus is long, narrow, convex, and truncate. The pronotum is highly convex and strongly dilated in the middle.

The female is more oval in shape and feebly shining above, with the clypeus tapering, bilobed, and recurved at the end, the pronotum less broad and convex, the elytra a little longer, and their outer margins slightly dilated and thickened before the middle.

For the sake of comparison I have photographed males of *Fruhstorferia birmanica* (Pl. VIII. fig. 7) and *F. yunnana* (Pl. VIII. fig. 10) side by side with the new species.

Nannopopillia varicolor, sp. n.

Nigro-ænea, elytris flavis, margine toto anguste vittaque mediana ab callo humerali fere ad apicem pertinenti, medio intus dilatata, nigris, pedibus nigris vel flavis, vel vitta medio interrupta, vel vitta castanea, vel elytris toto nigris; ovata, convexa, sat longe et dense albido-vestita, clypeo, elytris, lineaque mediana ventrali angusta nudis, clypeo angustato, valde recurvato, transversim ruguloso, antice arcuato, fronte rugosè punctato, longitudinaliter excavato; pronoto grosse et crebre punctato, postice linea angustissima mediana lævi, angulis anticis acutis, posticis valde obtusis; scutello parce punctato; elytris fortiter punctato-sulcatis, intervallis convexis, secundo fere ad extremitatem irregulariter punctato; pygidio rugoso, processu mesosternali valido, fortiter compresso, obtuso; pedum anticorum ungue majori fisso, aliis integris.

Long. 9-11 mm.; lat. max. 5-6 mm.

BRIT. E. AFRICA: S. Kavirondo (4500 ft.), Kisii District, N. Kavirondo, Mt. Elgon, etc.

UGANDA: Mbale-Kumi Road, South of L. Salisbury (3700 ft.).

Dr. S. A. Neave found this insect in very great abundance,

often in company with *Gnatholabis hirsuta*, Ohaus, to which, in its general aspect and coloration, it bears a marked resemblance. It is remarkable, to an even greater degree than that species, for the extreme variability of its elytral coloration. Typically yellow, with a longitudinal black stripe on each elytron, dilating near the middle, the stripe is sometimes scarcely traceable, sometimes red instead of black, and sometimes interrupted in the middle. Occasionally the elytra are entirely black, whilst in pale and dark forms the legs may be either yellow or black. The pronotum and pygidium, as well as the lower surface, with the exception of a bare median line, are densely clothed with pale yellow hair, sometimes more or less rubbed away from pronotum and pygidium. The clypeus is more elongate than in the other species of the genus, the punctures of the pronotum do not coalesce transversely as in *N. ludificans*, the hind angles are rounded off, and the mesosternal process is strongly developed but not long.

XLII.—On Indo-Chinese Hymenoptera collected by R. Vitalis de Salvaza.—III. By ROWLAND E. TURNER, F.Z.S., F.E.S.

Superfamily ICHNEUMONOIDEA.

Family Evaniidæ.

Pristaulacus (Tetraulacinus) tonkinensis, sp. n.

♀. Nigra; antennis, articulis duobus apicalibus infuscatis, pedibusque flavo-testaceis; coxis posticis intermediisque nigris; abdomine nigro, segmento primo apice late, secundoque dimidio basali rufo-ferrugineis; alis flavo-hyalinis, stigmate venisque fuscis; macula quadrata sub stigmate fusca.

Long. 15 mm.; terebræ long. 23 mm.

♀. Head shining, very finely punctured; posterior ocelli about equidistant from the eyes and from each other, and more than twice as far from the hind margin of the head as from each other. Antennæ scarcely longer than the abdomen, the first joint of the flagellum scarcely half as long again as broad, the second twice as long as the first, the third distinctly longer than the first and second combined. Neck short, only a little more than half as long as



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