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XVIII.—Papers on oriental Carabidæ.—VIII

H.E. Andrewes

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HASTITES, gen. nov.

Tegmen elongate; subcosta united with radius for most of its length, terminating in two branches on costa; radius simple; media straight, not forked until far beyond middle of tegmen, a little beyond separation of subcosta from radius; upper branch of media forked, lower simple; cubitus with its upper branch forked.

Hastites muiri, sp. n. (Fig. 3.)

Tegmen about 5.5 mm. long, 1.8 wide; deep ferruginous as preserved, with black veins.

Fig. 3.

Hastites muiri, sp. n.

Oligocene of Gurnet Bay, Isle of Wight, 1891 (Hooley, 353).

Mr. Muir writes that he would place this in the Dictyophoridae, near *Hasta* and *Thanatodictya*. These genera were founded by Kirkaldy in 1906 for Australian species.

XVIII.—Papers on Oriental Carabidæ.—VIII.

By H. E. ANDREWES.

ALL the species described in this paper were taken by Mr. E. A. D'Abreu in the Central Provinces, and nearly all of them at or near Nagpur. Some of them are not known as yet from any other locality, but others are apparently more widely spread, and three of them I took myself many years ago at Belgaum, in the south of the Bombay Presidency. Mr. D'Abreu has kindly allowed me to retain in my collection the types of such species as are not already represented in it.

BEMBIDIINI.

Tachys comptus, sp. n.

Length 2.5 mm.; width 1.0 mm.

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Black, shiny ; prothorax with a faint reddish tinge, base, margin, and epipleuræ of elytra and sterna dark red ; joints 1-4 of antennæ, palpi, two spots on each elytron, and venter testaceous ; joints 5-11 of antennæ and legs flavescent.

Head convex and very smooth, labrum and clypeus truncate, frontal furrows simple, short, and shallow, eyes not very prominent, antennæ hardly reaching beyond base of prothorax.

Prothorax very convex, smooth, a good deal wider than head, and half as wide again as long, equally contracted at extremities, but sides of base very oblique close to angles, so that the part of base in contact with elytra is narrower than apex, sides strongly and evenly rounded, hind angles projecting as a small, sharp, acute tooth ; median line very faint, foveæ small and rounded, quite close to angle, no carina, the shallow furrow inside basal border faintly crenulate. *Elytra* convex, ovate, half as wide again as prothorax, and as much longer than wide ; stria 8 deeply impressed, stria 1 moderately impressed, not nearly reaching base, no other striæ visible, front dorsal pore near base, hind one at two-fifths from apex, recurved striole deep but not long ; testaceous spots fairly large, reaching nearly to the site of stria 2, vaguely margined with red, the front one more or less triangular, the hind one transverse, placed behind shoulder and at apical fourth respectively.

Not unlike *T. pæcilopterus*, Bates, but distinguished at once by the simple frontal furrows and the single sutural stria on the elytra. Darker and a little more elongate, the apical antennal joints very light ; prothorax more convex, sides more strongly rounded, hind angles acute and projecting ; front dorsal pore on elytra placed much further forward.

CENTRAL PROVINCES: Nagpur (*E. A. D'Abreu*), a dozen ex. CHOTA NAGPUR: Ranchi (*W. H. Irvine*—Ind. Mus.), 1 ex. ASSAM: Mangaldai dist., Tezpur (*S. W. Kemp*—Ind. Mus.), 1 ex.

O O D I N I.

MILTODES, gen. nov.

Ligula narrow, a little dilated at apex, bisetose ; paraglossæ wide, rounded, reaching far beyond it, but not enveloping it. Antennæ with joint 3 shorter than 4. Palpi subacuminate at apex, labials with joint 2 unisetose on inner margin. Mentum small, with a rather shallow sinus and a triangular tooth. Labrum trisetose, the outer pores much larger than the central one, which is very small. Prosternum

much hollowed out beneath, especially near hind angles. Base of ventral segments strongly crenulate, as in some species of *Craspedophorus*.

In other respects this genus agrees with *Oodes*, though its very small size, minute head, and chestnut colour give it a very distinct facies of its own.

Miltodes granum, sp. n.

Length 3.25 mm. ; width 1.6 mm.

Chestnut-brown, margin of elytra a little darker; antennæ, palpi, and legs more or less testaceous. Surface smooth, moderately shining, shagreened, and microscopically punctate.

Head extremely small (0.5 mm. wide), convex, clypeus with a seta on each side near front angle, suture very faint, with three or four ill-defined punctures along it, eyes rather large and prominent, antennæ reaching basal fourth of elytra. *Prothorax* moderately convex, three times as wide as head, and two-thirds as wide again as long, widest at base, strongly contracted to apex, base widely arcuate (convexity forwards), apex slightly emarginate, sides finely bordered and evenly rounded, hind angles a little less than right, but with the point rounded off; median line and hind transverse impression just visible, surface otherwise smooth and even. *Elytra* moderately convex, a shade narrower than prothorax, into which the base fits almost exactly, half as long again as wide, sides parallel, base finely bordered from shoulder to stria 3; striæ moderately impressed and finely punctate, none of them quite reaching either base or apex, or joining the adjacent striæ, scutellary stria short, stria 1 hardly reaching forward beyond its extremity, a large umbilicate pore at base of stria 2, intervals almost flat, 3 without setiferous pores. Prosternal process finely bordered and rounded at apex; metepisterna longer than wide; ventral surface strigose, chiefly in a longitudinal direction, segment 1 with a transverse sulcus. Legs slender and elongate.

I do not know of any species among the Oodini with which I can usefully compare this, but it can hardly be confused with any other Eastern species at present described. At the first glance it suggests one of the smaller species of the genus *Alphitobius* (Tenebrionidæ), but the resemblance is, of course, only a superficial one.

CENTRAL PROVINCES: Nagpur (*E. A. D'Abreu*), 1 ex., ♀, "under weeds."

DRIMOSTOMINI.

Cælostomus ruber, sp. n.

Length 5·0–5·5 mm. ; width 2·0–2·2 mm.

Dark red, elytra and metasternum a little lighter, joints 4–10 of antennæ and middle of venter darker, palpi testaceous. Surface moderately shiny and appearing rather greasy.

Head rather small, moderately convex behind, flat in front, sides strongly bordered, a distinct rounded angle at each front corner, frontal furrows rather short and deep, divergent behind, and uneven at bottom, eyes small and rather flat, antennæ incrassate towards the apex but hardly moniliform, reaching a little beyond base of prothorax, pubescent from middle of joint 4. *Prothorax* quadrate and rather flat, a good deal wider than head, a third as wide again as long, rather wider at base than apex, base truncate, apex slightly emarginate, sides very lightly rounded in front, and equally lightly sinuate before base, only slightly contracted behind, border very fine, a pore at hind angle, but no marginal setæ are visible on any of the specimens, hind angles projecting a little laterally and slightly acute; median line deep, reaching base but not apex, base depressed between foveæ, which are wide and deep, converging a little and pointed in front, reaching base behind, which—regarded vertically—is strongly bisinuate; surface nearly smooth, a few punctures near hind angles, and usually traces of puncturation or crenulation in the depressions and marginal channel. *Elytra* convex, short-ovate, rather pointed behind, where the margin is distinctly sinuate, three-quarters as wide again as prothorax, less than half as long again as wide, sides strongly contracted at base, an obtuse tooth projecting forwards at shoulder, basal border distinct; striæ shallow, deeper at apex, finely and closely punctate, stria 1 continued nearly to basal border, a large pore at base of 3, 1–2 and 7 deep to apex, 3–6 not reaching apex, intervals flat on disk, convex near apex, 8 wider near apex, with a series of very large umbilicate pores, widely interrupted at middle, surface smooth. *Underside* smooth along median line, coarsely punctate at sides, pro- and metasternum channelled, prosternal process with a large pore at apex, metasternum bordered between the meso-coxæ, metepisterna elongate, ventral segments crenulate at base, as in some species of *Craspedophorus*. *Legs* rather short, protibiæ with one or two minute spines near apex of outer margin, tarsal joints throughout short and small, joint

1 equalling 2 + 3, joints 1-2 in protarsi not obliquely dilated, nor are joints 1-3 enlarged in any of the specimens (from which I conclude that all are probably ♀ ♀).

CENTRAL PROVINCES: Nagpur (*E. A. D'Abreu*), 5 ex. (two at light).

I have dissected out the buccal organs, as also those of an example of *C. picipes*, MacL., and find them to be almost exactly alike, except that in the new species the spines on the inner margin of the maxillæ appear to be rather more numerous. Nevertheless, owing to the very different facies, I put the species into the genus *Cælostomus* with great hesitation, but before making a new genus I am inclined to await the discovery of ♂ specimens, which I hope Mr. D'Abreu may soon find. It differs from *C. picipes* chiefly in the different form of the prothorax, the very light striation of the elytra, the different form of the protarsi, and the greasy-looking surface. As far as the tarsi go, the species is more nearly related to *Drimostoma*, but I am inclined to think that that genus is hardly separable from *Cælostomus*.

ANCHOMENINI.

Anchomenus indicus, sp. n.

Length 7.0-7.5 mm.; width 2.6-3.0 mm.

Black, upper surface ænescent, elytra slightly iridescent; joint 1 of antennæ, side-margins of prothorax, extreme apex of elytra, and legs more or less red-brown, apex of palpi testaceous. Surface moderately shiny.

Head moderately convex, smooth, frontal foveæ short and shallow, clypeal suture fine but clear, eyes fairly prominent, antennæ rather thick, joints 1-3 glabrous, reaching basal fourth of elytra. *Prothorax* moderately convex, distinctly wider than head and a third as wide again as long, equally contracted at extremities, sides of base oblique, apex bordered, front angles rounded but projecting slightly forwards, sides rounded, bordered in front only, rather strongly reflexed, more widely so towards base, almost angulate at middle, no sinuation behind, hind angles very strongly rounded, the hind pore forming a distinct notch on the margin, front pore in the marginal channel at two-fifths from apex; median line rather fine, foveæ elongate, very deep close to base, diverging forwards, surface nearly smooth and rather dull. *Elytra* convex, ovate, rather pointed behind, base bisinuate, nearly two-thirds as wide again as prothorax, and as much longer than wide; rather finely but clearly striate, the striæ with fine close-set punctures, intervals nearly flat,

3 with three inconspicuous pores, surface smooth, a little more shiny than head and prothorax. Underside smooth, metepisterna elongate. Upper surface of tarsi with two grooves, separated by a fine ridge; on the protarsi the grooves are less impressed and visible only on joints 1-2.

Very similar in form to *A. chinensis*, Boh., but a good deal smaller and rather more elongate, the legs and base of antennæ darker. Head similar; prothorax less evenly rounded at sides, which are more reflexed behind, the angles a little more evident; elytra distinctly narrower, with less rounded sides, the punctured striæ exactly similar; tarsi furrowed in just the same way.

CENTRAL PROVINCES: Bhiwapur dist. and Seoni dist., Khawasa, 2000 ft. (*E. A. D'Abreu*), 2 ex., ♂ ♀. BOMBAY: Belgaum dist., Tudia (*H. E. Andrewes*), 1 ex., ♂.

GALERITINI.

Planetes indicus, sp. n.

Length 8.0-8.5 mm.; width 2.4-2.8 mm.

Black above, piceous beneath; joint 1 of antennæ, femora, and tibiæ light testaceous, rest of antennæ, palpi, clypeus, labrum, and tarsi a little darker. Pubescence rather long and conspicuous.

Head rather wide and moderately convex, surface shiny, coarsely punctate, more sparsely on disk, neck constricted, smooth behind, eyes rather prominent, hairy, antennæ thick, a fine dark engraved line along middle of each of the joints 5-11. *Prothorax* cordate, a little convex, not much wider than head and very little wider than long, contracted about equally at extremities, but widest at apical fourth, sides of base oblique, apex emarginate at middle, sides lightly rounded and gently sinuate behind, hind angles only a little more than right, a slight notch in front of them, where the hind setiferous pore is placed; median line, basal impression, and foveæ all moderately deep, surface moderately shiny, finely but not closely punctate, densely along base. *Elytra* flat, only a fourth as wide again as prothorax, in the form of a rectangular figure, half as long again as wide, with rounded corners, base emarginate, border sharply rounded at shoulder; costæ very fine, the primary ones hardly more noticeable than the secondaries, surface dull. Underside punctate, but shiny.

Evidently very near *P. immaculatus*, Schaum, the type of which I have not seen. I do not know whether either Bates

or Chaudoir had seen it, though both refer to the species. I have been able to examine the example so named by the former (Ann. Soc. Ent. Fr. 1889, p. 280), and I think his determination is correct. The new species is rather smaller and narrower; head more coarsely punctate; prothorax narrower, less rounded at sides, more coarsely punctate (though less so than head); elytra narrower, costæ a little narrower.

CENTRAL PROVINCES: Nagpur, 5 ex., Telinkheri, 1 ex. (*E. A. D'Abreu*).

ZUPHIINI.

Zuphium indicum, sp. n.

Length 11.0 mm.; width 3.75 mm.

Ferruginous, underside, joint 1 of antennæ, and margins of prothorax darker, head, prothorax, and border of elytra red, elytra slaty-black. Pubescence extremely short and fine.

Head very convex behind, flat in front, surface very shiny, though finely punctate, more sparsely on disk, eyes small, genæ large and evenly rounded, antennæ slender, reaching fully to apex of elytra. *Prothorax* cordate, slightly convex, half as wide again as head and a shade longer than wide, a good deal more contracted behind than in front, sides gently rounded and sinuate at a short distance from base, front angles much rounded, hind angles slightly obtuse, reflexed, not very sharp; median line fine, a little depressed at extremities, foveæ elongate, curving outwards in front, surface very finely and closely punctate, confluent in the foveæ, moderately shiny. *Elytra* flat, with oblique, but distinct shoulders, sides very gently rounded, almost parallel, rather more than half as wide again as prothorax, and as much longer than wide; striæ (for the genus) rather deeply impressed, more faintly near apex, very finely and closely punctate, intervals flat, the odd ones almost imperceptibly raised, a large pore at base of stria 1, pores of marginal series, which is widely interrupted, very large, the marginal channel fairly wide, surface very finely and closely punctate, very glossy in appearance and consequently moderately shiny. Underside finely and nearly uniformly punctate, rather more shiny than upper surface.

Closely allied to *Z. formosum*, Bates, but easily distinguished by its immaculate elytra. Head less closely punctate and more shiny, front not depressed, antennæ with joint 1 much darker than the other joints; prothorax a little wider in

front, hind angles hardly projecting; elytra a little wider, the marginal channel wider, striæ deeper, intervals flat, the surface more evenly punctate.

CENTRAL PROVINCES: Nagpur, 1000 ft. (*E. A. D'Abreu*), 5 ex.

Zuphium d'abreui, sp. n.

Length 7·5–8·0 mm.; width 2·75–3·0 mm.

Ferruginous (ventral surface and legs rather lighter), head, prothorax, border of elytra, suture near apex, and a shoulder-spot reddish, side-margins and base of prothorax, and elytra piceous-black. Pubescence short and fine.

Head convex behind, flat in front, rather sparsely punctate and very shiny, eyes of moderate size, genæ short, curving round sharply behind, antennæ hardly reaching apex of elytra. *Prothorax* cordate, slightly convex, a third as wide again as head, and hardly longer than wide, contracted more behind than in front, lightly rounded in front and sinuate at basal fifth, front angles rounded, but distinct, hind angles right, not very sharp, moderately reflexed and projecting a little laterally; median line very fine, the surrounding area slightly depressed, especially near base, foveæ short but fairly deep, surface finely and closely punctate, a little more coarsely in the foveæ, moderately shiny. *Elytra* flat, with oblique shoulders, sides parallel, two-thirds as wide again as prothorax, hardly more than half as long again as wide; striæ extremely shallow and perceptible chiefly because the intervals are slightly convex, though faint punctures are visible here and there, the odd a very little more raised than the even, a small pore on each side of scutellum at base of stria 1, surface finely, closely, and uniformly punctate. The red spot covers the shoulder and extends backwards to a third from base, inwards to about stria 3. Surface moderately glossy. Underside very finely punctate.

Of nearly the same size and shape as *Z. erythrocephalum*, Chaud., but the shoulder-spot covers a more restricted area and there is no common apical spot. Head more sparsely punctate and consequently more shiny, eyes more prominent; prothorax a little less closely punctate and rather wider in front; elytra with shoulders more prominent, striæ less evident, the puncturation less close and more even.

CENTRAL PROVINCES: Nagpur (*E. A. D'Abreu*), 4 ex. BOMBAY: Belgaum (*H. E. Andrewes*), 2 ex. Two of the Nagpur and one of the Belgaum examples were taken flying to light.

MASOREINI.

Ephnidius rubidus, sp. n.

Length 4.0–4.75 mm.; width 1.5–2.0 mm.

Head, side and hind margins of prothorax, and underside piceous, middle of sterna and last ventral segment lighter; front of head, prothorax, and apical border of elytra dark red; elytra black; palpi, antennæ, and legs testaceous. Surface generally rather dull, very finely shagreened.

Head convex and very smooth, clypeal suture slightly curved, very faint, hardly visible at sides, eyes small and prominent, antennæ rather slender, reaching a little beyond base of prothorax. *Prothorax* moderately convex, half as wide again as head, and as much wider than long, base truncate, finely bordered (except at middle), apex emarginate, sides gently rounded and finely bordered, more contracted in front than behind, a seta before middle and another at hind angle, front angles slightly rounded but prominent, hind angles obtuse, but not much rounded; median line short and fine, impressions obsolete, the hind one just visible at middle, surface smooth and even. *Elytra* only slightly convex, of same width as prothorax and about two-thirds as long again as wide, base slightly emarginate, sides parallel, contracted close to shoulder; stria 1 sharply impressed (except close to base), the other striæ just visible and extremely finely punctate, intervals quite flat, 1 narrowing from base to apex, 3 without pores, marginal channel with few but large setiferous pores, a long pore on each side of scutellum; surface sericeous, but rather dull, quite without the mottled appearance of *A. adelioides*, MacL. Underside smooth and shiny, hind tarsi very long and slender.

A little smaller and narrower than *A. simplex*, Schm. Goeb., and otherwise coloured, the surface a little less dull. Head and prothorax very similar in form, latter with sides rather less rounded, elytra with more parallel sides, stria 1 more deeply impressed, the other inner striæ more effaced.

CENTRAL PROVINCES: Nagpur (*E. A. D'Abreu*), many ex. BOMBAY: Khandesh (*T. R. D. Bell*); Belgaum (*H. E. Andrewes*). MADRAS: Madura (*C. Somers-Smith*).

Some of the Nagpur specimens came to light. I took the Belgaum specimens during the two rainy seasons of 1886–7, nearly all near water.