

of copper wire : the whole 320 grains being, of course, equivalent to 1·032, or thirty-two thousandths—a figure far above any degree of saltiness of sea water, but chosen on account of its convenience of divisibility :—thus, the 320 grains of wire doubled, straightened out and cut, gives ·016, or sixteen one-thousandths : of which make sixteen coils, or loops to denote it, of one piece. The other piece doubled as before and cut gives ·008, and so on, until the one-sixteenth of a thousandth is arrived at,—a fraction which will be found to readily sink the bottle, or ‘turn the scale’ of this frictionless balance.

Below is added a diagram (Pl. IX) for corrections for temperature of fresh water ; and a suitable table of corrections for temperature of sea water will be found in ‘*Mauvy’s Physical Geography of the Sea,*’ and in many other books of a like character, for those who like to seek out for themselves the “*exquisite and beautiful compensations*” which as a part of its machinery the sea salts provide in the physical economy of the Ocean.

III.—*Notes on Indian Rhynchota* : HETEROPTERA, No. 1.

By E. T. ATKINSON, B. A., PRESIDENT.

[Received and Read December 1, 1886.]

Order RHYNCHOTA, Burmeister.

Hemiptera, Linn. : *Rhyngota* Fabr. : *Proboscidea*, Scop. : *Dermaptera*, Retz.

Insects with an incomplete metamorphosis, not exhibiting the marked changes from larva to pupa and imago observable in the *Lepidoptera* : furnished with a mouth or rostrum which is fitted for piercing and sucking. The rostrum is usually 3—4-jointed and contains four seta that arise from the anterior portion of the lower surface of the head and represent the maxillæ and mandibles of other orders of insects. Antennæ with 3—5 joints, rarely more ; the wings are usually four in number, but are sometimes abbreviated or altogether wanting.

Suborder HEMIPTERA, Latreille.

The first pair of wings (*hemelytra*) are horizontal, with the veins arranged differently from those of the second pair (*wings*), and usually comprise a basal coriaceous portion (*corium* and *clavus*), and a membranous portion (*membrane*) at the apex. This membrane is sometimes entirely absent. The wings are entirely membranous and are sometimes absent.

GYMNOCERATA, Fieber, Reuter.

Cimex, Linn. : *Cimicides*, Latr. : *Geocorisæ*, Latr. : *Geocores*, Burm., Dallas : *Aurocorisa*, Westw. : *Terrestria*, Leach : *Geocorisæ* and *Amphibicorisæ*, L. Dufour, Spin., Sahlb. et auct.

Antennæ exerted, at least as long as the head, joints without lateral processes: rostrum 3—4-jointed, rising from the anterior and usually the upper part of the head, at the base remote from the first pair of coxæ: feet not adapted for swimming: antennæ with 4—5 joints rarely with only three joints.

Fam. PENTATOMIDÆ, Kolenati.

Pentatoma, pt. Olivier, En. Méth. iv, p. 25 (1789) : *Cimex*, pt. Fabr. Ent. Syst. iv, p. 79 (1794) : *Scutati*, Burm. Handb. Ent. ii (i), p. 343 (1835) : *Longiscuti*, Am. and Serv. Hist. Nat. Ins. Hém. p. 19 (1843) : *Scutata*, Dallas, List Hem. i, p. 2 (1851) : *Pentatomidæ*, Kolenati, Mel. Ent. iv, (1846) : Stål, En. Hem. v, p. 3 (1876) : *Pentatomida*, pt., Stål, Hem. Afric. i, p. 32 (1864).

Head very often clypeated, rostrum 4-jointed, inserted usually near the labrum towards the apex of the head, seldom towards the base of the head: antennæ with 4—5 joints, inserted on the lower side of the head below the lateral margins: scutellum very large, reaching at least the base of the membrane.

Subfam. PLATASPINA, Stål.

Enum. Hem. v, p. 3 (1876) :—*Plataspidæ*, Dallas, List Hem. B. M. i p. 61 (1851) : *Plataspidina*, Stål, Ofvers. K. V. A. Förh., p. 611 (1870) : *Arthropteridæ*, Fieber, Eur. Hem. p. 27 (1861) ; *Arthropterida*, Stål, Hem. Afric. i, p. 1 (1864).

Head clypeated: rostrum 4-jointed, inserted towards the base of the head, remote from the source of the labrum: scutellum very large, covering the entire abdomen: hemelytra longer than the body, with the apical half folded inwards: longitudinal veins of membrane simple: tarsi 2-jointed, the first joint very short.

Genus TARICHEA, Stål.

A. S. E. F. (4 s.) v, p. 163 (1865) : Stål, En. Hem. v, p. 6 (1876) : Walker, Cat. Het. i, p. 10 (1867).

Body very broadly ovate, above very much convex, beneath somewhat flat: head clypeate, very broadly rounded before the eyes, juga contiguous before the tylus: eyes slightly transverse: ocelli more distant from each other than from the eyes: lateral margins of thorax roundly dilated: scutellum covering entire abdomen, abruptly amplified at the base: feet somewhat short (Stål).

1. TARICHEA NITENS, Dallas.

Plataspis nitens, Dallas, List Hem. i, p. 74 (1851).

Tarichea nitens, Stål, A. S. E. F. (4 s.) v, p. 163 (1865); En. Hem. v, p. 6 (1876); Walker, Cat. Het. i, p. 111 (1867).

♀. Above brassy, very smooth and shining, rather thickly and finely punctured: head, disc of abdomen, anus, sutures and stigmata, black: pectus dull black: eyes reddish: abdomen bright red, shining: legs bright orange-red: head beneath black with an orange spot in the middle of the base: rostrum pitchy red, with the basal joint orange-red: antennæ orange-red, with the two (?) apical joints black (*Dallas*). Body long $9\frac{1}{2}$ mill.

Reported from N. India.

Genus CALACTA, Stål.

A. S. E. F. (4 s.) v, p. 163 (1866); En. Hem. v, p. 6 (1876).

Body very broadly ovate or oval, rather convex, flat beneath: head produced before the eyes, somewhat amplified forwards, truncated at the apex; juga contiguous before the middle; eyes transverse, oblique; ocelli almost twice as distant from each other as from the eyes: lateral margins of thorax roundly amplified, anterior angles produced to the apex of the head, rounded: scutellum covering the entire abdomen, not abruptly amplified at the base: costal margin of hemelytra, broadly lobate at the base: feet somewhat short (*Stål*).

2. CALACTA RUFO-NOTATA, Stål.

Calacta rufo-notata, Stål, A. S. E. F. (4 s.) v, p. 164 (1865); En. Hem. v, p. 6 (1876).

♂. Broadly oval, moderately convex, remotely and finely punctulate: disc of thorax and scutellum very finely punctulate: eyes rufous-piceous: small spots, one marginal near the posterior angles of the thorax, another on the basal lobe of the hemelytra, two marginal dorsal before the middle of the abdomen, sanguineous: tarsi weakly testaceous flavescent: anteocular part of the head hardly amplified forwards (*Stål*). Long, 6; broad $2\frac{3}{4}$ mill.

Reported from Siam.

Genus ONCYLASPIS, Stål.

Hem. Afric. i, p. 2 (1864); En. Hem. v, p. 4, 6 (1876).

Body depressed, rather strongly convex: head broad, slightly or moderately bending forwards; vertex about thrice broader than the eyes which are transverse, oblique, narrowed inwards, deeply immersed.

very slightly prominulous beyond the sides of the head: ocelli remote from the eyes: antennæ inserted in the middle or almost in the middle between the eyes and the rostrum, the first joint somewhat equal in length to the two following: pronotum about twice as broad as the head, anterior margin gradually rather strongly sinuated behind the entire head; anterior angles obtuse, distinct, not rounded: feet generally short: sixth ventral segment in ♀ produced forwards in an acute angle reaching the base of the fifth segment; forming anteriorly (in ♀) a less produced right or somewhat obtuse angle (*Stål*).

Type, *P. ruficeps*, Dallas.

3. ONCYLASPIS RUFICEPS, Dallas.

Plataspis ruficeps, Dallas, List Hem. i, 73, (1851): Walker, Cat. Het. i, p. 110 (1867).

Oncylaspis ruficeps, Stål, En. Hem. v. p. 6 (1876).

♂, ♀. Above brassy black, shining, very finely punctured, with the head and the anterior angles of the thorax reddish brown: coriaceous portion of the hemelytra brown: membrane brownish, semitransparent, with dark brown veins. Body beneath reddish brown, shining, finely punctured; the anal apparatus and the middle of the disc of the abdomen, black: legs, antennæ and rostrum reddish brown, the latter rostrum with the tip pitchy (*Dallas*). Body long 9—10 mill.

Reported from Burma, Tenasserim.

Genus POSEIDON, Vollenhoven.

Tijdschr. Ent. Ned. viii, p. 63 (1865).

Body elliptical, rather broader, a little tumid above, shining: head in the ♂, broad, anteriorly with three horns which are channeled, the lateral pair curved inwards in the ♀, the head is broad, semicircular, the juga unite at the tip of the tylus: antennæ inserted below the head, 5-jointed; the first very long, cylindrical, rather broad, the second very small, only one-eighth of the length of the first, the third neither so long nor so stout as the first, slightly clavate, the rest gradually decreasing in length and thickness: eyes pyriform, very distant; ocelli much nearer to each other than to the eyes: rostrum extending beyond the posterior coxæ, the second and third joints of equal length: lateral margins of pronotum arched: scutellum scarcely emarginate posteriorly in the ♂: venter flat, with, in ♀, a short longitudinal groove on the first segment: feet rather short and stout (*Voll.*)

4. POSEIDON MALAYANUS, Vollenhoven.

Poseidon malayanus, Voll., Tijds. Ent. Ned. viii, p. 64, t. 1, f. 3-5 (1865).

♂, ♀. Bronzed black above: eyes brownish-white: two spots and two lines encircling the tylus, these lines in the ♂ are in the middle of the median cephalic horn: two small spots near the anterior margin of the pronotum, a thin line along its entire lateral margin and two round spots on the scutellum near, and a fine line around, the anterior margin, orange: scutellum rather strongly and pronotum more weakly punctured, head smooth: hemelytra piceous-brown: antennæ weakly pilose, black, with the joints whitish: rostrum ferruginous: body beneath shining black, except pectus which is dull cinereous: each segment of the abdomen in the ♀ has two small orange spots on each side on the margin: feet black, tarsi brownish (Voll.). ♂, long, 15; ♀, long, 13 mill.

Reported from Malacca, India?

Genus BRACHYPLATYS, Boisduval.

Voy. Astrolabe, Ent. ii, p. 627 (1832): Westwood in Charlesworth's Mag. Nat. Hist. ii, p. 26 (1838); White, id., iii, p. 539 (1839): Dallas, List Hem. i, p. 61 (1851); Walker, Cat. Het. i, p. 98 (1867): Stål, Hem. Afric. i, p. 8 (1864); En. Hem. v, p. 4, 7 (1876):—Includes *Coptosoma*, subg. *Platycephala*, Lap., Ess. Hém, p. 74 (1832).

Body very broadly ovate, generally slightly convex above, flat beneath: head foliaceous, transverse, broad, broadly rounded at the apex; vertex 4-5 times broader than the eyes; antennæ remote from the eyes, the first joint not longer than the third, almost equal in length: eyes slightly transverse, not oblique, slightly immersed, strongly prominent beyond the sides of the head, narrowed outwards: ocelli a little more distant from each other than from the eyes: pronotum about one half broader than the head, sinuated at the apex behind the vertex, truncated behind the eyes, anterior angles obtuse, rounded at the apex, not produced. As pointed out by Westwood, the scutellum in the ♂, in both *Brachyplatys* and *Coptosoma*, is notched and in the ♀, entire. In the former the sixth ventral segment, in the ♂, is produced forwards in an acute angle reaching the base of the fifth segment, and in the ♀, forms anteriorly a less produced right or somewhat obtuse angle: in *Coptosoma*, the same segment forms an obtuse, or very obtuse angle, or is merely obtusely rounded. In *Brachyplatys*, the first joint of the last tarsi is nearly as long as the second, and in *Coptosoma* is much shorter.

5. BRACHYPLATYS VAHLII, Fabricius.

Cimex vahlII, Fabr. Mant. Ins. ii, p. 283 (1787) ; Ent. Syst. iv, p. 89 (1794)
Coquebert, Ill. ii, p. 79, t. 18, f. 14 (1801) ; Wolff, Ic. Cim. p. 96, t. 9, f. 90 (1802) ?

Tetyra vahlII Fabr., Syst. Rhyng. p. 142 (1803).

Thyreocoris vahlII, var. Germar, Zeitsch. i (i) p. 33 (1839) ; Herr. Schöff. Wanz Ins. v. p. 31, 33 (1839).

Plataspis vahlII, Am. & Serv. Hist. Nat. Ins. Hém., p. 64 (1843).

Brachyplatys vahlII, Dallas, List Hem. i, p. 70 (1851) excl. syn. pt. ; Walker, Cat. Het. i, p. 100 (1867) ; Stål. Ofvers K. V.-A. Förh. p. 611 (1870) ; En. Hem. v, p. 7 (1876) ; Distant, A. M. N. H. (5s.) iii, p. 44 (1879).

Head, thorax, scutellum and abdomen, black : two large marks on the head, the margin of the thorax and a small oblique line before the margin, also the margin of the scutellum, flavescent : thorax gibbous, shining : two lines on each segment of the abdomen on both sides and which unite at the apex, also the feet, yellow (*C. vahlII*, Fabr.).

♂, ♀. Head with yellow transverse lines : pronotum with a sinuated transverse line on the anterior margin, abruptly curved before the anterior angle, before reaching the posterior angle ; an arcuate line on the border of each anterior angle and another similar intramarginal line around the scutellum, below which is another slender line ; margins of abdomen, transverse lines on each side of the venter, rostrum, feet and antennæ, yellow : some specimens have a small yellow dot on each side of the disc of the pronotum and another like it on each side at the base of the scutellum (*P. vahlII*, Am. and Serv.) Long 5-6 mill. Differs from *B. radians*, Voll., in its smaller size and having the intramarginal flavescent line on the scutellum punctured fuscous. Differs from *B. nigriventris*, Westw. in having transverse yellow lines on the head.

Reported from Philippines, Cochin-China, Assam : not uncommon in Sikkim.

6. BRACHYPLATYS RADIAN, Vollenhoven.

Brachyplatys radians, Voll., Faune Ent. l'Arch. Ind. Néerl. i, p. 52 (1863) : Walker, Cat. Het. iii, p. 527 (1868) : Stål, En. Hem. v, p. 8 (1876).

Var. *Brachyplatys vahlII*, Voll., l. c. p. 52 (1863).

Brassy-black : head spotted yellow ; anterior margin of thorax and oblique submarginal line yellow : two marginal lines on scutellum of which the interior line is the broader : venter yellow, with a large discal radiating patch (Voll.). Long 7 mill. Vollenhoven suggests that this is only a variety of his *B. vahlII*. It is a little larger : over almost the entire head extends a broad yellow patch in which winds a black streak that has its outline twice interrupted : the margin and yellow spots on the pronotum are broader and brighter : the venter black, with the

yellow spots on the margin of a conical shape or it may be said that the venter is yellow with a broad black discal patch emitting rays towards the margin. Stål suggests that Vollenhoven's figure (l. c.) t. 4, f. 8 should be referred to this species: the yellow rays from the venter vary much in length and he has never seen specimens in which the small discoidal spots on the pronotum and the basal spots on the scutellum are wanting.

Reported from Philippines, Celebes, Sumatra, Amboina, Ternate, India (?).

7. BRACHYPLATYS SILPHOIDES, Fabricius.

Cimex silphoides, Fabr., Ent. Syst. iv, p. 86 (1794).

Tetyra silphoides, Fabr., Syst. Rhyng. p. 141 (1803): Schiödte in Kroyer's Nat. Tids. iv, p. 301 (1842), excl. syn. Burmeister.

Brachyplatys silphoides, Dallas, List Hem. i, p. 71 (1851), excl. syn. pt: Walker, Cat. Het. i, p. 100 (1867): Stål, Hem. Fabr. i, p. 5 (1868); En. Hem. v, p. 8, 1876).

Body entirely glabrous, brassy-black, immaculate: margin of abdomen broadly white with a row of black dots: wings lineated: feet yellow (*Fabr.*)

♂, ♀. Aenescent-black, very distinctly and rather densely punctured, head somewhat rugose, four small spots on head, lateral submarginal line and line obliquely drawn from lateral angles towards the interior part of the eyes and here confluent with the intramarginal line, also two small spots placed before the middle and very distant from each other, elevated margin of scutellum and intramarginal line, also four basal spots, yellow-testaceous: ventral limbus emitting on each segment two somewhat short flavescent rays of which the anterior is marked by a small black spot: feet flavescent (*Stål*). Long 6—8; broad, 5—6 mill.

Reported from India, Panjab, Ceylon, China. Westermann records its occurrence on rice (Serampore?).

8. BRACHYPLATYS SUBÆNEUS, Westwood.

Plataspis subænea, Westw., in Hope Cat. Hem. i. p. 17 (1837).

Thyreocoris septus, Germar, Zeitschr. i (i) p. 32 (1839).

Brachyplatys subænea, Dallas, List Hem. i, p. 70 (1851): Vollenhoven, Faune Ent. l'Arch. Ind. Néerl. i, p. 54 (1863), excl. t. 4, f. 8: Walker, Cat. Het. i, p. 100 (1867): Stål, En. Hem. v, p. 8 (1876).

Brassy: head with a broad submarginal line and four dots on the rhombus (between the eyes), anterior and lateral margins of thorax and an angulated sublateral line and margin of scutellum, fulvous: feet pale-

ly luteous: abdomen brassy, marked by very many transverse conical spots on the sides (*Westw.*). Long $6\frac{1}{4}$ mill.

Reported from China, Philippines, Ceylon, Malacca, Burma, Assam, India.

9. BRACHYPLATYS BURMEISTERI, Distant.

Thyreocoris silphoides, Burm., Handb. ii (i) p. 384 (1835): Stål, En. Hem. v, p. 8 (1876).

Brachyplatys burmeisteri, Distant, A. M. N. H. (5s.) iii, p. 46 (1879).

Brassy-black: entire margin, the feet and marginal spots on the abdomen luteous (*Burm.*). Long 6-8 mill. Can be at once distinguished from *B. vahlii*, Fabr. and *B. silphoides*, Fabr. by its uniform coloration above and absence of luteous markings on the head and pronotum: the luteous abdominal radial streaks are as in *B. radians*, Voll.

Reported from Tranquebar, Noa-Dehing valley and Sadiya (Assam).

10. BRACHYPLATYS NITIDUS, Westwood.

Plataspis nitidus, Westw., in Hope Cat. Hem. i, p. 17 (1837); Walker, Cat. Het. i, p. 110 (1867).

Thyreocoris nitidus, Germar, Zeitschr. i (i) p. 35 (1839).

Brachyplatys nitidus, Stål, En. Hem. v. p. 9 (1876).

Altogether black, shining, finely punctured: head broad; scutellum posteriorly emarginate (*Westw.*). Long, $6\frac{1}{4}$ mill.

Reported from India.

11. BRACHYPLATYS BISTRIGA, Walker.

Brachyplatys bistriga, Walker, Cat. Het. i, p. 100 (1867).

Aeneous, finely punctured: head about two-thirds of the breadth of the thorax: antennæ, legs, marginal line on pronotum on each side which does not extend to the posterior angle, a very short line connecting the marginal line with the posterior angle, border of scutellum, marginal transverse lanceolate streaks on venter, each containing a black point, and the corium, pale luteous: costa of hemelytra black: wings blackish cinereous (*Walker*). Long $5\frac{1}{4}$ mill.

Reported from Bangalore.

12. BRACHYPLATYS COGNATA, Walker.

Brachyplatys cognata, Walker, Cat. Het. i, p. 101 (1867).

Aeneous-black, minutely punctured: head about two-thirds of the breadth of the thorax: an irregular interrupted line near the fore border of the head, a twice interrupted line between the eyes and a dot

with a small longitudinal line on each side in the middle, the legs, antennæ, a waved line on pronotum which diverges on each side from the anterior margin to the posterior angle, a marginal line on each side ending near the posterior angle, sides of scutellum and transverse streaks on each side of the venter, luteous: scutellum slightly excavated at the tip (*Walker*). Long 4—5 mill.

Reported from Burma.

13. BRACHYPLATYS ADJUNCTA, Walker.

Brachyplatys adjuncta, Walker, Cat. Het. i. p. 101 (1867).

Aeneous, minutely punctured: head about two-thirds of the breadth of the thorax: a mark on the disc of the head between two transverse interrupted lines and the lines themselves, antennæ, legs, a transverse undulating line on the thorax which extends along the foreborder and diverges on each side to the posterior angle and two marginal lines which do not extend to the posterior angle, border of scutellum, border of venter which emits short streaks to the disc, luteous: scutellum excavated at the tip (*Walker*). Body long, $4\frac{1}{4}$ mill.

Reported from Burma.

Genus COPTOSOMA, Laporte.

Coptosoma. subg. *Coptosoma*, Lap., Ess. Hém. p. 73 (1832):—*Coptosoma*, Dallas, List. Hem. i, p. 61 (1851); Walker, Cat. Het. i, p. 83 (1867); Stål, Hem. Afric. i, p. 1, 9 (1864); En. Hem. v, p. 4, 10 (1876). Includes *Globocoris*, Hahn, Wanz. Ins. ii. p. 40 (1834).

Body very broadly ovate, above moderately convex, beneath somewhat flat or very slightly convex: head usually small and perpendicularly, or somewhat so, deflexed, narrower than the pronotum; tylus not reflexed anteriorly, lying entirely in the same plane: eyes rather prominulous; ocelli nearer to the eyes than to each other: antennæ inserted at the eyes: lateral margins of thorax posteriorly sinuate, before the sinus, usually distinctly amplified and foliaceous: scutellum somewhat amplified hindwards: feet somewhat short.

14. COPTOSOMA DUODECIMPUNCTATA, Germar.

Thyreocoris duodecimpunctatus, Germar, Zeitsch. i (i) p. 30 (1839); Herr. Schöff. Wanz. Ins. v, p. 14, t. 150, f. 474 (1839).

Coptosoma duodecimpunctatum, Dallas, List Hem. i, p. 62 (1851).

Coptosoma duodecimpunctata, Walker, Cat. Het. i, p. 86 (1867): Stål, En. Hem. v, p. 10 (1876): Distant, A. M. N. H. (5 s.) iii, p. 44 (1879).

Body brassy-black: border of thorax and venter; eight spots on the thorax (four on anterior margin, one on each lateral margin, and one

in each lateral one-third) and four spots on the scutellum, red (*German*). The feet are cinnamon-colour, brown towards the base; the broad red border of the abdomen is bidentate on each segment and has large black spiracula: scutellum with a yellow line within the free black border. Long, 6 mill.

Reported from Tranquebar, Assam: the Indian Museum has specimens from Sikkim and Samaguting (Assam).

15. COPTOSOMA CRIBRARIA, Fabricius.

Cimex cribrarius, Fabr., Ent. Syst. Suppt. p. 531 (1798).

Tetyra cribraria, Fabr. Syst. Rhynch. p. 143 (1803): Schiödt in Kröyer's Nat. Tidsskr. iv, p. 305 (1842).

Thyreocoris cribraria. Burm. Handb. ii (i) p. 384 (1835): Germar, Zeitschr i, (i) p. 26 (1839); Herr. Schöff. Wanz. iv, p. 84, t. 134, f. 416 (1834) and v, p. 31 (1839).

Coptosoma cribrarium, Am. & Serv. Hist. Nat. Ins. Hém. p. 66, t. 2, f. 4, (1843); Dallas, List Hem. B. M. i, p. 67 (1851; Vollenhoven, Faune Ent. l'Arch. Indo-Néer. i, p. 50 (1863); Stål, Hem. Fabr. i, p. 6 (1863).

Coptosoma atomarium, pt. Vollen. l. c. i, p. 50 (1863) ♂.

Coptosoma cribraria, Walker, Cat. Het. B. M. i, p. 87 (1867); Stål, En. Hem. v, p. 12 (1876); Scott, A. M. N. H. (4 s.) xiv, p. 289 (1874); Distant, Trans. Ent. Soc. p. 414 (1883).

Body small, somewhat round: thorax and scutellum flavescent, with very numerous impressed fuscous spots: scutellum somewhat emarginate at the tip: abdomen dull black in the middle; feet yellow (*Fabr.*). Long $3\frac{1}{2}$ —5 mill.

Vollenhoven's *C. atomarium* (nec Germar) is the ♂ of *C. cribraria* and is of a greyish or greenish-yellow, irregularly covered with deep black punctures on the posterior portion of the pronotum and on the scutellum: the head is small with an extremely fine edging of black on the anterior margin, a crescent-shaped black line on the vertex extending from one eye to the other: antennæ yellow, with the tip of the last joint brownish: eyes red: pronotum divided into two unequal parts by a row of excavated brown points, in front of this row there is sometimes a waved brown line; the posterior is punctured black: basal elevation on scutellum not tumid, excavated points larger but more distant than those on the thorax; beneath, head and pronotum yellow: meso- and meta-thorax slaty-grey; abdomen shining black with a broad yellow margin in which are the finely black-irised stigmata: feet yellow, last joint of tarsi, brown. Vollenhoven makes *C. cribraria* differ from his *C. atomarium* in its usually greater size, colour egg-yellow or greenish-yellow: punctuation blacker and smaller, the row of points on the pronotum is not so straight; scutellum throughout with a submarginal black line except on the basal elevation: abdomen yellow, with a large black patch

in the middle from which proceed black rays running along the anterior margins of the segments and between these rays are small transverse black lines (*Voll.*). Long $3\frac{1}{2}$ —4 mill. ♂ ; 4— $4\frac{1}{2}$ mill. ♀.

Reported from Japan, Cochin-China, Burma, India, Ceylon, Timor, Sumatra; the Indian Museum has examples from Java, Calcutta, Sib-ságar and Dikrang valley (Assam). The Sumatran specimens have the yellow inclined to orange, those from Bengal are paler.

16. COPTOSOMA PARDALINA, Stål.

En. Hem. v, p. 13 (1876).

Yellow: pronotum behind the middle and on the impressions, finely punctured, the scutellum rather more strongly punctured, the punctures on the scutellum confluent in subreticulate and irregularly confluent masses and small lines, posteriorly less numerous, finer on the basal half: head semicircularly rounded before the eyes, margin narrow tylus and two triangular spots black: pronotum with the two typical, black transverse lines before the middle: pectus and venter black; ventral limbus and double row of lateral spots on each segment, flavescent; the anterior spot large, subtransverse, posterior spot small, sometimes very minute. Easily distinguished from *C. cribraria* by the head anteriorly more gradually rounded, dorsal punctuation stronger, marking blacker and more extended and the absence of lateral spots produced in long rays on the venter. Very like *C. lyncea*, Stål, from Australia, differs in the punctuation and the black dorsal marking also in the sparingly punctulate base of scutellum and the ventral marking (Stål) Long, $4\frac{1}{2}$; breadth of pronotum, $3\frac{1}{2}$ mill.

Reported from India.

17. COPTOSOMA NEPALENSIS, Westwood.

Coptosoma nepalensis, Westwood, Hope Cat. Hem. i, p. 17 (1837): Stål. En. Hem. v, p. 13 (1876).

Thyreocoris nepalensis, Germar, Zeitschr. i, (i), p. 28 (1839).

Thyreocoris circumscriptus, Germar, l. c. p. 29 (1839).

Coptosoma nepalense, Dallas, List. Hem. i, p. 63 (1851).

Coptosoma circumscriptum, Dallas, l. c. p. 63 (1851): Walker, Cat. Het. i, p. 86 (1867).

Coptosoma cinctum, Vollenhoven, Faune Ent. l'Arch. Indo-Néer. i, p. 46 (1863).

Brassy black, very shining, punctured: head small, with two whitish cuneate spots before the eyes: pronotum with a very slender lateral and anterior border (interrupted in the middle), and a sublateral, angulated line, whitish; two small basal dots and a slender border on the scutellum, whitish; antennæ pale fuscous: feet whitish; femora fus-

cescent at the base; abdomen æneous; margin and sublateral spots, whitish (*Westw.*). Body long, 4 mill.

Reported from Nepál. The Indian Museum has specimens from Sikkim.

18. COPTOSOMA CINCTA, Esch.

Scutellera cincta, Esch. Dorpat Abh. i, p. 161 (1822); Entomographia, p. 105 (1822).

Thyreocoris seminulum, Burm. Nov. Ac. Ac. Leop. xvi, Sup. i, p. 290 (1834).

Thyreocoris variegatus, Herr. Schöff. Wanz. Ins. iv, p. 83, t. 134, f. 414 (1839).

Thyreocoris cinctus, Germar, Zeitschr. i, (i), p. 27 (1839).

Coptosoma cinctum, Dallas, List Hem. i, p. 64 (1851); Walker, Cat. Het. i, p. 89 (1867); Stål, Ofvers. K. V.-A. Förh. p. 613 (1870).

Coptosoma cincta, Stål, En. Hem. v, p. 13 (1876).

Head somewhat longer than broad, forming anteriorly a stout angle, yellow; a median line, dark brown: eyes large, yellow: antennæ as long as the thorax, yellow, second joint shortest: thorax twice as broad as long, strongly excised anteriorly and much narrower than behind, sides weakly excised, surface convex, thickly punctured, black-brown: entire side-border yellow (with a brown longitudinal line on the anterior half), sides of fore-borders, a transverse line interrupted in the middle on the anterior half, and another irregular line in the middle towards the posterior margin: scutellum broad as long, posteriorly entirely obtuse, anteriorly convex, sloped posteriorly, grossly punctured, black-brown; the broad fore-border and the narrow outer margin smooth, yellow; with yellow dots in the middle: hemelytra yellow at the base: beneath and pectus pale grey: abdomen black, shining, punctured, the margin of each segment with a stout three-cornered yellow spot: feet yellow (*Esch.*). Long, $2\frac{1}{2}$ —3; broad, 2 — $2\frac{1}{2}$ mill.

Reported from Philippines. Specimens most probably representing this species come from Assam and Ceylon. Differs from *C. nepalensis*, *Westw.* in its smaller size and proportionately larger and more numerous yellow marks above.

19. COPTOSOMA SPHÆRULA, Germar.

Thyreocoris sphærule, Germar, Zeitschr. ; (i) p. 25 (1839); Herr. Schöff. Wanz v, p. 15 and 30, t. 150, f. 476 (1839).

Coptosoma sphærum, Dallas, List Hem. i, p. 64 (1851).

Coptosoma sphærule, Vollenhoven, Faune, Ent. l'Arch. Indo-Néer. p. 47 (1863); Walker, Cat. Het. i, p. 86 (1867); Stål, En. Hem. v, p. 14 (1873).

Bronzed black, shining, finely punctured: head without a spot; antennæ brownish-yellow: pronotum with a fine double border, yellow, extending from the anterior almost up to the posterior angles: scutellum

bordered with yellow, except at its base: hemelytra brown with a broad yellow border. Beneath, head black, pectus dull black with a transparent yellow border at the anterior angles: abdomen shining bronzed black, with a slight edging and with small sub-costal lines, yellow: feet yellowish-brown, deeper towards the coxæ (*Voll.*). Long, 2—3 mills.

Reported from Java, China, Ceylon, N. Bengal.

20. COPTOSOMA PARVULA, Dallas.

Coptosoma parvulum, Dallas, List Hem. i, p. 65 (1851): Walker, Cat. Het. i, p. 87 (1867).

Coptosoma parvula, Stål, En. Hem. v, p. 15 (1876).

♂, ♀. Black, shining, convex, broader behind, very finely and densely punctured: head with a small reddish spot on each side before the eyes; the tylus reaching the anterior margin: eyes reddish brown: thorax with a faint transverse furrow across the middle; the anterior portion of the lateral margins yellow: scutellum wider behind, with a distinct transverse impressed line, near the base: hemelytra margined with yellow at the base: body beneath black: abdomen with the outer margin and a submarginal spot on each side of each segment, orange: legs pale brownish orange, with the base of the femora brown: antennæ pale brownish orange, with the apical joint darker. (*Dallas.*) Long, $2\frac{1}{2}$ —3 mill.

Reported from India.

21. COPTOSOMA CICATRICOSA, Dallas.

Coptosoma cicatricosum, Dallas, List Hem. i, p. 66 (1851); Walker, Cat. Het. i, p. 87 (1867).

Coptosoma cicatricosa, Stål, En. Hem. v, p. 15 (1876).

♂. Body and abdomen black, shining, punctured: head rugose, eyes red: the lateral margins of the thorax much dilated, distinctly emarginate in front of the lateral angles; a strong transverse punctured furrow across the disc before the middle: scutellum with a strong transverse furrow at the base, the included space not elevated; the whole surface covered with smooth reddish, elevated spots, with the interstices thickly punctured: pectus grey, obscure: legs black: rostrum pitchy red with the apex black: antennæ black (*Dallas.*) Long, $6\frac{1}{4}$ mill.

Reported from N. India.

22. COPTOSOMA XANTHOCHLORA, Walker.

Coptosoma xanthochlora, Walker, Cat. Het. i, p. 87 (1867).

Luteous, thinly and largely punctured, a little longer than broad: head about one-third of the breadth of the pronotum, with an abbreviated

transverse black line on the hind border and with two short piceous longitudinal lines in front: pronotum with a large green patch on each side of the posterior margin: scutellum green, except the fore-part where there is a distinct abbreviated transverse furrow: pectus with a black disc: abdomen beneath, with black points on each side (*Walker*). Body long, $4\frac{1}{2}$ — $5\frac{1}{2}$ mill.

Reported from India.

23. COPTOSOMA INTEGRAL, Walker.

Coptosoma integra, Walker, Cat. Het. i, p. 88 (1867).

Æneous-black, largely punctured: head a little more than one-third of the breadth of the pronotum, luteous along each side in front: pronotum with a luteous transverse line which extends along the anterior border and is dilated on each side where it includes a slender black streak: scutellum with the border luteous, not excavated at the tip, with a transverse furrow in front: abdomen beneath, luteous on each side: legs luteous (*Walker*). Body long, $2\frac{1}{2}$ —3 mill.

Reported from India.

24. COPTOSOMA BREVIS, Walker.

Coptosoma brevis, Walker, Cat. Het. i, p. 89 (1867).

Black, very minutely punctured, not longer than broad: head one-third of the breadth of the thorax with a broad curved yellow stripe on each side in front: eyes red: antennæ tawny: pronotum with two yellow lateral stripes which are interlined with black; the forepart with two narrow, yellow, slightly interrupted and undulating bands: scutellum bordered with yellow, except in front, where there is a yellow band: abdomen beneath, yellow on each side; legs yellow. Differs from *C. sphærulea*, Germ. in the continuous band at the base of the scutellum and from *C. hilaris*, Walker, by the speckled scutellum (*Walker*). Body long, 3 — $3\frac{1}{4}$ mill.

Reported from Burma.

The following species of this sub-family may be noted as likely to occur in India.

Tarichea chinensis, Dallas, List Hem. i, p. 74 (1851). China.

Calacta lugubris, Stål, A. S. E. F. (4 s.) v, p. 163 (1865). Hongkong.

Coptosoma tigrina, Stål, En. Hem. v, p. 13 (1876). Cochin-China.

Coptosoma punctiventris, Stål, l. c., p. 13. Malacca.

25. COPTOSOMA ASSAMENSIS, Atkinson.

Proc. A. S. B. p. 174 (1886).

Bronzed-black, shining, very closely and finely punctured: juga

yellow, with a very fine blackish external limbus: eyes large, prominulous, deep castaneous: lateral margins of pronotum (enclosing anteriorly a black longitudinal streak) broadly forward, narrowly hindward, also four oblong transverse spots (2 and 2) on anterior part, the pair nearest anterior margin smaller, and a broadly oval spot at each posterior basal angle, yellow: the third basal part of scutellum, black arcuate hindward, with two yellow, oblong, transverse elongate spots before the basal impression: sides very broadly and apical two-thirds rather sordid yellow, thickly and coarsely punctured fuscous, with a large rounded black spot in the middle of each posterior angle: abdomen beneath shining black; feet sordid flavescent. Long, $2\frac{1}{2}$ —3; broad, $2\frac{1}{2}$ mill.

Reported from N. E. Assam.

Subfam. CYDNINA, Stål.

En. Hem. v, p. 17 (1876):—*Cydnida*, Stål, Hem. Afric. i, p. 18 (1864): *Cydnini*, Schiödte, Nat. Tidsskr. p. 454 (1849): *Cydnidæ*, Dallas, List Hem. i, p. 109 (1851); Walker, Cat. Het. i, p. 147 (1867): *Cydnides*, Signoret, A. S. E. F. (6 s.) i, p. 25 (1881).

Antennæ remote from the lateral margins of the head, inserted near the base of the head, or not more remote therefrom than the anterior margin of the eyes, 4-5 jointed: rostrum 4-jointed, rising near the labrum and apex of the head: scutellum variable, moderate or very large: costal margin of corium prominulous beyond the lateral margins of the body throughout its entire length, or at least for half its length: first ventral segment, or at least the sides, covered by the metastethium, the extreme posterior margin only visible: lateral margins of venter completely entire, not incised between the segments, the angles of the segments not prominulous: tibiæ spinose: propleura convex, posteriorly depressed (*Stål*).

Sec. I CYDNIDES, Signoret.

A. S. E. F. (6 s.) i, p. 25 (1881); iii, p. 521 (1883): *Cydnida*, Stål, Hem. Afric. i, p. 11 (1864).

Having piliferous points on the vertex and the pronotum both in front near the anterior margin and also on the disc near the transverse impression and above. These piliferous points exist almost in the same places in all species—four on the disc of the head, of which two are situate above the eyes, one on each side, and two towards the tip of the lateral lobes (*juga*); six on the pronotum of which four are situate on the anterior margin, and two lateral on the disc near the transverse impression. Where the pile or hairs are wanting, their existence is

indicated by points or dots which do not occur amongst the second section comprising the *Sehirides*. The generic characters of the *Cydnides* are chiefly drawn from the piliferous points or dots other than those mentioned which are especially found along the lateral margins of the head, the pronotum or the hemelytra.

Genus CEPHALOCTEUS, Leon Dufour.

A. S. E. F. (1 s.) iii, p. 342 (1834) ; Am. & Serv. Hist. Nat. Ins. Hém., p. 94 (1843) ; Fieber. Eur. Hem. p. 83, 362 (1861) ; Walker, Cat. Het. i, p. 163 (1867) ; Stål, En. Hem. v, p. 21 (1876) ; Signoret, A. S. E. F. (6 s.) i, p. 38 (1881) :—*Cephaloctenus*, Schiödte, Krøyer's Tidsskr. iv, p. 330 (1843) ; (2 s.) ii, p. 449 (1849).

Eyes hardly visible, composed only of a small tubercle surmounted by one or two others ; ocelli absent : head longer than broad, spinulose, ciliated on the margin and the vertex ; the juga are longer than the tylus which is, however, free in front : antennæ 5-jointed, the first joint is the longest, the two last shortest, globose : rostrum reaching the intermediate pair of feet : the second joint stoutest and longest : pronotum twice as broad as long, very pilose on the sides and on part of the disc : scutellum longer than broad, acuminate : hemelytra shorter than the abdomen, membrane very short, veinless, also the corium which is bordered with numerous hairs and has some on the disc : wings rudimentary : feet short and stout ; femora amplified ; the intermediate and last tibiæ much ciliated over their whole surface ; the first pair with ten spines on the outer side, apparently mobile, and increasing in length and breadth from base to tip, the internal side furnished with four spines having very long hairs ; tarsi long and slender ; claws with appendages in the form of bristles : abdomen with numerous hairs on the disc and on the sides, the ostiolar canal more or less confused in the mesosternal groove with the ostiole towards the middle and forming an oblique opening with a distinct margin at the base and almost none at the tip (*Sign.*).

26. CEPHALOCTEUS MELOLONTHOIDES, Schiödte.

Cephaloctenus melolonthoides, Schiödte, in Krøyer's Nat. Tidsskr. iv, p. 332 (1843).

Cephalocteus melolonthoides, Stål, En. Hem. v, p. 21 (1876) : Sign. A. S. E. F. (6 s.) i, p. 40 (1881).

Fuscous or piceous, with ferruginous hairs ; scutellum and hemelytra at the apex of a weaker colour, membrane albescent at the apex : antennæ and rostrum ferruginous : neck pale yellow : feet rufous ; posterior tibiæ piceous, spines fuscous ; all the tarsi pale. Head occupying almost one-sixth of the length of the body, broader than long by one half, somewhat convex, impressed towards the sides with some unequal punc-

tures ; anterior margin of the head between the somewhat exserted eyes broadly rounded, deeply incised in the middle : sides of clypeus converging towards the apex, united by a small transverse furrow behind the middle : pronotum at least twice as broad as its median length, scarcely twice as long as the head, narrower than the basal breadth by one-third at apex, convex, the convexity transverse, almost the third part of a circle ; disc often flatly impressed in the middle, convexly sloped anteriorly and at the sides ; densely and minutely punctured, somewhat smooth towards the anterior angles : scutellum almost twice as long as the pronotum, longer by a fourth than the basal breadth, somewhat convex, densely punctured ; anterior angles very acute ; lateral margins, straight, apex broadly rounded : hemelytra as broad as half of the anterior margin of the scutellum, densely punctured, somewhat convex, sides convexly sloped, externally rounded : venter somewhat smoothish, with ferruginous hairs (*Schiödt*). Long, $3\frac{3}{4}$ mill.

Reported from Travancore.

Genus STIBAROPUS, Dallas.

List Hem. i, p. 111, 125 (1851) : Walker Cat. Het. i, p. 166 (1867) : Stål, En. Hem. v, p. 13 (1876) : Sign. A. S. E. F. (6 s.) i, p. 43 (1881). Includes *Pachynemis*, Jakowleff, Hém. Cauc., Trudy Russ. Ent. Obch. viii, p. 54 (1875).

Head very little longer than broad, rounded in front, with the apex very slightly emarginate ; the margins closely set with spines, the juga meeting beyond the tylus ; eyes of moderate size, globose, prominent : ocelli very large, distant, placed close to the anterior margin of the pronotum : antennæ short, not twice the length of the head, five-jointed, gradually increasing in thickness from the base to the apex ; basal joint short, second very small, third longest, gradually thickened towards the apex, fourth and fifth ovate : rostrum slender, reaching the posterior coxæ, inserted close to the apex of the head ; basal and third joints about equal, second and fourth also about equal, longer than the others, fourth thinnest : body oblong-ovate : thorax a little broader than long, almost semicircular in front : scutellum rather longer than broad, with the apex broad. Membrane well developed, passing beyond the apex of the abdomen, with longitudinal veins : anterior tibiæ compressed, cheliform, slightly curved, with the basal half of the outer margin spinose, the inner margin fringed with hairs, especially at the apex ; tarsi inserted at about one-third of the length of the tibiæ from the apex, very long and slender, three-jointed ; basal joint very long, forming more than half the tarsus, second shortest, third about half as long as the first ; intermediate tibiæ somewhat clavate, strongly curved, thickly set with spines on the outside, especially towards the apex ; tarsi inserted at the apex

of the tibiæ, rather short, three-jointed, apical joint longest, second shortest; posterior legs very stout, rather short; femora very broad, somewhat compressed; tibiæ very short, sparingly spinous on the outside, much enlarged and abruptly truncated at the extremity, forming a large oval disc, surrounded by closely set spines; these spines at the extremity of the inner margin run in a single oblique line across the inner surface of the tibiæ, towards the upper margin and in the angle formed by this row of spines with the truncated posterior margin, the tarsi are inserted, and lie so concealed by the ring of spines surrounding this margin as to elude detection except upon a very close examination; the tarsi are short, three-jointed, the apical joint largest, the basal joint very little longer than the second (*Dallas*).

27. STIBAROPUS LATIPES, Westwood.

Cydnus latipes, Westwood, Hope, Cat. Hem. i, p. 18 (1837); Stål, En. Hem. v, p. 26 (1876).

Stibaropus brunneus, Dallas, List Hem. i, p. 125, t. 3, f. 1 (1851); Walker, Cat. Het. i, p. 166 (1867); Stål, En. Hem. v, p. 17 (1876).

Stibaropus latipes, Signoret, A. S. E. F. (6 s.) i, p. 44, t. 1, f. 4 (1881).

♀. Head, thorax and scutellum pitchy castaneous, more or less transversely rugose: head castaneous in front with the vertex pitchy: ocelli red: thorax with a shallow furrow across about the middle, in front of which is a distinct, transverse, elevated line; the portion of the thorax behind the furrow is finely transversely rugose as also the scutellum which is furnished with a few scattered punctures. Corium and clavus castaneous-brown, finely and densely punctured; membrane pale brownish-yellow, semitransparent: body beneath pale castaneous, impunctate; abdomen clothed with short hairs and with the apex pitchy: legs pale castaneous, with the posterior tibiæ, darker; anterior tibiæ with the apex black; tarsi reddish: rostrum and antennæ reddish testaceous; antennæ darker (*S. brunneus*, Dallas., Long, $10\frac{1}{2}$ mill).

Reported from N. India.

28. STIBAROPUS MOLGINUS, Schiödte.

Scaptocoris molginus, Schiödte, Kröyer's Nat. Tidsskr (2 s.) ii, p. 458 (1849).

Stibaropus molginus, Stål, En. Hem. v, p. 17 (1876); Sign. A. S. E. F. (6 s.) i, p. 45 (1881).

Suboval: rostrum as long as the pectus: second joint of the antennæ longer by half than the third: scutellum transversely rugose, broadly rounded at the apex: hemelytra punctured, piceous-castaneous; vertex and anterior part of pronotum, black piceous: clavus and exterior margin of corium on the hemelytra, castaneous-rufous: beneath with

feet castaneous: pleura piceous; first pair of tibiæ black at the apex. Head very densely rugulose: last joint of the antennæ oblong-oval, as large as the third: second joint of the rostrum a little thickened, distinctly curved: anterior part of the pronotum minutely reticulate, the reticulation unequal, posterior part transversely rugulose, the wrinkles equal, very dense, punctulate: scutellum as long as the pronotum, rugulose like the posterior part of the pronotum, exceeding by one-sixth the basal breadth; a little dilated at the extreme tip, broadly rounded, almost truncated, margin broadly depressed: hemelytra distinctly punctured; exterior area of corium divided into two parts by a straight stria; marginal part narrow, punctulate, the anterior part broad, very smooth: membrane flavescent (*Schiödde*). Long, $9\frac{1}{2}$ — $10\frac{1}{2}$ mill.

Reported from Rangpur (Bengal): a single specimen from Jalpaigori.

29. STIBAROPUS TABULATUS, Schiödde.

Scaptocoris tabulatus, Schiödde, Kröyer's Nat. Tidsskr. (2 s.) ii, p. 459 (1849).

Stibaropus tabulatus, Stål, En. Hem. v, p. 17 (1876): Sign. A. S. E. F. (6 s.) i, p. 45 (1881).

Briefly obovate: rostrum as long as the pectus: second joint of antennæ one-fourth longer than the third: scutellum transversely striated, acutely rounded at the apex: hemelytra smooth. Weakly fulvous-castaneous; a double somewhat ring-shaped patch on the anterior part of the pronotum and the humeral protuberances, piceous: first pair of tibiæ fuscous at the apex; a transversely linear black spot near the posterior margin of the fifth ventral segment, somewhat triangularly dilated forwards in the middle of the segment: last ventral segment in ♂, piceous. Head strongly rugose: last joint of the antennæ elongate. Sovate, one fourth longer than the third: second joint of rostrum curved as regards the form of the anterior setæ: pronotum more distinctly constricted than in *S. molginus* and more narrowed towards the apex, anterior part more deeply reticulate, posterior part transversely striated, the striæ robust, here and there confluent: scutellum scarcely longer than the pronotum, exceeding by one sixth the basal breadth, transversely striated, the striæ rather regular, deep, gradually more distant towards the apex; apex scarcely dilated, acutely rounded, margin narrowly depressed: hemelytra smooth or very obsoletely punctured, exterior area of corium divided by an inwardly arched stria; marginal part broad, interior part narrow, linear, dilated towards the apex: membrane flavescent (*Schiödde*). Long, 7 mill.

Reported from Travancore.

30. STIBAROPUS CALLIDUS, Schiödte.

Scaptocoris callidus, Schiödte, Nat. Tidsskr. (1 s.) ii, p. 460 (1849).

Stibaropus callidus, Stål, En. Hem. v, p. 17 (1876): Sign. A. S. E. F. (6 s.) i, p. 46 (1881).

Obovate: rostrum as long as the prosternum: second joint of the antennæ as long as the third: scutellum somewhat convex, rugosely punctured, rounded at the apex: hemelytra minutely punctured. Ferruginous-castaneous, anterior part of the pronotum and base of the scutellum and hemelytra more obscure: apices of femora usually piceous, first pair of tibiæ fuscous at the apex: last ventral segment in ♂ with a blackish spot. Head densely punctured, punctuation rugose: last joint of antennæ oval, one-fourth longer than the third: second joint of rostrum straight, third roundly dilated above: anterior part of pronotum very minutely reticulate, the reticulation unequal, disc usually somewhat smooth, posterior part deeply and densely punctured, the punctures transverse, here and there confluent: scutellum one-fourth longer than the pronotum, longer by half than the basal breadth, punctures transverse, very dense at the base, here and there confluent, more distant towards the apex and gradually decreasing in size; apex scarcely dilated, obsoletely margined, broadly rounded: the hemelytra minutely punctured; exterior area of corium without a dividing line; with a longitudinal impression at the base, deeply punctured, remotely and very minutely punctured towards the apex: membrane whitish (*Schiödte*). Long, 5—5½ mill.

Reported from Serampur (Bengal). Found flying in the evening on the banks of the Hughli river.

31. STIBAROPUS FLAVIDUS, Signoret.

Stibaropus flavidus, Sign., A. S. E. F. (6 s.) i, p. 47, t. 2, f. 6 (1881).

Yellow, rugose: head semi-horizontal, semi-perpendicular, the tylus shorter than the juga, with two bristles at the tip, the juga with six: eyes very prominent; ocelli almost pedunculate or at least borne on a small tubercle: rostrum reaching the insertion of the intermediate feet, the first joint very long: the second joint of the antennæ very short, the third thrice as long as the second, the first almost as long as the third: pronotum rugose, twice as broad behind as in front, the anterior border marginate; a transverse groove beyond the middle; lateral margins pubescent: scutellum longer than broad, rugose, almost carinate in the middle, broadly rounded at the tip: hemelytra long, finely punctured; membrane broad, white, with five veins: feet robust, pubescent, spinose, the anterior small; tibiæ curved, concave beneath, having the tarsi inserted before the tip; the posterior very stout, the tibiæ ending in a

robust, spinose stump : abdomen pubescent ; ostiolar canal much grooved, reaching three-fourths of the metasternum and ending in a rounded lobe with the odoriferous aperture invisible. Allied to *S. callidus*. Schiödte, differs in having the second joint of the antennæ shorter than the third, and the rostrum being longer (*Sign.*). Long, 6 ; broad, $2\frac{3}{4}$ mill.

Reported from N. India.

32. STIBAROPUS (?) MINOR, Walker.

Stibaropus minor, Cat. Het. i, p. 166 (1867).

Piceous, elliptical, convex, shining ; head slightly rugulose, about one-third of the breadth of the thorax : rostrum, antennæ and legs ferruginous : thorax minutely punctured in front of the antemedial transverse furrow ; hind part transversely rugulose : scutellum minutely rugulose, with a transverse impression very near the tip : legs incrassated ; tibiæ clavate, setose ; tarsi slender : hemelytra minutely punctured ; membrane pale cinereous (*Walker*). Long, $5\frac{1}{4}$ mill.

Reported from Burma.

33. STIBAROPUS (?) TESTACEUS, Walker.

Stibaropus testaceus, Walker, Cat. Het. i, p. 166 (1867).

Testaceous, oval, thick, convex, shining : head somewhat conical, slightly rugulose, about one-third of the breadth of the thorax which is thickly and minutely punctured, with a transverse median furrow : scutellum transversely and minutely rugulose : legs short ; tibiæ setose ; anterior femora and tibiæ thick ; hind femora and tibiæ much incrassated : hemelytra very minutely punctured ; membrane pale cinereous (*Walker*). Long, $5\frac{1}{4}$ mill.

Reported from India.

Genus LACTISTES, Schiödte.

Kröyer's Nat. Tidsskr. (2 s.) ii, p. 456 (1849) ; Stål, En. Hem. v, p. 17 (1876), Sign. A. S. E. F. (5 s.) ix, p. clxxii (1879) ; l. c. (6 s.) i, p. 48 (1881).

In this genus, as in the preceding, the anterior tarsi appear to be inserted before the end of the tibiæ, due to a prolongation of the end of the tibia (which is itself more or less emarginate) arising from the union of the apical spines. Head normally ciliated : juga inclosing the tylus : vertex more or less rugulose ; eyes spinose at the base : pronotum much narrower in front, with a median transverse impression : corium almost twice as long as the membrane, the latter extending slightly beyond the abdomen : ostiolar canal more or less rugose, with the *ostirole* in an emargination beneath and usually accompanied by a

small hook-shaped tongue (*Sign.*). In *Stibaropus*, the posterior tibiæ are thickened; in *Lactistes*, they are slender; in *Scoparipes*, they have a longitudinal row of brush-shaped hairs, and in *Adrisa*, they are cylindrical. Schiödte separates *Cephalocteus* and *Lactistes* thus:—

Cephalocteus.

Tarsi equal, very minute. Posterior tibiæ clavate, setose, externally very spiny. First tibiæ pectinate, truncate.

Lactistes.

Tarsi unequal, first pair longer, last tibiæ narrow, compressed, spiny. First tibiæ pectinate, hamate.

34. *LACTISTES RASTELLUS*, Schiödte.

Lactistes rastellus, Schiödte, Kröyer's Nat. Tidsskr. (2 s.) ii, p. 457 (1849): Stål, Overs. K. V.-A. Förh. p. 614 (1870); En. Hem. v, p. 17 (1876): Sign. A. S. E. F. (6 s.) i, p. 49, t. 2, f. 8 (1881).

Blackish-brown, shining, oval: first pair of tibiæ rounded internally before the apex: third joint of antennæ one-fourth shorter than the second which is cylindrical. One-half longer than its greatest breadth before the base of the pronotum; somewhat convex, shining, castaneous, the antennæ and feet of a weaker colour. Head shorter by one-third than its greatest breadth through the eyes, rugosely punctured, flattish, margin somewhat elevated, minutely incised in the middle, frontal striæ converging from the median length: rostrum reaching the intermediate coxæ, second joint straight above: antennæ exceeding the head by one-fifth, first and second joints of the same length, cylindrical, the second twice as slender, third obconical, last two equal, ovate, one-fourth longer than the third: pronotum one-sixth longer than the anterior breadth, shorter by half than the basal breadth, convex, somewhat flatly sloped towards the apex, distinctly constricted behind the middle, densely punctured, posterior margin and anterior protuberances very smooth; sides sinuated behind the middle; anterior angles obtuse, posterior angle somewhat straight, callous, prominulous beyond the margin of the hemelytra: scutellum as long as the pronotum, scarcely exceeding the basal breadth, rather densely punctured, apex somewhat deflexed, somewhat obtuse: hemelytra densely punctured, membrane hyaline (*Schiödte*). Long, $5\frac{1}{2}$ mill.

Reported from Serampur (Bengal), Philippines.

35. *LACTISTES VICINUS*, Signoret.

Lactistes vicinus, Sign., A. S. E. F. (6 s.) i, p. 50 t. 2, f. 9 (1881).

♀. Close to *L. rastellus*, Schiödte, but differs from it in the much shorter, broad, and rounded tip of the tibiæ, in the internal edge of the

tibiæ being without tubercles, whilst the external edge has 5-6 robust spines or teeth. Head rounded, emarginate in front, juga united with the tylus, borders with a rim; less rugose: pronotum punctured, margins ciliated: hemelytra with three piliferous points: abdomen punctured: the ostiolar canal more sinuous in front and behind, ending in a lobe more angularly rounded, with a small tooth at the emargination: smooth part of the mesosternum punctured: third joint of antennæ oval, as long as the second but stout; 4-5 joints are equal and longest (*Sign.*). Long, $7\frac{1}{4}$; broad, $3\frac{1}{3}$ mill.

Reported from N. India.

36. LACTISTES TRUNCATO-SERRATUS, Signoret.

Lactistes truncato-serratus, Sign., A. S. E. F. (6 s.) i, p. 51, t. 2, f. 10 (1881).

♀. In colour and form like *L. vicinus*, Sign., but differs especially in the dilated prolongation of the posterior tibiæ which is short and presents at the last spine of the external side two emarginations that form three rounded teeth: the tarsi are very long. Head rounded, emarginate in front, the tylus shorter than the juga but free, the juga not touching at the tip: pronotum more punctured, with two irregular smooth spaces on the anterior disc: scutellum less densely punctured: hemelytra without piliferous points: abdomen punctured on the sides, on the mesosternum in the glossy lateral part, and on part of the metasternum and near the insertion of the posterior femora: the episternum much punctured: the ostiolar canal very irregular, ending in a small lobe, rounded, with a valveless emargination, not a tooth (*Sign.*). Long, $7\frac{1}{2}$; broad, $3\frac{1}{2}$ mill.

Reported from N. India.

Genus SCOPARIPES, Signoret.

B. S. E. F. (5 s.) ix, p. clxxii (1879); l. c. p. 235 (1879): l. c. (6 s.) i, p. 202 (1881).

Distinguished by the form of the posterior tibiæ in the ♂ which are long, flattened, more narrow at the base and at the tip and have on the internal surface a line or edge furnished with short, stiff hairs very close, and the same line but with a few hairs only in the ♀; on the external surface, there are spines as in the other genera of this section. Head more or less rounded and furnished on the margin with hairs and rather stout spinules; antennæ 5-jointed of which the third is shorter than the second: ostiolar canal broad, grooved transversely and ending in a broad lobe with the lower opening surrounded by a kind of hood (*Sign.*).

37. SCOPARIPES LONGIROSTRIS, Signoret.

Scoparipes ? *longirostris*, Sign., A. S. E. F. (6 s.) i, p. 205, t. 7, f. 24 (1881).

Brown-black; somewhat parallel, elongate: rostrum and tarsi, yellowish: two first joints of the antennæ, black, the rest brownish. Head rounded in front, striated, finely punctured, spinulose, and ciliated on the margin: second joint of the antennæ longer than the third: rostrum very long, reaching the second ventral segment, the joints almost equal, the second joint much arched: pronotum almost square, anterior angles rounded, anterior border much emarginate, and strongly impressed, finely punctured, also the lateral margins and on the median transverse line; much ciliated on the borders: scutellum rounded, impressed at the tip and very concave; disc punctured: hemelytra shorter and narrower than the abdomen, finely punctured, with 7-8 piliferous points on the external side; membrane brown: feet black: anterior tibiæ, broad, with the usual spines: abdomen glossy in the middle, punctured and striated on the sides (*Sign.*). Long, 12; broad, 6 mill.

Reported from India?

Genus ADRISA, Am. & Serv.

Hist. Nat. Ins. Hém. p. 89 (1843): Stål, En. Hem. v, p. 20 (1876): Signoret. A. S. E. F. (6 s.) i, p. 205 (1881). Includes *Acatalectus*, Dallas, List Hem. i, p. 110, 122 (1851); Walker, Cat. Het. i, p. 64 (1867) and *Geobia*, Montr. Ann, Soc. Linn. Lyon. (2 s.) v, p. 245 (1858).

Distinguished by its 4-jointed antennæ, due to the union of the second and third joints; first joint short, not extending beyond the anterior margin of the head, second scarcely or as long as the third and fourth together, second joint gradually thickened from base to tip and a little pubescent, third and fourth almost of equal length and very pubescent: second joint of rostrum thickest and longest, the fourth is shortest, almost as long as the first; body oval, a little convex; corium twice as large as the membrane: scutellum angular at the tip: the meso- and meta-sternal *plaques mates* very large, the upper reaching the lateral margin above the mesosternal furrow: the ostiolar canal which reaches the middle of the metasternal space is more or less waved and ends in a tubercle or rounded or angulated lobe; it is emarginate beneath with a large valvule varying with the species: feet and abdomen normal (*Sign.*).

38. ADRISA MAGNA, Uhler.

Acatalectus magnus, Uhler, Proc. Ac. Nat. Sci. Phil. p. 222 (1860); Stål, En. Hem. v, p. 27 (1876).

Adrisa magna, Signoret, A. S. E. F. (6 s.) i, p. 206, t. 7, f. 25 (1881).

♀. Black, shining, much punctured, the punctuation more or less

confluent, head rounded, emarginate, with the anterior margin narrowly recurved, juga meeting by a point of their surface in front of the tylus, coarsely and deeply rugosely punctured: eyes testaceous, ocelli reddish: antennæ piceous, pubescent, terminal joints paler; rostrum pitchy black, second joint thickened; thorax subquadrate, anterior angles a little oblique and rounded, behind the head, a slightly elevated, irregularly crescent-formed surface, smooth and impunctate, remaining surface very deeply, coarsely and confluent punctured, a series of very fine punctures along the lateral margins, basal margin subtruncate, smooth, with a very few coarse punctures: scutellum shining, rugosely punctured, impunctate at the apex: corium subopaque, very finely and closely punctured; membrane fuliginous, somewhat opaque, freckled with spots of yellow, beneath scabrescently punctured, venter densely so, its disc shining, impunctate, margins trenchant; legs deep black, shining, anterior and middle femora ciliated beneath, with a row of long slender spines, those upon the posterior pairs very short, tibiæ densely spinose (*Uhler*). Long, 19; breadth of abdomen, $10\frac{1}{2}$ mill.

Reported from Hong-Kong.

39. *ADRISA* (?) *CLARA*, Walker.

Acatalectus clarus, Walker, Cat. Het. iii, p. 535 (1868).

Black, elliptical, rather flat: sides of the head and of the thorax with a few bristles: head hardly punctured; sides and fore border very slightly reflexed: eyes, rostrum, antennæ and legs, piceous: rostrum extending to the middle coxæ: 1-4 joints of the antennæ successively increasing in length: thorax sparingly and minutely punctured, smooth, except on each side in front of a transverse middle furrow; a ferruginous patch on each hind angle: scutellum rather thinly punctured, smooth at the base, with a narrow ferruginous border on each side: legs stout; femora slightly dentate beneath; tibiæ spinose: hemelytra piceous, more thickly punctured than the thorax, with two veins near the costa and with four near the hind border; membrane colourless (*Walker*). Long, $10\frac{1}{2}$ mill.

Reported from India.

Genus *ÆTHUS*, Dallas.

Pt., List Hem. i. p. 110 (1851): Walker, Cat. Het, i, p. 148 (1867): Stål, Hem. Afric. i, p. 19, 20 (1864); En. Hem. v, p. 18 (1876): Sign. A. S. E. F. (6 s.) i, p. 423 (1881). Includes *Cydnus*, Fieber, Eur. Hem. p. 83, 363 (1861).

Body oval or ovate, slightly convex; margins at least of the head, pilose or setose: head rounded at the apex, juga and tylus equally long;

bucculæ continued through, slightly elevated : first joint of the rostrum not extending posteriorly beyond the bucculæ : antennæ 5-jointed, very often somewhat short and furnished with subfusiform apical joints ; scutellum triangular, longer than broad, frena extended almost to the apex : corium longer than the scutellum, with the apical margin straight : prosternum longitudinally impressed : feet moderate, femora sparingly setose, tibiæ very spinose, first pair much compressed, upper margin spinosely pectinate (*Stål*).

Signoret (l. c.) restricts *Æthus*, to those species of Dallas which have the head spinulose and ciliated and in which the ostiolar canal does not end in a cornet or ear-shaped opening of which the borders are more or less flattened.

40. *ÆTHUS INDICUS*, Westwood.

Cydnus indicus, Westwood, Hope, Cat. Hem. i, p. 19 (1837) ; *Stål*, En. Hem. v. p. 26 (1876) ; Sign. An. Mus. Gen. xvi, p. 632 (1880) ; Lethierry, l. c. xviii, p. 649 (1883).

Æthus perosus, *Stål*, Ofvers. K. V.-A. Förh. p. 214 (1853) ; Hem. Afric. i, p. 23 (1864) ; Ofvers. K. V.-A. p. 614 (1870) ; En. Hem. v, p. 18 (1876).

Æthus impressicollis, Signoret, A. S. E. F. (3 s.) viii, p. 923 (1861).

Æthus indicus, Dallas, List Hem. i, p. 114 (1851) ; Walker, Cat. Het. i, p. 155 (1867) ; Signoret, A. S. E. F. (6 s.) ii, p. 28, t. 1, f. 69 (1882).

Small, black, shining, ovate, punctured : antennæ moderate ; sides of body setose : feet moderate, black : anterior tibiæ, broad, spinose, four posterior setiferous (*Westwood*). Body long 6 mill.

♂, ♀. Oval or ovate, black-piceous : head somewhat obtusely rounded, rarely somewhat semicircular, distinctly punctured, the base and the tylus smooth, margin slightly reflexed, remotely pilose : antennæ fuscous-piceous, apical joints of a weaker colour, somewhat short, three last joints somewhat incrassate, second a little shorter than the third : thorax convex, in ♂, impressed before the middle, rather densely and distinctly punctured, the base and transverse space before the middle, smooth, lateral margins remotely pilose : scutellum moderately densely punctured : hemelytra distinctly punctured ; membrane sordid hyaline or very slightly infusate : sides of venter sparingly punctured : tarsi yellow piceous (*Æ. porosus*, *Stål*). Long, $5\frac{1}{2}$ —6 ; broad, 3— $3\frac{1}{2}$ mill.

Reported from S. Africa, Madagascar, Flores, Celebes, Borneo, Java, China, Burma, India, Bombay.

41. *ÆTHUS BORREI*, Signoret.

Æthus borrei, Signoret, A. S. E. F. (6 s.) ii, p. 32, t. 2, f. 73 (1882).

♂. Brown, oval, shining, sparingly and strongly punctured : ros-

trum, antennæ coxæ and feet, yellow; tarsi of a lighter colour; spines on feet, black. Head rounded, emarginate in the middle, the tylus shorter than the juga, the latter inclosing it, the borders also defined and posteriorly with 13-14 piliferous points on each side: vertex almost smooth, obsoletely striated: three ocelli near the eyes: rostrum reaching the intermediate coxæ, antennæ short, the second joint shorter than the third: pronotum very convex, with a strong line of dots behind the emargination and a slight impression; others at the anterior angles and on the transverse impression; the lateral margins sinuate and with 13-14 ciliated points: scutellum with the tip angularly rounded, rugosely and sparingly punctured on the disc, the base smooth: hemelytra strongly punctured; the marginal side visible to the tip but indistinct from the middle of the corium, and appearing crenulated, due to the presence of nine piliferous points or dots: the internal radial vein ending in the middle of the corium: membrane very long, of a light yellow hyaline and extending from near its half beyond the abdomen; feet yellow, with black spines; anterior tibiæ very broad, with seven stout spines, the sixth and seventh almost united as in *Lactistes*: abdomen smooth, impressed on the sides, in the space occupied by the ciliated points and the stigmata: *plaques mates* striated and punctured, the upper ending in a point on the suture, the lower separated from the smooth lateral space by an almost straight line; the ostiolar canal not reaching the middle of the metasternum and ending in a reniform lobe, with a valvular tooth in the indentation. Differs from *Ae. indicus*, Westw. by its much broader head, almost smooth, and the tylus shorter than the juga which inclose it. In *Ae. indicus*, the head is longer than broad between the eyes and the tylus is very narrow in front and as long as the juga which almost inclose it (*Sign.*). Long, 7; broad, 4 mill.

Reported from Silhet.

42. *ÆTHUS PERPUNCTATUS*, Signoret.

Æthus ? perpunctatus, Sign., An. Mus. Gen. xvi, p. 634 (1881); A. S. E. F. (6 s.) ii, p. 34, t. 2, f. 75 (1882).

Black: broadly oval, convex, much punctured over its entire surface, much ciliated on the head and pronotum: two glossy spaces on the anterior disc of the pronotum, at the basal angles of the scutellum and a median line on the latter almost carinate. Head rounded in front; the tylus very narrow at the tip which reaches the juga, margins slightly reflexed: pronotum ciliated on the sides and on the surface near the margin at the anterior angles; hemelytra much ciliated on the marginal side, with 12-13 piliferous points: membrane short, brown: feet black; tarsi pale; anterior tibiæ with eight spines on the external side

and four on the internal side : second joint of the antennæ much longer than the third : rostrum reaching the intermediate feet : ostiolar canal ending in the middle of the episternum, much rounded at the tip which is curved back beneath, with a valvular emargination : the episternums with three small dull plates (*plaques mates*), that of the mesosternum occupying the entire internal angle along the coxa and continued on the suture up to the border ; the lower, or that of the metasternum, occupying only the space above the extreme lobe of the ostiolar canal (*Sign.*) Easily distinguished by its abundant punctuation and the form of the ostiolar canal. Long, 6 ; broad, $3\frac{1}{2}$ mill.

Reported from Khandalla (Bombay ?).

43. *ÆTHUS MAURUS*, Dallas.

Æthus maurus, Dallas, List Hem. i, p. 118 (1851) ; Walker, Cat. Het. i, p. 158 (1867) ; Stål, En. Hem. v, p. 26 (1876) ; Distant, Scien. Res. 2nd Yarkand Miss. p. 3 (1879).

♂, ♀. Black somewhat shining, very thickly and finely punctured : head as long as broad, with the anterior margin semicircular, very faintly notched at the tip, juga not passing the tylus : ocelli not very large, red : thorax with a faint punctured transverse furrow about the middle, the anterior and lateral margins, and the portion of the disc behind the transverse furrow, very thickly and finely punctured : scutellum rather elongated, very thickly and finely punctured. Coriaceous portion of the hemelytra pitchy castaneous, finely and rather thickly punctured, the punctures closer on the line of the veins, near which it is darker than on the rest of the surface ; membrane brownish, transparent : abdomen very thickly and finely punctured on the sides, the middle of the disc, smooth, shining, impunctate ; the posterior margins of the segments very minutely denticulated : legs pitchy black, with the tarsi ferruginous : rostrum ferruginous : antennæ ferruginous brown (*Dallas*). Long, $6\frac{1}{4}$ mill.

Reported from India ?

Genus *CYDNUS*, Fabricius.

Pt. Syst. Rhyng. p. 184 (1803) : *Cydnus*, Dallas, List Hem. i, p. 110, 120 (1851) : Walker, Cat. Het. i, p. 164 (1867) : Stål, Hem. Afric. i, p. 18, 19 (1864) ; En. Hem. v, p. 20 (1876) : Sign. pt. A. S. E. F. (6 s.) ii, p. 145 (1882). Includes *Brachypelta*, Am. & Serv., Hist. Nat. Ins. Hém. p. 89 (1843).

Body oval : head produced, semicircularly rounded at the apex and slightly emarginate in the middle, juga longer than the tylus, contiguous at the apex, margins reflexed, remotely ciliated ; bucculæ rather elevated, higher posteriorly than anteriorly : first joint of rostrum not extending

beyond the bucculæ posteriorly : antennæ 5-jointed, first joint not reaching the apex of the head : the lateral margins of the thorax ciliated : scutellum broader than long, narrow at the apex : frena extended almost to the apex of the scutellum : costal margin of the hemelytra remotely ciliated, apical margin waved : prosternum longitudinally excavated : feet robust, tibiæ spinose, first pair compressed, upper margin spinosely pectinated (*Stål*). Signoret's diagnosis slightly differs as he makes the tylus and juga usually equal in length and bases his differentiation from *Æthus* on the ostiolar canal having at the tip a free lobe, more or less elevated, horn-shaped and more or less flattened on the sides.

44. CYDNUS VARIANS, Fabricius.

Cydnus varians, Fabr., Syst. Rhyng. p. 187 (1803) : Sfâl, En. Hem. v. p. 26 (1876) ; Sign., A. S. E. F. (6 s.) ii, p. 155, t. 6, f. 92 (1882).

Æthus varians, Stâl, Hem. Fabr. i, p. 6 (1868).

Cydnus cyrtomenoides, Dohrn, Stettin Ent. Zeit. p. 40 (1860).

♂, ♀. Black-piceous or piceous, basal margin of thorax and feet, paler : membrane sordid whitish : tarsi piceous-whitish : head anteriorly very finely and remotely punctulate : thorax and hemelytra distinctly punctured. In stature like *Æthus indicus*, Westw., but differs in its much smaller size, head more obtuse, anteriorly very obsoletely and remotely punctulate, tylus very slightly narrowed forwards, antennæ much shorter, ocelli situate nearer to the eyes, thorax more narrowed anteriorly, punctuation on thorax, scutellum and hemelytra finer, first pair of tibiæ with fewer spines but apparently longer and the venter remotely sprinkled with fine, obsolete, small punctures (*Stål*). Long, 4 ; broad $2\frac{1}{5}$ mill.

Reported from Bengal, Bombay, Ceylon.

45. CYDNUS ATERRIMUS, Forster.

Cimex aterrimus, Förster, Nov. Spec. Ins. p. 71 (1771).

Cimex niger, De Géer, Mém. iii, p. 269 (1773).

Cimex tristis, Fabr., Syst. Ent. p. 716 (1775) ; Ent. Syst. iv, p. 124 (1794).

Cydnus tristis, Fabr., Syst. Rhyng. p. 185 (1803) : Hahn, Wanz. Ins. i, p. 161, t. 25, f. 83 (1831).

Brachypelta tristis, Am. & Serv., Hist. Nat. Ins. Hém. p. 90 (1843).

Cydnus carbonarius, Fourcroy, Ent. Paris (1785) : sec. Sign.

Cydnus spinipes, Schranck, Enum. Ins. Austr. p. 275 (1781).

Brachypelta elevata, Uhler, Proc. Ac. Sci. Phil. p. 222 (1860) ; *Cydnus id*, Stâl, En. Hem. v, p. 20 (1876)

Var. (b). *Cydnus sanguinicollis*, Fabr., Syst. Rhyng. p. 185 (1803).

Var. (c). *Cydnus brunnipennis*, Fabr., l. c. p. 185 (1803).

Brachypeltus aterrimus, Signoret, A. S. E. F. (6 s.) iii, p. 358, t. 9, f. 186 (1883.)

Cydnus aterrimus, Dallas, List Hem. i, p. 12 (1851) excl. syn. pt.; Walker, Cat Het. i, p. 164 (1867); Stål, Hem. Afric. i, p. 19 (1864); Hem. Fabr. i, p. 6 (1868); En. Hem. v, p. 20 (1876).

Black, somewhat shining, densely and distinctly punctulate: membrane whitish hyaline, margined black at the base: thorax in ♂ anteriorly intruded and slightly transversely elevated in the middle (Stål.) ♂, ♀, long, 9-13; broad 5-6 mill.

Var. *b.* has the antennæ, and basal limb of thorax yellow-castaneous. ♂, long 12; broad, $6\frac{1}{4}$ mill.

Var. *c.* has the antennæ, corium and clavus, yellow castaneous, the corium and clavus infuscate at the base. ♂, long, 9; broad 5 mill.

Oval, elongate, deep black, finely punctured: base of vertex, anterior disc of the pronotum, two basal angles of the scutellum, smooth, the last a little elevated: beneath smooth, shining in the middle, the sides more or less granulated or punctured: feet smooth, shining, sometimes of a lighter colour, femora with several rows of spinose hairs, anterior and middle pair with two spines at the tip: anterior tibiæ strongly amplified, the end having eleven strong spines on the external side and four on the internal side and at the tip, several others on the anterior and posterior disc: trochanters, rostrum and antennæ, piceous. Head longer than broad, margins much raised in front, without hairs on the border and shining only those proceeding from the piliferous points on the vertex and those anterior below the head which spring from each side of the base of the rostrum: the tylus strongly inclosed by the juga: eyes small, without a spine at the base: ocelli very small nearer to the eyes, than to the median line: rostrum short, stout, scarcely extending beyond the anterior coxæ, first joint entirely hidden by the rostral ridges which are rather raised; the second joint stouter, equal to the third, the last one-third less than the preceding: first joint of the antennæ shortest, the third less than the rest, second, fourth and fifth almost equal: anterior border of pronotum strongly emarginate and showing behind the indentation an impression, very strong in the ♂ and less so in the ♀: scutellum triangular, the side hardly shorter than the base, tip angular: hemelytra with 1-3 hairs, external margin very narrow: membrane almost as long as the corium and extending by one-fourth beyond the abdomen, dull plates (*plaques mates*) with the angles rounded and weakly grooved; the glossy parts and grooves closely punctured: *ostiole* ending in a broad, tumid, smooth, shining plate with the posterior convexity circular (*Sign.*). Long, 10-13 mill.

Reported from Europe, Africa, India: specimens from Hardwar (N.-W. P.).

Add perhaps

Cydnus nigrinus, Fabr., Ent. Syst. iv, p. 123 (1794); Sign. A. S. E. F. (6 s.), ii, p. 147, t. 6, f. 85 (1882). Reported from China, Cochin-China, Europe.

Cydnus laticeps, Sign., l. c. p. 162, t. 7, f. 98 (1882). Reported from Hong-Kong.

Genus GAMPSOTES, Signoret.

A. S. E. F. (6 s.) ii, p. 243 (1882).

Stenocoris and *Gampsotes* differ from the other genera of *Cydnina* in the length of the rostrum which reaches the tip of the second segment of the abdomen. In *Stenocoris*, the third joint of the antennæ is much smaller than the second, and the 4-5 joints equal or almost so, whilst the base of the second joint moves in a median groove on the mesosternum. In *Gampsotes*, the second joint of the antennæ is longer than the third, the third is shorter than the fourth which itself is almost as long as the second: the base of the second joint is free, crosier-shaped and slender, further the first joint is only partly hidden by the rostral ridges which leave the apical half of the joint free (*Sign.*).

46. GAMPSOTES PARALLELUS, Signoret.

Gampsotes parallelus, B. S. E. F. (6 s.), i, p. xxix (1881): ii, p. 243, t. 8, f. 103 (1882).

Two and half times longer than broad, parallel, piceous: antennæ especially the joints, and the tarsi ferruginous; rostrum of a lighter colour. Head longer than broad between the eyes, finely punctured, a little ciliated: second joint of the antennæ hardly less long than the third, fourth and fifth longest, the latter longer than the fourth: rostrum very long, reaching the third abdominal segment, second joint arched and somewhat crosier-form at the base, third joint shortest, equal to the first, the fourth slender and long, equal to the second: pronotum strongly emarginate in front and punctured, except on the anterior disc and at the posterior margin, weakly ciliated on the sides: scutellum very long, rounded at the tip, much punctured, except at the basal angles: hemelytra very long; membrane yellow hyaline, extending slightly beyond the abdomen, with four obsolete veins; corium convex at the tip, much punctured, cubital portion with two almost complete rows of points and a third smaller towards the scutellum: feet comparatively short, normally ciliated and spinulose; anterior tibiæ much dilated: ostiolar canal ending in an irregular tuberculous lobe: dull plates (*plaques mates*) occupying almost the entire meso- and meta-thoracic space and weakly striated: abdomen very rough on the sides and smooth in the middle (*Sign.*). Long, $5\frac{1}{2}$; broad, 2 mill.

Reported from India.

Genus MACROSCYTUS, Fieber.

Eur. Hem. p. 83, 362, (1861): Stål, Hem. Afric. i, p. 19, 23 (1864); En. Hem. v, p. 18 (1876): Sign. A. S. E. F. (6 s.) ii, p. 465 (1882).

Body oval, depressed, ciliated with rare or very rare hairs: head flat, semicircularly or somewhat obtusely rounded; juga and tylus of equal length; bucculae continued through: antennae 5-jointed, moderate, filiform, second and third joints somewhat equal, somewhat longer than the basal: scutellum triangular, longer than broad, the frena continued almost to the apex: corium longer than the scutellum, exterior apical angle acute: prosternum longitudinally impressed: feet moderate, tibiae slender, first pair somewhat compressed, upper margin pectinated with remote spines, last femora beneath armed near the apex with a spine or tooth. Closely allied to *Æthus*, Dallas, differs in having the body very remotely ciliated, margin of the head always without small spines and especially in its habit (Stål). Signoret makes the distinguishing characters the large scutellum and especially the presence of a spine at the tip of the posterior femora.

47. MACROSCYTUS FOVEOLUS, Dallas.

Æthus foveolus, Dallas, List Hem. i, p. 113 (1851); Walker, Cat. Het. i, p. 157 (1847); Stål, En. Hem. v, p. 25 (1876).

Macroscytus foveolus, Signoret, A. S. E. F. (6 s.) ii, p. 472, t. 12, f. 131 (1882).

♂. Head rather small, with the anterior margin rounded, entire, the juga not meeting beyond the tylus; pitchy brown, with the margins paler and fringed with fine bristles: ocelli very large, red: thorax pitchy brown, with the posterior margin castaneous, anterior margin with a faint, finely punctured, transverse fovea; lateral margins finely and thickly punctured, and fringed with long, stout, bristles: posterior portion of the disc finely and sparingly punctured: scutellum pitchy brown at the base, becoming castaneous-brown towards the apex, rather strongly but sparingly punctured; the tip with a distinct fovea. Coriaceous portion of the hemelytra bright castaneous-brown, thickly and finely punctured; membrane brownish, semi-transparent: abdomen beneath pitchy, very smooth, shining, with the disc impunctate, the sides thickly and finely punctured: pectus pitchy, thickly and finely punctured: anterior legs pitchy red; four posterior pitchy, with the coxæ reddish; all the tarsi ferruginous: rostrum pitchy red, with the apex pitchy: antennae ferruginous, dusky towards the base (Dallas). Long, $11\frac{1}{2}$ mill.

Reported from N. India.

48. MACROSCYTUS BRUNNEUS, Fabricius.

Cydnus brunneus, Fabr., Syst. Rhyng. p. 185 (1803). Tanger.

Æthus brunneus, Walker, Cat. Het. i, p. 149 (1867) excl. syn. Syria.

Cydnus proximus, Ramb., Fauna Andal. p. 112 (1839). Spain.

Æthus badius, Walker, Cat. Het. p. 159 (1867). India, Ceylon, N. China.

Var. (b.) *Æthus opacus*, Stål, Ofvers. K. V.-A., Förh., p. 214 (1853); *Macroscytus* id., Hem. Afric. i, p. 26 (1864); En. Hem. v, p. 19 (1876). Caffraria.

Var. (c.) *Cimex spinipes*, Fabr., Spec. Ins. ii, p. 360 (1781); Mant. Ins. ii, p. 172 (1787); Ent. Syst. iv, p. 124 (1794). Cen. Africa.

Cydnus spinipes, Fabr., Syst. Rhyng. p. 186 (1803); Stål, En. Hem. v, p. 25 (1876).

Macroscytus brunneus, Fieber, Eur. Hem. p. 362 (1861) excl. syn. pt.; Muls. and Rey, Pun. Fran. ii, p. 32 (1866), Stål, Hem. Fabr. i, p. 6 (1868); Sign. A. S. E. F. (6s.) ii, p. 477, t. 14, f. 136 (1882).

Stature and size of *C. aterrimus*, Förster, but entirely brunneous and more flat, thorax not retuse nor impressed with a median stria: antennæ 5-jointed: feet spinose: last pair of femora inwardly dentate (*M. brunneus*, Fabr.).

Oval: of a more or less deep brown; the varieties *brunneus* and *opacus*, black and *spinipes* more or less finely punctured: corium sometimes glossy: rostrum, base of antennæ and the tarsi, yellow. Head rounded circularly in front; tylus as long as the juga which have 5-6 hairs along the margin: vertex scarcely carinate: ocelli approximate to the eyes: rostrum reaching the tips of the intermediate coxæ: two first joints of the antennæ, yellow; the third shorter than the second, the fourth and fifth the longest: pronotum convex in front, transversely flattened without an impression; borders slightly margined and with several hairs: scutellum long, reaching three-fourths of the abdomen, angular at the tip which is sloped, convex at the base and on the sides, very finely punctured on the disc: hemelytra almost flat, finely punctured, the radial veins scarcely prominent, the marginal side with 3-6 piliferous points; membrane short, white, hyaline, veins clouded brown: feet obscure, more or less deeply coloured, the tarsi yellow, all the femora spinose beneath, the posterior femora with two stouter spines at the tip which causes the posterior tibiæ to become somewhat distorted at the base, this portion is reddish and glabrous: abdomen black and smooth with some hairs on the margin: ostiolar canal grooved; the tip with two lobes having a broad irregular valvule in the posterior indentation; the dull plates (*plaques mates*) finely striated, the upper rounded at the anterior angle and between it and the mesosternal groove a smooth space which extends to the level of the tip of the ostiolar canal. In var. *opacus*, there is a weak punctuation in the smooth space of the metasternum (*Sign.*). Long, 8; broad, $4\frac{1}{2}$ mill.

Reported from Europe, Africa, Asia: China, Ceylon, India.

49. *MACROSCYTUS EXPANSUS*, Signoret.

A. S. E. F. (6 s.), ii, p. 479, t. 14, f. 138 (1882).

Body oblong, oval, of a blackish-brown: rostrum, base and tip of the antennæ and the feet of a lighter colour: tarsi, yellow: hemelytra light brown; finely punctured on the posterior disc of the pronotum, the scutellum and the hemelytra. Tylus on a level with the jugæ which have six hairs; vertex weakly furrowed: third joint of the antennæ shorter than the second: pronotum with 10—11 hairs on the lateral margins; behind the emargination the points are very obsolete: scutellum smooth at the base, sparingly punctured on the disc, tip angular: membrane hyaline; abdomen smooth in the middle, with very fine small striæ, on the sides: the mesosternal dull plate (*plaque mate*) finely striated, rounded at anterior angle, separated from the mesosternal groove by a broad glossy band which is punctured and furnished with small striæ, that of the metasternum is finely striated and punctured: the ostiolar canal ends in a two-lobed part of which the external lobe is broadly dilated and there is a broad rounded valve in the indentation. Possibly only a local variety of *M. brunneus*, Fabr., from which it differs in its appearance but especially in the form of the tip of the ostiolar canal which is here much dilated and is confused with the thickened fold of the mesosternal groove (*Sign.*). Long, 7; broad, 4 mill.

Reported from Bombay.

Genus *GEOTOMUS*, Mulsant & Rey.

Pun, France, p. 34 (1866); *Sign.* A. S. E. F. (6 s.), iii, p. 33 (1883).

Differs from *Cydnus* in the absence of small spines on the head. The rostrum is short, usually not extending beyond the intermediate trochanters which distinguishes it from *Gampsotes*: the anterior border of the pronotum is not margined which separates it from *Pangæus*: the absence of the tumidity on the lateral angles of the disc of the pronotum which conceals the real angle as in *Macroscytus* and the posterior femora being spinose at the tip give sufficient characters for distinguishing it. Moreover the ostiolar canal is terminated by a reniform or cornet-shaped lobe (*Sign.*).

50. *GEOTOMUS PYGMÆUS*, Dallas.

Æthus pygmæus, Dallas, List Hem. i, p. 120 (1851); Walker, Cat. Het. i, p. 158 (1867); Stål, En. Hem. v, p. 26 (1876).

Cydnus rarociliatus, Ellenr., Nat. Tijds. Ned. Ind., xxiv, p. 139, f. 7 (1862) Vollen., Faun. Ent. Ind. Neerl. p. 18 (1868).

Cydnus pallidicornis, Vollen., l. c., p. 17 (1868).

Cydnus apicalis, Horváth, Hem. Het. récoltés en Chine, p. 3 (1879).

Æthus palliditarsus, Scott, Hem. Japan, Trans. Ent. Soc. iv, p. 309 (1880).

Geotomus jucundus, F. B. White, A. M. N. H. (4 s.) xx, p. 110 (1877).

Geotomus subtristis, F. B. White, l. c., p. 111 (1877).

Geotomus ? *minutus*, Motsch., Sign., Ann. Mus. Civ. Gen. xvi, p. 650 (1880).

Geotomus pygmæus, Sign., A. S. E. F. (6 s.) iii, p. 51, t. 3, f. 160 (1883).

♀. Elongate-ovate, black, shining: head with the juga sparingly punctured; ocelli red; thorax smooth, somewhat quadrate, transverse, with a short line of fine punctures close to the middle of the anterior margin, a line of similar punctures across the middle, and a few scattered punctures on the sides, scutellum long, rather thickly and finely punctured, with the base impunctate. Coriaceous portion of the hemelytra pitchy, very thickly and finely punctured, the punctures larger along the veins; membrane whitish; body beneath, black; abdomen thickly and finely punctured on the sides; the disc smooth: legs pitchy; tarsi pale orange; antennæ pale brown, with the tips of the fourth and fifth joints paler or testaceous (*Dallas*). Long, $3\frac{1}{2}$ — $4\frac{1}{4}$; broad, $1\frac{3}{4}$ —2 mill.

Reported from India, Sumatra, Java, New Caledonia, Japan, China, Hawaii.

51. GEOTOMUS ELONGATUS, Herrich Schæffer.

Cydnus elongatus, Herr. Schæff., Wanz. Ins. v, p. 97, t. 27, f. 546 (1839).

Cydnus oblongus, Ramb., Fauna Andal. p. 115 (1839); Fieber, Eur. Hem. p. 364 (1861).

Æthus elongatus, Walker, Cat. Het. i, p. 148 (1876).

Geotomus elongatus, Muls. and Rey, Pun. France, ii, p. 35, 38 (1866); Sign. A. S. E. F. (6 s.) iii, p. 212, t. 5, f. 176 (1883).

Body oblong, elongate, parallel on the sides: black-brown, corium a little lighter: rostrum, antennæ and feet, yellow-brown; tarsi yellow: punctured on the head, the posterior disc and the sides of the pronotum, the scutellum (except the basal angles), and the hemelytra. Head rounded in front, tylus as long as the juga and presenting two hairs at the tip, the juga with 4—5 hairs: second joint of the antennæ as long as the third, the fourth and fifth longest: rostrum reaching the base of the intermediate coxæ: pronotum slightly impressed, punctured on the posterior disc, also on the lateral margins and behind the anterior indentation; 7—8 piliferous points on the sides: scutellum long, punctured, angular at the tip, with a longitudinal impression, basal angles smooth: hemelytra punctured, a single piliferous point on the marginal side: membrane white hyaline: abdomen black, smooth in the middle, sides punctured: mesosternal plate extending to the lateral margin, metasternal plate separated from the smooth space which has two rows of dots, by an almost straight line, concave above, convex below: ostiolar

canal very rough, narrow at the base, very broad at the tip which forms a much rounded lobe presenting behind a strong excavation in which is hidden the *ostiole* (*Sign.*). Long, 4; broad $2\frac{1}{4}$ mill,

Reported from Europe, Asia, Africa.

52. GEOTOMUS ABDOMINALIS, Signoret.

A. S. E. F. (6 s.) iii, p. 219, t. 9, f. 184 (1883).

♂. Oval, elongate: pitchy brown, the hemelytra of a lighter colour. Head rounded in front; the tylus broader in the middle than at the tip, as long as the juga and having two hairs at the tip, the juga with five hairs on the margin: vertex finely punctured: the second joint of the antennæ longer than the third: rostrum reaching the level of the intermediate coxæ: pronotum strongly impressed in front behind the anterior indentation and finely punctured in that space also on the transverse line and along the lateral margins; the transverse groove, absent in the middle, is visible on the sides below the piliferous points; lateral margins with five hairs: scutellum long, narrowly rounded at the tip, finely punctured on its disc, basal angles smooth and very convex: hemelytra punctured, corium more sparingly: membrane slightly smoky, hyaline, projecting beyond the abdomen which is smooth in the middle, strongly punctured on the sides: meso- and meta-sternum without dull plates (*plaques mates*), and both sparingly but broadly punctured: ostiolar canal, broad, short, ending in a broad ear or cornet (*Sign.*). Long, $3\frac{1}{2}$; broad, 2 mill.

Reported from India.

Genus CHILOCORIS, Mayr.

Verh. Zool. Bot. Gess. Wien, xiv, p. 907 (1864); Walker, Cat. Het. i, p. 170 (1867); Stål, En. Hem. v, p. 21 (1876); Sign., A. S. E. F. (6 s.) iii, p. 517 (1883). Includes *Amnestoides*, Sign., B. S. E. F. (5 s.) ix, p. viii. (1880).

Margin of head with erect spinules: tylus as long as the juga: eyes prominent, ocelli distinct: antennæ 5-jointed, second joint scarcely half as long as the third: margin of pronotum anteriorly and on both sides, elevated; scutellum short, triangular, reaching the base of the fourth abdominal segment: odoriferous orifice with a long furrow, with a rounded elevated lobe at the apex: first pair of tibiæ gradually broader towards the apex, externally spinosely pectinated: tarsi inserted at the apex of the tibiæ (*Mayr.*)

53. CHILOCORIS NITIDUS, Mayr.

Chilocoris nitidus, Mayr, Verh. Zool.-Bot. Gess. Wien, xiv, p. 907 (1864); Walker Cat. Het. i, p. 170 (1867); Stål, En. Hem. v, p. 21 (1876); Distant, Trans. Ent. Soc p. 415 (1883); Sign., A. S. E. F. (6 s.) iii, p. 518 (1883).

Shining, piceous-black: posterior margin of the pronotum, hemelytra, antennæ, rostrum and feet, rufous castaneous: head strongly, posterior part of pronotum and hemelytra finely, and the apex of scutellum, punctured; membrane hyaline: abdomen smooth (*Mayr*). Long, 5 mill.

Reported from Kashmir.

54. *CHILOCORIS PICEUS*, Sign.

A. S. E. F. (6 s.) iii, p. 518, t. 15, f. 261 (1883).

Blackish-brown, lighter on the corium and on the lateral and posterior margins of the pronotum. Head broad, eyes very stout; ocelli nearer to the eyes than to the median line; vertex with a longitudinal impression; the border of the head, margined: tylus broader in the middle than towards the tip: pronotum strongly margined in front with a longitudinal line and impressions; anterior disc smooth, shining, not punctured (except on the sides which are finely punctured), transverse groove very distinct, with a line of dots; posterior disc weakly punctured: scutellum blunt at the tip, sparingly punctured on the disc, more so but more finely on the lateral margins: hemelytra strongly punctured along the cubital veins with two rows of lines on the clavus, the corium very finely punctured at the tip, almost smooth at the base: membrane hyaline yellow: meso- and meta-sternum dull: ostiolar canal very long but not extending beyond the margin, ending in a lobe truncated at the tip, rounded behind, with a median canal which disappears towards the terminal lobe (*Sign.*). Long, $3\frac{1}{2}$; broad $1\frac{3}{4}$ mill.

Reported from India. Possibly same as preceding.

55. *CHILOCORIS PARUMPUNCTATUS*, Sign.

A. S. E. F. (6 s.) iii, p. 520, t. 15, f. 202 (1883).

This species is distinguishable by the serrated margins of the pronotum and of the base of the hemelytra from the teeth of which issue hairs, nine on the pronotum and six on the hemelytra. Light chestnut brown, shining, weakly punctured on the head; tylus very convex and much amplified in the middle, narrow at the tip and on the vertex much broader than the juga: pronotum strongly margined in front, with 3—4 stout points behind the anterior indentation, the anterior disc smooth, shining, longer than the posterior, very convex, and separated from the latter by a strong punctured impression; beyond the groove on the posterior disc are some twelve stouter points and on the groove on each side of the eyes, 3—4 stout points: scutellum blunt, rounded at the tip, sparingly and strongly punctured on the disc, a little more abundantly on the sides: hemelytra sparingly punctured

on the corium which is almost smooth, more abundantly along the cubital suture, the clavus showing a complete line along the suture and a half-line near the scutellum; a second line of punctures on the external radial vein and a strong impunctate line, not extending beyond the middle of the hemelytra, on the internal radial vein: membrane hyaline, extending beyond the abdomen which is smooth and shining: meso- and meta-sternum entirely dull: ostiolar canal very long, extending beyond the mesosternum, stout at the source; then narrowing and ending in a rounded lobe which points backwards; in the middle, a narrow groove gradually widened until it is lost in the rounded lobe (*Sign.*). Long, $2\frac{1}{4}$; broad, 1 mill.

Reported from India.

Sec. II. SEHIRIDES Signoret.

A. S. E. F. (6 s.) i, p. 26 (1881); iii, p. 521 (1883):—*Sehirida*, Stål, Hem. Afric. i. p. 27 (1864).

Without piliferous or setigerous points or dots on the vertex and pronotum in front near the anterior margin and on the disc near the transverse impression and above. These characters are, however, so weak and variable that Stål was probably right in sinking the divisions into *Cydnida* and *Sehirida* made by him in 1864 and including the whole as one sub-family of the Pentatomidæ in 1876 (En. Hem, v. p. 17, 1876).

Genus PELTOXYS, Signoret.

B. S. E. F. (5 s.) x, p. xxxiii (1880); l. c. (6 s.) iii. p. 522 (1883). Includes *Legnotus*, Stål (nec Schiödte), Hem. Fabr. p. 7 (1868); En. Hem. v, p. 22 (1876).

Scutellum short, sides almost equal at the base, tip acuminate; membrane very large, but not projecting beyond the abdomen: rostrum short, scarcely extending beyond the anterior feet: intermediate femora ciliated and with four short spines at the tip; anterior tibiæ a little dilated, the posterior tibiæ straight: ostiolar canal broad, long, with an opening of one half its size (*Sign.*).

56. PELTOXYS BREVIPENNIS, Fabricius.

Cimex brevipennis, Fabr., Ent. Syst. Suppl. p. 536 (1798).

Cydnus brevipennis, Fabr., Syst. Rhynch. p. 187 (1803).

Æthus brevipennis, Walker, Cat. Het. i, p. 158 (1867).

Legnotus brevipennis, Stål, Hem. Fabr. i, p. 8 (1868); En. Hem. v, p. 22 (1876).

Peltoxys pubescens, Sign., B. S. E. F. (5 s.) X, p. xxxiii (1880).

Peltoxys brevipennis, Sign., l. c. (6 s.) iii, p. 522, t. 15, f. 203 (1883).

♂. Black, shining, above and beneath very densely and distinctly punctured: first joint of the antennæ and the rostrum, piceous: tarsi pale yellow piceous. Tylus remotely punctured towards the base, impunctate before the middle, transversely rugose: thorax in the middle almost twice longer than the head, convex towards the sides, behind the middle, and anteriorly transversely slightly depressed, somewhat convex before the middle, this convex part somewhat depressed in the middle, anteriorly somewhat sloped: clavus with two rows of punctures: corium in the interior part behind the middle with four rows of punctures, towards the base, and on the exterior part sparsely punctured: membrane fuscous, (*Stål*). Long, $4\frac{1}{3}$: broad, 2 mill.

Reported from Tranquebar, India, Saigon.

Genus TRITOMEGAS, Amyot & Serville.

Hist. Nat. Ins. Hém. p. 92 (1843): Signoret, A. S. E. F. (6 s.) iv, p. 50 (1884).

Second joint of the antennæ much smaller than the third: *plaques mates* of the episternums small: lobes of the head, unequal or equal which causes the anterior margin to appear more or less emarginate: tylus almost as long as the juga. Head slightly reflexed on the margins and appearing impressed or more or less emarginate in front: pronotum appearing flattened in the margins although really possessing a marginal ridge: median angles of the prosternum less pronounced than in the other genera of this section and therefore the median groove is not so deep: mesosternal ridge indistinct, metasternum smooth: ostiolar canal with an ear-shaped small tongue very distinct, the dull plates (*plaques mates*) weakly developed above and below the mesosternal groove (*Sign.*).

57. TRITOMEGAS BICOLOR, Linnæus.

Cimex bicolor, Linnæus, Faun. Suec., No. 936 (1761); Syst. Nat.; (ed. 13) p. 722 (1767); De Géer, Mem. iii, p. 268 (1773); Fabr., Syst. Rhyng., p. 176 (1803: Wolff, Icon. Cim. p. 63, t. 7, f. 60 (1801): Stoll, Pun., p. 126, t. 32, f. 224 (1788).

Cydnus bicolor, Hahn, Wanz. Ins. i, p. 192, t. 31, f. 99 (1831).

Cydnus nubilosa, Harris, Exp. Eng. Ins. 90, t. 26, f. 8 (1776).

Sehirus bicolor, Dallas, List Hem. i, p. 129 (1851).

Tritomegas bicolor, Am. & Serv., Hist. Nat. Ins. Hém., p. 98 (1843) Schlb. Mon. Geoc. Fenn. p. 21 (1848): Sign., A. S. E. F. (6 s.), iv, p. 50, t. 2, f. 217 (1884).

More or less oval: bluish-black, shining, punctured, spotted white; two irregular spots on the anterior angles of the pronotum, two others at the external base of the hemelytra and two not so large at the external angle of the corium: usually also two small white dots at the external angle and at the base of the pronotum as in the type, white: head indented in front, juga with a channeled rim: feet bluish-brown, with a more or less broad white ring at the base of the tibiæ:

antennæ brown, second joint shorter than the third, the latter sometimes twice as long as the former: dull plates (*plaques mates*) less developed with some strong, deep points, especially in the mesosternal angle: ostiolar canal very long, projecting beyond the transverse two-thirds of the metasternum (*Sign.*). Long, 5-7; broad, $2\frac{1}{2}$ -5 mill.

Common in Europe and Asia.

IV.—*A second series of New Species of Ficus from New Guinea.*—By
GEORGE KING, M. B., LL. D., F. L. S., *Superintendent of the Royal
Botanic Garden, Calcutta.*

[Received March 23rd;—Read April 6th, 1887.]

Since reading my paper before this Society “on some new species of *Ficus* from New Guinea,” in January last, I have received from the distinguished botanist and explorer, Signor Beccari of Florence, materials which enable me to describe seven additional new species from that island. The whole of these species were collected either by Sig. Beccari himself, or by his companion Count D’Albertis. These seven species all belong to the third of the sub-groups defined in my paper just referred to, namely, the group characterised by having “unisexual flowers, the males and galls being in one set of receptacles and the fertile female flowers alone occupying another set of receptacles.” In this group these seven species are distributed amongst the sections *Sycidium*, *Covellia*, *Eusyce*, and *Neomorphe*, for the distinguishing characters of which I must refer to the paper already mentioned.

SYCIDIUM.

Ficus conspicabilis, King. A tree (?) the young branches and leaf-buds covered with short deciduous yellow hairs; leaves broadly ovate or elliptic, the apex acute or shortly acuminate, the edges entire; the base broad, slightly unequal, sub-cordate, 7-nerved; primary lateral nerves about 6 pairs; secondary nerves sub-transverse, little curved; lower surface pubescent especially on the midrib and nerves, reticulations minute distinct; upper surface minutely lepidote; length of blade about 8 inches; petiole .8 in.; stipules densely covered with long, yellow, silky hairs. Receptacles large, shortly pedunculate, axillary, solitary, depressed-turbinate, both base and apex very concave, the surface wrinkled, rough, minutely tuberculate, deciduously hispid-tomentose; length from base to apex 1.1 in.; breadth 1.6 in.; umbilicus much



Atkinson, Edwin Thomas. 1888. "III.—Notes on Indian Rhynchota: Heteroptera, No. 1." *The journal of the Asiatic Society of Bengal* 56(I), 22–61.

View This Item Online: <https://www.biodiversitylibrary.org/item/110436>

Permalink: <https://www.biodiversitylibrary.org/partpdf/368300>

Holding Institution

California Academy of Sciences

Sponsored by

California Academy of Sciences Library

Copyright & Reuse

Copyright Status: Public domain. The BHL considers that this work is no longer under copyright protection.

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.