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XXXIX.—The homoptera of Indo-China

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Skull: extreme length from condylion to front face of incisors 22.8; basal length 20.2; greatest posterior breadth 10; interorbital breadth 4.6.

Type. Adult male. B.M. no. 6. 12. 6. 16. Original number 659. Collected at Min-gyong, 110 miles S.E. of Seoul, Corea, 25 November, 1905, by Malcolm P. Auderson. Presented by the Duke of Bedford, K.G.

It is to be noted that Dobson stated his type to be an immature female, which accounts for the comparatively small dimensions he gives.

XXXIX.—The Homoptera of Indo-China. By W. L. DISTANT.

Fam. Cicadidæ.

In a previous paper on this subject (ante, (8) xix. p. 100), I gave a rough list of fifty-five species belonging to this family alone. Since then a further collection from Mon. R. Vitalis de Salvaza has arrived at the British Museum. Those to be added to the previous list are as follows, including ten species here described for the first time :—

Tosena splendidula, Dist. Cryptotympana mimica, Dist. — vitalisi, Dist. Dundubia longina, Dist. Cosmopsaltria divergens, Dist. Haphsa conformis, Dist. — fratercula, Dist. — opercularis, Dist. — crassa, Dist. Platylomia diana, Dist. —— saturata, Walk. Meimuna tripurasura, Dist. Terpnosia majuscula, Dist. Gauna laosensis, Dist. —— vestita, Dist. var. Mogannia funebris, Walk. Huechyys aurantiaca, Dist. Scieroptera delineata, Dist.

These 18 species + 55 previously recorded - 1 suppressed in this contribution bring the total to 72 species of Cicadidæ now known from Indo-China.

Cryptotympana mimica, sp. n.

 \mathcal{J} . In colour and markings very closely resembling *C. pustulata*, Fabr., but the abdomen beneath being ochraceous with a broad central longitudinal black fascia; opercula black, their outer and apical margins narrowly ochraceous. In structure, however, the male strongly differs in the length and shape of the opercula. In C. pustulata the opercula are not half the length of the abdomen and their inner margins strongly oblique to apices; in the species here described the opercula are considerably longer than half the abdominal length, their inner margins concave, their outer margins a little sinuate and their apices subacute, in C. pustulata the apices are obtusely rounded.

Long., excl. tegm., 3, 41 mm.; exp. tegm. 113 mm. Hab. Laos; Vietri (R. Vitalis de Salvaza).

Cryptotympana vitalisi, sp. n.

J. Body and legs black; ocelli and transverse fringe of hairs before them, two macular patches of hairs on each lateral area of pronotum, pilose spots to metanotum (two on anterior margin, two on each lateral margin, and two in front and one at each lateral margin of cruciform elevation) ochraceous; small spots at lateral abdominal segmental margins and a larger spot on each side of anal segment ochraceous; lateral and apical areas of face reddish ochraceous; lateral margins of opercula ochraceous; tegmina black to near middle and more or less illuminated with dull ochraceous, remaining costal and the apical areas pale fuliginous, the lower three ulnar areas more or less pale hyaline; wings black illuminated with dull ochraceous for more than basal half, remaining area pale hyaline; face globose, deeply centrally sulcate on disk and strongly transversely striate; opercula with their apical halves broadly angulate, slightly inwardly overlapping on basal areas, their apices reaching to about the third abdominal segment at its lateral areas; pronotum with the fissures prominent, its posterior marginal area strongly transversely striate.

Long., excl. tegm., J, 48 mm.; exp. tegm. 128 mm.

Hab. Laos; Vietri; Cochin China; Cap Saint Jacques (R. Vitalis de Salvaza).

Allied to C. aquila, Walk.

Dundubia longina, sp. n.

S. Head and pronotum pale brownish ochraceous; a spot at apex and a suffusion at base of front, a central

longitudinal fascia and posterior and lateral areas of pronotum olivaceous, the extreme posterior and lateral margins narrowly black; abdomen above olivaceous, somewhat thickly greyishly pilose; body beneath and legs paler olivaceous or ochraceous, apices of anterior femora, the anterior tibiæ and tarsi, longitudinal streaks to intermediate femora and tibiæ, and the whole of the intermediate tarsi black ; tegmina and wings hyaline, the venation olivaceous or ochraceous; opercula long, slightly passing the last abdominal segment but not reaching the apex of the anal segment, concavely sinuate on each side of basal half and then moderately broadened and convex on each side, the apices rounded; face strongly transversely striate, moderately broadly centrally sulcate; posterior pronotal area thickly, transversely striate; mesonotum with two central, faintly marginally indicated obconical spots; abdomen robust, broadly convex, about as long as space between apex of head and base of cruciform elevation.

Long., excl. tegm., 42 mm.; exp. tegm. 120 mm.

Hab. Tonkin (R. Vitalis de Salvaza).

Allied to *D. mannifera*, Linn., but a more robust species, with the opercula longer, slightly passing the last abdominal segment; thickly pilose abdomen etc.

Cosmopsaltria divergens, sp. n.

 \mathcal{J} . Head above ochraceous, front with a large black spot on each lateral area, vertex with an irregular transverse fascia and the margin of the ocelli and a streak behind inner margin of each eye black ; pronotum ochraceous, its posterior and lateral areas paler, the fissures and two central longitudinal angulated fasciæ which are angularly united posteriorly, black; mesonotum ochraceous, a broad elongate fascia on each lateral area, two central obconical spots divided by a long lanceolate spot and a spot at each anterior angle of the cruciform elevation black; abdomen castaneous, the narrow segmental fissures black; body beneath ochraceous, face with the lateral striations and a central fascia on posterior half, costal spots, streaks to femora, anterior tibiæ and tarsi, bases and apices of intermediate and posterior tibiæ, margins of opercula, and abdomen beneath, more or less black ; tegmina and wings hyaline, venation ochraceous, tegmina with the upper margin of basal cell and basal half of inner claval margin, and wings with the veins to upper ulnar areas and to claval area black; tegmina with the transverse veins at bases of second and third ulnar areas infuscated.

Opercula in \mathcal{J} reaching the penultimate abdominal segment, their inner margins convex and distinctly overlapping, their apical margins somewhat roundly oblique, their lateral margins concave near base; face broad and tumid, centrally sulcate on posterior half, the lateral striations coarse and profound.

Long., excl. tegm., 3, 34 mm.; exp. tegm. 100 mm.

Hab. Laos; Luang Piahang (R. Vitalis de Salvaza).

Above resembling the Indian species C. duarum, Walk., but differing from all other species of the genus with which I am acquainted by the peculiar structure of the opercula.

Haphsa conformis, sp. n.

 \mathcal{J} . Head, pronotum, and mesonotum olivaceous green; front of head with an angulated central spot; vertex with the area of the ocelli and an angulated fascia before each eye black; pronotum with two central anteriorly and posteriorly angulated fasciæ, the fissures, the anterior and posterior edges of the posterior and lateral marginal areas, and two spots on the latter black; mesonotum with a central longitudinal fascia which is angulated on each side before base, and on each side of this fascia a shorter obconical spot, followed by a broad sublateral fascia, excavate and broken near anterior margin, the anterior angles of the basal cruciform elevation and a spot in front of same black; abdomen above ochraceous, the central and apical areas more or less black; face and clypeus black, striations and a central longitudinal fascia (broken centrally), base and a central fascia to clypeus ochraceous; sternum, legs, and opercula more or less ochraceous, apices of tibiæ and the tarsi black ; abdomen beneath bright ochraceous ; tegmina and wings hyaline, the venation either black or castaneous, costal membrane black, olivaceous green on its basal area, transverse veins at bases of second and third terminal apical areas darkly infuscated; opercula broad, their inner margins straightly adjacent but not meeting for about one-third from base, thence obliquely rounded to apices which are subangularly, obtusely rounded and reach the penultimate abdominal segment; face strongly convex; abdomen about

as long as space between apex of head and base of cruciform elevation.

Long., excl. tegm., \mathcal{J} , 28 mm.; exp. tegm. 94 mm. Hab. Tonkin (R. Vitalis de Salvaza).

Haphsa fratercula, sp. n.

J. Body above pale castaneous brown; a central angulated spot to front, area of ocelli and a lateral curved fascia on each side of vertex; two central angulated lines and the fissures to pronotum, central longitudinal fasciæ to mesonotum, and basal areas of the abdominal segments black, lateral areas of the pronotum ochraceous; body beneath and legs more or less ochraceous; face with a central black fascia angularly extended on anterior and posterior areas, lateral areas of clypeus, apices of anterior femora, apical areas of tibiæ, tarsi, and apex of rostrum black; opercula ochraceous, conically narrowed to apices which reach the anterior margins of the fourth abdominal segment, their inner basal margins contiguous but not meeting; face convexly tumid; abdomen as long as space between the apex of head and base of cruciform elevation; tegmina and wings hyaline, venation mostly black, tegmina with the basal half of costal area castaneous, the transverse veins at the apices of the second and third apical areas infuscated.

Long., excl. tegm., 24 mm.; exp. tegm. 82 mm. Hab. Xieng Klouang (R. Vitalis de Salvaza). Allied to H. nicomache, Walk., found in British India.

Haphsa opercularis, sp. n.

 \mathcal{S} . Generally allied in colour and markings to the preceding species, *H. fratercula*, but a larger species with a different structure of the opercula, which reach the fifth abdominal segment, are obliquely and angularly divergent from base to apex which is obtusely angulate.

Long., excl. tegm., J, 30 mm.; exp. tegm. 105 mm. Hab. Xieng Klouang (R. Vitalis de Salvaza).

Terpnosia majuscula, sp. n.

 \mathcal{S} . Head, pronotum, and scutellum pale castaneous; face, eyes, a central discal fascia to pronotum (centrally compressed), two large central obconical spots to mesonotum

and a larger spot on each lateral area (sometimes practically absent), and a rounded spot near each anterior angle of the basal cruciform elevation black; abdomen above pale castaneous with black shadings on basal and apical areas, beneath pale shining ochraceous, the apical area pale castaneous; sternum, opercula, and legs testaceous brown; tegmina and wings hyaline; the first with the costal area, venation, basal cell, suffusions to basal margins of first and second ulnar areas, broader suffusions to the apical margins of all the ulnar areas, and prominent spots to the apices of all the veins to apical areas testaceous brown; wings with broad suffusions at the apices of the upper ulnar areas, and narrow outer margin testaceous brown; face prominently transversely ridged on lateral areas; rostrum passing posterior coxæ, its apex black ; opercula transverse, not extending beyond base of abdomen, outer margins convex; body above and beneath more or less sparingly ochraceously pilose.

Long., excl. tegm., 2, 37-42 mm.; exp. tegm. 100-105 mm.

Hab. Laos; Chapa (R. Vitalis de Salvaza).

Allied to *T. psecas*, Walk., but a larger species, the opercula broader and more transverse, the wings with discal suffusions and margins testaceous brown.

Terpnosia mesonotalis.

Terpnosia mesonotalis, Dist. Ann. & Mag. Nat. Hist. (8) xix. p. 102 (1917).

Calcagninus salvazanus, Dist. l. c. p. 103.

The specimen I included in the genus *Calcaginus* (supra) was apparently tuberculous on the abdomen beneath; from a further and lengthy series this character is not to be maintained, and the species must be suppressed and placed as a synonym of *Terpnosia mesonotalis*.

Gæana laosensis, sp. n.

2. Head, pronotum, and mesonotum black; a large spot on each lateral area of the pronotum, the abdomen, and legs more or less bronzy brown; two basal spots to head (one near each eye), a transverse series of four spots to mesonotum and two central spots at base of same, a spot on each side of face near eyes, coxal margins, and a double series of submarginal abdominal segmental spots ochraceous; tegmina pale tawny brown, a central transverse series of four spots (the uppermost in radial area) and the apical one dark tawny brown, on the apical area about nine small greyish-white spots (six submarginal, the other three near the anterior confines of the dark apical area); wings pale blackish with greyish-white streaks at base and five small spots of the same hue near apical margin.

Structural characters reserved till 3 specimen received. Long., excl. tegm., \$, 27 mm.; exp. tegm. 82 mm.

Hab. Laos; Tathom (R. Vitalis de Salvaza).

Allied to the British Indian species G. stellata, Walk.

Gæana vestita, var.

Gæana vestita, Dist. Entomologist, xxxviii. p. 121, fig. (1905).

 \mathfrak{P} . Differing from the typical form of \mathfrak{F} in having the transverse subcentral pale fascia broken up into three spots, and with no pale spot in the penultimate ulnar area.

Hab. Laos; Tathom (R. Vitalis de Salvaza).

Scieroptera delineata, sp. n.

9. Head black; pronotum dark castaneous, lateral and posterior margins and a central "hourglass"-shaped fascia dark ochraceous; mesonotum dark ochraceous, with a large, fasciate, obconical black spot on each lateral area, the basal cruciform elevation dark ochraceous; face black, its lateral areas, sternum, and legs more or less ochraceous ; anterior femora with more than apical halves black, intermediate and posterior femora more or less apically suffused with black; abdomen beneath somewhat fuscous and opaque, above black; tegmina shining, talc-like, nearly basal half brassy brown, remaining area of a paler brassy hue, the costal membrane and costal area and the veins on about basal half testaceous brown, remaining venation more or less black, interior of basal cell and inner tegminal margin black; veins on basal half suffused with testaceous brown and a transverse macular fascia of the same colour deliminating the basal area; wings pale brassy yellow; face transversely striate, not longitudinally sulcate; anterior femora with three long robust spines on underside of anterior areas; rostrum reaching the intermediate coxæ; vertex of head at base and between the ocelli distinctly sulcate.

Long., excl. tegm., \mathfrak{P} , 18 mm.; exp. tegm. 50 mm. Hab. Laos; Chapa (R. Vitalis de Salvaza).