

LXI.—On remarkable Specimens of *Rana esculenta* from South-western Persia. By G. A. BOULENGER, F.R.S.

THE collection made by Mr. R. B. Woosnam when accompanying Col. Ballward in Persia contains two specimens of *Rana esculenta*, male and female, which do not fall under the definition of any of the races hitherto distinguished, and for which I think it desirable to propose a new name—var. *susana*—the specimens having been captured not far from the ruins of Susa, at an altitude of about 400 feet.

This variety agrees with var. *ridibunda*, to which I have referred the Persian specimens previously examined by me, in the small size and feeble prominence of the inner metatarsal tubercle, and with the typical form in the comparatively short tibia, which barely meet at the heels when they are laid at right angles to the body. Besides, the length of the tibia is less than one half that of head and body, whilst in var. *ridibunda* it usually measures one half or more. The life-colour of the male specimen, obtained in a small stream on March 20th, is described in Mr. Woosnam's notes as drab colour, with a few dark brown spots; head, shoulders, and upper back light green: the female, caught in the Kerkah River on March 19th, was of a greenish-brown colour, with dark brown blotches and a broad light stripe along the middle of head and body. Other specimens of *R. esculenta*, obtained by Mr. Woosnam at Kernanshah, 6000 feet altitude, are referable to the var. *ridibunda*.

I append some measurements of these specimens, in accordance with the method proposed in the 'Proceedings of the Zoological Society,' 1891, p. 377:—

Var. <i>ridibunda</i> .	Kernanshah.	♂	1.	2.	3.	4.	5.
"	"	♀	67	34	32	9	3½
"	"	♀	86	43	40	12	4
Var. <i>susana</i> .	Susa.	♂	75	38	37	11	4
"	"	♀	64	29	29	7	3
"	"	♀	63	29	29	7½	3

1. Length (in millimetres) from snout to vent. 2. Length of tibia (in the fish). 3. Length of foot measured from outer metatarsal tubercle to tip of fourth toe. 4. Length of inner toe. 5. Length of inner metatarsal tubercle.

LXII.—*Rhynchothol* Notes.—XXXVI. By W. L. DISTANT.

Fam. Cicadidae.

THERE are a few unique types described by Walker in the British Museum, which have no locality and are female specimens. Their generic identification is a matter of doubt and difficulty, and the following notes have reference to same. I also append the descriptions of some species from various habitats.

*Purana* ? *hirundo*.

*Cicada hirundo*, Walk. List Hom. i. p. 152 (1850).

This unlocalized type is a female specimen, not "Mrs" as stated by Walker, and apparently belongs to the genus *Purana*.

*Purana* ? *confiactes*.

*Cicada confiactes*, Walk. List Hom. Suppl. p. 35 (1858).  
*Dumthubia confiactes*, Stål, Orv. Vet.-Ak. Forh. 1862, p. 481.

This species is only represented by a single unlocalized female specimen. It is apparently a species of *Purana*.

*Diceropyga* ? *nodosa*.

*Cicada nodosa*, Walk. List Hom. i. p. 162 (1850).

A single unlocalized female specimen which I have doubtfully referred to this genus, the principal characters of which are found in the male, viz., the opercula and the structure of the anal abdominal segment.

*Diceropyga* ? *acutipennis*.

*Cicada acutipennis*, Walk. Ins. Scand., Hom. p. 20 (1858).

This species is also only represented by a single unlocalized female specimen, and the remarks appended to the previous species equally apply to this one.

*Terpnosia* ? *stipata*.

*Cicada stipata*, Walk. List Hom. i. p. 155 (1850).

Only represented by a single unlocalized female specimen, which seems clearly to belong to this genus. Should this species be proved ultimately to belong to *Terpnosia* its specific name must be altered, as it is already used in the genus.

Subfam. *Circulixæ*.

POLYNEURARIA.

*Platypleura attenuata*, sp. n.

Head and thorax above brownish ochraceous, head with the anterior margins of front and the lateral margins of vertex luteous; base of front, a spot near anterior angle of vertex, and a transverse fascia between the eyes black; pronotum with a central longitudinal fascia (not extending through posterior margin), a longitudinal fasciate spot on each side of disk, the incisures, and a small marginal spot black; mesonotum darker in hue, with four obconical spots, of which the two central ones are very short, two rounded spots in front of cruciform elevation, and a spot on each anterior angle of same, black; abdomen with the basal segmental areas black, their apical areas ochraceous; body beneath piceous, clothed more or less with very short greyish hairs; a somewhat macular transverse fascia between eyes at base of face, apices of anterior and intermediate femora, a longitudinal spot on each side of anterior femora, and the lateral and posterior margins of opercula, ochraceous; a spot on each side of anterior femora near their apices and a longitudinal fascia beneath them, central longitudinal sulcation to face, and a suffusion between face and eyes, and the opercula (excluding margins), black; abdomen beneath piceous, the posterior segmental margins ochraceous; tegmina and wings hyaline, the venation fuscous or fuscous brown; tegmina with the costal membrane brownish ochraceous, with a spot at about one third from its base and the whole basal cell piceous; claval area brownish, thickly greyishly pilose, and with some scattered greyish hairs on the basal half of tegmina; transverse veins at bases of apical areas more or less infuscated and submarginal fuscous spots on most of the longitudinal veins to apical areas; wings with the extreme base pale ochraceous, margins of anal area pale fuscous where the veins are piceous.

Long., excl. tegm., ♂ 19 mm.; exp. tegm. 66 mm.

Hab. N. Nigeria; Zunguru (*A. L. de M. Mlyn*, Brit. Mus.).

The lateral margins of the pronotum are angularly developed, and extend to about half the length of basal cell; the whole body above is more or less greyishly pilose, and the abdomen in male is short and attenuated posteriorly; the opercula do not quite meet inwardly, and their lateral and

posterior margins are convexly rounded and do not pass the base of abdomen; the tegmina are long and narrow, their greatest breadth being a little less than a third of their length; rostrum passing the posterior coxæ.

DUNDUBIARIA.

*Purana Davidi*, sp. n.

Body above brownish ochraceous; broad lateral margins to face enclosing a pale spot anteriorly, two transverse fasciæ on each lateral area of vertex, and the area of the ocelli black; pronotum with the anterior and posterior margins and a central linear spot to lateral margins, two central longitudinal fasciæ (widened and amplified anteriorly, united posteriorly), and the incisures black; mesonotum with five black longitudinal fasciæ, the central one continuous, one on each side shorter and a little curved, the two lateral fasciæ much broader, crossing mesonotum, but prominently broken near base; a large spot in front of cruciform elevation and posterior segmental margins black; head beneath, sternum, and legs a little paler than above, abdomen beneath ochraceous; face (excluding a basal spot and transverse striations), space between face and eyes, apices of anterior and intermediate femora and the upper surfaces of same (more or less), coxal spots, apex of rostrum, and abdominal tubercles, piceous or black; tegmina and wings hyaline, venation testaceous, in parts piceous; tegmina with the costal membrane testaceous, a distinct stramineous spot at apex of radial area, and the transverse veins at bases of second, third, fifth, and seventh apical areas broadly infuscated; claval areas to both tegmina and wings fuscous; opercula in male transverse, greyish, their extreme margins piceous, their posterior margins oblique, their posterior angles just passing base of second abdominal segment, outer margins nearly straight, inner angles well separated; rostrum reaching apex of basal abdominal segment, abdominal tubercles very large and prominent; spines to anterior femora long, piceous, their apices testaceous.

Long., excl. tegm., ♂ 26-33, ♀ 27; exp. tegm., ♂ ♀, 79-88 mm.

Hab. Kiang-Si (*A. David*, 1875, Paris and Brit. Mus.).

*Purana pigmentata*, sp. n.

Body above brownish ochraceous; head with some piceous lateral striæ to front; area of the ocelli with a curved fascia

on each side, and inner margins of eyes, black; pronotum with two central longitudinal fasciæ (almost united anteriorly and posteriorly and with a small discal curved fascia on each side), incisures, narrow lateral and posterior margins, and two spots on each side of posterior margin, black or piceous; mesonotum with a central longitudinal somewhat lanceolate fascia, on each side of which is a short somewhat oblique fascia, a longer and broader fascia on each lateral area, and two rounded spots in front of cruciform elevation, black; a broad outer lateral fascia to tympanal coverings, and anal segment above and beneath, black or piceous, posterior segmental margins a little paler and with some obscure lateral and discal fuscous spots; body beneath and legs a little paler than above; sternum and opercula somewhat finely greyish tomentose, sternum with some obscure discal piceous spots; face with the upper transverse striae (not meeting centrally) and discal margins of central sulcation piceous, a black transverse line between face and eyes; abdominal tubercles pale castaneous; tegmina and wings hyaline, their bases narrowly ochraceous, venation ochraceous near base and afterwards fuscous; tegmina with the costal membrane and postcostal veins ochraceous, transverse veins at bases of second and third apical areas slightly infuscated; opercula in male oblique, outwardly moderately convex, somewhat widely separated inwardly, their apices moderately obliquely truncate and about reaching anterior margin of basal abdominal segment; rostrum reaching base of abdomen, its apex piceous; anterior femora beneath with two strong spines and a smaller apical one.

Long, excl. tegm., ♂ 17 mm.; exp. tegm. 47 mm.

Hab. Siam, Bangkok; Cambodia; Cochinchina, Lakhon.

Allied to *P. carmentis*, Walk., from which it differs by the concolorous, shorter, and differently shaped opercula in the male, and also by the broad outer piceous lateral margins of the tympanal coverings.

*Saurda Pratti*, sp. n.

♂ ♀. Brownish olivaceous; anterior margin of front and lateral areas of vertex brownish castaneous, area of ocelli black; pronotum with two central fasciæ amplified anteriorly and posteriorly, the incisures, and inner, lateral, and posterior margins, a central longitudinal line crossing the posterior margin, and the whole of the anterior lateral angles, piceous or black; mesonotum with two central obconical spots, their outer margins continued to anterior angles of

cruciform elevation, an obsolete spot on each side of the two central ones and a similar spot in front of cruciform elevation, piceous; abdomen above much suffused with piceous; body beneath, opercula in male, and legs brownish ochraceous; under surfaces of anterior tibiae, anterior and intermediate tarsi, and apex of rostrum piceous; tegmina and wings hyaline, veins fuscous, a little suffused with pale fuscous brown along the veins, transverse veins at the bases of second, third, fifth, and seventh apical areas more distinctly infuscated; subdorsal areas distinctly fuscous and inwardly margined with black; tegmina with the costal membrane and basal cell brownish ochraceous; opercula in male reaching the penultimate abdominal segment; their apices broad and subangularly rounded, narrowed towards base, where they are concavely sinuate on each side, their inner margins contiguous but not meeting on disk of abdomen, their surface distinctly granulose, their edges a little recurved and apices very narrowly crenaceous; rostrum reaching the posterior coxae.

Long, excl. tegm., ♂ 48, ♀ 51; exp. tegm., ♂ 154, ♀ 168 mm.

Hab. Brit. New Guinea, Ekekei (*Pratt*).

*Saurda Sharpi*, sp. n.

Closely allied to the preceding species (*S. Pratti*), but differing by its smaller size, the opercula in male only reaching the third abdominal segment, and though of same general shape yet much more narrowed at their bases; transverse veins at the bases of apical areas to tegmina a little more infuscated; pronotum and mesonotum with the piceous markings obsolete.

Long, excl. tegm., ♂ 47 mm.; exp. tegm. 132 mm.

Hab. Brit. New Guinea; Ekekei (*Pratt*).

*Diceromygga aluana*, sp. n.

Head and pronotum ochraceous; lateral striae to front, a spot at anterior angles of vertex, area of ocelli, and extreme basal margin of vertex, piceous or black; anterior margin of pronotum narrowly black; mesonotum greenish ochraceous, sometimes suffused with piceous, with two obconical spots denoted by their dark outer margins; abdomen in male brownish ochraceous, palely pilose, with a lateral series of large black segmental spots on each side and the apex piceous; in female with the lateral spots smaller, more elongate, and fasciate, and with a large crenaceous spot at

base of anal segment; body beneath and legs pale ochraceous, apex of rostrum black; tegmina and wings hyaline, the venation ochraceous or fuscous; tegmina with the costal membrane greenish ochraceous, a small prominent ochraceous spot at apex of radial area, a fuscous spot on transverse veins at bases of second, third, fifth, and seventh apical areas, and marginal fuscous spots near apices of longitudinal veins to apical areas; opercula in male extending to about half the length of abdomen, their apices subacutely rounded, their outer margins concavely sinuate, their inner margins convex; rostrum passing the posterior coxæ; anterior femora with two strong spines beneath.

Long, excl. tegm., ♂ 33, ♀ 24 mm.; exp. tegm., ♂ ♀, 76-80 mm.

Hab. Solomon Islands; Alu (Brit. Mus.).

*Pomponia piceata*, sp. n.

Body and legs uniformly piceous brown; mesonotum with four darker obconical spots, the two central ones shortest; tegmina and wings talc-like, a little opaque, but uncertainly discerned in a somewhat discoloured spirit-specimen, their extreme bases piceous; tegmina with the venation fuscous, in some parts ochraceous, costal membrane piceous brown, transverse veins at bases of second, third, fourth, and fifth apical areas slightly infuscated, and a very obscure marginal series of pale elongate fuscous spots at apices of longitudinal veins to apical areas; wings with the venation brownish; face globose, the striations robust; rostrum passing the posterior coxæ; opercula in male transverse, their posterior margins convex, just reaching base of second abdominal segment, their inner angles a little separated.

Long, excl. tegm., ♂ 42; exp. tegm. 108 mm.

Hab. Yonkin, Cho-Moi (Rogel, Paris Mus.).

*Oncotympana fuscata*, sp. n.

Head and pronotum brownish ochraceous; head with curved striae to front, broad inner area to eyes, and area of ocelli black; pronotum with extreme margins, incisures, two broad central longitudinal fasciæ (a little amplified anteriorly, and much amplified posteriorly), two spots on disk, and two large oblique spots on each apical area of posterior margin black; mesonotum black, with two subobsolete central obconical spots, and with the following obscure castaneous maculations, viz., a very obscure spot in each of the obconical areas, a spot outside them, a larger spot at their apices, a spot on each

lateral area, and a transverse spot on each side of the lateral angles to cruciform elevation; cruciform elevation dull castaneous, its disk and a spot on its anterior angles black; abdomen above black, the tympanal coverings dull ochraceous, the posterior basal segmental margins testaceous; sternum and opercula greyish ochraceous; legs and abdomen beneath brownish ochraceous; apices of anterior femora, anterior tibiae (excluding two longitudinal streaks), apical areas of intermediate tibiae, apex of posterior tibiae, anterior tarsi, intermediate tarsi (excluding base), and obscure lateral spots to abdomen, black; spiracular spots to abdomen testaceous; tegmina and wings moderately infuscate, the venation fuscous, in parts dull ochraceous; tegmina with the costal membrane testaceous, the transverse veins at the apices of the second, third, fifth, and seventh apical areas moderately infuscate; rostrum passing the posterior coxæ; opercula in male broad, convex, and overlapping, reaching the base of the second abdominal segment.

Long, excl. tegm., ♂ 33; exp. tegm. 108 mm.

Hab. North China (Paris Mus.).

Allied to *O. maculaticollis*, Motsch., from which, apart from the different coloration, it may be distinguished by the narrower tegmina and the broader cruciform elevation.

*Oncotympana stratoraria*, sp. n.

Body and legs brownish ochraceous; head with lateral striae to front, two spots on each lateral margin of vertex, area of ocelli, and inner margin of eyes black; pronotum with the lateral margins, incisures, two central longitudinal fasciæ (amplified anteriorly, and united posteriorly) black; mesonotum with four broken and subobsolete obconical spots, the two central ones smaller and only denoted by their margins, a small marginal spot before the lateral spots, and two rounded spots in front of the cruciform elevation black; abdomen above with two large spots on basal, and the greater part of the remaining segments, black; a broad central fasciæ, face, apices of anterior and intermediate femora, bases and apical areas of anterior and intermediate tibiae, apex of rostrum, and lateral abdominal marginal spots, black; tegmina and wings hyaline; tegmina with the venation mostly purplish red on basal half, becoming fuscous towards apex, a somewhat large fuscous spot on transverse veins to second, third, fifth, and seventh apical areas, and a marginal series of minute pale fuscous spots near apices of longitudinal veins to apical areas; venation of wings mostly fuscous brown;

rostrum considerably passing the posterior coxæ; opercula centrally overlapping, not quite reaching base of abdomen.

Long, excl. tegm., ♂ 26; exp. tegm. 83 mm.

*Hab.* Yunnan (Paris Mus.).

Allied to *O. virescens*, Dist., but rostrum larger, opercula shorter, and colour different.

Subfam. *TYGIDINÆ*.

*CARINETARIA*.

*GUARANISARIA*, gen. nov.

Allied to *Carineta*, but with the tegmina short, not longer than the body, semiopaque and with an additional vein or veinlet crossing the third ulnar area. Other structural characters as in *Carineta*.

Type, *G. dissimilis*, Dist.

*Guaranisaria dissimilis*, sp. n.

♂. Head and thorax above black, shortly palely pilose; a small central spot at base of head, lateral and posterior margins (very narrow) and the incisures to pronotum, and lateral margins to mesonotum ochraceous, the mesonotum also obsoletely displays the margins of two central oboconical spots; abdomen above ochraceous, the basal segment and central area of second segment black; exposed tympana greyish white; body beneath black, the lateral margins of both sternum and abdomen ochraceous and longly pilose; tibiae and tarsi stramineous, bases and apices of anterior and intermediate tibiae, and apices of tarsi piceous or black; opercula ochraceous, inwardly, outwardly, and apically piceous; tegmina suffused with shining piceous brown, the costal membrane stramineous, the subclavial area roseate; wings hyaline, the venation ochraceous; front robustly protuberant, about as long as vertex; transverse vein at base of second tegminal apical area almost vertical; rostrum reaching intermediate coxæ; opercula transverse, not meeting inwardly, their posterior margins rounded and not quite reaching base of abdomen.

Long, excl. tegm., ♂ 15 mm.; exp. tegm. 34 mm.

*Hab.* Argentina (*Wagner*, Brit. Mus.); Paraguay; Sapucay (Coll. Heidemann).

A female specimen from Paraguay sent me for identification by Mr. Heidemann has the abdomen completely piceous black above with only marginal lateral ochraceous streaks, beneath the lateral ochraceous abdominal margins are traversed by a black median fascia.

*TAPHURARIA*.

*Abroma philippinensis*, sp. n.

♀. Body pale testaceous; head with a castaneous or piceous spot at anterior angles of vertex; mesonotum with four subobsolete oboconical spots, of which the two central are shortest; sternum somewhat thickly palely pilose; rostrum with its apex piceous and reaching the intermediate coxæ; streaks to coxæ and femora, and a central fascia to abdomen beneath, piceous; tegmina and wings hyaline, venation ochraceous or brownish ochraceous; costal membrane ochraceous, veins at bases of first and second apical areas and a subclavial streak pale fuscous; front distinctly finely longitudinally sulcate; first and third apical areas of tegmina about equal in length and a little longer than second.

Long, excl. tegm., ♀ 15-17 mm.; exp. tegm. 39-41 mm.

*Hab.* Philippine Islands, Palawan (Paris Mus.).

I have not seen a male of this species.

*PARNISARIA*.

*Quantia Souzi*, sp. n.

♂. Body above black, mostly palely pilose; head with the apical margin of front, lateral margins of vertex, and a central spot at base testaceous; pronotum with the margins and a central fascia which is amplified posteriorly (where it contains a black spot) pale testaceous; mesonotum with the margins and two central elongate fasciæ (each containing a black spot) testaceous; body beneath testaceous; face (excluding margins and basal spots) streaks of femora, anterior tibiae, bases and apices of intermediate and posterior tibiae, tarsi, and metasternum black; tegmina and wings hyaline, venation ochraceous on basal and fuscous on apical areas; tegmina with the costal membrane ochraceous; wings with the margins of the anal area fuscous.

*Var. a.*—♀. Mesonotum with only faint indications of the pale central elongate fasciæ.

*Var. b.*—♀. Both pronotum and mesonotum without pale central fasciæ.

Long, excl. tegm., ♂ & ♀ 17½ mm.; exp. tegm. 39-42 mm.

*Hab.* Yunnan; Tschaka (*Mgr. Souzi*, Paris Mus.).

Without locality (Brit. Mus.).

Allied to *Q. marginata*, Dist., but tegmina totally pale hyaline, wings with only margins of anal area infuscated, lateral pronotal margins less oblique and more sinuate, &c.

## CHLOROCYSTARIA.

AKAMBA, gen. nov.

♂. Head with the front anteriorly and somewhat triangularly produced, centrally distinctly longitudinally impressed, about as long as vertex, ocelli much nearer to each other than to eyes, lateral margins of vertex a little upwardly reflexed and discontinuous with margins of front, including eyes a little narrower than base of mesonotum; pronotum considerably shorter than mesonotum, about as long as head, its lateral margins a little convexly sinuate, its posterior angles somewhat strongly ampliate; abdomen longer than space between apex of head and base of cruciform elevation, subglobose, with a central dorsal longitudinal ridge, and with a prominent laterally produced nodosity on each side of basal segment, the anterior margin of which is a little convex, but not centrally conically produced; tympana completely exposed; anal segment in male largely produced; rostrum reaching the intermediate coxæ; opercula small, obtusely angulate, placed at each lateral margin, not extending beyond base of abdomen; tegmina and wings hyaline, the first with the second and third ulnar areas shortest, apical areas eight, basal cell about twice as long as broad; wings with six apical areas; legs somewhat short and slender, anterior femora with one moderately strong spine.

Allied to *Musoda*, Karsch, from which it differs by the non-conically produced basal abdominal segment and its laterally produced nodosities on each side, &c.

Type, *A. athiopica*, Dist.

*Akamba athiopica*, sp. n.

♂. Body and legs ochraceous; ocelli red; pronotum with the margins, a central longitudinal fascia, on each side of which is a short curved discal fascia, and the incisures fuscous brown; mesonotum with two short central obconical spots, on each side of these a short anterior elongate spot, followed by three long fasciæ on each lateral area, fuscous brown (these spots and markings are sometimes obsolete); posterior abdominal segmental margins red; tegmina and wings hyaline, the venation ochraceous; tegmina with the costal membrane and postcostal area ochraceous; abdomen above distinctly, finely, palely pilose; lateral pilose protuberances to basal abdominal segment with their margins

fuscous; head with a distinct longitudinal impression on each side of ocelli.

Long, excl. tegm., ♂ 14 mm.; exp. tegm. 39 mm.

Hab. West Africa; Free Town, Sierra Leone (*E. E. Austen*, Brit. Mus.). B. E. Africa; Sambaru (*C. S. Bellon*, Brit. Mus.).

*Gymnolympana olivacea*, sp. n.

Body olivaceous; sternum, opercula, and legs a little paler; head with the anterior margin of front plebeous; anterior tibiae brownish, striped with fuscous, apices of tarsi fuscous; tegmina and wings hyaline, the venation olivaceous; costal membrane of tegmina olivaceous; rostrum just passing the anterior tibia, its apex fuscous; opercula in male with their apices broadly rounded, inwardly somewhat obliquely sinuate. Long, excl. tegm., ♂ ♀ 26-30 mm.; exp. tegm., ♂ 70-78, ♀ 90 mm.

Hab. Brit. Centr. New Guinea; Dinawu, 3600 feet (*Pratt*).

Genus PLAUTILLA.

*Plautilla*, Stål, Öfr. Ver.-Ak. Forh. 1866, p. 155; Hem. Afr. iv. p. 2 (1866).

Type, *P. stalagnoptera*, Stål.

By the kindness of Dr. Handlirsch of the Vienna Museum, I have been able to examine a cotype, determined by Stål himself, of *P. stalagnoptera*, the type of the genus.

♂. The tympana are entirely uncovered; the opercula in male large and convex, inflated, and projecting beyond the lateral margins of the abdomen as in the genus *Gymnolympana*; the tegmina are moderately short and broad, their greatest width being a little less than half their length and half as broad again as the wings; tegmina with eight apical areas, bases of the upper vein to lower ulnar area and lower vein to radial area fused; pronotal lateral marginal areas angularly dilated, thus resembling *Zammera*, to which Stål allied *Plautilla*, but which belongs to a different subfamily, by the complete absence of tympanal coverings; head (including eyes) half the width of base of mesonotum; abdomen beneath (excluding apical segment) concave, with a central longitudinal ridge and the lateral margins recurved.

This genus clearly forms the type of a new division, which may be called *Plautillaria*, to be placed between the *Melanopsaltaria* and *Hemidictyaria*. To the first it is allied by the venation of the tegmina, and to the second by the head

(including eyes) being only half the width of base of mesonotum.

I refrain, however, from giving fuller characters, as there are apparently other genera to be included and a divisional diagnosis must not be too narrow or exclusive. Thus the *Cicada humeralis*, Walk. (Insect. Saund., Hom. p. 15, 1858), evidently represents an allied but undescribed genus to *Planitia*, but the unique male type has its abdomen mutilated, and is therefore not in a condition for generic description.

Fam. Fulgoridæ.

Subfam. Fulgorinæ.

Genus PYROPS.

*Pyrops*, Spin. Ann. Soc. Ent. Fr. viii. p. 231 (1839); Dist. Tr. Ent. Soc. 1859, p. 443.  
Zanna, Kirck. J. Nat. Hist. Soc. Bomb. xiv. p. 47 (1902).

*Pyrops Rendalli*, sp. n.

Allied to *P. pustulatus*, Gerst., from which it differs by the longer, more robust, and obliquely ascending head; colour of tegmina and wings as in Gerstaecker's species.

I have had in my possession for the last ten years a mutilated specimen (wanting the abdomen and legs), given me by Dr. P. Rendall, who captured it at Zomba; in working over the genus I am now compelled to shortly describe it as above.

Exp. tegm. 72 mm.

*Hab.* B. C. Africa: Zomba (*Dr. P. Rendall* Coll. Dist.).

Length of head (*P. pustulatus*, Gerst.) 7-7½ mm.; apex of cephalic process slightly depressed.

Length of head (*P. Rendalli*, Dist.) 10 mm.; apex of cephalic process obliquely erect.

*Pyrops pulvinuculus*, sp. n.

Head about twice longer than abdomen, somewhat shining brown, obscurely mottled with olivaceous, more prominently so beneath and on apex above, basal area rugose; pronotum olivaceous, mottled with brown, rugose; mesonotum brownish ochraceous, rugosely punctate; abdomen brownish ochraceous, the apical appendage piceous; legs and sternum much shaded with olivaceous, legs with obscure and irregular fuscous markings; abdomen beneath greyish, thickly fuscously punctate; tegmina greyish, with closely reticulate sanguineous and fuscous veins, not extending to the apical area, which is

a little paler, with more regular transverse veins, costal edge finely hirsute; wings dull pale ochraceous, the apex very broadly and the posterior margin moderately pale fuscous; head much longer than space between its base and apex of abdomen.

Long. head, from angle of apex to eyes 17 mm.; eyes to apex of abdomen 13½ mm.; exp. tegm. 44 mm.

*Hab.* Java: Surabaya (Brit. Mus.).

The principal characters of this species are its very long cephalic process and the distinctive coloration of the tegmina and wings.

*Pyrops tapirus*, sp. n.

Head, pronotum, mesonotum, body beneath, and legs ochraceous; head with large coarse black punctures, most numerous on basal halves of lateral areas, less numerous on basal third of upper surface, on apical half of upper surface two on each outer carination, beneath with about six in sub-longitudinal series on basal half; body beneath with black punctate spots, most conspicuously marked on lateral areas of prosternum, clypeus, and under surface of abdomen; legs spotted with black, anterior and intermediate tarsi black; abdomen above testaceous, posterior segmental margins ochraceous, apex piceous, and somewhat longly ochraceously pilose; tegmina pale ochraceous, the venation a little darker, and the whole surface somewhat thickly sprinkled with small black spots, some a little larger than others; wings creamy white; the cephalic process is robust and distinctly slightly recurved downwards at apex, which has its face marginately but not centrally carinate; the apex of the rostrum is black and reaches the intermediate coxæ; the two outer longitudinal carinations to the cephalic process both above and beneath are much waved.

Long. head, from angle of apex to eyes 12 mm.; eyes to apex of abdomen 19 mm.; exp. tegm. 60 mm.

*Hab.* Java (Horsfield Coll., Brit. Mus.).

A species to be recognized by the robust cephalic process, apically recurved, and distinctly and peculiarly maculately punctured with black.

*Pyrops Dalysi*, sp. n.

Body and legs pale brownish ochraceous; cephalic process finely and thickly blackly punctate on lateral areas, a little more finely so beneath, and very obsoletely so on discal area above, the two outer carinæ beneath with about six sub-tubercular reddish-ochraceous spots; clypeus, sternum, and

legs finely blackly punctate, femora with an apical and anterior and intermediate tibiae with two incomplete black annulations; abdomen beneath with black spiracular spots, abdomen above with the anterior segmental margins more or less piceous; tegmina greyish white, the venation testaceous, the whole surface more or less sprinkled with minute shining black spots, some a little larger than others; wings creamy white, the venation very pale ochraceous; head horizontally porrect, about as long as space between its base and apex of abdomen, gradually attenuated anteriorly, its face with its margins and a central longitudinal line carinate.

Long. head, from angle of apex to eyes  $11\frac{1}{2}$  mm.; eyes to apex of abdomen 12 mm.; exp. tegm. 34 mm.

*Hab.* Siam: Lacan (*Malcolm Daly*, Brit. Mus.).

A small species, to be identified by its long horizontally porrect, and anteriorly narrowed cephalic process, with its bright subtubercular reddish-ochraceous spots beneath.

#### Genus FULGORA.

*Fulgora*, Linn. Syst. Nat. ed. xii. i. (2) p. 703 (1767).

*Holmanus*, Amy. & Serr. Hém. P. 490 (1843).

*Pyrgus*, Kirk. J. Bomb. Nat. Hist. Soc. xiv. p. 47 (1802).

#### *Fulgora siderata*, sp. n.

Body and legs ochraceous; abdomen above thickly cretaceously tomentose; cephalic process above somewhat thickly covered with minute white spots, beneath unspotted; base of head and a short longitudinal fascia not extending beyond the latitude of eyes, two spots between eyes, a spot in front, another behind, and the posterior margins of eyes black; pronotum with a black spot near each anterior angle; mesonotum with six spots arranged in pairs (the two central largest) on anterior margin and a large oblique spot on each lateral margin black; rostrum, anterior and intermediate tibiae, all the tarsi, and transverse fasciæ to abdomen beneath black; tegmina greenish ochraceous, thickly interspersed with small black maculate markings, four large black spots on costal membrane, a number of large ochraceous spots margined with white arranged in somewhat transverse but much broken series, some of the spots united; wings cretaceous white, the upper area (including apex) purplish red, and containing some irregular black apical spots; cephalic process measured from angle of apex to eyes about as long as from middle of mesonotum to apex of abdomen, nearly its apical half upwardly recurved, its apex broadly laterally compressed.

Long. ceph. process, from angle of apex to eyes 17 mm.; eyes to apex of abdomen 24 mm.; exp. tegm. 76 mm.

*Hab.* Borneo (Brit. Mus.).

I have for many years had an unlocalized specimen in my own collection.

#### *Fulgora evanescens*, sp. n.

Body and legs ochraceous; rostrum, anterior and intermediate tibiae, and all the tarsi piceous; abdomen beneath with small, scattered, fuscous spots; cephalic process marked above and beneath with very small and obscure pale spots; tegmina ochraceous, with darker suffusions on apical area and four or five large darker spots in costal membrane; there are also a number of scattered obsolete paler spots with dark centres, some of which are united; wings pale hyaline, with an obscure, pale fuscous, curved, fasciate spot above the apex of radial area; cephalic process long and slender, only slightly upwardly recurved, and from its apex to eyes as long as from eyes to apex of abdomen; rostrum passing the posterior coxæ.

Long. ceph. process, from angle of apex to eyes 19 mm.; eyes to apex of abdomen 19 mm.; exp. tegm. 70 mm.

*Hab.* Nias Island.

Allied to *F. lauta*, Stål.

#### LXIII.—Notes on British Copepoda: Change of Names. By THOMAS SCOTT, LL.D., F.L.S.

In the 'Fifteenth Annual Report of the Fishery Board for Scotland' (1897), part iii. p. 150, I described a species belonging to the Copepoda under the name of *Delavalia mimica*; but though it exhibited a close affinity with the genus *Delavalia*, especially in the structure of the mandibles and of the fifth pair of thoracic feet, the structure of the first pair more nearly resembled those of *Nitocera* or *Ametra*, the inner branches of that pair being composed of three instead of two joints. In my remarks on the species I referred to this difference; but because the species had such a general resemblance to *Delavalia* it was provisionally ascribed to that genus.

During recent years many specimens of this species, both from the Scottish and English coasts, have been examined,