

REPORT ON THE
ORTHOPTERA OF MESOPOTAMIA AND PERSIA.

COLLECTED BY

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DICTYOPTERA AND *ENSIFERA*.

BY

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(With three plates.)

DICTYOPTERA.

FAM.—BLATTIDÆ.

Gen.—*ISCHNOPTERA*, BURM.

Ischnoptera evansi, n. sp.

(Fig. 1 and 2).

Type:—One female from Mesopotamia, Amara (at light, W. E. EVANS, 7-8-1918).

A small species for the genus, of a rather pale, very uniform testaceous colour. Head testaceous, the vertex exposed; face darkened between the eyes, which are widely separated; no ocellar spots visible. Antennæ testaceous, darker in the distal part. Maxillary palpi yellowish, the 4th joint shorter than the 3rd, much dilated at the apex, 5th joint long, brown at the apex which is acute. Pronotum testaceous, translucent laterally; anterior and lateral margins rounded, posterior margin slightly produced in the middle. Meso and metanotum testaceous with a small fuscous mark on each side. Abdomen testaceous with two lateral fuscous bands; supraanal plate translucent, slightly triangularly produced; subgenital plate broad, almost truncate at the apex.

Legs concolorous; front femora armed beneath on the outer edge with 5 or 6 spines subequal in length, rather strong, one of which is apical, on the inner edge, from base to apex, with 4 moderately strong spines, 10 very small ones, 1 rather large and 2 very long apical ones; tibiæ short, armed with 5 apical spurs, 3 superior (1 ext., 2 int.) and 2 inferior spines (1 ext., 1 int.); tarsi short, the 3 first joints spiny beneath, presenting two minute lateral spines at the apex, 4th joint very short, 5th almost as long as the metatarsus; arolia between the claws large. Intermediate and posterior femora armed with two internal apical spurs and 6 or 7 spines on each inferior margin; intermediate tibiæ armed with 5 apical spurs, 7 superior (2 ext., 3 med., 2 int.) and 6 inferior spines (3 ext., 3 int.); posterior tibiæ with 5 apical spurs, 13 superior (4 ext., 4 med., 5 int.), and 9 inferior spines (4 ext., 5 int.); posterior tarsi longer than those of the two other pairs.

Elytra and wings extending little beyond the apex of abdomen. Elytra very pale testaceous, almost transparent; marginal field broad, occupying more than the third of the total width of the tegmen; 8 costal veins; humeral vein furcate after the 8th costal, its superior sector giving 10 branches; the inferior one furcate at the apex; median vein trifurcate at its base; ulnar vein forming 4 branches, parallel, somewhat angled near their base. Wings hyaline; mediastinal vein furcate at the apex; humeral vein furcate little after the middle, having given 4 branches, its superior sector giving 5 more parallel branches, the inferior trifurcate at the apex; median vein very slightly sinuate; ulnar vein giving 3 branches towards the apex of the wing and 3 short ones to the dividing vein; axillary vein trifurcate.

Length of body, 13 mm.; length of pronot., 3.5 mm.; width of pronot., 5 mm.; length of tegmen, 12.7 mm.

This species looks very much like a *Blattella* but the venation of the wing is that of an *Ischnoptera* or rather an *Ischnopterite* as that large genus is much too comprehensive and should be restricted after examination of large series of the species referred to it.

Gen.—BLATTELLA, CAUDELL.

Blattella germanica, L.

Mesopotamia: Kurna, 20-5-18, 1 ♂; Amara, 27-11-17, 1 ♀; 10-6-18, 1 ♀; 30-6-18, 1 ♀; 7-8-18, 1 ♀ (at light).

Persia: Enzeli, 10-2-19, 1 ♂.

Cosmopolitan species.

Gen.—SUPELLINA, nov. gen.

Very closely allied to *Supella* Shelf. Male narrow and elongate, with tegmina and wings extending beyond the apex of abdomen. Head with eyes well separated; interocular space flattened, forming with the facial shield a subangular line. Tegmina with the discoidal sectors oblique; wings with the ulnar vein ramose, no apical triangle. Dorsal segments of abdomen unspecialized; supraanal plate very weakly produced; subgenital plate with styles well developed, almost symmetrical, inserted near the apex of the plate. Front femora armed anteriorly with two long apical spines and a row of very short, spiniform bristles, posteriorly with one apical spine and one before the apex of the inferior edge. Femora of the other legs armed with a few spines on each edge. Female unknown.

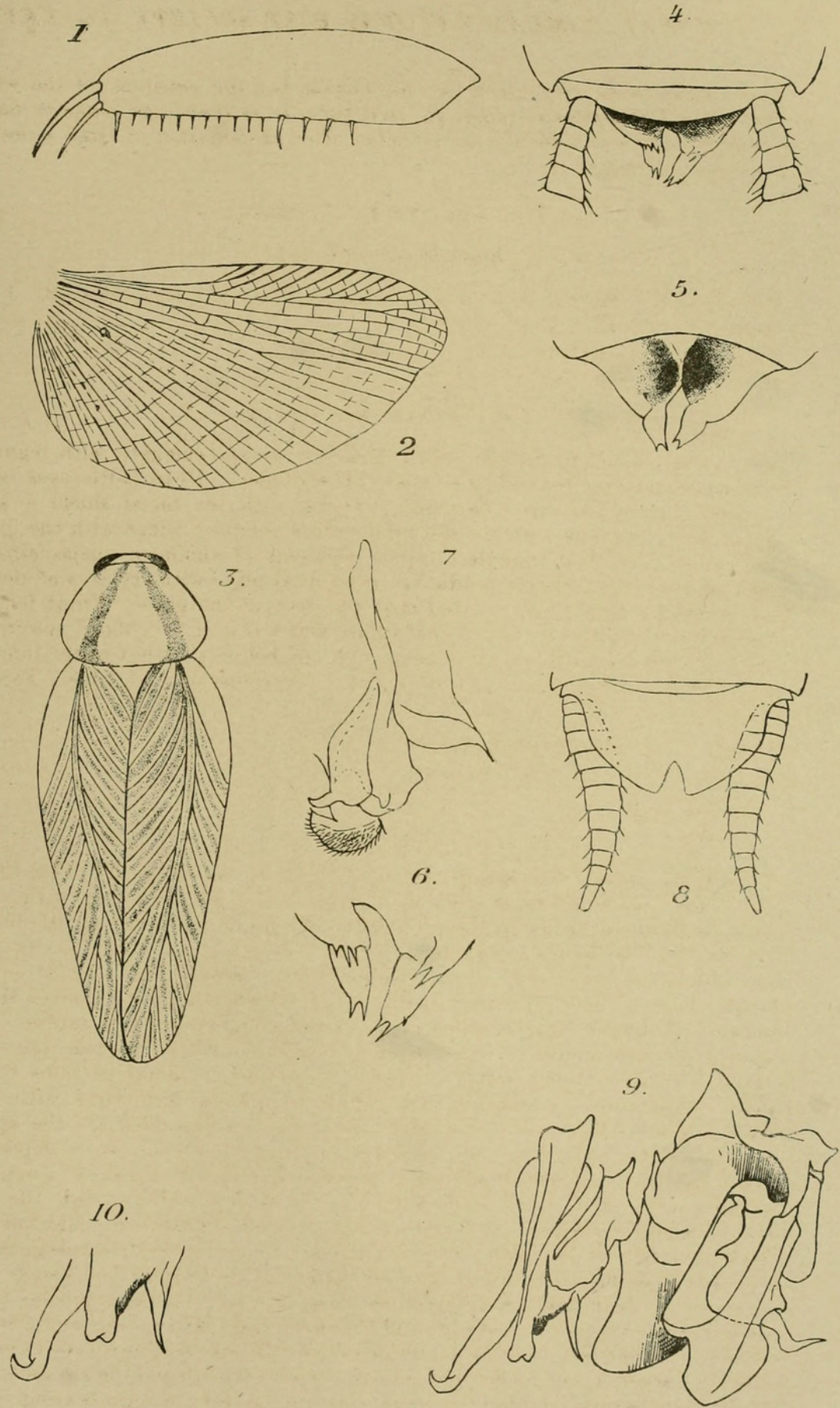
Genotype: *Supellina buxtoni*, n. sp.

Supellina buxtoni, n. sp.

(Fig. 3 to 7).

Type: One male from Mesopotamia, Amara (P. A. BUXTON, 14-9-1918.)

♂. Size medium, form slender. Colour very pale yellowish with two brown longitudinal bands on the pronotum, and numerous longitudinal brown lines on the elytra between the principal veins. Head elongate; occiput short, brown; interocular space wide; front, between the ocellar spots, whitish; face brown. Maxillary palpi long, brown, the last segment short, truncate. Antennæ brown. Pronotum broad, slightly convex, anterior and posterior margins almost straight, lateral margins convex; disk pale yellowish marked with two brown bands converging anteriorly; lateral portions transparent. Meso and metanotum testaceous. Abdomen testaceous with two brown lateral lines; supraanal plate, very short, subrounded at the apex; subgenital plate rather large and produced, emarginate at the apex, depressed on each side with a longitudinal keel in the middle. Cerci formed of 12 articles, depressed with their outer angle somewhat produced and rounded, the two distal ones much smaller. Style rather big, inserted almost in the midst of the posterior margin of the plate, armed with two very minute denticulations at their apex; the superior margin of the subgenital plate bearing 2 or 3 such denticulations at their base. Genital valves showing a long chitinous process and a rounded head entirely covered with stiff bristles. Legs rather long and slender, yellowish. Front femora armed anteriorly with two apical spines very close together, the superior one longer and curved, posteriorly with one apical spine and one about at the distal third of the inferior margin; anterior margin bearing about 30 spinuliform bristles from proximal third to the apex; tibiæ shorter than the femora, armed with 4 apical spines, 3 superior (1 ext., 2 int.) and 2 inferior ones. Intermediate and posterior femora armed with 4 or 5 spines on each margin



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beneath; intermediate tibiae armed with 5 apical spines, 8 superior (3 ext., 3 med., 2 int.) and 4 inferior ones (3 ext., 1 int.); posterior tibiae with 5 apical, 13 superior (5 ext., 4 med., 4 int.) and 7 inferior spines (4 ext., 3 int.).

Elytra very long, their anterior margin somewhat sinuate, internal margin almost straight; humeral vein with 7 branches, the two apical of which are furcate; anal field elongate. Marginal field transparent, the remainder of the tegmina pale yellowish with longitudinal brown bands between the veins. Wings transparent, the costal veins somewhat darkened and clubbed; ulnar vein triramous, no intercalated triangle.

Length of body, 9.5 mm.; length of tegmen 10 mm.; width of tegmen, 3 mm.; length of pronot, 2.5 mm.; width of pronot, 3 mm.

This species shows very distinctive features in its general coloration, armature of the front tibiae and apex of the abdomen. It seems closely related to *Supellia* Shelf., but cannot enter this genus on account of the lack of spines on the anterior margin of the front femora and the absence of a specialized gland on the abdominal tergites.

Gen.—BLATTA, L.

Blatta orientalis, L.

Persia: Enzeli, 19-6-19, 1 ♂.

Gen.—PERIPLANETA, BURM.

Periplaneta americana, L.

Mesopotamia: Amara, 1 ♀.

Gen.—SHELFORDELLA, ADELUNG.

Shelfordella tartara, Sauss.

(Fig. 8 to 10).

Mesopotamia: Amara, R. Tigris, 7-4-18, 2 ♀ (immature), common in fields; billets, etc.; 25-6-18, 1 ♂; 31-5-18, 1 ♂; 24-9-18, 1 ♂; 30-9-18, 1 ♂; Kurna, 20-5-18, 1 ♂.

This interesting species had not yet been recorded from Mesopotamia; the specimens collected by Mr. BUXTON agree fully with ADELUNG's description.* There is very little to add to this very good description. The front femora are armed anteriorly with two long apical spines and 13 ones on the inferior margin, these being rather strong and regular; posterior inferior margin with 5 spines, one of which at the apex; front tibiae with 5 apical, 3 superior (1 ext., 2 int.) and 6 inferior spines (3 ext., 3 int.). Intermediate and posterior femora armed beneath with 6-7 spines on each margin; intermediate tibiae with 5 apical, 8 superior (3 ext., 3 med., 2 int.) and 8 inferior spines (4 ext., 4 int.); posterior tibiae with 5 apical, 14 superior (5 ext., 5 med., 4 int.) and 13 inferior spines (7 ext., 6 int.). Genital valves rather short and broad, with three sharp hooks.

Gen.—POLYPHAGA, BRULLE.

Polyphaga aegyptiaca, L.

Mesopotamia: Kurna, 20-5-18, 1 ♂; Basra, 16-8-17, 1 ♂; Amara, 7-3-17, 1 ♀; 10-3-18, 1 ♀ (under palm logs); 27-4-18, 1 ♂ (flying).

Persia: Menjil, Gillan, 2,000 ft, 1 ♀ (running in stony desert).

Two egg-cases of this species have been collected by Mr. W. E. EVANS; they agree with the description given by Dr. W. INNES BAY (*Mem. Soc. ent. Eg.* I [1912], p. 37), one being 10, the other 9 mm. long, both bearing 16 denticulations on the crest (fig. 11).

* *Horæ Societatis Entomologicae Rossicae*, XXXIX [1910] p. 331.

Polyphaga subhyalina, n. sp.

(Fig. 12 and 15).

Type : 1 ♂, from Persia, Qazvin, 4,000 ft., 25-8-19. (P. A. BUXTON).*Co-types* : 2 ♂, same locality, 30-9-19.

♂. Medium sized species; form elongate, coloration very pale, not very hairy. Head small, occiput and forehead black with long reddish hairs, face and mouth parts very pale yellowish. Eyes very large, black, a little more approximate than the ocelli; these are big, yellow, the space between them forming a rounded keel. Antennæ rather thick, yellow. Maxillary palpi yellow, the 3rd article longer and thicker than the 4th, the 5th comparatively very short, truncate. Pronotum small, short and broad, its anterior margin fringed with long hairs, its surface covered with short, silky, reddish hairs; general shape regularly oval, the anterior margin feebly truncate, clearing the summit of the head; disk slightly convex, adorned with symmetrical brown lines, forming a triangular impression. Abdomen broad, whitish, almost glabrous; supraanal plate small, rounded at the apex; subgenital plate a little asymmetrical, with no style, its posterior margin concave, lined with short spinuliform hairs, angles rounded. Cerci short, yellowish. Genital valves short, folded on the right, presenting a long hook on the left.

Legs yellow, rather short. Front femora bearing long, irregular bristles; tibiae armed with 8 spines round the apex and 1 on the upper margin; tarsi long and slender, the metatarsus equaling the other joints together. Intermediate femora bearing scarce long bristles and armed with 1 external genicular spine; tibiae armed with 7 long apical spurs, 6 superior (2 ext., 2 med., 2 int.), and 2 inferior spines (1 ext., 1 int.). Posterior femora armed as the intermediate ones; tibiae with 7 spurs, the longer one much shorter than the half of the metatarsus, 11 superior regularly disposed (5 ext., 3 med., 3 int.), and 5 inferior spines (2 ext., 3 int.). Tarsi long, all the articles covered with spinelets; arolia between the claws small.

Elytra extending much beyond the apex of abdomen, almost transparent with numerous small greyish spots and the costal area whitish; humeral vein sending 6 or 7 branches to the internal margin; branches of the median vein very numerous, 12 to 14; anal field short. Mediastinal vein with a small inferior lobe. Wings transparent except a few small greyish spots near the apex and a narrow white opaque band along the anterior margin in its apical midst ulnar vein with 5 branches; 1st axillary vein with 10 branches.

Length of body, 13 mm.; length of pronot., 3.5 mm.; width of pronot., 6 mm.; length of tegmen, 19.5 mm.; width of tegmen, 7 mm.; post tib. 5.6 mm.; post. metatarsus, 6 mm.

Although looking much like *H. livida* Burm., at first sight, this species belongs to the *algerica* group, having the spines of the posterior tibiae regularly disposed along the whole length of the tibia. *H. Roseni* Brancs, seems to be a very close species but BRANCSIK does not speak in his description of the disposition of the tibial spines; anyhow, the shape of the pronotum is different from that of the present species, the elytra and wings are shorter and the tarsi possess no arolium.

Polyphaga africana, L.

Mesopotamia: Azijiysh, R. Tigris, 1-11-18, 1 ♂; under flood refuse, slopes of Jebel Hamrin, 1 adult and 2 young ♀ (?).

The male specimen here referred to agrees quite well with the good figure of this species given by SAVIGNY (Deser. de l'Égypte, Orth., pl. II, fig. 11), but the anterior part of the pronotum is not whitish; I do not think this colour variation is sufficient to authorize the creation of a species or even a geographical race. There is a very distinct small arolia between the tarsal claws and the posterior

tibiae are armed with 9 superior spines, the three distal ones forming a group not very clearly separated from the other 6; 4 inferior spines inserted in the distal half of the tibia, of which 2 external and 2 internal, the latter much longer.

The female specimens seem to belong to the same species, showing the same tibial armature; there is no tarsal arolia but this must be characteristic of the females of all the species of this genus. The adult specimens are covered with a reddish hairy clothing and show the supraanal and subgenital plates slightly notched at the apex.

Polyphaga persica, n. sp.

(Fig. 14 and 16).

Type:—One male from Persia, Qazvin, 4-9-1919 (P. A. BUXTON).

Size medium, form rather short and stout, coloration testaceous brown with numerous small brownish spots on the tegmina. Head hidden by the pronotum; occiput and forehead black; facial shield and clypeus yellow, the former depressed, the latter forming a protuberance with a fine median furrow. Eyes large, black, as distant one from the other as the ocelli; these are very large, yellow, oval; between them is a tuft of reddish hairs. Maxillary palpi testaceous, the last joint much shorter than the fourth one. Antennae brownish, thick.

Pronotum rather wide, testaceous, covered with long reddish hairs; a narrow band along the anterior border almost transparent, posterior part somewhat darkened, 8 small black spots on the disk which is convex; anterior margin slightly produced in the middle, lateral margins almost straight, posterior one convex. Mesonotum testaceous, its posterior margin subangulate, its exposed part very large, brownish.

Abdomen broad, depressed, testaceous above, yellowish with reddish hairs beneath. Supraanal plate small, subtriangular, its posterior margin sinuate, apex feebly notched; subgenital plate a symmetrical, its posterior margin sinuous, thick, covered with reddish hairs; styli irregular, the right one much shorter than the left which is inserted in the concavity of the margin. Cerci very short, testaceous.

Legs yellowish; anterior femora provided with very long hairs and a few spiniform bristles on the inferior inner edge; tibiae very short, armed with 8 strong spines round the apex and 1 on the superior margin; tarsi long, rather slender, the metatarsus equaling the other joints together; no arolia between the claws. Intermediate and posterior femora provided with long bristles, without genicular spines; intermediate tibiae with 7 very long apical spurs, 7 superior (4 ext., 2 med., 1 int.) and 1 inferior spines; posterior tibiae with 7 apical spurs, 10 superior (4 ext., 3 med., 3 int.) and 4 inferior (2 ext., 2 int.) spines, the superior ones forming 3 imperfectly limited groups. Tarsi longer and thinner than the anterior ones, the metatarsi longer than the other joints together.

Elytra and wings extending beyond the apex of abdomen. Elytra very broad, chiefly near the apex, subhyaline with many little greyish spots; marginal field narrow, whitish; humeral, median and ulnar veins with numerous parallel branches. Wings slightly smoky, chiefly towards the apex and along the anterior margin; anal angle very pronounced. Veins brownish; median vein emitting 9 branches, ulnar vein with 13 branches; many of the radiate veins are furcate.

Length of body, 15.5 mm.; length of pronot., 4.5 mm.; width of pronot., 7 mm.; length of elytra, 18.5 mm.; width of elytra, 6.5 mm.

This species has exactly the same form and size as the preceding; it differs from it by its general colour and by the absence of arolia between the tarsal claws. The hook of the genital valves (fig. 13-14) is much thicker and more curved in *africana* than in *persica*.

FAM.—MANTIDÆ.

Gen.—MANTIS, L.

Mantis religiosa, L.

Mesopotamia: Amara, nov. 1917, 2♂, 3♀; Kizil Robat, north-east of Baghdad, 1♂, 1♀; Masharra Canal, Amara, 8-6-18, 1♀.

Gen.—IRIS, SAUSS.

Iris oratoria, L.

Mesopotamia: Kut el Amara, R. Tigris, 9-8-18, 1♂; Shahroban, R. Diala, 30-7-18, 1♂.

Gen.—FISCHERIA, SAUSS.

Fischeria fasciata, Thunb.

Mantis fasciata, Thunberg, 1815, *Ac. Petersb.* V., p. 292; *Fischeria fasciata*, Giglio-Tos, 1916, *Bull. Soc. ent. it.* XLVII [1915], p. 21; *Fischeria baetica*, Rambur, 1839, *Faune And.* II, p. 19, pl. 1, fig. 1,2.

Mesopotamia: Amara, 11 and 20-9-18, 1♂, 2♀;—Kut el Amara, R. Tigris, 9-8-18, 2♂.

Three male specimens, collected by Mr. P. A. Buxton, are very much larger than Spanish examples (length of body, 68 mm.; length of pronot., 18 mm.; length of tegmen, 47 mm.); they are quite similar to these in every other respect but might be considered as a local race.

Gen.—BOLIVARIA, STAL.

Bolivaria brachyptera, Pall.

Persia, Qazvin, sept. 1919, 2♀.

Gen.—EMPUSA, ILLIGER.

Empusa egena, Charp.

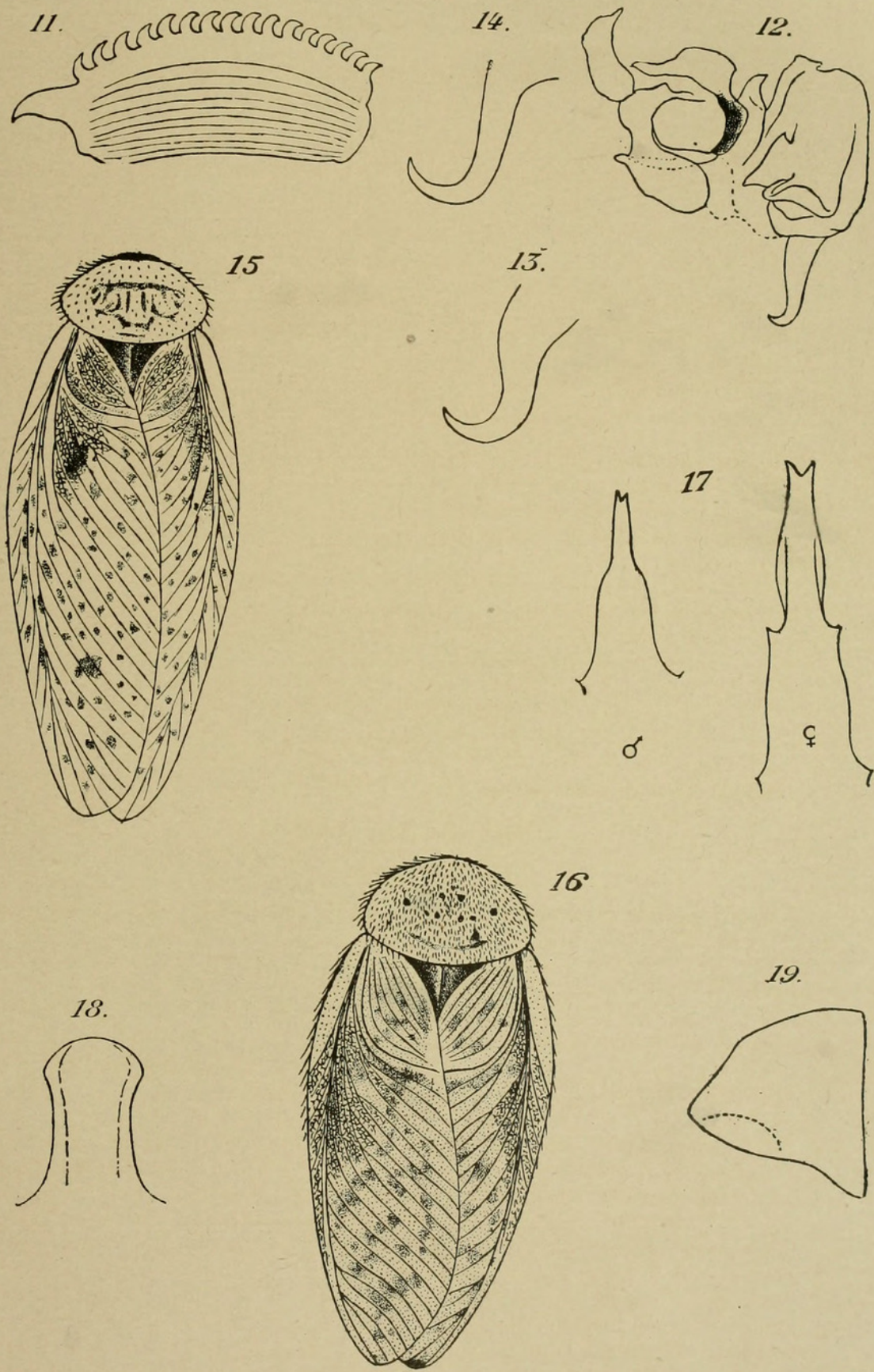
Mesopotamia: Amara, R. Tigris, April 1918, 1♂;—Masharra, 20-3-18 1 young ♀.

Empusa uvarovi, n. sp.

(Fig. 17).

Types:—One male from Mesopotamia, Amara, on Alhagi, margin of dry marsh (W. E. EVANS, 12-9-18).—One female, same locality (P. A. BUXTON, 10-9-1918).

Very much like *E. egena* Charp., but smaller. Male with conical process of vertex rather short, rounded above, slightly furcate at the apex; prothorax slender weakly denticulated anteriorly, its posterior part almost unarmed. Elytra transparent, tinted with greenish near the anterior border and the apex; marginal field opaque, green with the extreme border yellow (in life wholly green?) and a narrow yellow band (in life green?) along the humeral vein, extending from base to the stigma which is yellow; median vein furcate on the stigma, its superior branch furcate; discoidal vein trifurcate. Wings transparent, greenish near the apex; discoidal vein furcate. Legs green banded with yellowish (in life wholly green?); lamellar expansions of the femora smaller than in *E. egena*, subtriangular. Female with process of vertex rather short, divided in two almost equal parts, the apical one rounded above, canaliculate beneath,



its sides convex and weakly lamellar; prothorax as in the male but more strongly denticulate. Tegmina almost entirely of a fine green with the same yellow marks as those of the male; wings more greenish than those of the male; lamellar dilatations of the femora as in the male. Abdomen similar to that of *E. egena* but with weaker median and lateral lobes.

Length of body, ♂, 48 mm. ♀, 56 mm.; length of pronot, ♂, 19.5 mm. ♀ 23 mm; length of ant. fem., ♂, 11.5 mm., ♀, 14.5; elytra, ♂ 26.5 mm., ♀ 34 mm.

This species is much smaller and more slender than *E. egena*; it differs from it by the shape of the process of the vertex and by its tegmina much more brightly coloured. It seems very close to *E. unicornis* Johans. but the prothorax is comparatively much shorter than in this last species and the shape of the vertex of the female seems intermediate between that of *E. unicornis* and *E. egena*.

I take much pleasure in dedicating this beautiful Mantid to Mr. B. UVAROV who has so carefully studied the Orthopterous fauna of West Asia.

Gen.—BLEPHAROPSIS, REHN.

Blepharopsis mendica, F.

Mesopotamia: Amara, R. Tigris, may 1917, 1 ♂; 7-4-18, 1 ♂; 16-8-18 (at light) 1 ♀; 27-9-18, 1 young.

ENSIFERA.

FAM.—PHASGONURIDÆ.

Gen.—HOMOROCORYPHUS, KARNY.

Homorocoryphus nitidulus, Scop.

Mesopotamia: Amara, 20-10-17, 2 ♀; 30-10-17, 1 ♀.

Gen.—CONOCEPHALUS, THUNB.

Conocephalus fuscus, F.

Persia: Enzeli, 20-6-10, 1 ♂.

Conocephalus fuscus turanicus, Semenof.

Xiphidium fuscum turanicum, Semenof, 1915, *Rev. russe Ent.*, XV [1915] p. 451.

Mesopotamia; below Amara, on Tigris, 15-5-18, 1 ♀; 22-10-18, 1 ♂, 1 ♀,

Conocephalus buxtoni, n. sp.

(Fig. 18 to 20).

Type:—One male from Mesopotamia. Amara (P. A. BUXTON, 30-6-18).

Size medium, form rather slender; general colour pale green, dorsum of head and pronotum with a broad median band of reddish brown; on pronotum, this band is outlined on each side with opaque yellow. Head with dorsum of vertex very slightly ascending above the plane of the occiput; fastigium of vertex narrow, little more than half as wide as the basal antennal joint, very slightly enlarged at apex. Pronotum with lateral lobes high, their posterior margin very weakly convex, callosity slightly convex, broad. Abdomen slender, 10th tergite notched at apex, subgenital plate truncate, bearing rather long, cylindrical styles. Cerci very large, almost triangular, the internal margin being strongly produced in a triangular process, ending in a small tooth directed downwards; apex rounded, medial portion somewhat swollen, part of the internal margin between the process and the apex depressed, almost lamellar.

All the femora unarmed beneath; anterior and intermediate tibiae with 6 pairs of inferior spines; posterior femora with 2 very small genicular spines on each side. Elytra much longer than the posterior femora, a little shorter than the wings.

Length of body, 14.5 mm.; post. fem., 12 mm.; length of tegmen, 19 mm.; length of wing, 20.5 mm.

The present species is very interesting as it belongs to the subgenus *Neoxiphidion* which contains chiefly American forms; only two species of this subgenus have been described from the palearctic region; *C. japonicus* Redt., from Japan and *C. Chavesi* Bol., from Azores. Those three forms may be distinguished as follows:—

1. Cerci of ♂ dentate in the middle; dorsum of vertex and pronotum unicolorous; tegmina shorter than posterior femora which are spinose beneath.
..... *C. japonicus*, Redt.

—Cerci of ♂ dentate before the middle.....2.

2. Posterior femora longer than the body and than tegmina; their inferior margin with 1 or 2 spines.....*C. chavesi*, Bol.

—Posterior femora entirely unarmed beneath, shorter than the body; tegmina very long..... *C. buxtoni*, Chop.

Gen.—PHASGONURA, STEPH.

Phasgonura viridissima, L.

Mesopotamia: Amara, May 1918, 1 ♂, 4 ♀.

Gen.—TETTIGONIA L.

Tettigonia albifrons, f.

Mesopotamia: Amara, May 1918, 2 ♂, 1 ♀.

Gen.—PHOLIDOPTERA, WESMAEL.

Pholidoptera persica, n. sp.

(Fig. 21 to 23).

Types:—One male from Persia, Qazvin, 20-7-19 (P. A. BUXTON)—One female, same locality, 20-9-19.

Reddish grey or brownish. Head concolourous; occiput a little darkened behind the eyes; fastigium of vertex short, broader than the first joint of antennae, slightly rounded at the apex, convex above, narrowing beneath and separated from facial shield by a transverse furrow; face glabrous, shining, yellowish or brownish; facial shield and clypeus with two small blackish impressions. Pronotum concolorous with indistinct blackish marks on the disk; shape similar in both sexes, somewhat produced posteriorly, lateral lobes high, their inferior margin subangulate, anterior margin straight, posterior one subtruncate, lined, black; disk without keels, convex anteriorly, feebly depressed posteriorly; prosternum unarmed. Abdomen concolorous with about 10 small black spots on the posterior edge of each tergite to the 7th; 10th tergite of male presenting two long, almost cylindrical processes; supraanal valve triangular; cerci short, bluntly curved near the apex which is dentiform; subgenital plate large, weakly emarginate at the apex; style cylindrical, equaling about the third of the plate. Titillators short, slightly curved at the apex, basal part inflated with many small spines. Female with 10th tergite emarginate, bearing short processes similar to those of the male; cerci conical; subgenital plate large, very widely concave at the apex. Ovipositor very short and thick, gently curved, blackish at the apex.

Legs concolourous, rather short and stout. Front femora thick, armed beneath with 3 small black spines on the inner edge; tibiae longer than the femora, armed above with 3 external spines, beneath with 6 rather strong ones on each side; tarsi very short, the metatarsus scarcely longer than the 2nd joint. Intermediate femora longer than the anterior ones, bearing, like those, 3 very small black spines beneath; tibiae armed above with 2 external, 4 internal spines, beneath as the anterior ones. Posterior femora short and stout, armed beneath with 4-5 small black spines on the outer edge, 2-3 on the inner edge; tibiae a little shorter than the femora, with 4 apical spurs and 6-7 small spines inserted in a black spot on each inferior margin, the apical ones much longer than the others; about 25 spines on each superior margin; tarsi short, the free plantulae equaling scarcely half the length of the metatarsus.

Elytra extending in both sexes a little beyond the apex of the 1st abdominal tergite; they are brownish with blackish spots between the anastomosed veinlets which are very numerous; ♂ with 3 lateral veins; humeral vein simple, thick, sinuate near the apex; discoidal vein furcate; ♀ with 2 lateral veins and 3 dorsal ones.

Length of body, ♂, 25 mm., ♀, 26 mm.; length of pronot., 8 mm.; ant. fem., 6.5 mm.; ant. tib., 7.7 mm.; interm. fem., 8.5 mm.; interm. tib., 8.5 mm.; post. fem. 21.5 mm.; post. tib. 20.5 mm.; ovipos., 13 mm.

This species is very distinct by reason of its stout stature, the small black spines of all the femora, the very short free plantulae of the posterior metatarsi, the form of the anal segment of the male and the brevity of ovipositor. It might perhaps enter the genus *Ariagona* Krauss, previously known from a single canarian species, as well as *Pholidoptera*.

Gen.—METRIOPTERA, WESMAEL.

Metrioptera escaleraei, Bolivar.

Mesopotamia: Amara, R. Tigris, May-June 1918, 4 ♂, 4 ♀.

Metrioptera persica, Uvarov.

(Fig. 24 to 26).

Platypleis persica, Uvarov, 1917, *Bull. Mus. Caucase*, XI, p. 11, fig. 9.

Mesopotamia, Amara, R. Tigris (W. E. EVANS, June 1918) 1 ♂, 1 ♀.

This species is known only from the female; the specimens here referred to have been identified by M. B. UVAROV himself, who had the kindness to send me the undescribed male.

♂ (Macropterous). Slender, smaller than the female, almost unicolourous testaceous. Anal segment very deeply and acutely divided at the apex, forming two long acute processes, the basal part of the tergite angularly folded; sub-genital plate large with two longitudinal keels, apex deeply and narrowly notched, presenting above two small black lines along the sides of the hollow; styli rather long, cylindrical. Cerci stout, as long as the processes of 10th tergite, narrowing towards the apex, bearing at their proximal third a strong internal tooth. Titillators slender, strongly curved, armed with a few small spines.

Length of body, 18.5 mm.; length of pronot., 4.8 mm.; elytra 20.5 mm.; post fem., 18 mm.; post. tib., 16.5 mm.

Gen.—PARADRYMADUSA, HERMAN.

Paradrymadusa qazvinensis, n. sp.

(Fig. 27 to 30).

Types:—One male from Persia Qazvin, (P. A. BUXTON, Nov. 1918) and one female, same locality (P. A. BUXTON, 17, July 1919).

Large species, testaceous or rufous brown. Occiput concolorous; apex of vertex not much broader than the first article of antennae; face yellowish,

shining, glabrous. Pronotum rather strongly produced backwards in both sexes, its anterior margin straight, the posterior one convex; lateral lobes high, their inferior margin subangulate, widely bordered with yellow; prosternum with two small spines. Tenth abdominal tergite of male very deeply and angularly emarginate at the apex, supraanal valve triangularly produced; cerci short and stout, bearing a small apical tooth, directed outwardly, their internal face slightly extending in a blade, bearing an acute tooth about the middle; subgenital plate wide, slightly concave at the apex; styli? (wanting). Tenth tergite of female like that of the male but less deeply emarginate, supraanal valve smaller, feebly produced; cerci short, conical; subgenital plate wide, its posterior margin emarginate, forming two rounded lobes with two small tubercles near the apex of the notch. Titillators angled, the inferior border of their apical part armed with a few strong spines. Ovipositor long and almost straight, apical margin of the valves obliquely truncate.

Legs concolourous; anterior coxæ with a very long, strong spine; femora stout, armed inwards with 3 or 4 inferior spines and a very small genicular one; tibiæ armed above with 3 external spines, beneath with 6 spines on each margin; intermediate femora armed with 2 small genicular spines and 1 to 4 inferior external ones; tibiæ armed above with 2 external, 4 internal spines, beneath with 6 spines on each margin. Posterior femora very long, armed beneath with 5 internal, 7-8 external small spines and 2 small genicular ones; tibiæ a little longer than the femora, armed with 4 inferior apical spurs, 12 acicular small spines on each inferior border and 2 superior apical spurs, 30-31 external and 26-27 internal rather strong spines. Tarsi rather long, 2nd joint almost as long as the 1st, 3rd short, very much depressed, free plantulæ of the metatarsus much shorter than the half of the metatarsus.

Elytra of the male extending almost to the apex of the 2nd abdominal tergite, rufous brown with the marginal field whitish and a fulvous marking near the internal angle; anterior margin weakly convex, apex truncated, internal margin sinuate; 2 lateral veins, humeral vein furcate. Elytra of the female almost hidden by the pronotum, rounded, their sutural margin slightly overlapping.

Length of body, ♂, 27 mm., ♀, 25 mm.; length of pronot., ♂, ♀, 10 mm.; elytra, ♂ 7 mm., ♀, 4.5 mm. ant. fem., ♂ ♀, 9.5 mm.; ant. tibiæ, ♂ ♀, 11 mm.; interm., ♂ ♀, 11 mm.; interm. tib., ♂ ♀, 12 mm.; post. fem., ♂ ♀, 33.5 mm.; post. tibiæ, ♂ ♀, 32.5 mm.; ovipos., 26 mm.

Gen.—MAGRETTIA, BR.

Magrettia mutica, Br.

Magrettia mutica, Brunner von Wattenwyl, 1888, *Verhandl.k.k.zool-bot. Ges. Wien*, XXXVIII, p. 285, fig. 18—Adelung 1902, *Ann. Mus.Zool.Ac.Sc. Petersb.*, VII, p. 16.

Mesopotamia: Ruz, 16-18 (W. E. EVANS), 1 young male, in tuft of earth.

Although immature this example shows the principal features given in ADELUNG's very good redescription of this interesting species.

FAM.—GRYLLIDÆ.

Gen.—GRYLLOTALPA, LATR.

Gryllotalpa gryllotalpa, L.

Mesopotamia: Amara, R. Tigris, 10-12-17, 1 ♂; 30-3-18, 1 ♂.

Gen.—TRIDACTYLUS, OLIV.

Tridactylus savignyi, Guer.

Mesopotamia: Amara, R. Tigris, 10-4-18, 1 ♂; 30-6-18, 1 ♂.

Those two specimens are large (5 mm.) and of a very recessive coloration.

Gen.—PTERONEMOBIUS, JACOBS.

Pteronemobius gracilis, Jak.

Gryllus gracilis, Jakovleff, 1871, *Hor. Soc. ent. Ross.*, VI, p. 20, tab. 1, fig. 3, 3a.—*Nobius mayeti*, Finot, 1893, *Ann. Soc. ent. Fr.*, Bulletin, p. 252.—*Nemobius adelungi*, Uvarov, 1912, *Hor. Soc. ent. Ross.*, XL., p. 39.

Mesopotamia: Amara, R. Tigris, April-June 1918 (P. A. BUXTON), 4 ♂, 11 ♀;—Amara, at light (N. E. Evans, 7-8-18), 2 ♂, 1 ♀.

MR. B. UVAROV himself supposed that his *N. adelungi* was the same species as the north African *N. mayeti*; after a careful comparison between the specimens collected in Mesopotamia and examples of *N. mayeti* from Algeria, I cannot hesitate to publish this synonymy; but, in its turn, as M. UVAROV makes me remark, the latter species must fall in synonymy with *Gryllus gracilis*, Jak. which, although described in Russian, is valid, the drawing being quite sufficient to recognize the insect. The species is a *Pteronemobius* as the male possesses a tubercle-like spine very near the base of the internal border of the posterior tibiae.

Gen.—ACHETA, L.

Acheta bimaculata, De Geer.

Mesopotamia: Amara, 9-8-18, at light, 1 ♂; under stone by Diala River north-east of Baghdad, 1 young.

Acheta amarensis, n. sp.

Types:—One male, one female from Mesopotamia, Amara (P. A. BUXTON, 26.6-18).

Co-type:—One male, same locality.

Rather small species, wholly shining black, very similar to *A. morio*, F. Head smaller than in this latter species, scarcely wider than the pronotum; ocelli extremely small, disposed almost in a straight line; face tumid. Pronotum as wide posteriorly as anteriorly, its posterior border almost straight. Abdomen black; subgenital plate of ♂ very much compressed, that of ♀ small, notched at apex. Ovipositor shorter than the posterior femora. Legs black; the posterior femora somewhat tinged with reddish at their inferior margin chiefly in the male; posterior tibiae short, armed with 3 external and 4 internal very strong spines; internal spurs strong, the superior decidedly longer than the intermediate one; metatarsi longer than the other joints of the tarsus, somewhat dilated in the middle, their internal face rounded, the external one depressed; external superior margin keeled and armed with 3 rather strong spines, the internal one rounded, armed with 1 apical spine; apical spurs strong, the internal extending a little farther than the midst of the last joint of the tarsus.

Tegmina of male as long as the abdomen; speculum broader than long, rounded anteriorly; diagonal vein rather long, slightly sinuate; 3 postaxillary veins, the 2nd one very much curved; 2 veinlets between the diagonal and the postaxillary veins; 3 oblique veins; apical field rather short with 6 longitudinal veins and a very wide, somewhat irregular reticulation. Lateral field black with 5 longitudinal veins and the mediastinal which is triramose and very much curved at apex. Tegmina of female with 9 dorsal veins, the 5 internal of which very close, the 4 others separated by veinlets forming a wide reticulation; 5 veins in the lateral field and the mediastine which is triramose as in the male but not curved at apex. Wings candate, blackish near the anterior border.

Length of body, ♂, 16 mm., ♀, 18 mm.; length of tegmina, ♂ ♀, 11 mm.; length of wings, ♂, 17 mm., ♀, 17.5 mm.; post. fem., ♂ ♀, 8.5 mm.; post. tib., ♂ ♀, 6 mm.; post. tarsi, ♂ ♀, 4.5 mm.; ovipos. 8 mm.

Individual variations.—The second male of this species has tegmina a little shorter than the abdomen, with no veinlet between the diagonal and post-axillary veins and 7 longitudinal veins in the lateral field.

This species looks very much like the African *A. morio*, F., of which it differs however by many small features, the most striking of which is the form of the posterior metatarsus (fig. 31).

Gen.—GRYLLUS, L.

Gryllus desertus, Pallas.

Mesopotamia: Amara, April-May 1918, 3 ♀; Kut-el-Amara, 7-8-18, 1 ♀; Kurna, 20-3-18, 1 ♀.

Persia: Enzeli, 1 ♀.

All these examples belong to the macropterous form *desertus*, Pall.

Gryllus domesticus, L.

Persia: Qazvin [4,000 ft.], 17-9-19, 2 ♀.

Gryllus tartarus, Sauss.

Mesopotamia: Basra, 30-6-18, 1 ♀; 12-8-18, 1 ♀; Amara (W. E. EVANS), very common at light.

Gryllus chinensis, Web.

Mesopotamia: Amara, May-Sept. 1918, 5 ♂, 3 ♀.

All these examples belong to the *Cerisyi* form; two of them are very large with the veins of the lateral field of the tegmina almost straight and quite equidistant.

Gryllus frontalis, Fieb.

Mesopotamia: Kizil Robat, N.E. of Baghdad, 1 young individual.

Gen.—GRYLLODES, SAUSS.

Gryllodes lateralis, Fieb.

Mesopotamia: Amara, 2-11-17, 1 immature ♀.

Gryllodes macropterous, Fuente.

Mesopotamia: Amara, April-June 1918 (P. A. BUXTON), 5 ♂, 1 ♀; 2-7-18 at light (W. E. EVANS), 1 ♀.

Compared with a typical male from Ciudad Real (I. BOLIVAR in coll. Finot) the ♂ examples cannot possibly be differentiated from it; yet 3 of them are smaller and less coloured, one being almost wholly pale yellow, but they show absolutely no other character allowing us to consider them as a different species.

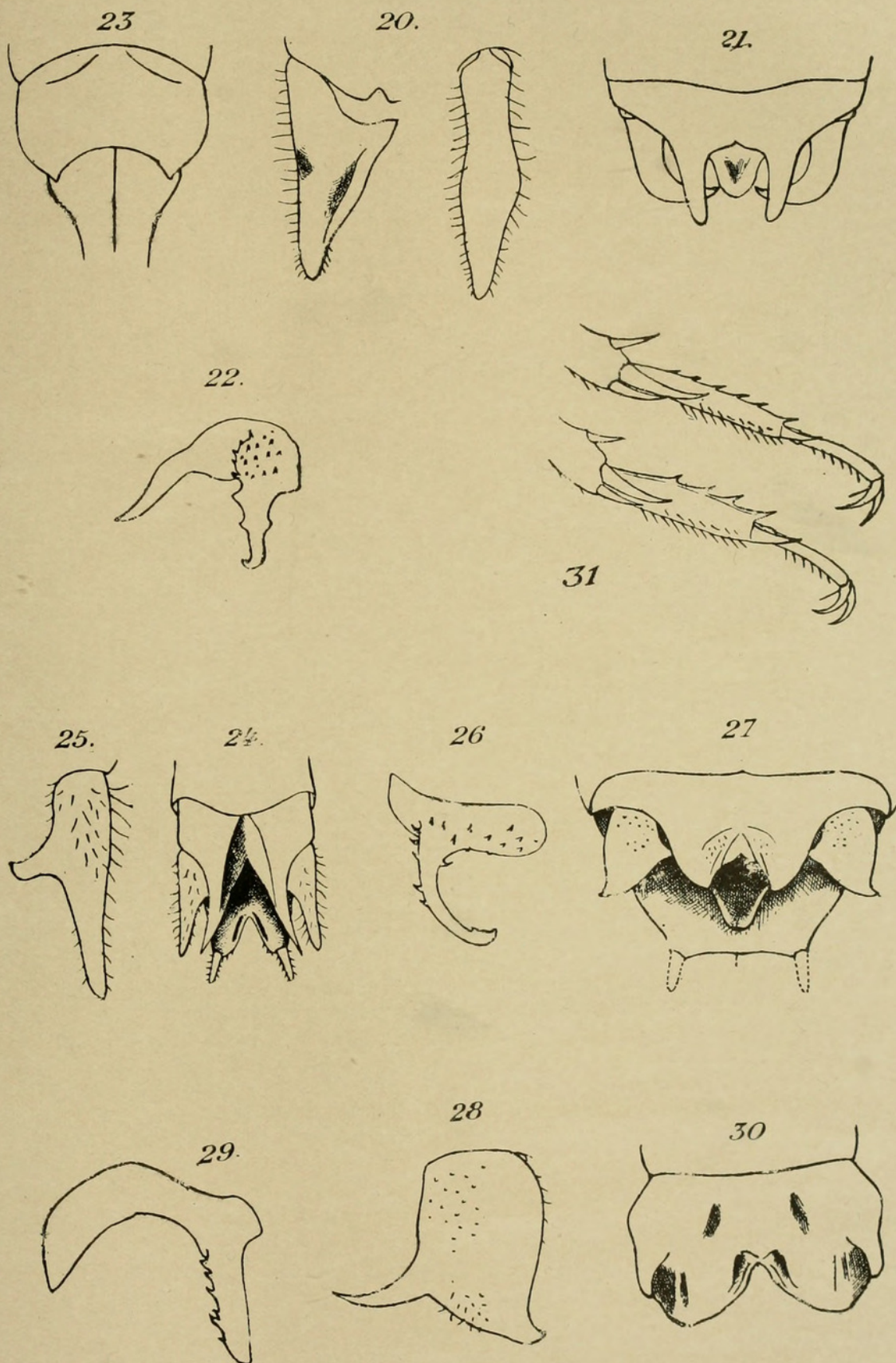
The females are a little smaller, very pale yellowish, with a small head. I refer them with much doubt to this species although they may be considered as a small variety with very recessive coloration, corresponding to the ♂ which is above recorded.

Gen.—METIOCHE, STAL.

Metioche, sp.

Mesopotamia: Amara, on herbage by Tigris (W. E. EVANS, 19-9-18), 1 ♀.

This specimen must belong to one of the species described by STAL from the oriental region (*M. coleoptrata*, *M. tibialis*, *M. pallipes*); it is quite impossible to separate those species with the author's short diagnosis and very possibly



there may be only one species. The specimen here referred to looks very much like the ♀ of *Trigonidium cicindeloides*, Ramb., but the elytra are not so convex, with false veins between the longitudinal nervation; the antennæ are testaceous with the two first articles black. Legs testaceous, anterior tibiæ, tarsi and spines of the posterior tibiæ feebly darkened; anterior tibiæ showing no auditory foramen but a depression at base of the inner face, this being certainly a character of the wingless condition of the species.

The types of all the new species have been deposited in the British Museum.

Explanation of Plates.

Plate I.

- Fig. 1. *Ischnoptera evansi*, n. sp.—Internal face of anterior tibia, $\times 6$,
Fig. 2. *Ischnoptera evansi*, n. sp.—Venation of Wing, $\times 4$.

Supellina buxtoni, n. sp.

- Fig. 3. Male, dorsal view, $\times 4\frac{1}{2}$.—Fig. 4. Apex of abdomen, dorsal view, $\times 12$.—Fig. 5. Subgenital plate, $\times 12$.—Fig. 6. Styli, dorsal view, $\times 26$. Fig. 7.—Genital valves, $\times 16$.
Fig. 8. *Shelfordella tartara*, Sauss.—Supraanal plate and cerci of ♂, $\times 6$.
Fig. 9. *Shelfordella tartara*, Sauss.—Genital valves, dorsal view, $\times 10$.—
Fig. 10. Apex of left valves of same, $\times 12$.

Plate II.

- Fig. 11. Egg-case of *Polyphaga ægyptiaca*, L., $\times 4$.—Fig. 12. *Polyphaga subhyalina*, n. sp.—Genital valves, dorsal view, $\times 17$.—Fig. 13. Hook of genital valves of *Polyphaga africana*, $\times 26$.—Fig. 14. The same hook of *P. persica*, n. sp.
Fig. 15. *Polyphaga subhyalina*, n. sp.—Dorsal view of male, $\times 3$.
Fig. 16. *Polyphaga persica*, n. sp.—Dorsal view of male, $\times 3$.
Fig. 17. *Empusa uvarovi*, n. sp.—Dorsal view of process of vertex, $\times 6$.
Fig. 18. *Conocephalus buxtoni*, n. sp.—Fastigium of vertex, $\times 17$.—Fig. 19. Id.—Outlines of lateral lobe of pronotum, $\times 6$.

Plate III.

- Fig. 20. Id. Dorsal and lateral outlines of cercus of ♂, $\times 12$.—Fig. 21. *Pholidoptera persica*, n. sp.—Apex of abdomen of ♂, $\times 6$.—Fig. 22. Id. Left titillator, $\times 16$.—Fig. 23. Subgenital plate of ♀, $\times 6$.
Fig. 24. *Metrioptera persica*, Uvarov.—Apex of abdomen of ♂, dorsal view, $\times 6$.—Fig. 25. Id. Right cercus, dorsal view, $\times 12$.—Fig. 26. Id. Right titillator, $\times 16$.—Fig. 27. *Paradrymadusa qazvinensis*, n. sp.—Apex of abdomen of ♂, dorsal view, $\times 6$.—Fig. 28. Id. Right cercus, dorsal view, $\times 12$.—
Fig. 29. Id. Left titillator, $\times 16$.—Fig. 30. Subgenital plate of ♀, $\times 6$.
Fig. 31. External face of posterior tarsi of *A. Acheta morio*, F.: *B. A. amarensis*, n. sp.



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