Descriptions of six new species of Palaearctic Blattodea.

By G. Bey-Bienko.

(With 13 figures.)

The present paper contains descriptions of six new species of Palaearctic *Blattodea*, the types of which are deposited in the Zoological Museum of the Academy of Sciences in Leningrad.

Subfamily **Ectobiinae.**

Ectobius tadzhikus sp. n. (Fig. 1.)

Stalinabad (form. Dushambe), N. W. Tadzhikistan (Buchara), 15. VI. 1928, 1 ♂ (L. Kozhantshikov); Sarai on the river Pianj (upper course of the river Amu-Darja), S. E. Tadzhikistan (E. Buchara), 14. VI. 1933, 1 ♂ (G. Bey-Bienko) and 25. VI. 1910, 1 ♂ (N. Zarudny); Tshubek, on the river Piang, ca. 70 km N. E. from Sarai, 23. VI. 1910, 2 ♂♂ (including the type) (N. Zarudny); Hirmendzhan, riv. Pianj, ca. 65 km N. E. from Tshubek, S. E. Tadzhikistan, 1. VII. 1910, 1 ♂ (N. Zarudny); Azantshi, Tadzhikistan (E. Buchara), 28. VI. 1910, 2 ♂♂ (N. Zarudny). „Tsheshme-a-gou, E. Buchara", 13. VII. 1910, 3 ♂♂ (N. Zarudny).

♂. Resembling *E. duskei* Adel. but larger. Form elongate, slender, more deplanate than in the genotype (*E. lapponicus* L.). Head seen from the front cordiform; maximum width across eyes subequal to depth of head; occipital interspace between inner margins of eyes equal to interspace between inner margins of antennal scrobes; antennae equal in length to body; maxillary palpi elongate, slender, three apical joints subequal in length, penultimate joint narrowly-conical, distal joint slightly widened in the basal third, then narrowed apically, depressed.

Pronotum subhexagonal, maximum width equal to one and one third of length (as 10 : 7.5), point of maximum width placed not strongly but distinctly behind the middle; anterior margin

very feebly arcuate, practically straight; lateral margins roundly and regularly passing into anterior margin, oblique, forming well rounded lateral angles at point of maximum width of pronotum; hind margin practically straight, forming with lateral margins distinct obtuse angles; surface of pronotum subdeplanate on disc, lateral parts slightly deflexed.

Elytra broadly lanceolate, extending beyond hind margin of supraanal plate for a distance equal to pronotal length, three times and one third (as 10 : 3) as long as broad, maximum width placed near the middle, regularly narrowing apically, in basal four-fifths feebly, in apical fifth more evidently; apex narrowly rounded, not acute; marginal field broad, strongly narrowing apically,

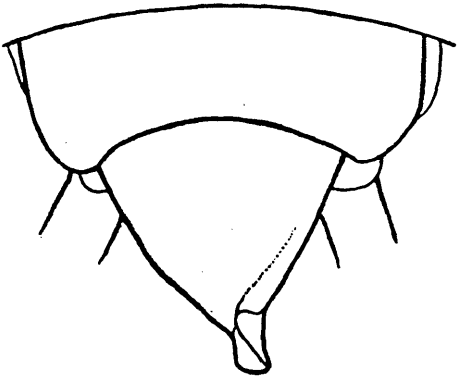

Fig. 1. — *Ectobius tadzhicus* sp. n.

occupying basal third of elytra; anal field elongate-pyriform, subequal in length to marginal field; scapular field occupying at point of greatest width two-fifths of elytral width, costal veins regularly-placed, 13 to 14 in number; oblique sectors of discoidal field 9 to 10 in number; axillary veins subobliterate; interspace between anal sulcus and the first axillary vein half again as broad as the interspace between first and second vein; venation relatively distinct. Wings reaching the apex of elytra; costal veins feebly incrassate, 10 in number; discoidal and median veins parallel and slightly arcuate on their whole length, not incurved anteriorly along anterior margin of intercalated triangle; interspace between discoidal and median vein more than half again as broad as the interspace between median and ulnar vein; both fields not narrowed apically.

Abdomen slightly narrowing apically; dorsal surface strongly concave; seventh tergite long, parallel-sided, hind margin straight, forming with lateral ones a straight angle; glandular area relatively narrow, triangular, narrowing posteriorly, posterior angulated part sometimes less impressed and less distinct, not reaching the hind margin of the seventh tergite, central part of the basal half roundly inflated, small, often indistinct; posterior margin of the sixth tergite bow-shaped elevated on the middle; supraanal plate short, strongly transverse, hind margin broadly-rounded; penultimate ventral segment quite symmetrical, with broad round excision on its whole hind margin; subgenital plate triangular, as long as broad, not strongly asymmetrical, sinistral margin seen from below, practically straight, dextral margin rounded but without distinct angle, styliform process large, broad, depressed; cerci long, deplanate, sharpened on the apex, practically two times as long as subgenital plate.

Anterior femora with anterior lower margin having 2—3 not large spines in the basal half, and two larger and strongly unequal apical spines; hind metatarsus a little longer than three remaining apical joints of hind tarsi.

Coloration in recessive specimens pale-ochraceous or pale-whitish, in the intensive type brownish-ochraceus. Interocular space, antennae, maxillary palpi, the bowshaped figure on pronotal disc, ventral and dorsal stripes along lateral margin of abdomen and cerci in the intensive type blackish-brown, sometimes black; in the recessive type the bow-shaped figure on pronotal disc and the interspace between eyes dark-brown, maxillary palpi, antennae, ventral and dorsal abdominal stripes and cerci are light brownish. Elytra with relatively sparse dark brown, or brownish (in the recessive type), spots placed on costal veins and on oblique sectors of discoidal field, and with very distinct intervenational pattern of the same colour; basal part of discoidal vein dark-brown or brownish. Wings in the recessive type slightly infumated in apical part, practically hyalinous, in the intensive type distinctly infumated, with brownish veins. Abdomen and legs pale, in the intensive type pale-ochraceous with a brownish shade.

Length of body ♂ 7.6—8.4, pronotum 1.85—2.0, elytra 7.9—8.7 mm.

There is a single Palaearctic representative of the genus *Ectobius* related to *E. tadzhikus* sp. n.; this is *E. duskei* Adel. But the new

species differs strongly from *E. duskei* in its larger size, coloration of elytra and abdomen, in the structure of subgenitale plate and in a quite dissimilar shape of pronotum, elytra and styliform process. It would be very interesting to see the female sex of the new species since this sex in *E. duskei* is characterized by features of the genus *Phyllodromica* Fieb.

Ectobius semenovi sp. n. (Fig. 2.)

Novo-Astrakhanskoje on the riv. Syr-Darja, in the vicinity of Kzyl-Orda (form. Perovsk), Kazakstan, 9.—10. VII. 1911, 13 ♂♂

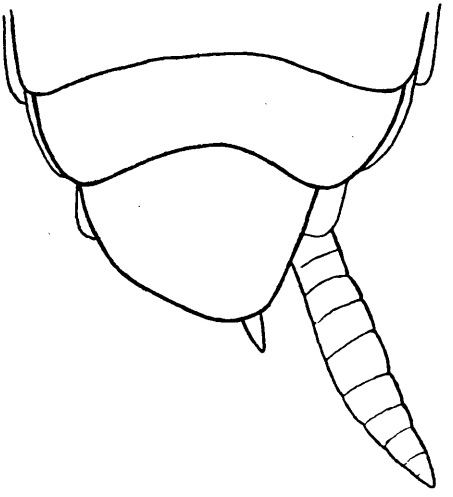

Fig. 2. — *Ectobius semenovi* sp. n.

(including the type and) 7 ♀♀ (N. Zarudny); Kzyl-Orda (form. Perovsk), 5. VII. 1912, 7 ♂♂ and 4 ♀♀ (V. Nikolsky).

♂. A very peculiar species with slightly abbreviated elytra. Head seen from the front broadly-cordiform, maximum width across eyes subequal to median depth, occipital interspace between inner margin of eyes scarcely broader than interspace between inner margins of antennal scrobes; antennae distinctly longer than body; maxillary palpi not strongly elongated, penultimate joint subequal in length to preceding joint, relatively thick, apical joint a little longer than penultimate, strongly broadened in the basal third and then narrowing apically, three times as long as broad in basal third, apex rounded, not acute.

Pronotum practically semi-circular, a little less than half again as long as broad (as 10 : 6.8), point of maximum width placed in anterior part of the basal fifth, anterior margin truncate, posterior margin practically straight.

Elytra relatively short, not or scarcely reaching the supraanal plate, regularly narrowing apically, apex narrowly rounded but not acute, three times as long as broad (as 10 : 3.3), costal veins 9—11 in number, oblique sectors of discoidal field 7—8 in number, marginal field broad, equal in length to anal field, regularly narrowing but not strongly pointed apically, axillary veins less distinct than oblique sectors of discoidal field. Wings as long as elytra, costal veins not incrassate, 8 in number, interspace between discoidal and median veins slightly narrowed apically, about twice as broad as the interspace between median and ulnar veins.

Abdomen regularly narrowing apically, dorsal surface moderately concave; seventh tergite parallel-sided, equal in length to sixth, hind margin with a feeble broadly-rounded excision in the median third, practically straight; glandular depression occupying median part of anterior two thirds of the tergite, is simple and relatively deep, triangular, with the anterior margin practically straight; the length of this depression subequal to its greatest width; supraanal plate short, strongly transverse, hind margin broadly rounded; penultimate ventral segment quite symmetrical, hind margin broadly-concave; subgenital plate distinctly asymmetrical, short, distinctly broader than long, sinistral margin straight, short, dextral margin forming a distinct rounded angle at the base of plate, styliform process very small, simple, cylindrical in basal part and narrowing apically; cerci long, deplanate, acute at the apex, twice as long as the subgenital plate.

Anterior femora with anterior lower margin having 2 relatively small spines in the basal half and two larger, subequal apical spines; hind metatarsus equal in length to remaining three apical joints of hind tarsi.

♀. Distinctly deplanate, form broadly elliptical, brachypterous, resembles somewhat the brachypterous females of the genus *Phyllodromica* Fieb. Pronotum proportionally broader, a little more than half again as broad as long (as 10 : 6.54), hind margin truncate, point of greatest width placed practically along hind margin.

Elytra abbreviate, roundly-triangular, a little longer than pronotum, hind margin truncate, inner margins broadly arcuate,

touching only in their apical halves, costal margin in its largest part straight, roundly passing into the hind margin, hind inner angle a little more than 90°, narrowly rounded; marginal field broad, reaching the base of apical third of elytra, costal veins 4 in number, anal sulcus feeble, indistinct.

Abdomen broad, last tergite strongly transverse, hind margin broadly arcuato-trigonal, cerci not deplanate, cylindrical in basal part and conical apically; subgenitale plate broad, hind margin arcuate on its whole length, median part slightly deflexed between bases of cerci.

General colour pale-ochraceous or pale-yellowish, interocular space reddish-brown or dark brownish in ♀, pronotal disc with a weak, indistinct brownish-ochraceous bow-shaped figure, lateral parts hyalinous. Elytra without small dark spots on costal veins, with not strong but distinct brownish intervenational pattern which is sparser in scapular field than in discoidal and anal fields; in the female sex this pattern is completely absent in scapular field but very distinct in discoidal and anal fields. Legs pale-yellowish, unicolorous. Abdomen pale-yellowish or pale-ochraceous, dorsal surface with indistinct (♂) or with quite distinct (♀) lateral brownish stripes. Subgenital plate in ♀ with a large reddish-brown spot.

Length of body ♂ 6.0—6.8, ♀ 5.9—6.6, pronotum ♂ 1.5—1.7, ♀ 1.7—1.9, elytra ♂ 4.4—4.7, ♀ 1.9—2.2 mm.

This species is well distinguished by its relatively short elytra, scarcely reaching in ♂ to the supraanal plate, by the reduced number of costal veins, by the shape of pronotum and by the coloration.

The species is dedicated to Mr. A. P. Semenov-Tian-Shansky, honorary President of the Russian Entomological Society and the author of many papers on systematics of insects, specially from Central Asia.

Phyllodromica persa sp. n. (Fig. 3.)

Shah-kuh, between Shahrud and Astrabad, N. Persia, 21.—25. VI. 1914, 1 ♂ (type), 5 ♀♀ and 5 larvae (A. Kiritshenko); Astrabad, N. Persia, 27.—29. IV. 1914, 1 ♂ and 1 ♀ (A. Kiritshenko).

Strongly resembles *Ph. pygmaea* B.-Bienko from Kazakstan in the structure of elytra, dimensions and principal morphological features but differs from it as follows. Apical joint of the maxillary palpi about half again as long as the preceding joint, not securiform,

practically parallel-sided, with somewhat narrowed but not pointed apex. Pronotum broader and more convex, anterior margin truncate in ♂ or subtruncate in ♀. Hind margins of all abdominal tergites in ♂ straight without triangular excision on the sixth tergite. Male subgenital plate*) strongly asymmetrical, a little broader than long, synistral margin seen from above not reflexed, without a marginal rim, styliform process very larye, in the shape of a strongly incurved hook, apex acute; dextral margin obtusely angulate in basal third. Tarsal claws in the female sex less dissimilar, practically equal in length, each claw not less than twice as long as the arolia.

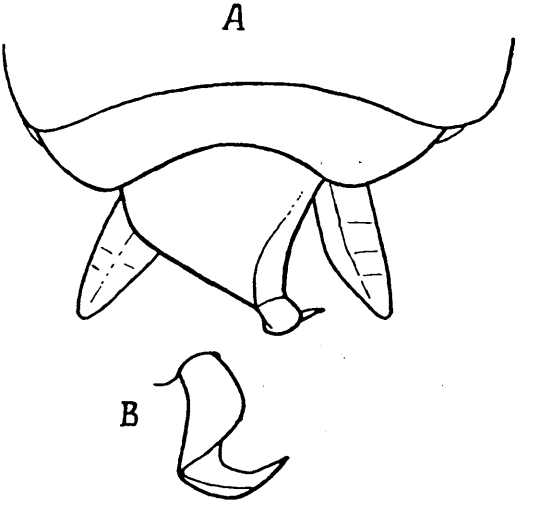

Fig. 3. — *Phyllodromica persa* sp. n.

Pronotum, mesonotum and metanotum yellowish-brown, with a weak indistinct brownish bow-shaped figure, sometimes absent in the female sex; no distinct median longitudinal dark stripe.

*) In the original description of *Ph. pygmaea* B.-Bienko (Bol. Soc. Esp. Hist. Nat., XXXII, 1932, p. 110) the male subgenital plate is said to be „triangular, acute at the apex, somewhat asymmetrical . . ., styliform processus small". But this description is based on the ventral view of a moderately magnified subgenitale plate (see fig. 4 A); a reexamination of the typical series under greater magnification shows that sinistral margin seen from above is strongly reflexed, forming a broad marginal rim; styliform processus (fig. 4 B) placed on the upper surface of the plate along dextral margin, is large, moderately incurved and regularly narrowing apically, not visible from below; in some specimens this processus is placed more or less vertically.

Abdomen in ♂ black above and below, hind margins of tergites whitish; in ♀ the abdomen is blackish-brown, sometimes with three indistinct dark longitudinal stripes above, hind margins of tergites as in the male sex.

Length of body ♂ 4.3, ♀ 5.1—6.2, pronotum ♂ 1.1, ♀ 1.25—1.45, elytra ♂ 0.75, ♀ 1.05, maximum width of pronotum ♂ 1.83, ♀ 2.4—2.5, of elytra ♂ 0.38, ♀ 0.48 mm.

This interesting species similar to *Ph. pygmaea* is characterized by the same structure of elytra as in the *subaptera* group of the

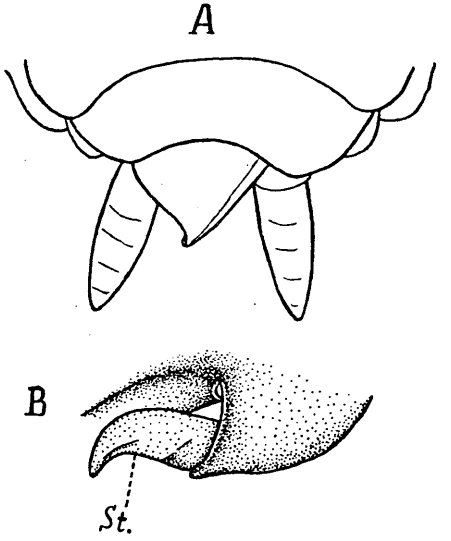

Fig. 4. — *Phyllodromica pygmaea* B. B. ♂.

genus *Phyllodromica* Fieb. represented by a few species in the western part of the Mediterranean subregion; but both species differ strongly from *Ph. subaptera* Ramb. and its western allies in a quite different type of coloration, longer tarsal claws, strongly specialized and proportionally very large styliform processus and in some other less decided features. It is interesting to note a very close affinity of these two species occupying the most eastern limit of the areas of the genus *Phyllodromica* to the representatives of the western Mediterranean fauna.

The new species is a first member of the genus *Phyllodromica* from Persia.

Subfamily **Pseudomopinae.**

Symploce persica sp. n. (Figs. 5—6.)

Bazman, Kirman prov., S. E. Persia, 7.—8. VIII. 1898, 6 ♂♂ (including the type) and 8 ♀♀ (N. Zarudny).

♂. Belongs to the *S. hospes* (Perk.) group distributed in tropical and subtropical Northern America and Africa and known also from the Hawaiian Islands. Size middle, form as usual in the genus. Head seen from the front broadly pyriform, maximum

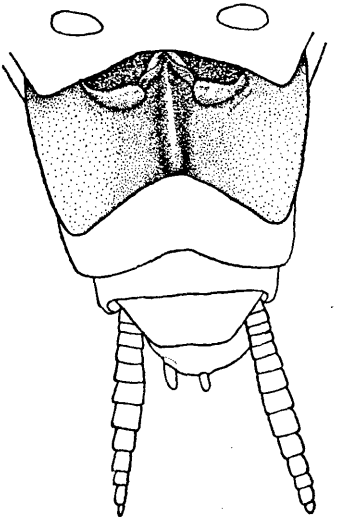

Fig. 5. — *Symploce persica* sp. n. ♂.

width across eyes slightly less than depth of head (as 8.8 : 10), occiput and eyes seen from above visible for full width, occipital interspace between eyes not strongly but distinctly narrower than interspace between antennal sockets, occipital depth of eye slightly greater than maximum width between eyes, minimum width placed a little below the middle of the inner occipital margin, the latter is distinctly rounded; ocellar spots relatively large, face from the interspace between ocellar spots to the mouth part distinctly transversely arcuate; maximum width of eyes placed a little before their upper end; maxillary palpi slender, third joint distinctly longer than fourth, apical joint subequal in length to third.

Pronotum subpentagonal, half again as long as the maximum width between lateral angles (as 10 : 6.79), anterior margin practically straight, forming with lateral margins a faintly distinct, very obtuse rounded angle; hind lateral angles broadly rounded, obtuse; hind margin very obtusely angulated, the angulated apex distinctly deflexed, seen in profile oblique; hind part of pronotum more deplanate than anterior part.

Elytra extending beyond the apex of abdomen on a distance equalling to half the length of pronotum, relatively broad, parallel-sided, with rounded apex, three and half times as long as broad

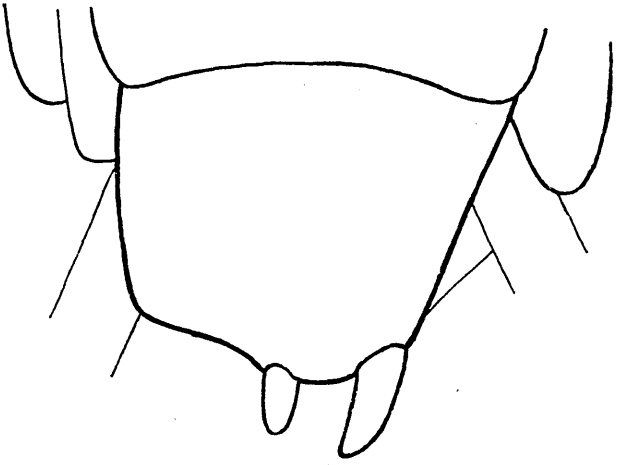

Fig. 6. — *Symploce persica* sp. n. ♂ (subgenitale plate).

(as 10 : 2.86), scapular field at widest part occupying a little more than one third of elytral width (as 1 : 2.66), anal field elongated, occupying two-fifths of elytral length; venation as usual in the genus, viz. discoidal vein bifurcate near the middle, sectors of discoidal field nine in number, quite longitudinal, axillary veins six in number. Wings relatively broad, about half again as long as broad, reaching the apex of elytra, interspace between discoidal and median veins not strongly but distinctly broader than interspace between median and ulnar vein; costal veins 15 in number; discoidal vein bifurcate at three-fifths of the length of wing, ulnar vein with six incomplete and three complete branches.

Median segment unspecialized, with an elevated transverse arculus; sixth tergite long, specialized, anterior part depressed,

median part of anterior margin with two lateral, well elevated transverse swellings placed just behind posterior margin of the fifth tergite, median part between these swellings produced anteriorly, triangular, with the apex obtected by hind margin of the fifth tergite; there is also a very distinct median longitudinal thick keel-shaped elevation beginning from the base of median triangular projection to hind margin of the tergite; hind margin obtuse-angulate emarginate; hind margin of the fifth tergite broadly concave, median part elevated over the impression of the sixth tergite; seventh tergite not concealed, hind margin with broad roundly triangular emargination on the middle; hind margin of the eighth tergite quite straight. Supraanal plate moderately transverse, more than twice as broad as long, narrowed apically, hind margin broadly truncate. Cerci long, slender, not strongly but distinctly deplanate. Subgenital plate small, practically as long as broad, moderately assymetrical, sinistral margin straight, sinistral stylus placed at the apex of sinistral margin, simple, small, strongly deplanate, slightly narrowing apically, dextral margin straight in basal two-thirds, apical third obtusely angulate, dextral stylus smaller than sinistral, practically parallel-sided.

Legs heavily spined; anterior lower margin of anterior femora with strong spines decreasing in length to the apex of femora, except three larger apical spines increasing in length to the femoral extremity; hind metatarsus slightly longer than four remaining joints, ventral margin with two rows of small spinules, pulvilli small, tarsal claws equal in length, large.

♀. As the male but more robust. Occipital interspace a little broader than in the male sex. Elytra extending beyond the apex of abdomen on a distance equal in length to pronotum. Abdomen broader and shorter, dorsal surface unspecialized, supraanal plate strongly transverse, short hind margin broadly rounded, practically straight on the middle, subgenital plate transverse, hind margin truncate.

General coloration pale-ochraceous, without admixture of dark colour except the lower part of occipital interspace which is brownish-ochraceous or reddish-brown.

Length of body ♂ 11.9—13.1, ♀ 11.2—12.0, pronotum ♂ 2.9—3.1, ♀ 3.2—3.5, elytra ♂ 12.0—12.9, ♀ 12.7—13.3 mm.

This interesting species is easely distinguished from its allies in the peculiar structure of the sixth abdominal tergite, in the shape

of the seventh and eight tergite and in more numerous incomplete branches of the ulnar vein of wings; there are also some less evident differences in the structure of subgenital plate of male.

This is a first Palaearctic and Asiatic representative of the genus *Symploce* Hebard.

Subfamily **Polyphaginae.**

Heterogamodes minuta sp. n. (Figs. 7—9.)

Vicinity of Ashkhabad, Turkmenistan, 23. IX. 1930, 2 ♂♂ (including the type) and 1 ♀, in a burrow of *Spermophilopsis leptodactylus* Licht? (Dr. J. Vlasov); Ashkhabad, 2. XI. 1928, 1 ♂ (Dr. J. Vlasov).

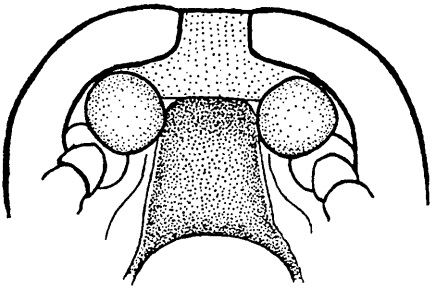

Fig. 7. — *Heterogammodes minuta* sp. n. ♂.

♂. A very peculiar species resembling somewhat *H. curtipennis* Chop. from Greece but not closely allied to it and showing a closer affinity to *H. roseni* Brancs. Body small for the genus, form relatively robust. Occipital interocular space not strongly but distinctly narrower than the interspace between inner margins of lateral ocelli, subequal in width to diameter of an ocellus, parallel-sided.

Pronotum practically oval, anterior margin roundly passing into lateral margins, not forming an angle with the latter so that all these margins form a broadly rounded arch; hind margin broadly rounded; point of maximum width placed a little behind the middle of pronotum.

Elytra extending beyond the apex of abdomen on a distance equal in length to pronotum, distinctly shorter than wings, relalively broad, broadly rounded apically, twice as long as broad at the widest point, venation very distinct; oblique sectors of dis-

coidal field 12 to 13 in number, anal field occupying a little more than one-third of elytral length. Wings extending beyond the apex of elytra for a distance equal in length to the half length of hind femora.

Apex of median and posterior femora armed with a long relatively heavy spine; tarsi without arolia between claws; anterior tibiae with eight apical and a single preapical spine; median femora

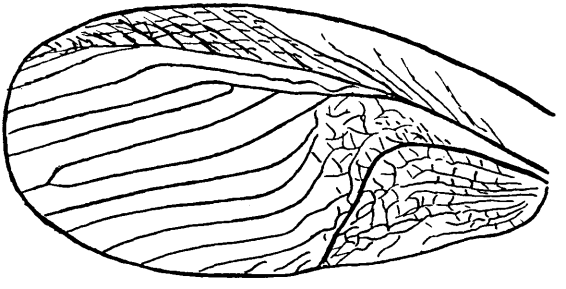

Fig. 8. — *Heterogammodes minuta* sp. n. ♂.

with seven apical, seven upper and a single lower spine, posterior femora with seven apical, ten or eleven upper and four or five lower spines.

Subgenitale plate asymmetrical, without styles.

Coloration light pale-testaceous, elytra and wings transparent, with indistinct greyish-brown spots; apical part of scapular field with whitish veins.

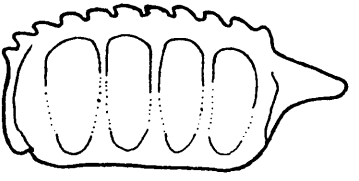

Fig. 9. —

♀. Small, broadly-oval, narrowing anteriorly, broadly rounded posteriorly, pro-, meso- and metanotum strongly convex, abdomen faintly convex, subdeplanate; the surface is practically smooth, covered with relatively sparse and short hairs.

Head with quite smooth face, front between antennal bases quite flat, occipital interspace between eyes equal in length to an eye.

Pronotum transversely rhomboidal, anterior margin well rounded, posterior margin obtusely angulate, forming with lateral margin a straight angle; meso- and metanotum with median part of hind margin straight, lateral angles well acute.

Armature of legs as in the male sex but all spines are very heavy.

Supraanal plate a little more than two and half times as broad as long, hind margin very broadly rounded, practically straight at its median part, with a small triangular median emargination; subgenital plate with median part roundly produced, with a very distinct obtusely-angulate emargination on its middle.

Coloration reddish-brown, with very indistinct sparse dark-brown spots, especially on the pronotum. Legs brownish-yellow.

Length of body ♂ 9.1—9.2, ♀ 11.3, pronotum ♂ 2.4—2.5, ♀ 3.7, elytra ♂ 8.8—9.2, maximum width of pronotum ♂ 4.2—4.4, ♀ 5.7 mm.

Ootheca (fig. 9) is small, a little less than twice as long as broad, with numerous and very fine longitudinal keels; vertical depressions indicating borders of the egg sacks 3 in number, indistinct; ridges elongated, well indicated, considerably longer than interspaces between them, 11 in number. Length of ootheca 4.5, median width 2.4 mm.

This interesting species has the same principal morphological and colour features as *H. roseni* Brancs. known from Turkmenistan and Persia but differs strongly from it as well as from all other known species of the genus *Heterogamodes* in its very small body and elytra; the latter are distinctly shorter than wings and characterized by the reduced number of oblique sectors in discoidal field and by relatively long anal field.

Subfamily **Panesthinae.**

Cryptocercus relictus sp. n. (Figs. 10—13).

1930. *Cryptocercus* sp. (*spadicus* Shiraki?) Bey-Bienko, Ann. Mag. Natur. Hist., Ser. 10, V, p. 494 (♂, ♀; Gaolindzsy, Manchuria).

Slavianka, district Possjet, South Ussury region, Russian Far East, 18. VIII. 1928, 1 ♂ (type) (Dr. V. M. Engelhardt); Solovei-

tzev Kliutsh, South Ussury region, 19. VII. 1931, 3 ♀♀ (N. Shabliovskaya); Gaolindzsy, Manchuria, 22.—27. VI. and VI. 1926, 1 ♂, 1 ♀ and 2 larvae; Lunanfu, Hodzigou, Szechuan prov., China, elev. 6000', VII.—VIII. 1893, 1 ♀ (Berezovsky); Lunanfu, Tazaopin, Szechuan prov., 14000', VII.—VIII. 1893, 1 ♀ (Berezovsky).

♂. Very similar in general appearance and principal morphological features to the single known representative of the genus,

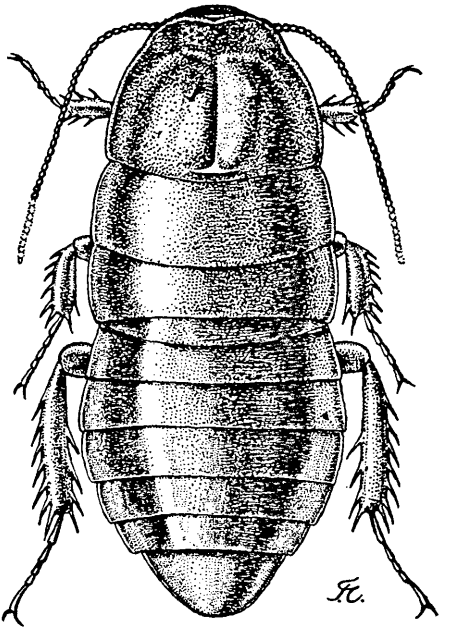

Fig. 10. — *Cryptocercus relictus* sp. n. ♀.

viz. *C. punctulatus* Scudd. from N. America but much smaller and heavier.*)

Body smooth, shining with scattered puncturation. Head flattened, scarcely visible from above, face smooth, puncturation

*) Shiraki's *Cryptocercus spadicus* described from Japan (Annot. Zool. Jap., VI, 1906, p. 32, pl. II, fig. 2) does not belong to the genus *Cryptocercus* as it is characterized, according to the description and figure by that author, by the presence of 8 evident abdominal segments (a true *Cryptocercus* is characterized by the presence of 7 evident segments if the median segment would be considered as the first abdominal segment); Shiraki himself recently (Insecta Matsumurana, V, 4, 1931, p. 172) showed that his *Cryptocercus spadicus* is an juvenile specimen of the genus *Panesthia*.

denser and more delicate than on the upper surface of the body; eyes not projecting, ocelli completely absent; maxillary palpi very short, apical (fifth) joint a little longer than fourth, third joint subequal in length to apical, distal truncation of the apical joint practically equal to half the length of that joint.

Puncturation of pronotum denser and deeper than on the other tergites; anterior transverse concave area between elevated anterior margin and the beginning of the deep median longitudinal depression with small but very distinct granules, longitudinal depression near its posterior end touching with a very distinct and short transverse linear depression, T-shaped. Meso- and metanotum, as well as all abdominal tergites including the sixth (apical) tergite only delicately punctured, without minute rounded projections. Sixth tergite (fig. 11) triangularly produced, apex rounded;

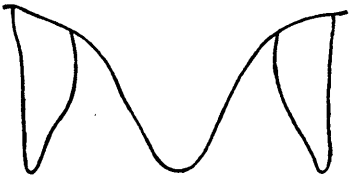

Fig. 11. — *Cryptocercus relictus* sp. n. ♂.

sixth sternite similar in the shape to the sixth tergite but somewhat larger. Supraanal plate, cerci and subgenital plate concealed, completely enveloped by the sixth tergite and sternite; supraanal plate of the same type as in *C. punctulatus* Scudd. but lateral margins not sinuated, straight in their apical two thirds, more convergent apically, the apex narrowly rounded; cerci as in *C. punctulatus*; subgenital plate (fig. 12) as broad as the supraanal plate, hind margin with two distinct lateral emarginations from which relatively small cylindro-conical and quite similar styli arise, the hind margin between these styli distinctly undulate, with not strong, rounded, obtuse median emargination; the distance between the styli distinctly greater than median width of the produced triangular part of the supraanal plate.

Legs as in *C. punctulatus*, but heavier and differ in the number of spines; anterior femora with 2—5 subapical spines on anterior lower margin and with 2—3 spines on posterior lower margin, dorsal genicular spines absent; all other femora without subapical

spines or the middle femora, with only one spine on anterior lower margin; dorsal genicular spines on median and posterior femora developed but very small.

♀. Resembling the male sex in all external features excepting the shape of the sixth ventral segment (fig. 13), which is characterized by presence of two feeble but distinct rounded excisions on lateral margins before the apex, hind margin between these excisions

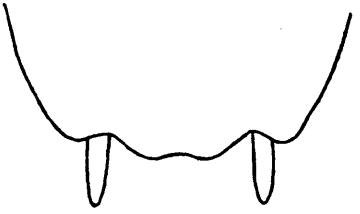

Fig. 12. — *Cryptocercus relictus* sp. n. ♂.

truncate or with very feeble rounded excision of the same type as two subapical excisions; this feature permits to determine the sex without removing the sixth ventral abdominal segment. Supra-anal plate concealed as in the male sex, and quite similar in form and structure; subgenital plate absent.

General coloration uniformly shining brownish-black or almost black but specimens which probably have recently moulted,

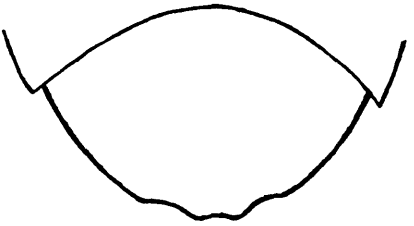

Fig. 13. — *Cryptocercus relictus* sp. n. ♀.

as well as the larvae are dark reddish-brown; lower surface slightly lighter, with a distinct dark-reddish-brown shade.

Length of body ♂ 17—21, ♀ 18.3—23.5, pronotum ♂ 5—5.6, ♀ 5.5—6.2, maximum width of pronotum ♂ 7.2—7.5, ♀ 7.5—9.2, length of hind femora ♂ 3.7—4, ♀ 3.8—4.2 mm.

This extremely interesting insect differs strongly from *C. punctulatus* in its smaller and heavier body, structure of maxillary palpi

and pronotum, in quite distinct type of puncturation, in a presence of evident external sexual features, in details of the structures of the inner genitalia, in shorter and more robust legs and in a presence of small but distinct genicular spines on the middle and hind femora; this last mentioned feature usually has in *Blattodea* a generic importance but all other structural features and the general appearance of both species are so similar that I hesitate at present to separate *C. relictus* into an independent genus.

The discovery of an Asiatic representative of the genus *Cryptocercus* has a very great zoogeographical importance and shows a very remarkable distribution of the genus. I do not want at present to speculate on the reasons of such distribution but it shows that the genus *Cryptocercus* belongs to a very ancient group of animals and its present disjointed area is a relic of former wide distribution.

Two female specimens from the Szechuan prov., China, differ from the Ussurian and Manchurian specimens in larger size and in more coarsely punctured lateral parts of abdominal tergites and of the whole surface of the sixth tergite; it is very probable that they belong to an independent species but I hesitate to describe a new species on the female sex alone.