

Studies on the Dermaptera and Orthoptera of Manchuria.

By G. J. Bey-Bienko.

The present paper is based on a small collection of the Orthopteroid insects received by me for determination from the Manchurian Research Society, Harbin.

The fauna of the Dermaptera and Orthoptera of Manchuria is practically unexplored and there are no works on the Orthopteroid insect of this very interesting country. We know from Manchuria only seventeen species and races of Orthoptera, and only one species of Dermaptera, recorded casually by six or seven authors.

The Manchurian fauna and flora are very interesting from the biogeographical point of view because they contain some tropical elements, for instance *Oxya adentata* Will., *Ox. manzhurica* n. sp. and *Gryllotalpa africana* Pal. Beav., and some boreal ones, like *Psophus stridulus* (L.), *Chorthippus albomarginatus* (Degeer), *Podisma frigida* (Boh.) etc. The tropical elements in Manchurian fauna, as well as in the fauna of the whole Far East, are relics of the Tertiary period when climatic conditions were more favourable.

The collection contains nearly two-hundred specimens, representing thirty-nine species and races, of which one belongs to the Dermaptera, two to the family Blattidae, of the order Orthoptera, three to the family Tettigoniidae, three to the family Gryllidae and thirty to the family Acrididae. Species not yet recorded from Manchuria are marked with an asterisk.

In this work I include also the species not represented in the collection before me, but recorded from Manchuria by previous workers.

Order Dermaptera.

*1. *Forficula vicaria*, Semenov. — Handaohetzsy, 10. VIII. 1921, 1 ♂ and VIII. 1925, 1 ♀; one ♀ from the same country but without exact data.

The species has been described by A. P. Semenov-Tian-Shansky from Korea (1902: 99—100, fig. 1) and after that re-

corded by the same author from the Russian Far East (1908: 169), but not known previously from Manchuria.

2. *F. robusta*, Semenov. — Not represented in the collection but described by Semenov-Tian-Shansky from the Russian Far East, Korea and Manchuria (Ashiche and Van-li-cho-tun) (1908: 166—167).

This species has been recorded by earlier authors from E. Asia under the name *F. tomis* (Kol.).

Order Orthoptera.

Family Blattidae.

*3. *Blattella germanica* (Linné). — Handaochetzsy, 10. VIII. 1921, 1 ♂.

A cosmopolitic species but no exact record of this species from Manchuria are known to me.

4. *G. ?? sp. ??* — Gaolindzsy, 22.—27. VI. 1926, 2 ♂♂; same locality, VI. 1926, 2 ♂♂ and 2 larvae.

This cockroach is characterised by a very strange combination of morphological features and determination of its generic position is very difficulty without the female sex. I give only a brief description of this probably new genus and species.

Body depressed, elyptical. Pronotum semicircular; anterior part with a distinct broad transverse impression and elevated anterior margin; posterior part with a very distinct longitudinal impression. Elytra and wings absent. Legs very short; tarsi without arolia or pulvilli; femora not more than two and half times as long as broad; anterior femora in apical part with 3—5 spines on anterior lower margin and with 2—3 spines on posterior lower margin; middle femora without spines below. Supraanal plate triangular; cerci short, subequal in length to the supraanal plate, not articulated, depressed, strongly sharpened on the apex; styli small, symmetrical. General coloration uniformly blackish-brown. Total length 17—21 mm.

Family Tettigoniidae.

*5. *Conocephalus chinensis* (Redt.). — Handaochetzsy, 10. VII. 1921, 1 ♂; same locality, 15. VII. 1921, 2 ♂♂.

The species has been described by its author from „Amur“ (Redtenbacher, 1891: 509—510, fig. 85) and later on recorded by Matsumura and Shiraki from Japan (1908: 53) and by Uvarov from Russian Far East (1926: 283).

6. *Homorocoryphus nitidulus* (Scop.) — Not represented in the collection but recorded recently by me from Harbin (1926: 200).

7. *Gampsocleis sedakowi sedakowi* (F.-W.) — This subspecies has been recorded from Mukden, E. Manchuria by Dirsh (1927: 150), but I have no specimen from that country.

8. *G. sedakowi obscura* (Walk.). — Handaohetzsy, 30. VIII. 1921, 1 ♂; the station Hingan, 5. VIII. 1926, 2 ♂♂ and 2 ♀♀ (P. A. Pavlov).

Recorded by Dirsh from Guntszhulin, South Kuantshen, Manchuria (1927: 151).

9. *G. inflata*, Uvarov. — Described by Uvarov from Shantung, N. China (1924: 525) and recently recorded by Dirsh from Manchuria without an exact data (1927: 155). Not represented in the collection.

*10. *Deracantha onos* (Pall.). — Station Tshzhalantun, 9. VIII. 1925, 1 ♂ (P. A. Pavlov).

Known from Transbaikalia, N. E. Mongolia (Jacobson, 1905: 423—424) and recorded by Pylnov from N. Mongolia (1916: 282).

Family *Gryllidae*.

*11. *Oecanthus longicauda*, Matsumura. — Ertzendsiandsy, 1022, 2 ♂♂, 2 ♀♀.

Described by Matsumura from Formosa but not yet recorded from the continent. Mr. V. M. Dirsh, Kiev kindly determined my specimens and wrote to me that he knows this species also from Russian Far East.

*12. *Gryllus infernalis* Sauss. — Station Mangau, 12. VIII. 1926, 1 ♀; Handaohetzsy, 10. VII. 1926, 1 ♂, 1 ♀.

Described by Saussure from Tshifu, China (1877: 156) and recorded by Bolivar from Daba near Kalgan, N. China (1901: 244) and by Uvarov from Russian Far East (1926: 289).

Caudell (1927: 7) and Vnukovsky (1927: 443) recorded recently from E. Siberia another species *Gryllus desertus* Pall. (the former author from Okeanskaya near Vladivostok and the latter from Habarovsk), but it is evident that these two records are based on wrong determinations (because *G. desertus* is a Mediterranean species and its occurrence in Palearctic region is quite improbable) and belong to *G. infernalis*.

13. *Gryllotalpa africana* Pal. Beauv. — Station Mangau, 12. VIII. 1926, 1 ♂; Ertzendsiandsy, 29. IX. 1920, 2 ♂♂; Harbin, V. 1923, 1 ♀.

Recently recorded by me from Harbin (1927: 3) and probably very common in Manchuria.

Family *Acrididae*.

*14. *Acrida turrita* L. — Station Siaohaotzsy, 19. VIII. 1926, 1 ♂.

The specimen belongs to the typical form not to subspecies *koreana* Ikonnikov, described by that author from Korea (1913: 10—11, fig. 1). This species was recorded from Japan both by Rehn (1902: 629) and Shiraki (1910: 17) under the name *Acr. nasuta* L., but Hebard showed that Japanese records belong to *A. turrita* (1926: 211). Rehns record of *A. nasuta* from Korea (1902: 629) belongs unquestionably to *A. turrita* also or to its subsp. *koreana* Ikon.

15. *Parapleurus alliaceus* (Germ.). — Recorded by Ikonnikov from Tsitsikar (1911: 244) but not represented in collection.

In 1902 Rehn described from Japan another species of the genus *Parapleurus*, viz. *P. fastigiatus* (1902: 629—631) but Hebard in 1924 synonymised that species with Germar's *P. alliaceus* (1924: 213).

16. *Chrysocrachn vittatus* Uvarov. — Not represented in the collection, but has been described by Uvarov from prov. Mukden (Tshendiutun near Maimakai), as well as from Transbaikalia (1914: 168—169); known also from N. Mongolia (Pyl'nov, 1916: 276—277) and from Minusinsk district, Central Siberia (Tarbinsky, 1926: 278).

*17. *Podismopsis ussuriensis* Ikon. — Station Gaolintzsky, 1.—3. VII. 1926, 1 ♀.

Originally described by Ikonnikov from the Russian Far East (1911: 246—247), then recorded by the same author from Korea (1913: 11), but not known previously from Manchuria.

18. *Chorthippus (Stauroderus) apricarius* (L.). — Recorded by Ikonnikov from Tsitsikar (1911: 251) but not represented in the collection.

19. *Ch. (St.) hammarströemi* (Miran). — Recorded by Tarbinsky (1926: 279) from Tziatziaghon, South from Harbin, but I have no specimens from Manchuria.

*20. *Ch. (St.) dubius* (Zub.)

1898. *Stenobothrus dubius* Zubowsky, Ann. Mus. Zool. Acad. Imp. Sci. St. Petersburg, III, pp. 85—86 (♀ ♂; southern part of W. Siberia and Semipalatinsk province).

1901. *Stenobothrus horvathi* Bolivar, in Zichy, Dritte Asiat. Forschungsreise, II, Orthoptera, p. 231 (♂ ♀; Urga, N. Mongolia). Station Anda, 15.—16. VIII. 1926, 1 ♀.

Not known previously from Manchuria, but recorded by Karny from Lan-tshou, Gan-ssu prov., NW. China (1908: 30). The species described by Bolivar from Urga under the name *St. horvathi* is typical *Ch. dubius* as a careful comparison of Bolivars description with specimens of *Ch. dubius* Shows. It is evident that this species is widely distributed in northern parts of Central Asia.

21. *Ch. (St.) bicolor* (Charp.) — Not represented in the collection but recorded by Ikonnikov from Tsitsikar (1911: 253).

22. *Ch. (St.) sp.* Station Mangau, 12. VIII. 1926, 1 ♀ in bad condition.

Probably represents a new species, but I do not want to describe a new species of this difficult genus on the female sex only. Elytra in this specimens are characterised by the strongly narrowed apical third; mediastinal area very prominent. Pronotum with feebly incurved lateral keels; typical sulcus placed distinctly behind the middle of pronotum. Elytra scarcely reaching the apex of the abdomen.

*23. *Ch. (in sp.) albomarginatus* (Degeer). — Station Mangau 12. VIII. 1926, 2 ♀ ♀.

24. *Ch. (in sp.) dorsatus* (Zett.) — Not represented in the collection but recorded from Tsitsikar by Ikonnikov (1911: 254).

*25. *Euchorthippus unicolor* (Ikon.) — Station Mangau, 12. VIII. 1926, 1 ♂, 2 ♀ ♀; station Anda, 13.—16. VIII. 1925, 1 ♂, 1 ♀.

This interesting and very good species was described by its author from Korea (Ikonnikov, 1913: 15) and not known from any another locality.

*26. *Gomphocerus sibiricus* (L.). — Manduhe, 30. VII. 1926, 1 ♂ (P. A. Pavlov).

Widely distributed insect, but not known previously from Manchuria; the specimens are typical *sibirica* L., but not the var. *kudia* Caudell, described recently from Kudia river, Russian Far East (1926: 2—3), which differs from the typical form only by larger size. It is evident that this „variety“ is a distinct geographical race of *G. sibiricus*, because some other widely distributed species, for instance *Arcyptera microptera* (F.-W.), *Celes skalozubovi*, Adel. and *Bryodema tuberculatum* (Fabr.) give also

in the eastern portions of their arens of distribution distinct geographical races, differing from the typical forms specially in their larger size.

27. *G. przewalskyi* Zub. — Recorded by Ikonnikov from Tsitsikar (1911: 249) but not represented in the collection.

*28. *Acryptera microptera sibirica* Uvarov. — Manduhe, 30. VII. 1925, 1 ♀ (P. A. Pavlov).

Specimens recorded by Ikonnikov from Tsitsikar (1911: 251) under the name *A. flavicosta* (Fisch.) unquestionably, as show their dimensions given by that author, belong to this subspecies, originally described by Uvarov from Transbaikalia and Irkutsk provinces (1914: 170—171).

*29. *A. fusca fusca* (Pall.) — Station Tshzhalantun, 8. VIII. 1925, 1 ♀ (P. A. Pavlov); Manduhe, 30. VII. 1925, 1 ♀ (P. A. Pavlov); station Hingan, 5. VIII. 1925, 12 ♂♂, 13 ♀♀ (P. A. Pavlov).

*30. *A. fusca albogeniculata* Ikon. — Station Hingan, 5. VIII. 1925, 1 ♂, 2 ♀♀ (P. A. Pavlov).

It is very interesting that this subspecies has been taken in the same locality as the preceding subspecies.

31. *Aiolopus tergestinus* (Charp.). — Station Mangau, 12. VIII. 1926, 2 ♂♂, 4 ♀♀ and 2 larvae; station Anda, 15.—16. VIII. 1926, 1 larva.

The species has been recorded from Tsitsikar by Ikonnikov (1911: 254). It is interesting that immature specimens of this species were taken in August.

*32. *Psophus stridulus* (L.) — Station Hingan, 5. VIII. 1925, 2 ♂♂, 2 ♀♀ (P. A. Pavlov).

Typical *C. skalubovi* Adel., but not the sbps. *orientalis* Ikonnikov, described by its author from Korea and the lake Hanka Russian Far East (1013: 15—16).

*33. *Celes skalozubovi skalozubovi* Adel. — Station Tshzhalantun, 8. VIII. 1925, 1 ♀ (P. A. Pavlov).

34. *Oedaleus infernalis* Sauss. — Harbin, 1925, 2 ♀♀; the station Hingan, 5. VIII. 1925, 1 ♀ (P. A. Pavlov); Ertzendziandzy, 29. VI. 1920, 1 ♀.

Recorded by Ikonnikov doubtfully from Tsitsikar (1911: 255).

35. *Bryodema tuberculatum dilutum* (Stoll.) — Station Hingan, 5. VIII. 1925, 2 ♂♂ (P. A. Pavlov); station Tshzhalantun, 8. VIII. 1925, 1 ♂, 1 ♀; station Manduhe, 30. VII. 1925, 1 ♂ (P. A. Pavlov).

This eastern subspecies of *tuberculatum* Fabr. is recorded by me from Manchuria in my monograph of the genus *Bryodemema* (Bey-Bienko, 1928).

*36. *B. luctuosum luctuosum* (Stoll.) — Station Anda, 15.—16. VIII. 1926, 1 ♀.

Widely distributed subspecies but not recorded previously from Manchuria.

*37. *B. barabensis* (Pall.) — Manduhe, 30. VII. 1925, 1 ♂, 1 ♀ (P. A. Pavlov).

38. *B. rhodopa* (Fisch.-W.) — Station Anda, 13. VIII. 1926, 4 ♂♂; same locality, 15.—16. VIII. 1926, 2 ♀♀; station Hingan, 5. VIII. 1925, 1 ♂, 1 ♀ (P. A. Pavlov); station Manduhe, 30. VII. 1925, 1 ♂; station Tshzhalantun, 8. VIII. 1925, 1 ♂ (P. A. Pavlov).

The species was recorded by Ikonnikov from Tsitsikar (1911: 256) under the name *B. barabense* Pall. var. *rhodopa* Fisch.-W.; I am inclined to think that *rhodopa* F.-W. is a distinct species more southern in its distribution (Bey-Bienko, 1928).

*39. *Sphingonotus mongolicus* Sauss. — Station Tshzhalantun, 8. VIII. 1925, 9 ♀♀ (P. A. Pavlov).

Originally described from „Mongolia“ (probably N. China) (Saussure, 1888: 82) and then recorded by Ikonnikov from Korea (1913: 19).

Genus *Haplotropis* Sauss.

1888. *Haplotropis* Saussure, Additamenta ad Prodr. Oedipodiorum, p. 125 (genotype *H. brunneiana* Sauss. by monotypy).

1905. *Haplotropis* Jacobson, in Jacobson and Bianchi, Priamokr. Lozhnos. Ross. Imp., p. 280.

1910. *Haplotropis* Kirby, Syn. Cat. Orthopt., III, p. 283.

1910. *Staurotylus* Adelung, Horae Soc. Ent. Rossicae, XXXIX, pp. 343—344 (genotype *St. mandshuricus* Ad., by monotypy) (syn. nov.).

40. *H. brunneriana* Sauss.

1888. *H(aplotropis) brunneriana* Saussure, loc. cit., p. 125, pl. 2, fig. 10 (♀: the river Amur).

1905. *H(aplotropis) brunneriana* Jacobson, in Jacobson and Bianchi, loc. cit., p. 280.

1910. *H(aplotropis) brunneriana* Kirby, loc. cit., p. 283.

1910. *Staurotylus mandshuricus* Adelung, loc. cit., pp. 344—346 (♂, ♀; Guntshulin, prov. Kuantskei, Manchuria; [the lake Hanka, South Ussury region]).

1911. *Haplotropis brunneriana* Ikonnikov, Ann. Mus. Zool. Acad. Imp. Sci. St.-Petersb., XVI, pp. 256—257 (♂, ♀; Kamen-Rybolov (on the lake Hanka, South Ussury region; Manchuria; North China)).

1926. *Haplotropis brunneriana* Bey-Bienko, Izvest. Zap.-Sibir. Otd. Russ. Geogr. Obstsh., V, p. 202 (The district Tshita, Transbaikalia).

Station Hingan, 5, VIII. 1925, 1 ♂ (P. A. Pavlov); station Tshzhalantun, 9, VIII. 1925, 3 ♀ ♀ (P. A. Pavlov); station Manduhe, 30, VII. 1925, 1 ♂ (P. A. Pavlov).

A careful comparison of the detailed description given by Adelung for his *Staurotylus mandshuricus* with specimens of *Haplotropis brunneriana* shows that the two insects are synonymous. Adelung's mistake was based on the wrong determination of the subfamily, because this author thought that his new *St. mandshuricus* is a member of the subfamily Pamphaginae.

I. Bolivar in his monograph of the Palaearctic Pamphaginae did not include Adelung's *Staurotylus* and he also was inclined to think that this genus belongs to the subfamily Batrachotetriginae and is probably Saussure's *Haplotropis* (1912: 3). It is evident that the occurrence of any Pamphagid in North-East Asia is quite impossible because this group is Mediterranean and Ethiopian in its distribution.

The species, as show the above mentioned references, is widely distributed in North-East Asia (Palearctic region).

*41. *Oxya adentata* Will. (Fig. 1). Ertziandziandzy, 21. VI. 1920; 1 ♂, 3 ♀ ♀.

The species was described by its author from Taipaishan, Shense province of China (Willemsse, 1925: 26—27, figs. 21—23) and quite recently recorded by Uvarov from Okeanskago, near Vladivostok, Russian Far East (1926: 290).

Two females are quite typical, while another female differs from them by the subgenital plate, which has two submedian spines and two more or less sharp lateral carinae. Uvarov (1926: 290—291) mentioned that one female from Okeanskaya is also characterised by the presence of a pair of submedian spines and two sharp carinae of subgenital plate, but this female was quite similar in habitus to typical *O. adentata*; I sent to Mr. B. P. Uvarov, London the four above mentioned specimens in order to verify my determination and Mr. Uvarov wrote to

me that they are *O. adentata* and that subgenital plate in this species is somewhat variable in typical series (at the British Museum).

*42. *O. manzhurica* sp. nov. (Figs. 2 and 3). — Station Mangau, 12. VIII. 1926, 1 ♂ (type); station Anda, 15.—16. VIII. 1926, 1 ♀ (paratype).

♂. Size medium for the genus, form slender. Pronotal prozona slightly longer than metazona; hind margin of the pronotum broadly rounded. Elytra long, narrow, extending far beyond the apex of hind femora. Supraanal plate elongated, as long as broad, not broadly rounded on the apex and forming on its apical end a somewhat acute angle, a little less than 90°. Cerci long, distinctly extending beyond the apex of the supraanal plate;

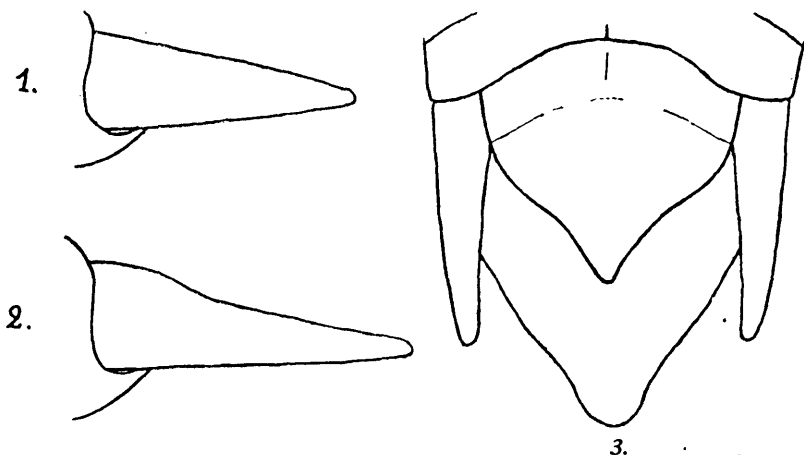


Fig. 1. Left male cercus of *Oxya adentata* Willemse. — Fig. 2. Left male cercus of *Oxya manzhurica* sp. nov. — Fig. 3. Male genitalia of *Oxya manzhurica* sp. nov. from above.

seen from above they are not depressed laterally, broad; seen in profile broad in basal third and distinctly narrowed in apical two-thirds; lower margin of cercus straight; upper margin somewhat incurved near the apex of the basal third. Subgenital plate short, broad. Hind legs as in *O. adentata*, but somewhat longer.

General coloration greenish-yellow. Head with brownish-green face and light-green lateral sides under the eyes. Lower parts of the lateral lobes of the pronotum light-green; upper parts with a brownish postocular band. Median and anterior legs greenish-yellow; hind tibiae and external side of hind fe-

mora light-green; inner side of hind femora yellow; apical portion of hind femora brownish yellow, with admixture of black color on lower and inner sides; basal part of hind tibiae with a little black spot on upper surface.

♀. As the male, but larger and somewhat more robust. Prozona in pronotum a little longer than metazona; hind pronotal margin rounded-angulate. Elytra extending well beyond the apex of hind femora; their anterior margin as in *O. adentata*. Posterior pleural part of the second abdominal tergite with very small, but distinct sharpened projection. Cerci very short, broad not reaching to the apex of supraanal plate. Subgenital plate somewhat longer than it is broad, with two distinct lateral keels, forming on the straight hind margin of the plate two very small teeth; submedian spines absent. Upper valves of the ovipositor with more or less regular, equal spines; lower valves with somewhat irregular, unequal and less dense spines.

Coloration from above light-reddish-brown. Face reddish-brown; lateral sides of the head below the eyes light-green. Lower portion of the lateral lobes of prozona below the black postocular band, light-green. Anterior and middle legs light-green. external surface of hind femora, and hind tibiae light-green; inner surface of hind femora yellow, apical external portion brownish-yellow, with a feeble admixture of black color.

	♂	♀
Length of body	24 mm	25.5 mm
„ pronotum	5.1 „	5.8 „
„ elytra	22 „	23 „
„ hind femora	12.3 „	14 „

Mr. B. P. Uvarov, London, has kindly compared these two specimens with series of the genus *Oxya* in the British Museum and has informed me that this is an undescribed species differing from all previously known species.

It is very probable that *O. manzhurica* is related to *O. shangdiensis* Willemse described by its author from Shanghai and Hai Ring, China, only on female sex (1925: 54—55, figs. 60—61). From this species *Oxya manzhurica* differs strongly in its distinctly smaller size, form of the female subgenital plate and coloration. From *O. adentata* my new species may be easily separated by its larger size, longer elytra, form of the male supraanal plate and cerci, and the coloration.

*43. *Podisma frigida* (Boh.) — Station Hingan, 5. VIII. 1925, 2 ♂♂, 4 ♀♀ (P. A. Pavlov).

*44. *P. parvula* Ikonn. — Mealis, 1 ♀.

Originally described by Ikonnikov from the Russian Far East (Ikonnikov, 1911: 260, pl. 5, fig. 3) and not recorded previously from adjacent regions.

*45. *Prumna prinnoa* (Fisch.-W.) — Station Hingan, 5. VIII. 1925, large series of specimens (P. A. Pavlov).

Widely distributed in East Asia injurious species, but has been not recorded previously from Manchuria.

*46. *Calliptamus sibiricus* Vnukovsky. — Ertzendsiandsy, 29. VI. 1920, 1 ♀; the station Hingan, 5. VIII. 1925, 2 ♀♀ (P. A. Pavlov); station Tshzhalantun, 8. VIII. 1925, 2 ♀♀ (P. A. Pavlov).

The species has been described by its author (1926: 91) from Kamen district, W. Siberia; specimens before me agree well with the brief description.

It is very probable that *C. sibiricus* represents only a western subspecies of *C. abbreviatus* Ikonnikov described from Korea and Russian Far East (1913: 21) because the former differs from the latter, as shows a comparison of Ikonnikov's description with specimens of *C. sibiricus*, only in its smaller size.

*47. *Euprepocnemis shirakii* Bol. — Ertzendsiandsy, 20. VI. 1920, 1 ♀. This specimen agree well with Bolivar's description of his *E. shirakii*, from Japan (1914: 11—12), as well as with Hebard's redescription of this species (1924: 223—224), but they are somewhat smaller and I sent to Mr. Uvarov my specimens for verify my preliminary determination. Mr. Uvarov has informed me that my specimens are not smaller than specimens from Japan in the British Museum.

Ikonnikov's record of *E. plorans* (Charp.) from Korea (1913: 22) unquestionably belongs to *E. shirakii*.

*48. *Acrydium sibiricum* (Bol.). — Ertzendsiandsy, 28. IX. 1920, 1 ♂. Described by Bolivar from E. Siberia (1887: 265), and not recorded from adjacent regions.

*49. *A. subulatum* (Linn.). — Handaohetzsy, 16. IV. 1918, 3 ♂♂, 3 ♀♀.

These specimens differ from the typical ones in somewhat larger size, but I have very few specimens and could not describe this form.

*50. *A. longulum* (Shiraki)? — Handaohetzsy, 16. IV. 1918, 1 ♂; station Mangau, 11. VIII. 1926, 1 ♀.

I had determined these two specimens as *Paratettix indicus* Bol., described from E. India and China (Bolivar, 1887: 281), and sent them to Mr. Uvarov to check my determination, but Mr. Uvarov was inclined to think that this is propably *A. longulum* described by Shiraki from Sapporo (Trans. Nat. Hist. Soc. Sapporo 1906, p. 5) and redescribed by Matsumura in 1913 (Thoasand Insects of Japan. Additamenta I, 1913, p. 24, pl. III, fig. 13).

I have compared these specimens with *Paratettix meridionalis* (Ramb.), genotype of the genus *Paratettix* Bol. and I find that Manchurian specimens are very like *Paratettix*.

The most distinct feature of *A. longulum*? from Manchuria is hind femora, which have undulate lower keel and are distinctly shorter and thicker than in *Acrydium subulatum*, type of the genus *Acrydium* Geoffr. These features are very like those in *P. meridionalis*.

Literature cited.

1. Adelung, N. Über einige bemerkenswerte Orthopteren aus dem palaearctischen Asien. — Horae Soc. Ent. Ross., XXXIX, 1910, pp. 328—358, pl. XV.

2. Bey-Bienko, G. J. On some new or interesting Asiatic Orthoptera. — Izvest. Zap.-Sibir. Otd. Russ. Geograph. Obstsh., V, 1926, pp. 199—203, figs 1—2.

3. — Notes on some Orthoptera from Palaearctic Asia. Trans. Sibir. Acad. Agric. and Forestry, VI, N. 8, 1926 (1927), pp. 1—13, figs. 1—3.

4. — Monograph of the genus *Bryodema* Fieb. and its nearest allies. — Ann. Mus. Zool. Acad. Sci. Leningrad, 1928 (in print).

5. Bolivar, J. Essai sur les Acridiens de la tribu des Tettigidae. — Ann. Soc. Ent. Belg., XXXI, 1887, pp. 175—313, pl. IV—V.

6. — Orthoptères in: Eu. Zichy, Dritte Asiatische Forschungsreise, II, Zool. Ergebnisse. — Budapest, 1901, pp. 223—243.

7. — Estudios entomologicos. I. Los panfaginos paleárticos. Trab. Mus. Cienc. Nat., Nr. 6, 1912, pp. 1—32.

8. — Estudios entomologicos, segunda parte. I. El Grupo de los Euprepocnemes. — Ibidem, N. 20, 1914, pp. 1—40.

9. Caudell, A. N. Orthopteroid insects from the Maritime province of Siberia. — Proc. Unit. St. Nat. Mus., 71, N 7, pp. 1—7, figs. 1—2.

10. Dirsh, V. M. Studies on the genus *Gampsocleis* Fieb. (Orthoptera, Tettigoniidae). — Mém. de la Classe d. Sciences Phys. et Mathem. d. l'Acad. d. Scienc. d. l'Ukraine, VII, 1927, pp. 147—158, pl. I—II.

11. Hebard, M., Studies in Japanese Acrididae. — Trans. Amer. Ent. Soc., L, 1924, pp. 209—224, figs. 1—2.

12. Ikonnikov, N. Zur Kenntnis der Acridiideen Sibiriens. Ann. Mus. Zool. Acad. Imp. Sci. St. Petersburg., XVI, 1911, pp. 242 bis 270, pl. 1.

13. — Über die von P. Schmidt aus Korea mitgebrachten Acridiideen. — Kusnetz, 1913, pp. 1—22, figs. 1—2.

14. Jacobson, G. G. and Bianchi V. L. Priamokrylyia i lozhnosettshatokrylyia Rossiiskoi Imperii. — St. Pétersbourg, 1902—1905, pp. 1—925 (Orthoptera, pp. 1—466), pl. I—XXV.

15. Karny, H. Orthoptera in: W. Filchner. Wissenschaftliche Ergebnisse d. Expedition nach China und Tibet. — Berlin, 1908, pp. 1—56.

16. Kirby, W. F. A synonymic catalogue of Orthoptera, III, Acrididae. — London, 1910, pp. 1—674.

17. Matsumura, F. and Shiraki, T. Locustiden Japans. — Journ. College Agric. Sapp., 1908, pp. 1—80, p. I—II.

18. Pyl'nov, E. Contribution à la faune des Acridiodea et Locustodea de la Mongolie boreale. — Revue Russ. d'Ent., XVI, 1916, pp. 275—284, figs. 1—6.

19. Redtenbacher, J. Monographie der Conocephaliden. Verh. Zool.-Bot. Gesellsch. Wien, XLI, 1891, pp. 315—562, pl. III—IV.

20. Rehn, J. A. G. Contributions toward a knowledge of the Orthoptera of Japan and Korea. — Proc. Acad. Nat. Sci. Shila., 1902, pp. 629—637.

21. Saussure, H. Mélanges orthopterologique. II. Gryllidae. — Mém. Soc. Phys. Genève, XXV, 1877, pp. 1—352, 362—704, pl. XI—XIX.

22. — Additamenta ad Prodrum Oedipodiorum. — Ibidem, XXX, Nr. 1, pp. 1—180, pl. I.

23. Semenov-Tian-Shansky, A. Dermaptera nova aut minus cognita. I. — Rev. Russ. d'Ent., II, 1902, pp. 90—102, figs. 1—2.

24. — *Dermatoptera nova aut minus cognita*. III. — Ibidem, VIII, 1908, pp. 159—173.

25. Shiraki, T. *Acrididen Japans*. — Tokyo, 1910, pp. 1 und 92, pl. I—II.

26. Tärbinsky, S. *K rasprostraneniýû priamokrylyh nasekomyh v predelah SSSR*. — *La Défense des Plantes*, III N 2—3, 1926, pp. 278—280.

27. Uvarov, B. P. *Contribution à la faune de Orthopteres de la province de Transbaicalie*. — *Ann. Mus. Zool. Acad. Imp. Sci. St. Petersb.*, XIX, 1914, pp. 167—172.

28. — *Notes on the Orthoptera in the British Museum*. 3. Some less known or new genera and species of the subfamilies Tettigoniinae and Decticinae. — *Trans. Ent. Soc. London*, 1923 (1924), pp. 492—536, pl. XXVIII.

29. — *Some Orthoptera from the Russian Far East*. — *Ann. Mag. Nat. Hist.*, ser. 9, XVII, 1926, pp. 273—291, figs. 1—8.

30. Vnukovsky, V. *Zur Fauna der Orthopteren und Dermapteren des Bezirkes Kamenj (südwestliches Sibirien, früh. Gouvernement Tomsk)*. — *Mitteil. Münchener Ent. Gesellsch.* 1926, N. 8—12, pp. 88—92.

31. — *Über die Fauna der Dermaptera, Dictyoptera und und Ensifera Sibiriens*. — *Deutsch. Ent. Zeitschr.*, 1926 (1927), pp. 441—443.

32. Willemsse, C. *Revision der Gattung Oxya Serv.* — *Tijdschrift voor Entomol.*, LXVIII, 1925, pp. 1—60, figs. 1—65.

33. Zubovsky, N. *Zur Acridiodea-Fauna des asiatischen Rußlands*. — *Ann. Mus. Zool. Acad. Imp. Sci. St. Petersb.*, III, 1898, pp. 68—110.



ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Konowia \(Vienna\)](#)

Jahr/Year: 1929

Band/Volume: [8](#)

Autor(en)/Author(s): Bey-Bienko Grigory J.

Artikel/Article: [Studies on the Dermaptera and Orthoptera of Manchuria. 97-110](#)