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ACTA ENTOMOLOGICA MUSEI NATIONALIS PRAGAE
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RESULTS OF THE ZOOLOGICAL SCIENTIFIC EXPEDITION OF THE NATIONAL MUSEUM IN PRAHA TO TURKEY

18.

HEMIPTERA IV

Terrestrial Hemiptera-Heteroptera of Turkey

By

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Editor of the Acta entomologica Musei nationalis Pragae wishes to call attention to the following errata in the Supplementum 3, 1956 (L. Hoberlandt: Result of the zoological scientific expedition of the National museum in Praha to Turkey. 18. Hemiptera IV):

page 40 line 4 for „vertex is only 4 times as wide"

read „vertex is only 2. 2 - 2. 3 times as wide"

page 109 line 1 for „Dimorphocoris blissoides (Bärensprung 1859)"

read „Dimorphopterus blissoides (Bärensprung 1859)"

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Contents

Introduction

The working of the material of *Hemiptera-Heteroptera* and a number of ecological observations obtained in the course of the Zoological Expedition of the National Museum in Prague in 1947 to Turkey were to form only a part of an extensive complete survey of the *Heteroptera* of Turkey. As, however, further journeys could not be made, on which gradually further material and more detailed ecological observations from all regions of the Turkey would have been collected, and as thus the first informative journey remained the only one, this working cannot bring any final results nor a survey of the *Hemiptera-Heteroptera* fauna of Turkey from the point of view of the occurrence of the species, their ecology and geographical distribution. In the present article I give preliminarily a characterisation only of some typical biotops and an analysis of their *Heteroptera* fauna. The proof material obtained during the expedition of 1947 I supplemented, as far as I was able to do so, with all the reports on the occurrence of *Hemiptera-Heteroptera* within the territory of present-day Turkey; thus I obtained a more or less complete list with special regard to the fauna of the Middle East, this can at least form the basis for a further more detailed and more complete investigation of the *Hemiptera-Heteroptera* fauna of Turkey and for an elucidation of its origin. New and extensive supplements may be expected on the basis of the study of the material from the recent journeys of Dr E. Schmidt and G. Seidenstücker, directed especially to the exploration of southern Turkey and the Eastern Mediterranean.

The determination of some species given in the present list was not possible without comparison with the types or other historical specimens. I was able to make these determinations thanks to the kindness of Dr. Max Beier, Naturhistorisches Museum, Wien, Dr. W. E. China, British Museum (N. H.), London, Dr. Eva Halászfy and Dr. Árpád Soós, Magyar Nemzeti Múzeum, Budapest, and Dr. E. Séguy, Muséum National d'Histoire Naturelle, Paris, all of whom either lent me or compared for me such specimens, and I wish therefore to express my deep gratitude to them here. It is my pleasant duty to thank also Dr. Güngör Karel, M. Z. M. E., Ankara, for his help in the transcription and location of some old Turkish topographical names.

Historical survey of the work done so far on the terrestrial Hemiptera-Heteroptera of Turkey

The fauna of the terrestrial *Heteroptera* of Turkey was worked as a whole by many, especially earlier authors, who have thus contributed considerably to the investigation and present knowledge of the fauna of Turkey, especially of Anatolia. Nevertheless the *Heteroptera* fauna of this country has remained to the present very little known, and it is difficult to foresee what will be the final result of the faunistic working of the *Hemiptera-Heteroptera* of the whole region. The present paper enlarges only a little the earlier knowledge; but as at present it is not possible to collect more new findings, I have tried to give a more or less complete basis for further supplements and for deepening the general knowledge of the *Hemiptera-Heteroptera* fauna of Turkey.

The first special heteropterological work concerning the present territory of the Turkish Republic may be said to be A. da Costa's Relazione di un viaggo per l'Egitto, la Palestina e la costa della Turchia asiatica per ricerche zoologiche; *Atti Acc. Sci. Napoli* 7, 40 pp., of 1874, even if this work mentions only two species, or of terrestrial species only representative of one genus (*Phytocoris* sp.) from Iskenderon.

In 1883 G. Horváth (Heteroptera Anatolica in regione Brussae collecta enumeravit. *Term. Füzetek* 7: 21—30) gave the working of the material of *Hemiptera* which E. Merkl had collected in 1882 from May till July in the neighbourhood of Bursa. The list gives 176 species of terrestrial *Heteroptera* and 6 species of aquatic and semiaquatic species of *Heteroptera*.

In 1892 A. Puton (Hémiptères d'Akbès, Région de l'Amanus (Syrie septentrionale) récoltés par M. Delagrange. *Rev. d'Ent.* 11 : 34—36) made the first contribution to the knowledge of the fauna of southern Anatolia, the region east of Gyaur dağlari from the vicinity of Ekbaz. M. Delagrange collected the material, and the list gives 84 species only of terrestrial *Heteroptera*.

In 1895 A. Puton and M. Noualhier (Supplément à la liste des Hémiptères d'Akbèz. *Rev. d'Ent.* 14: 170—177) supplemented the list of *Hemiptera* from Ekbaz published in 1892 and gave 20 species and forms.

In 1897 K. Escherich (Beitrag zur Hemipterenfauna Kleinasiens. *Ent. Nachr.* 23: 124—127) gave on the basis of the material collected by the author and L. Kathariner in the neighbourhood of Ankara a list of 52 species only of terrestrial *Heteroptera*.

G. Horváth (Hémiptères du voyage de M. Martinez Escalera dans l'Asie-Mineure. *Term. Füzetek* 24: 469—485) gave in 1901 a long list of the *Hemiptera* collected by M. Escalera in the southern and southeastern parts

of Anatolia. He lists 127 species and forms of terrestrial *Heteroptera* and 4 species of aquatic *Heteroptera*.

In 1905 the same author (Ergebnisse einer naturwissenschaftlichen Reise zum Erdschias-Dagh [Kleinasien]. Hemipteren. *Ann. Naturhist. Hof-Mus.* Wien 20:179—189) published the results of the Austrian scientific expedition to the Erciyas dağı in 1902. The list gives 89 species and forms only of terrestrial *Heteroptera*.

In 1918 appeared A. N. Kiritshenko's list of Caucasian Heteroptera (Hemiptera-Heteroptera faunae Caucasicae, I. *Mém. Mus. Caucase*, Ser. A, No. 6:1—177) which includes a number of species occurring in regions which now belong to the easternmost parts of the Turkish Republic.

In 1919 G. Horváth (Ergebnisse einer mit Unterstützung der Kais. Akademie der Wisenschaften in Wien ausgeführten zoologischen Forschungsreise von weiland Prof. Dr. Franz Tölg nach Kleinasien [Amanus-Gebirge]. *Arch. Naturg.* A, 85: 146—147) published a small list comprising 32 terrestrial species and 3 aquatic and semiaquatic species of *Heteroptera*, which had been collected in the southern part of Anatolia in the Gyaur dağlari in 1913 and 1914.

J. Fahringer published in 1922 (Eine Rhynchotenausbeute aus der Türkei, Kleinasien und den benachbarten Gebieten. *Konowia* 1: 137—144, 296—307) a list of *Hemiptera* from different regions of Turkey, especially from its western and southern parts. The list comprises the material collected by the author in 1909—1914 and is supplemented by the collections of F. Tölg of 1913 and 1914, which G. Horváth had worked already earlier. The list records 90 species and forms of terrestrial *Heteroptera* and 10 species of aquatic and semiaquatic *Heteroptera*.

A. N. Kiritshenko published in 1924 (Beitrag zur Hemipterenfauna des südlichen Armenien. *Wien. Ent. Ztg.* 41: 1—5) a list of 52 species and forms of terrestrial Heteroptera and 1 species of aquatic Heteroptera from the eastermost part of Anatolia.

H. Gadeau de Kerville gave in 1939 (Voyage zoologique d'Henri Gadeau de Kerville en Asie-Mineure [Avril-Mai 1912]. Tome I, Par. 1: 117—123) one of the latest lists including 67 species and forms of terrestrial *Heteroptera* and 15 species of aquatic and semiaquatic *Heteroptera*, collected in 1912 by the author in the region of Ankara and Izmir.

R. Linnavuori giving in 1953 a list of the palaearctic *Heteroptera* collected by J. Sahlberg and U. Saalas (A Palaearctic Heteropterous Material collected by J. Sahlberg and U. Saalas. *Ann. Ent. Fenn.*, 19: 147—167) included in it a considerable number of species (36) collected in the territory of present-day Turkey.

In addition to the publications listed above, devoted during the last 80 years specially to the *Heteroptera* fauna of Turkey, a number of other authors (F. X. Fieber, G. Horváth, A. Puton, O. M. Reuter, more recently G. Seidenstücker and E. Wagner, a. o.) have contributed by their articles, mainly descriptions of new species, to the enlargement of our knowledge on the *Heteróptera* of Turkey.

Survey of all localities reported of Hemiptera-Heteroptera in Turkey.

In the heteropterological literature there occurs a considerable number of topographical names, many of which were variously transcribed or now remodelled according to the Turkish language. For the sake of a better orientation I give here a list of all the names mentioned in this article and the name of the province (il) in which they occur. In brackets I give such expressions as are strikingly different from the official topographical names.

Abaçilar — Seyhan
Adana — Seyhan
Agapinari, Toros — Seyhan
Ağri dağı — Ağri
Ahir dağı — Maraş
Akşehir — Konya
Alahan, Toros — Içel
Alaşehir — Manisa
Alata — Içel
Amasya — Amasya
Andir dağ, Toros — Seyhan
Andirin — Maraş
Ani — Kars
Ankara — Ankara
Ankara-Baraj — Ankara
Ankara-Çankaya — Ankara
Antakya — Hatay
Antalya — Antalya
Aralik — Kars
Ardahan — Kars
Ardanuç — Çoruh
Artvin — Çoruh
Aşat — Muş
Atik, Gyaur dağlari — Seyhan
Ayaş — Ankara
Aydin — Aydin
Baba dağı — Aydin
Bahçeköy — Istanbul
Bâla — Ankara
Barbas — Muş
Belemedik — Seyhan
Belgrad ormani — Istanbul
Beynam — Ankara
Beyşehir — Konya
Bilecik — Bilecik
Binboğa dağı — Maraş
Boglan, Serafeddin dağlari — Bingöl
Bozüyük — Bilecik
Bulgar dağlari, Toros — Içel
Burdur — Burdur
Bursa — Bursa
Burulan, Ağri dağı — Ağri
Bürücek, Toros — Seyhan
Büyük ada — Istanbul
Büyükdere — Istanbul
Ceyhan — Seyhan
Çamlidere, Işik dağı — Ankara
Çanakkale — Çanakkale
Çildir gölü — Kars
Dede dağı near Misis — Seyhan
Deminceköy — Istanbul
Demirkapi — Kars
Deregasançay — Muş
Dom — Muş
Dum — Muş
Edirne — Edirne

Efes (Selçuk) — Izmir
Egnaki — Kars
Eibes, Toros — Maraş
Ekbaz (Akbèz) — Gaziantep
Engizek dağı — Maraş
Erciyas dağı — Kayseri
Erdemli — Içel
Ereğli — Konya
Erzurum — Erzurum
Eskişehir — Eskişehir
Eylar — Kars
Farcadin — Erzincan
Fener — Istanbul
Feke, Toros — Seyhan
Floria — Istanbul
Gaziantep — Gaziantep
Gebze — Kocaeli
Gediz (Hermos) — Izmir
Gerede — Bolu
Geyve — Sakarya
Gezelyar — Erzincan
Gök dağ — Sakarya
Göksun, Toros — Maraş
Gölbaşi — Ankara
Gözna — Seyhan
Gülek Boğazi, Toros — Seyhan
Gyaur dağlari — Seyhan
Halkali (Halki) — Istanbul
Hanziri, Gyaur dağlari — Seyhan
Haraba — Muş
Haruniye — Seyhan
Hasanoğlan — Ankara
Haydarpaşa — Istanbul
Heybeli ada — Istanbul
Hnus — Erzurum
Hozapin gölü — Kars
Ilgin — Konya
Incesu — Kayseri
Islâhiye — Gaziantep
Iskenderon (Alexandrette) — Hatay
Istanbul — Istanbul
Işakli — Afyon
Izmir — Izmir
Iğdir — Kars
Ilica — Balikesir
Kabahtapa — Kars
Kabuk tepe, Toros — Seyhan
Kağithane — Istanbul
Kağizman — Kars
Karaköy — Bilecik
Karapinar, Toros — Seyhan
Karataş — Seyhan
Kars — Kars
Kartal — Istanbul
Kaynaşli, Bolu dağlari — Bolu
Kayseri — Kayseri
Kilis — Gaziantep
Kizilcahamam — Ankara
Kizilviran — Konya
Konya — Konya
Kosor — Kars
Kozan, Toros — Seyhan
Kulp — Diarbakir
Kurtuk dağ — Muş
Kurudere, Emir dağlari — Afyon
Kuşçular — ? Seyhan
Küçük Çekmece — Istanbul
Kütahya — Kütahya
Lardat — Muş
Maraş — Maraş
Mardin — Mardin
Marmara boğazi — Istanbul
Menemen — Izmir
Menderes — Aydin/Izmir
Merdenik — Kars
Mersin — Içel
Misis — Seyhan
Moğan gölü — Ankara
Mollafeneri — Kocaeli
Mucur — Kirşehir

Namrun, Toros — Içel
Olur — Erzurum
Oltu — Erzurum
Pendik — Istanbul
Polu Çiftliği, Istanbul — Istanbul
Pozanti, Toros — Seyhan
Rize — Rize
Sakçagözü — Gaziantep
Samsun — Samsun
Sangot near Artvin — Artvin
Sapanca — Kocaeli
Saribaba — Kars
Sarikamiş — Kars
Seray dağ near Konya — Konya
Sikavi — Kars
Silifke — Içel
Sinande — ?
Sivrihisar — Eskişehir
Sothurgi su — Seyhan
Sultan dağlari — Konya
Suluhan, Toros — Seyhan
Talis — ?
Tapan, Gyaur dağlari — Seyhan
Tarsus — Içel
Taşçi — Seyhan
Tercan (Mamahatun) — Erzincan
Timak — Muş
Tokat — Tokat
Turunçlu, Toros — Konya
Tut — Kars
Ucü — Erzincan
Ulu dağ — Bursa
Ulukişla — Niğde
Üsküdar — Istanbul
Üsküp — Kirklareli
Yağma yayla — ?
Yalova — Kocaeli
Yarbaşi, Gyaur dağlari — Seyhan
Yamanlar dağı — Izmir
Yedikule, Istanbul — Istanbul
Yenicekale — Maraş
Yeniköy, Toros — Içel
Yeşilköy (St. Stefano) — Istanbul
Yilanli dağ near Kayseri — Kayseri
Yunu Burnu — Istanbul
Zardanes — Kars
Zemkan — Erzincan
Zor — Kars
Zurzuna — Kars

Dionconotus cruentatus (Brullé 1832)

2 ♂♂ and 7 ♀♀ — Ankara - Baraj, 3.—4. VII. 1947. (Exp. of the National Museum, Praha.)

On *Ranunculoideae* in the border zone of cultivated areas.

Up till now this species has been recorded in Turkey from Ekbaz (Puton and Noualhier 1895, Horváth 1901), Aydin and Ceyhan (Horváth 1901), Yeşilköy and Kâğithane (Horváth 1918).

Species of Holomediterranean distribution, in the Middle East recorded from Syria, Israel and Cyprus.

Camponotidea fieberi Reuter 1879

Izmir (Reuter 1879 a, 1881, Horváth 1918, Hoberlandt and Jordan 1944), Ekbaz (Puton 1892 and Reuter 1904 a, Horváth 1918, Hoberlandt and Jordan 1944) and Iskenderon (Horváth 1901, 1918; Hoberlandt and Jordan 1944).

Listed only from the above-mentioned localities, of which Izmir is the type locality, and from Greece. Species of Pontomediterranean distribution.

Camponotidea fieberi var. **simulans** Horváth 1918

Üsküdar, Konya, Eregli (Horváth 1918, Hoberlandt and Jordan 1944). This variety is further recorded only from Greece.

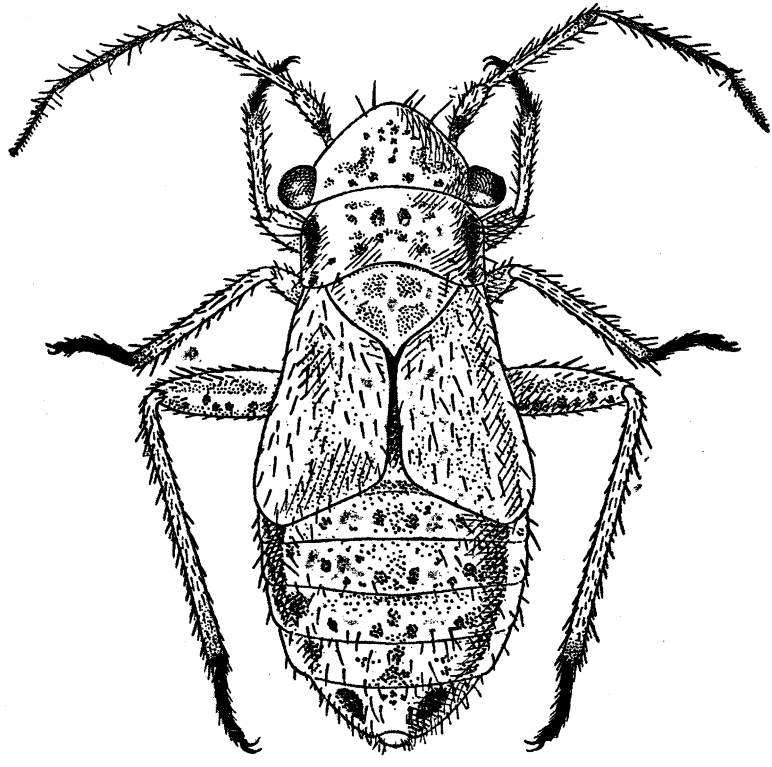
Orthotylinae

Dimorphocoris argaeicus n. sp.

Brachypterous female. Length 3—3.15 mm, maximum width (across the abdomen) 1.22—1.33 mm. Head: length 0.55 mm, width 1 mm, vertex 0.7 mm. Antennae: length of segment I, 0.39 mm; II, 0.67 mm; III, 0.55 mm; IV, 0,3 mm. Pronotum: length 0.42 mm, width 0.87 mm. Scutellum: length 0,45, width 0.61 mm.

General colour pale yellowish brown with dark brownish to brownish black drawings on the whole body, and with a greenish brown tint on the claval part and on the base of the corium. Head at the base with a transverse row of at most four round spots, vertex with a few irregular, fugaceous or fusing spots, vertex on each side with some oblique, darker here and there weakly perceptible bands; between the base of the antennae and the anterior margin of the eye a narrow, irregular, dark band. Eyes brown, at the inner side darker. The first antennal segment on the inner side at the very base with a small, irregular, dark spot; the second antennal segment at the end somewhat darkened; the third and fourth antennal segments black, the third at the very base brown. The black bristles on the light places of the antennae grow from small dark dots. Rostrum pale, last segment darkened, clypeus black. Disc of the pronotum with several irregular and indistinctly delimited spots of different sizes, sides of the pro-

notum with a broad, dark brown band which is interrupted or loses itself in the posterior part. Scutellum only at the base and before the end somewhat darkened. Sternum one-coloured. Hemelytra only in the corial part scarcely perceptibly spotted, only one larger, more distinct, irregular spot is in the middle of the posterior margin of the corium. Tergum fairly densely irregularly spotted and the respective tergites at the outher margin with



6. *Dimorphocoris argaeicus* n. sp., brachypterous female (paratype).

one well delimited dark spot, 7th tergite on each side with one large, longitudinally oval black spot. Venter one-coloured. Femora irregularly spotted, in the apical part the spots are somewhat more closely crowded together, the spines on the tibiae grow from tiny dark dots. Tarsi black.

General shape (fig. 6) of the body oval, strikingly expanded in a posterior direction 2.4 times as long as wide. Head seen from above triangular, 1.8 times wide across the eyes as long, sides in front of the eyes straight, frons narrowly rounded; head seen from the side 1.3 times as high as long, tylus not projecting and inclined under an angle of 60°, and the frons somewhat projects beyond its base. The lorae are well delimited and have

roughly the shape of an irregular hexagon. Vertex 4.6 times as wide as the width of one eye; the eyes are very small, longitudinal, strongly vaulted, sessile. Surface of head and tylus very finely sculptured, with a short, sparse, appressed, light pubescence and with numerous, long, erect, bent, black bristles longer than the width of the eye. Lower part of the head only with a pale pubescence. Rostrum extending to the basal third of venter. The base of the antennae is in the middle between the lower half of the eye and the base of the tylus. First antennal segment short, shorter by one third than the length of the head, thick, in the direction towards the end clavately expanded, widest before the end, third to fourth segment linear, third and fourth thinner than the second, second segment as long as the vertex is wide. Relative lengths of the respective antennal segments I: II: III: IV:: 13: 22: 18: 10. The whole antennae are closely covered with long thick black erect bristles, which are on the first segment as long as the segment is wide, on the other segments twice as long as the width of the respective segments.

Pronotum transversal, 1.9 times as wide as long in the middle, sides of the pronotum narrowing anteriorly almost imperceptibly and in the middle sligthtly bent; the anterolateral angles are broadly rounded, the anterior margin slightly concave, at the margins with a fine indication of a narrow collar, basal margin broadly deeply convex, humeral angles broadly rounded. Disc of the pronotum moderately vaulted, in the middle with a transversal, hardly perceptible impression, in the anterior half on each side with a longitudinally oval low elevation. Pronotum just as the head, scutellum and hemelytra finely sculptured, with the same pubescence and bristles. Scutellum triangular, 1.3 times as wide as long, moderately vaulted, sides before the end somewhat bent.

Hemelytra strongly shortened, reaching to base of the third tergite; cuneus and membrane completely lacking, and the clavus is only partly, hardly perceptibly separated. The claval commisura is 1.3 times as long as the length of the scutellum. Emboliar margin almost straight, divergent in a posterior direction, outer and inner posterior angle of the corium broadly rounded, posterior margin straight, inwards cut off. Abdomen in a posterior direction broadly expanded, tergites straight, connexivum narrow, half-raised. Venter considerably vaulted. Abdomen sculptured and overgrown just as the other parts of the body, sternum smooth and only with a sporadic, short, appressed light pubescence. The whole body considerably shiny.

Legs very short and strong; femora and tibiae with rather short semi-erect black bristles and sparser very long spines, which are more numerous in the distal half of the femora and on the tibiae, growing from small darker dots. Posterior femora at the base only slightly expanded; relative lengths of the segments of the posterior legs: trochanter : femur : tibia : tarsus 1 : tarsus 2 : tarsus 3 :: 7 : 31 : 44 : 4 : 5 : 6. Claws very long, narrow, sharp, regularly bent. Arolia characteristically convergent, expanded in the direction towards the end.

2 ♀♀ (holotype and paratype) — Erciyas dağı, 3,200 m., 25. VII. 1947. On sparse and sporadic grasses among the lava.

The new species stands very near the Mediterranean species *Dimorphocoris debilis* (Reuter), but is distinguished from it by the strikingly longer head which is in female of *D. debilis* 2.25 times as wide as long and the vertex is only 4 times as wide as the width of one eye, which is in *D. debilis* much larger and spherical. The first antennal segment of the new species is shorter by one third than the length of the head and strikingly thickened, whereas in female of *D. debilis* (Reuter) it is almost as long as the head. The emboliar margin and the posterior margin of the corium are in female of *D. debilis* distinctly rounded, in the new species straight. The femora are in female of *D. debilis* at the base much wider than in the new species, the proportions of all segments of the legs are on *D. debilis* much longer. The head and hemelytra are reminiscent of female of *D. schmidti* (Fieber), but this species can easily be distinguished by the different coloration, the different ratio of the antennal segments, etc.

Platyporus dorsalis Reuter 1890

Oltu (Kiritshenko 1918).

Further listed only from some localities in Transcaucasia. Species with endemic distribution restricted only to the Armenian high mountains.

Orthocephalus brevis (Panzer 1798)

1 ♀ — Edirne, 3. VI. 1947. (Exp. of the National Museum, Praha.)

On xerophylous steppe formation.

Up till now recorded in Turkey only from Bursa (Horváth 1883 a).

Species of Holomediterranean distribution, northwards extending into steppe regions of Central Europe. Bursa in W. Anatolia is only known locality in the Middle East.

Orthocephalus saltator (Hahn 1835)

1 ♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On *Compositae* in steppe formation.

This species has been recorded in Turkey from Bursa (Horváth 1883 a), Eylar (Kiritshenko 1918), Hnus (Kiritshenko 1924) and Anatolia (Reuter 1891 a).

Species of Holarctic distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Orthocephalus tenuicornis (Mulsant and Rey 1852)

3 ♂♂ and 4 ♀♀ — Moğan gölü, 5. VII. 1947. 4 ♂♂ — Toros: Bürücek, 29.—31. VII. 1947. (Exp. of the National Museum, Praha.)

On the vegetation of steppe and wooded hill formations.

In Turkey up till now recorded only from Ekbaz (Puton and Noualhier 1895),

Species of Holomediterranean distribution, in the Middle East recorded only from Syria and Israel.

Orthocephalus tenuicornis var. **fulvipes** Reuter 1904

Tarsus (Reuter 1904 b).
Known only from the type locality mentioned.

Orthocephalus parvulas Reuter 1891

Izmir, Bursa (Reuter 1891 a).
Up till now recorded from the two above-mentioned localities and seems to be a species endemic in the Aegean part of Anatolia.

Orthocephalus bivittatus Fieber 1864

1 ♂ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)
On vegetation of steppe formation.
This specimen constitutes a new record for Turkey.
Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia and in C. Asia from Turkestan.

Orthocephalus vittipennis (Herrich-Schäffer 1835)

4 ♂♂ and 15 ♀♀ — Gerede, 22. VI. 1947. (Exp. of the National Museum, Praha.)
On *Anthemideae* in the border zone of forest.
Species recorded in Turkey only from Merdenik (Kiritshenko 1918).
Species of Eurosiberian distribution, in SW Asia recorded from Transcaucasia.

Pachytomella phoenicea (Horváth 1884)

Tarsus (Reuter 1904 b).
Species listed only from Syria, Israel and above-mentioned locality in S. Anatolia, probably species of Pontomediterranean distribution.

Pachytomella passerinii (Costa 1841)

Bursa (Horváth 1883 a, Reuter 1891 a).
Species of Holomediterranean distribution, in the Middle East recorded only from Israel.

Piezocranum corvinum Puton 1895

Gaziantep (Reuter 1895).
Species known only from this type locality. Probably endemic of northern part of the Syrian plateau.

Strongylocoris niger (Herrich-Schäffer 1835)

2 ♀♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On shrubs along the river Meriç.

Up till now in Turkey known only from Sarikamiş (Kiritshenko 1918).

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia, Transcaucasia and Israel, in Central Asia from Turkestan.

Strongylocoris leucocephalus (Linnaeus 1858)

6 ♂♂ and 2 ♀♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On xerophilous vegetation in steppe formation.

Hitherto listed in Turkey only from Gög dağ (Fahringer 1922) and Asia Minor (Reuter 1891 a) occurring on *Asperula involucrata* (Fahringer).

Species of Eurosiberian distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Halticus apterus (Linnaeus 1761)

4 ♀♀ — Ankara - Baraj, 3.—4. VII. 1947. (Exp. of the National Museum, Praha.)

On *Ononis* sp. in the border zone of cultivated area.

Up till now recorded in Turkey from Ankara (Escherich 1897), Zardanes (Kiritshenko 1918) and Gök dağ (Fahringer 1922) occurring on *Vicia striata*.

Species of Holarctic distribution, in SW Asia recorded from Caucasia, Transcaucasia, in Central Asia from Turkestan.

Halticus macrocephalus Fieber 1858

2 ♂♂ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On vegetation along the river Meriç.

These specimens constitute a new record for Turkey.

Species of Holomediterranean distribution, in the eastern Mediterranean listed only from Mithilene.

Halticus luteicollis (Panzer 1805)

2 ♂♂ and 1 ♀ — Ankara - Baraj, 3.—4. VII. 1847. (Exp. of the National museum, Praha.)

In the border zone of cultivated area.

Hitherto known in Turkey only from Izmir (Reuter 1891 a).

Species of Holomediterranean distribution, extending northwards as far as England and Sweden. Izmir in SW Anatolia is only known locality in the Middle East.

Cyllocoris persimilis Puton 1895

Ekbaz (Puton 1895, Puton and Noualhier 1895 and Horváth 1901).

Species only known from above mentioned type locality; it seems to be a species of endemic distribution restricted to the northern part of the Syrian plateau.

Globiceps (Kelidocoris) albipennis Jakovlev 1877

1 ♀ — Beynam, 28. VI. 1947. (Exp. of the National Museum, Praha.)

On the low vegetation in wooded hill formation.

This specimen constitutes a new record for Turkey.

Probably species of Caspian distribution, extending westwards into the steppe regions of Central Europe.

Globiceps (Kelidocoris) cruciatus Reuter 1879

2 ♂♂ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On low shrubs along the river Meriç.

Up till now recorded in Turkey only from Olur (Kiritshenko 1918).

Probably species of Eurosiberian distribution, lacking in northern Europe and Asia. In SW Asia recorded from Caucasia and Transcaucasia, in Central Asia from Turkestan.

Globiceps (Kelidocoris) flavomaculatus (Fabricius 1794)

2 ♀♀ — Ankara-Baraj, 3.—4. VI. 1947. (Exp. of the National Museum, Praha.)

On the ground among the sparse vegetation near the river Çubuk.

These specimens constitute a new record for Turkey.

Species of Eurosiberian distribution, in SW Asia recorded only from Transcaucasia.

Globiceps (Kelidocoris) caucasicus Poppius 1912

Kosor, Egnaki, Ağri dağı: Burulan (Kiritshenko 1918).

Species listed further only from the West Caucasus, and Transcaucasia. It seems to be a species of endemic distribution restricted to the high mountain region of SW Asia.

Orthotylus (Melanotrichus) minutus Jakovlev 1877

Aralik (Horváth 1894 and Kiritshenko 1918).

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia, in Central Asia from Turkestan.

Orthotylus (Melanotrichus) flavosparsus (C. Sahlberg 1842)

Aralik (Horváth 1894 and Kiritshenko 1918).
Species of Holarctic distribution. in S WAsia recorded from Caucasia and Transcaucasia, in Central Asia from Turkestan.

Orthotylus (Melanotrichus) beieri E. Wagner 1942

2 ♂♂ and 1 ♀ — Toros: Karapinar, 1. VIII. 1947. (Exp. of the National Museum, Praha.)
On the undergrowth of light, dry forest among *Juniperus excelsa* and *Abies cilicica.*
These specimens constitute a new record for Turkey.
This species up till now recorded only from the type locality in South Carinthia, and from S. France.

Orthotylus (Orthotylus) cupressi Reuter 1883

1 ♀ — Hasanoğlan, 13. VII. 1947. (Exp. of the National Museum, Praha.)
Flying at dusk high above the ground in the region of wild fruit-trees at an altitude of 1.000 m.
This specimen constitutes a new record for Turkey.
Species so far known from the western Mediterranean.

Orthotylus (Orthotylus) marginalis Reuter 1884

2 ♂♂ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)
On the growth of *Ulnus,* along the river Meriç.
These specimens constitute a new record for Turkey.
Species of Eurosiberian distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Orthotylus (Orthotylus) virescens (Douglas and Scott 1865)

Asia Minor (Oshanin 1909, 1912).
Species of Holomediterranean distribution, extending northwards as far as England. In the Middle East recorded only from Asia Minor and Cyprus.

Brachynotocoris viticinus Seidenstücker 1954

2 ♂♂ and 3 ♀♀ — Toros: Kozan, 8.—9. VIII. 1947. (Exp. of the National Museum, Praha.)
In the deciduous forest formation.
These specimens constitute a new record for Turkey. This species is described from Syria, NW of Hama (type locality), occurring on *Vitex agnus castus* L. (Seidenstücker).

Zanchius alatanus n. sp.

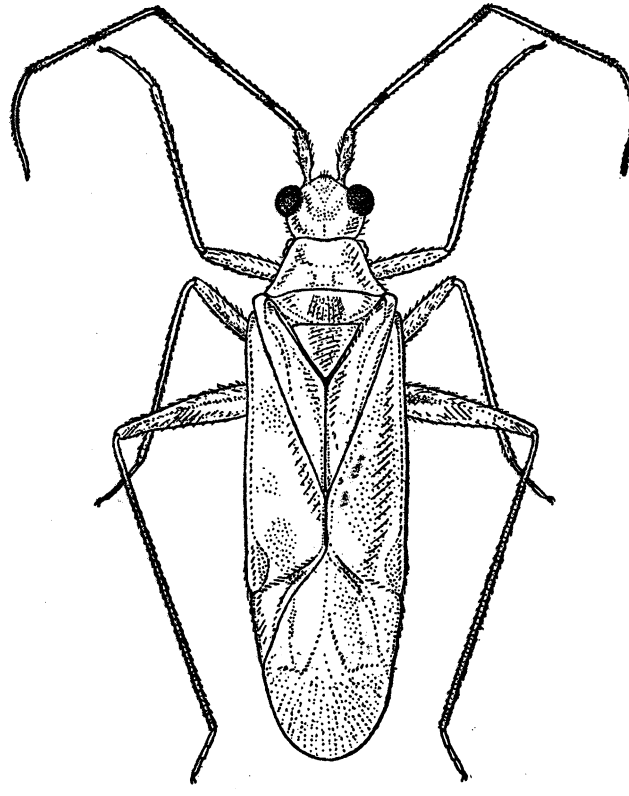
Male. Length to the end of hemelytra 2.7—3.23 mm, maximum width across the base of hemelytra 0.8—0.87 mm. Head: length 0.33 mm, width 0.47 mm, vertex 0.24 mm. Antennae: length of segment I, 0.3 mm; II, 1 mm; III, 0.73 mm; IV, 0.55 mm. Pronotum: length 0.27 mm, width 0.64 mm. Scutellum: length 0.36 mm, width 0.55 mm.

General colour light bright green, passing in some specimens finely to yellowish green (coloration after death), with whitish drawings on the hemelytra and with reddish bands on the antennae. Head light green, somewhat lighter at the base, eyes brownish reddish. Rostrum light green, only the extreme tip darkened. Antenae light yellowish green, first antennal segment on the underside in the middle with an oval pink to reddish spot and at the end with a narrow transversal band; both drawings are not visible in a view from above; second antennal segment in the basal fifth, almost in the middle, and at the very end with a narrow pink or reddish ring; third antennal segment with a similar ring in the middle and a second one at the very end. Pronotum, scutellum, sternum and abdomen unicoloured light green. Hemelytra bright light green, here and there with an unequally crowded green pigmentation; corium at the base with a longitudinal, irregular, whitish spot, in the middle of the corium with a transversal, unclearly delimited whitish band, which does not reach quite the emboliar margin of the corium; in some specimens it is more or less reduced or it fuses with the basal spot; emboliar margin of the corium in the apical third with an irregular whitish spot, inner posterior angle of the corium with a small, round, whitish spot. Outer basal part of the cuneus with an irregularly delimited, often fusing whitish spot. Membrane grayish green, opalescent, lighter along the outer margin of the membranal veins, which are here and there saturated green, near the end of the membranal cell with a darker, brownish spot. Legs concolore with the abdomen, posterior tibiae with two rows of minute black spots in their whole length. The whole body strongly shiny with a light shiny pubescence.

The general shape (fig. 7) of the body is narrowly elongated, almost parallel, 3.3 times as long as wide. Head across the eyes 1.4 times as wide as long, from the base in the direction towards the eyes roundedly expanded, distance of the eyes from the base of the head equalling their length; eyes oval, distinctly vaulted, distinctly coarsely facetted. Head in front of the eyes considerable truncated, with scarcely projecting tylus, which in a side view encloses an angle of 60°. Disc of the head flat, interocular space 2.4 times as wide as the width of one eye. Antennae thin 4—4.1 times as long as the width of the pronotum at the base; first antennal segment thickest, short, shorter by half the width of one eye than the width of the interocular space plus the width of one eye, widest in the basal third, gradually narrowing in the direction towards the end, on the inner side somewhat bent, with numerous semi-erect hairs, which are as long as the width of the first antennal segment. Segments 2—4 linear, with a short appressed light pubescence. Relative lengths of the respective antennal segments: I: II: III: IV:: 10: 33: 24: 18. Rostrum very thin, regularly narrowing in the direction towards the end,

reaching the end of the posterior coxae. Head at the base of tylus and antennae, behind the eyes, on the underside, and tylus with scattered erect hairs.

Pronotum at the base 2.3 times as wide as long, strongly narrowed in an anterior direction, basal margin 1.9 times as wide as the apical margin; sides of the pronotum moderately bent in their whole length, basal margin

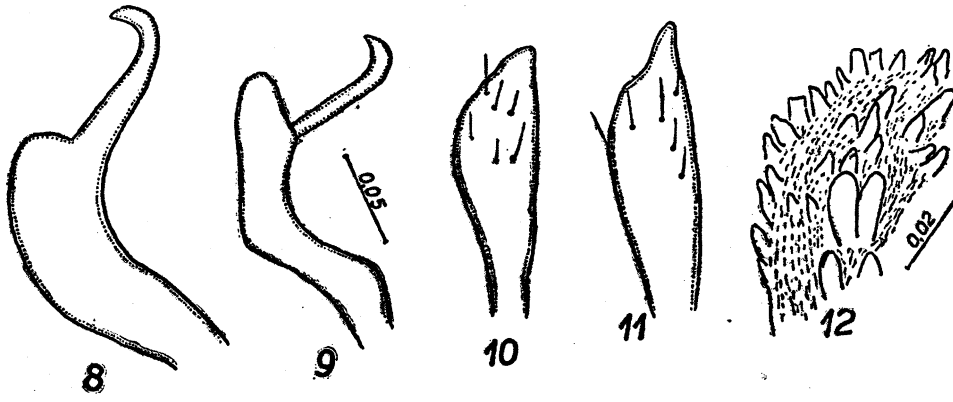


7. *Zanchius alatanus* n. sp., male (paratype) from Alata.

regularly bisinuate, anterior margin of the pronotum deeply bent, without collar. Disc of the pronotum moderately vaulted, divided in the middle by a transversal fine impression, anterior lobe elevated. Surface of the pronotum with sporadic, semi-erect light hairs, which are more striking at the margins. Scutellum triangular, at the base 1.5 times as wide as long, sides straight, tip blunt; mesoscutum occupying ⅓ of the whole length of the scutellum and more vaulted than the remaining part of the scutellum.

Hemelytra subhyaline, smooth, long, 2.9 times as long as wide, projecting with half their length beyond the end of the abdomen; hemelytra at the base

wider than the pronotum, basal jointing of the hemelytra exposed. Claval commissura 1.4 times as long as the length of the scutellum. Emboliar margin of the hemelytra straight, subparallel, embolium narrow, equally wide in the whole length, before the end expanded into an oval areola. Corium with irregularly scattered hairs, which are somewhat denser and more striking along the emboliar margin. Cuneus 3.3 times as long as the length of the corium, membrane long, narrow, at the end narrowly rounded, projecting



Zanchius alatanus n. sp., male — 8 and 9. Left paramare from different aspect. 10 and 11. Right paramere from different aspect. 12. Position of chitinized tubercles of phallosoma.

with half its length beyend the end of the cuneus. Inner membranal cell larger, arc of the vein broken. Cuneus, especially in the posterior corner, with long hairs.

Legs very thin and long, straight, femora at the base somewhat expanded especially the posterior ones, gradually narrowing in the direction towards the end; anterior coxae almost as long as half the length of the anterior femora. Relative lengths of the respective segments of the posterior legs : femur : tibia : tarsus 1 : tarsus 2 : tarsus 3 :: 35 : 61 : 3 : 4 : 4. Claws long, narrow, straight, only at the end slightly bent, arolia wide, convergent; pseudoarolia scarcely perceptible, very short and narrow.

Genital segment elongate; opening of pygophore elongate oval, inside on the base with a long obtuse tubercle. Left paramere (figs. 8—9) geniculately curved, in the middle widened, apex broadly rounded; inner portion of the paramere in the apical fourth with a slender perpendicular arm, a little shorter than the half of the paramere, before the apex outward curved and apically pointed. Right paramere (figs 10—11) toward the end club-like widened, outer margin in the apical third expanded, apex narrowed and blunt. Sensuous bristles sparse. Chitinised structure of phallosema composed of blunt and edged pegs as on the figure 12.

Female. Length to the end of hemelytra 2.85—3.42 mm, maximum width across the base of hemelytra 0.84—0.91 mm. Head: length 0.36 mm, width

0.48 mm, vertex 0.24 mm. Antennae: length of segment I, 0.33 mm; II, 1.06 mm; III. 0.73 mm; IV, 0.55 mm. Pronotum: length 0.3 mm, width 0.64 mm. Scutellum: length 0.45 mm, width 0.58 mm.

Agrees completely with the male in general colour and shape.

1 ♂ and 1 ♀ (holotype and allotype) and 33 ♂♂ and 25 ♀♀ (paratypes) —Alata, 26. VIII. 1947. 2 ♂♂ and 4 ♀♀ (paratypes)—Adana, 1.—3. VIII. 1947. 3 ♂♂ and 3 ♀♀ (paratypes)—Karataş, 2.—5. VIII. 1947. 3 ♂♂ (paratypes)—Abaçilar (Çakit), 7. VIII. 1947. (Exp. of the National Museum, Praha.)

The major part of these specimens was collected at dusk in flight over banana plantations. The other specimens, from Adana, Karataş and Abaçilar, were likewise collected in flight in an area of orchards.

The genus *Zanchius* Distant (Fauna Brit. India, Rhynch., 2: 477, 1904) is known from Ceylon, Formosa, India and Guam. The new species agrees very well in general structure with Distant's genus especially in the short first antennal segment which is distinctly shorter than the vertex between eyes plus the width of one eye, whereas in *Malococoris* Fieber is it about the same length. *Malococoris* Fieber differs from *Zanchius* Distant in the much longer head seen from above, with the tylus extending more forwards. Genus *Zanchius* Distant on the other hand has the head more truncate in front of eyes with the tylus not extending well forward. *Malococoris* Fieber also has a very narrow pronotal collar not present in *Zanchius* Distant, but both genera have the hind tibiae with the two rows of minute black spots down their entire length. The new species has a similar type of colour pattern to that of *Malococoris* Fieber, whereas *Zanchius annulatus* Distant, to which it seems to be more closely alied, is uniformly yellowish (postmortal colouring) without markings except on the antennae.

Pilophorus pusillus Reuter 1878

Aralik (Horváth 1894, Kiritshenko 1918).

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Pilophorus angustulus Reuter 1888

1 ♂ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On *Ulnus* sp. along the river Meriç.

Up till now recorded in Turkey only from Ekbaz (Puton and Noualhier 1895).

Species of Pontomediterranean distribution, up till now recorded from Greece, S. Anatolia and Cyprus.

Phylinae

Oncotylus (Cylindromelus) setulosus (Herrich-Schäffer 1839)

3 ♂♂ and 2 ♀♀ — Ankara-Baraj, 3.—4. VII. 1947. 7 ♀♀ — Moğan gölü, 8. VII. 1947. 2 ♂♂ — Moğan gölü, 8. VII. 1947. (Exp. of the National Museum, Praha.)

Occurring on low vegetation in the border zone of cultivated areas and on salt-steppe formation (Moğan gölü).

Up till now this species has been recorded in Turkey only from Zardanes (Kiritshenko 1918).

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia, in Central Asia from Tajikistan and Transalai.

Oncotylus (Oncotylus) viridiflavus viridiflavus (Goeze 1778)

1 ♂ — Ankara-Baraj, 3.—4. VII 1947. (Exp. of the National Museum, Praha.)

Occurring on low vegetation in the border zone of cultivated area.

Up till now this species has been recorded in Turkey from Ekbaz (Horváth 1901), Zardanes (Kiritshenko 1918) and Dom (Kiritshenko 1924).

Species of Mediterranean origin, subspecies *O. viridiflavus viridiflavus* (Goeze) extends through the whole Mediterranean northwards as far as England, in SW Asia recorded from Caucasia and Transcaucasia.

Oncotylus (Oncotylus) viridiflavus longipes E. Wagner 1954

Maraş, Iskenderon, Ereğli (E. Wagner 1954 b).

Subspecies so far collected only in the above-mentioned localities of Southern Anatolia.

Oncotylus (Oncotylus) rivalis Horváth 1894

Sarikamiş, Kücük Ağri dağı (Kiritshenko 1918).

Species described from Transcaucasia and seems to be a species of endemic distribution restricted to Armenian high mountains.

Oncotylus (Oncotylus) basicornis Horváth 1901

Ekbaz (Horváth 1901).

Known only from the above mentioned type locality and seems to be a species of endemic distribution in the northern part of the Syrian plateau.

Conostethus roseus (Fallen 1829)

4 ♂♂ and 1 ♀ — Toros: Bürücek, 29.—31. VII. 1947. (Exp. of the National Museum, Praha.)

On xerophilous vegetation (*Trifolium* sp.) of wooded hill formation.

Representation of this species in Turkish fauna listed only from Asia Minor (Oshanin 1909, 1912).

Species of Holomediterranean distribution, in the Middle East recorded further only from Israel.

Conostethus venustus (Fieber 1858)

Izmir (Reuter 1879 b).

Species of Holomediterranean distribution, in the Middle East recorded from Syria and Cyprus.

Pronototropis longicornis Reuter 1900

Ekbaz (Horváth 1901).

Species of Holomediterranean distribution, listed from Morocco, Cyprus and Israel.

Pachyxyphus lineellus (Mulsant and Rey 1852)

2 ♀♀ — Toros: Bürücek, 29.—31. VII. 1947. (Exp. of the National Museum, Praha.)

On the xerophilous vegetation of wooded hill formation.

Up till now recorded in Turkey from Bursa (Horváth 1883 a) Belgrad ormani (Fahringer 1922); Asia Minor (Reuter 1789 b). Occurring on *Cistus laurifolius* (Fahringer).

Species of Holomediterranean distribution, in the Middle East recorded from Israel and Caucasia.

Thermocoris munieri Puton 1875

1 ♂ — Toros: Bürücek, 29.—31. VII. 1947. (Exp. of the National Museum, Praha.)

On the xerophilous vegetation of wooded hill formation.

Up till now this species has been recorded in Turkey from Bursa (Horváth 1883 a, Reuter 1878, 1890 a) and Sapanca—Eskişehir (Horváth 1905 a).

Species of Holomediterranean distribution, in the Middle East recorded from Cyprus.

Opisthotaenia fulvipes Reuter 1901

1 ♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

Collected on the vegetation of steppe formation.

In Turkey so far listed only from Amasya (Reuter 1901 a).

Species of Pontomediterranean distribution, in SW Asia recorded from Transcaucasia.

Megalocoleus aurantiacus (Fieber 1858)

Asia Minor (Reuter 1879 b).

Species of Holomediterranean distribution; Asia Minor is only listed record of the distribution in the Middle East.

Megalocoleus molliculus (Fallen 1829)

3 ♂♂ and 2 ♀♀ — Ankara-Baraj, 3.—4. VII. 1947. (Exp. of the National Museum, Praha.)

Occurring on the xerophilous vegetation in the border zone of cultivated area.

Up till now this species has been recorded in Turkey only from Eylar (Horváth 1899, Kiritshenko 1918).

Species of European distribution, in SW Asia recorded from Caucasia and from Central Asia (Turkestan).

Megalocoleus krueperi (Reuter 1879)

Asia Minor (Oshanin 1909, 1912).

Probably species of Holomediterranean distribution, recorded also from Algeria, Sicily and Syria.

Amblytylus concolor Jakovlev 1877

4 ♀♀ — Beynam, 28. VI. 1947. (Exp. of the National Museum, Praha.)

On Gramineae in wooded hills formation.

Up till now this species has been recorded in Turkey only from Karaköy-Bozüyük (Horváth 1905 a).

Species of Pontomediterranean distribution, in the Middle East recorded only from Central Anatolia, in Central Asia from Tajikistan.

Amblytylus nasutus (Kirschbaum 1855)

1 ♂ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

Occurring in the border zone of steppe formation.

This specimen constitutes a new record for Turkey.

Species of Mediterranean distribution, penetrating into Central and West Europe. In SW Asia listed only from Transcaucasia.

Macrotylus quadrilineatus (Schrank 1785)

Asia Minor (Oshanin 1909, 1912).

Species of Holomediterranean distribution, in the Middle East recorded from Cyprus and Asia Minor.

Macrotylus herrichi (Reuter 1873)

2 ♂♂ and 4 ♀♀ — Ankara-Baraj, 3.—4. VII. 1947. (Exp. of the National Museum, Praha.)

On low vegetation in the border zone of cultivated area.

In Turkey recorded only from Konya-Kayseri (Horváth 1905 a).

Species of Holomediterranean distribution; the Anatolian locality is the only known one in the Middle East.

Macrotylus seidenstückeri E. Wagner 1954

Toros: Namrun (E. Wagner 1954 a). Occurring on *Salvia grandiflora* in *Abies* and *Cupressus* forest.

So far known only from the above-mentioned type locality.

Macrotylus antennalis Horváth 1905

Yilanli dağ near Kayseri (Horváth 1905 a).

Species up till now recorded only from the above mentined type locality; probably an endemic of Central Anatolian plateau.

Macrotylus bipunctatus Reuter 1889

Asia Minor (Oshanin 1909, 1912).

Species of Holomediterranean distribution; in the Middle East recorded only from Asia Minor.

Camptotylus linae (Puton 1881)

Aralik (Horváth 1894, Kiritshenko 1918).

Probably species of Iranian distribution, listed up till now only from Caucasia, Syria and Israel.

Camptotylus reuteri Jakovlev 1881

20 ♂♂ and 14 ♀♀ — Toros: Feke, 12. VIII. 1947. (Exp. of the National Museum, Praha.)

On *Tamarix* sp. on the sandy bank of the river Göksu.

These specimens constitute a new record for Turkey.

Species of Pontomediterranean distribution, in the Middle East recorded from Caucasia, Transcaucasia and Cyprus.

Harpocera thoracica (Fallen 1807)

Turkey (Thrace) (Oshanin 1909).

Species of Holomediterranean distribution, extending northwards as far as England. In the Middle East recorded also from Caucasia and North Iran.

Harpocera hellenica Reuter 1876

Bursa (Horváth 1883 a, Reuter 1883); Anatolia (Reuter 1890 a).

Species of Pontomediterranean distribution, recorded also from Greece, Syria and Israel.

Orthonotus rufifrons (Fallen 1807)

Izmir (Reuter 1878) and Gök dağ (Fahringer 1922), occurring on *Origanum vulgare*.

Species of Holomediterranean distribution, extending northwards as far as South Finland and Sweden.

Orthonotus rossicus (Reuter 1878)

Tarsus, Izmir (Reuter 1904 b, 1913).

Species of Pontomediterranean distribution; the two Anatolian localities constitute the only record from the Middle East.

Orthonotus rossicus var. **fraudatrix** (Reuter 1904)

Tarsus (Reuter 1904 b, 1913)

Variety only known from the above-mentioned type locality.

Phylus (Gnostus) breviceps Reuter 1899

Gaziantep (Reuter 1899).

Species known only from the above mentioned type locality; it seems to be a species of endemic distribution restricted to the northern part of the Syrian plateau.

Ephippiocoris lunatus Poppius 1912

Aralik (Kiritshenko 1918).

Probably species of Irano-Turanian distribution, up till now recorded only from Turkestan, Transcaucasia and easternmost part of Turkey.

Psallus (Apocremnus) kolenatii (Flor 1860)

Eğnaki (Kiritshenko 1918).

Species of Europen distribution, restricted to the zone of pineforests. Eğnaki is the only record in the distribution of this species from SW Asia, and, as N. A. Kiritshenko states it needs reexamination.

Psallus (Apocremnus) ancorifer var. fuscinervis (Reuter 1875)

3 ♂♂ and 6 ♀♀ — Toros: Bürücek, 29.—31. VII. 1947. (Exp. of the National Museum, Praha.)

On the low vegetation of wooded hill formation.

Up till now recorded in Turkey only from Izmir (Reuter 1879 b).

Species of Holomediterranean distribution, recorded also from N. America. Variety *fuscinervis* known only from the Mediterranean.

Psallus (Hylopsallus) anticus (Reuter 1876)

River-basin of Gediz (Reuter 1904 b).

Species of Pontomediterranean distribution; in the Middle East recorded also from Israel.

Psallus (Psallus) varians (Herrich-Schäffer 1842)

1 ♂ and 3 ♀♀ — Moğan gölü, 5. VII. 1947. (Exp. of the National Museum, Praha.)

On the low shrubs of steppe formation.

These specimens constitute a new record for Turkey.

Species of Holomediterranean distribution, extending northwards as far as England, Sweden and Finland. In SW Asia recorded only from Caucasia.

Psallus (Psallus) aurora (Mulsant 1852)

1 ♂ — Toros: Kozan, 8.—9. VIII. 1947. (Exp. of the National Museum, Praha.)

On the undergrowth in forest region.

New record for Turkey.

Species of Mediterranean distribution, with the centre of his distribution in the western Mediterranean.

Psallus (Psallus) brachycerus Reuter 1904

River-basin of Gediz (Reuter 1904 b).

With the exception of the above-mentioned locality this species has been recorded only from Mytilini. Probably species of Pontomediterranean distribution.

Psallus (Pityopsallus) piceae Reuter 1878

1 ♀ — Moğan gölü 9. VII. 1947. 1 ♀ — Adana 1.—3. VIII. 1947. (Exp. of the National Museum, Praha.)

First specimen has been collected on the steppe vegetation, specimen from Adana collected at dusk flying high above the ground.

New record for Turkey.

This species has been recorded up till now only from Switzerland and Roumania.

Psallus (Nanopsallus) carduellus var. **quadrisignatus** Reuter 1904

Yamanlar dağı near Izmir (Reuter 1904 b).
Variety recorded only from the above-mentioned type locality. Typical form is of Pontomediterranean distribution.

Psallus (Nanopsallus) carduellus var. **infuscatus** Reuter 1904

Yamanlar dağı near Izmir (Reuter 1904 b).
Variety recorded only from the above-mentioned type locality.

Excentricus punctipes (Fieber 1864)

Bursa (Horváth 1883 a, Reuter 1883).
Species of Caspian distribution; also recorded from South Russian steppe region.

Excentricus oophorus Horváth 1888

Bursa (Horváth 1888); Asia Minor (Reuter 1913).
Species only known from the above mentioned locality.

Criocoris sulcicornis (Kirschbaum 1855)

3 ♂♂ and 6 ♀♀ — Moğan gölü, 8. VII. 1947. (Exp. of the National Museum, Praha.)
On *Rubiaceae* in steppe formation.
Up till now recorded in Turkey only from Yilanli dağ near Kayseri (Horváth 1905 a).
Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Plagiognathus (Plagiognathus) alpinus Reuter 1875

3 ♀♀ — Moğan gölü, 5. VII. 1947. (Exp. of the National Museum, Praha.)
On salt steppe formation.
New record for Turkey.
Species of European distribution, in SW Asia recorded from Caucasia, Transcaucasia, in Central Asia from Turkestan.

Plagiognathus (Plagiognathus) bipunctatus Reuter 1883

1 ♀ — Moğan gölü, 9. VII. 1947. 1 ♂ — Adana, 1.—3. VIII. 1947. 3 ♂♂ — Karataş, 2.—5. VIII. 1947. (Exp. of the National Museum, Praha.)
Up till now recorded in Turkey only from Zardanes (Kiritshenko 1918).

Collected on *Verbascum* sp. of salt steppe formation (Moğan gölü) and at dusk flying high above the ground in cultivated area and steppe formation.

Species of Holomediterranean distribution, extending in steppe and leafy wood formations into Central Europe; in the Middle East recorded from Cyprus, Caucasia, Transcaucasia, in Central Asia from Tajikistan.

Plagiognathus (Plagiognathus) fulvipennis (Kirschbaum 1855)

4 ♂♂ and 4 ♀♀ — Edirne, 8.—13. VI. 1947. 1 ♀ — Beynam, 28. VI. 1947. 2 ♀♀ — Ankara-Baraj, 3.—4. VII. 1947. 1 ♀ — Gyaur dağlari, 17. VIII. 1947. (Exp. of the National Museum, Praha.)

On *Echium* sp. of steppe and wooded hill formations.

Up till now recorded in Turkey only from Zardanes (Kiritshenko 1918).

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Plagiognathus (Plagiognathus) arbustorum (Fabricius 1794)

7 ♂♂ and 5 ♀♀ — Mollafeneri, 21. VI. 1947. (Exp. of the National Museum, Praha.)

On low undergrowth in macchia.

Up till now recorded in Turkey only from Belgrad ormani (Fahringer 1922), occurring on *Urtica dioecia.*

Species of Eurosiberian distribution, in SW Asia recorded from Caucasia and Transcaucasia, in Central Asia from Tajikistan.

Utopnia torquata (Puton 1881)

Bursa (Horváth 1883 a, Reuter 1883), Iskenderon (Horváth 1901), Tarsus (Reuter 1904 b), Gyaur dağlari (Horváth 1919), Kusçular, Haruniye (Fahringer 1922); Anatolia (Reuter 1890 a).

Species of Pontomediterranean distribution, in the Middle East recorded from Syria and Israel.

Chlamydatus (Attus) pullus (Reuter 1870)

4 ♂♂ and 1 ♀ — Mollafeneri, 21. VI. 1947. (Exp. of the National Museum, Praha.)

Beneath low vegetation in macchia formation.

Up till now recorded in Turkey only from Merdenik (Kiritshenko 1918).

Species of Eurosiberian distribution, in SW Asia recorded from Caucasia, Transcaucasia, in Central Asia from Turkestan.

Monosynamma bohemani bohemani (Fallen 1829)

Asia Minor (Oshanin 1909, 1912; E. Wagner 1947).

Species of Holarctic distribution; Asia Minor is only record from the Middle East.

Monosynamma bohemani sabulicola (E. Wagner 1947)

1 ♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On shrubs along the river Meriç.

New record for Turkey.

This subspecies so far has been recorded from N. and C. Europe.

Campylomma verbasci (Meyer-Dür 1843)

1 ♂ and 1 ♀ — Edirne, 8.—13. VI. 1947. 1 ♂ — Hasanoğlan, 13. VII. 1947. 1 ♂ and 2 ♀♀ — Toros: Bürücek, 29.—31. VII. 1947. 3 ♀♀ — Adana, 1.—3. VII. 1947. (Exp. of the National Museum, Praha.)

On the low vegetation of steppe formation (Edirne) and wooded hill formation (Bürücek). Specimens from Hasanoğlan and Adana collected at dusk flying high above the ground.

New record for Turkey.

Species of Holomediterranean distribution, extending in steppe and leafy wood formations of Central Europe; in the Middle East recorded from Cyprus, Transcaucasia and Caucasia, in Central Asia from Turkestan.

Campylomma nicolasi Puton and Reuter 1883

1 ♀ — Edirne, 8.—13. VI. 1947. 1 ♂ and 1 ♀ — Hasanoğlan, 13. VII. 1947. 2 ♂♂ and 1 ♀ — Toros: Bürücek, 29.—31. VII. 1947. 15 ♂♂ and 19 ♀♀ — Adana, 1.—3. VIII. 1947. 4 ♂♂ and 8 ♀♀ — Abaçilar, 7. VIII. 1947. 2 ♀♀ — Adana (East), 14. VIII. 1947. 1 ♂ and 4 ♀♀ — Misis, 22. VIII. 1947. 3 ♀♀ — Alata, 26. VIII. 1947. (Exp. of the National Museum, Praha.)

On the low vegetation in steppe and wooded hill formation; at dusk flying high above the ground, predominantly in strongly cultivated areas.

These specimens constitute a new record for Turkey.

Species of Holomediterranean, distribution, in the Middle East recorded only from Transcaucasia and Egypt.

Campylomma annulicornis (Signoret 1865)

2 ♀♀ — Edirne, 8.—13. VI. 1947. 1 ♀ — Hasanoğlan, 13. VII. 1947. 3 ♀♀ — Adana, 1.—3. VIII. 1947. 1 ♀ — Karataş, 2.—5. VIII. 1947. (Exp. of the National Museum, Praha.)

On the low vegetation of steppe formation and at dusk flying high above the ground.

Up till now this species has been recorded in Turkey only from Aralik (Kiritshenko 1918).

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia.

Campylomma diversicornis Reuter 1878

43 ♂♂ and 56 ♀♀ — Adana, 1.—3. VII. 1947. 3 ♂♂ and 7 ♀♀ — Karataş, 2.—5. VIII. 1947. 1 ♂ and 1 ♀ — Abaçilar, 7. VIII. 1947. 4 ♂♂ and 5 ♀♀ — Gyaur dağlari, 17. VIII. 1947. 3 ♂♂ — Misis, 22. VIII. 1947. 2 ♂♂ and 1 ♀ — Alata, 26. VIII. 1947. (Exp. of the National Museum, Praha.)

Majority of the specimens collected at dusk while flying high above the ground in strongly cultivated areas; specimens coming from Gyaur dağlari were collected on the low vegetation of wooded hill formation.

This species has been recorded in Turkey only from Aralik (Horváth 1894).

Species of Pontomediterranean distribution, in the Middle East recorded from Transcaucasia, Iran and N. Iraq, in Central Asia from Turkestan.

Sthenarus (Phoenicocoris) pollinosus Horváth 1905

Konya—Kayseri, Yilanli dağ near Kayseri (Horváth 1905 a).

Up till now recorded only from the above-mentioned localities. It seems to be a species of endemic distribution, restricted to the Anatolian high plateau.

Sthenarus (Phoenicocoris) roseri (Herrich-Schäffer 1839)

Asia Minor (Oshanin 1909, 1912).

Species of Eurosiberian distribution; Asia Minor constitutes only record from the Middle East.

Sthenarus (Phoenicocoris) roseri var. **immaculatus** Stichel 1934

1 ♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On shrubs along the river Meriç.

Not recorded from Turkey. Variety described from Germany.

Sthenarus (Phoenicocoris) roseri var. **vittatus** Fieber 1861

4 ♂♂ and 12 ♀♀ — Edirne, 8.—13. VII. 1947. (Exp. of the National Museum, Praha.)

On shrubs along the river Meriç.

Variety listed from Europe and the Crimea not recorded from Turkey.

Sthenarus (Phoenicocoris) roseri var. **niger** Stichel 1934

1 ♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On shrubs along the river Meriç.

Variety described from Germany.

Sthenarus (Phoenicocoris) quercicola Reuter 1904

Menemen (Gediz) (Reuter 1904 b).

Known only from the above-mentioned type locality; probably species of the distribution restricted to Aegean part of Anatolia.

Auchenocrepis reuteri Jakovlev 1876

8 ♂♂ and 7 ♀♀ — Ankara-Baraj, 3.—4. VII 1947. (Exp. of the National Museum, Praha).

On *Tamarix* sp. in the border zone of cultivated areas.

This species has been recorded so far in Turkey from Izmir (Reuter 1878), Aralik (Horváth 1894, Kiritshenko 1918).

Species of Pontomediterranean distribution, in SW Asia recorded from Caucasia, Transcaucasia, Iran and N. Iraq, in Central Asia recorded from Turcomania and Turkestan.

Maurodactylus alutaceus var. **discifer** Reuter 1901

Amasya (Reuter 1901 b).

Probably species of Holomediterranean distribution, up till now recorded from Spain, variety *discifer* Reuter recorded from NW Anatolia and Turkomania.

Maurodactylus albidus (Kolenati 1845)

3 ♂♂ and 10 ♀♀ — Moğan gölü, 5. VII. 1947. (Exp. of the National Museum, Praha.)

On the low vegetation of steppe formation.

Up till now has been recorded in Turkey only from Aralik (Horváth 1894), Burulan (Kiritshenko 1918).

Species of Caspian distribution, in SW Asia recorded from Caucasia and Transcaucasia, in Central Asia from Turkestan.

Maurodactylus albidus var. **discoidalis** Reuter 1902

Amasya (Reuter 1902).

Variety recorded only from the above mentioned type-locality.

Tuponia eckerleini E. Wagner 1955

5 ♂♂ and 1 ♀ — Edirne, 8.—13. VI. 1947. (Exp. of the National Museum, Praha.)

On shrubs in the border zone of steppe formation.

This species is described from Mediterranean (type locality: Au Champ du Bés).

Up till now there is recorded from Turkey *Tuponia tamaricis* (Perris 1857) only from Aralik (Horváth 1894 and Kirithenko 1918). This record belongs probably for an another species.

Tuponia hippophaës (Fieber 1861)

3 ♂♂ and 4 ♀♀ — Edirne, 8.—13. VI. 1947. 6 ♂♂ and 7 ♀♀ — Ankara-Baraj, 3.—4. VII. 1947. 1 ♀ — Adana, 1.—3. VIII. 1947. (Exp. of the National Museum, Praha.)

Predominatly on *Tamarix* sp.

These specimens constitute a new record for Turkey.

Species of Holomediterranean distribution; in the Middle East recorded from Israel, Cyprus and Egypt.

Tuponia seidenstückeri E. Wagner 1955[2])

166 ♂♂, 161 ♀♀ and 19 nymphs — Toros: Feke, 12. VIII. 1947. (Exp. of the National Museum, Praha.)

On *Tamarix* sp. on the sandy bank of the river Göksu.

Known from the type locality: Maraş.

Tuponia concinna (Reuter 1875)

Aralik (Horváth 1894, Kiritshenko 1918).

Species of Pontomediterranean distribution, extending westwards as far as Algeria; in SW Asia recorded from Caucasia, Transcaucasia and Israel, and in Central Asia from Turkestan.

Hallodapus suturalis (Herrich-Schäffer 1839)

1 ♀ (macropterous form)—Adana, 1.—3. VIII. 1947. 1 ♀ (macropterous form) — Alata, 26. VIII. 1947. (Exp. of the National Museum, Praha.)

At dusk flying high above the ground in the strongly cultivated regions.

The specimens constitute a new record for Turkey.

Species of Holomediterranean distribution, in SW Asia recorded from Caucasia and Transcaucasia, in Central Asia from Turkestan.

Systellonotus putoni Reuter 1890

1 ♂ — Erciyas dağı, 24. VII. 1947, 2.700 m. (Exp. of the National Museum, Praha.)

On the ground below growth of *Astragalus* and *Acantholimon*.

This specimen constitutes a new record for Turkey.

Species of Holomediterranean distribution, has not been recorded from the Middle East.

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[2]) While this paper was in press issued E. Wagner's "Tuponia Reut. (Heteropt. Miridae) genusunun sistematiği hakkinda. Beitrag zur Systematik der Gattung Tuponia Reut. (Heteropt. Miridae)". — *Rev. Fac. Sci. Univ. Istanbul*, B, 20: 257—266, 28 figs, 1955. In this paper is described *Tuponia seidenstückeri* E. Wagner, which is identical with the specimens collected in Feke, I considered as new (under an another name), too. In the mentioned paper there are further species of the genus *Tuponia* Reut. recorded from Asia Minor: *T. carayoni* E. Wag. 1955 and *T. eckerleini orientalis* E. Wag. 1955 (from Posanti, Adana, Maraş, Tartus).