

Homopterological Reports I-III

(Homoptera, Auchenorrhyncha)

With 50 Figures

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Summary. The paper consists of the following reports. I. Occurrence of *Megamelus flavus* CRAWF. (Delphacidae) in the Far East. In Mongolia, Eastern Siberia and the Far East there occurs *Megamelus flavus* CRAWF., but not *M. notula* (GERM.); differences of both species as well as some asiatic localisations are listed. II. Notes on the genus *Pastiroma* DLAB. (Delphacidae). *Pastiroma* DLAB. is represented by 3 species, *P. clypeata* (HÖRV.), comb. n. (= *odessana* DLAB., syn. n.), *P. transbaikala* (KUSN.), sp. dist. and *P. melanthes* EM.; differences of these species in the key form and data on their distribution including the new ones are given. III. New synonyms and new names of Auchenorrhynchos insects. 1. The synonymy of *Ribantodolophax albostrigatus* (FIEB.) and *Calligypona vicina* LNV, as well as penis variability of the species are shown. 2. The synonymy of *Gargara parvula* LINDB., *G. alba* FUNKH. and possibly *Sypylus minutus* KATO is proved, male genitalia of the species are described and new data on distribution are added. *Kotogargara* MATS. is restricted to subgeneric range of *Gargara* A. S. 3. *Macropsis punctata* MIT. is considered as junior synonym of *M. notata* (PROH.). Phenotypic variability of the species and new data on its distribution are discussed. 4. *Macropsis fuscicornis* (BOH.) and *M. nigricutatum* MIT. are considered as synonyms; it is firstly recorded from Kurile Islands. 5. *Batra comorplus punctilligerus* ANUFR., nom. n. pro *B. punctatissimus* ANUFR., non MEL. is suggested.

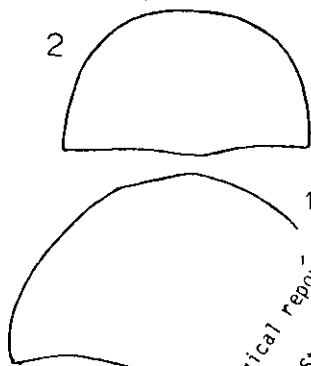
New data on taxonomy and distribution of some Auchenorrhynchos insects are being constantly accumulated during my work with the group. I have decided to publish these separate data as a series of short notes under the general title "Homopterological Reports". Three such notes are given in this paper.

Below in the text the following abbreviations are used to denote places where the materials mentioned in the paper are kept: GSU - Gorky State University, Gorky, USSR; MM - Moravian Museum in Brno, Czechoslovakia; SMTD - Staatliches Museum für Tierkunde Dresden, DDR; UZIN - Zoological Institute, Acad. Sci. Ukrainian SSR, Kiev, USSR; ZIN - Zoological Institute, Acad. Sci. USSR, Leningrad, USSR; ZINK - Zoological Institute, Acad. Sci. Kazakh SSR, Alma-Ata, USSR; ZAI - Zoological Museum of Moscow State University, Moscow, USSR.

I express my gratitude to Dr. A. F. EMELJANOV (ZIN), Dr. R. EMMRICH (SMTD), Dr. P. LAUTERER and Dr. J. STEHLIK (MM), Dr. R. LINNAVUORI (Raisio, Finland), Dr. V. N. LOGVINENKO (UZIN), Dr. E. G. MATYS (Institute of the Biological Problems of the North, Far East Centre, Acad. Sci. USSR, Magadan, USSR), Dr. I. D. MELIAEV (ZINK), Dr. A. I. SCHIATAKIN and Dr. E. M. ANTONOVA (ZM) for loan of some materials used in this study.

1. Occurrence of *Megamelus flavus* CRAWF. (Delphacidae) in the Far East

Looking through my Far Eastern materials of the genus *Megamelus* FIEBER, 1866 I found that they actually belong to *M. flavus* CRAWFORD, 1914 known by now only from the North America (SCUDDER, 1964) but not to *M. notula* (GERMAR, 1830) as considered earlier. Both species are closely allied but differing in the peculiarities listed below.



Isomira (Asiomira) kelcinikovae DUBR'

♀ wie ♂, aber der des Clypeus (5:7 nicht verbreitete

Die neue Art aber dadurch des weit zwischen Form

Dir

ist doppelt so breit wie der Vorderrand
er etwas kürzer; Glieder der Vordertarse

kelcinikovae DUBROVINA, unterscheidet sich die Flügeldecken ohne Spur einer Furche sind, der Hinterbrust glänzend. Beträchtliche Differenz Form des Halsschildes (Fig. 1, 2) sowie in der

er und Forschungsreisenden W. STÖTZNER gewidmet, weite und auch die vorliegenden Tiere sammelte.

Literatur

- A new subgenus and new species of Pollen Beetles of the subgen. (Coleoptera, Alleculidae) from Middle Asia. - Rev. d'Ent. 367-376.
Isomira-Arten (Col., Alleculidae) Mitteleuropas und des Mittel-Europas. - Entomol. Blätter 70 (2), pp. 65-128.

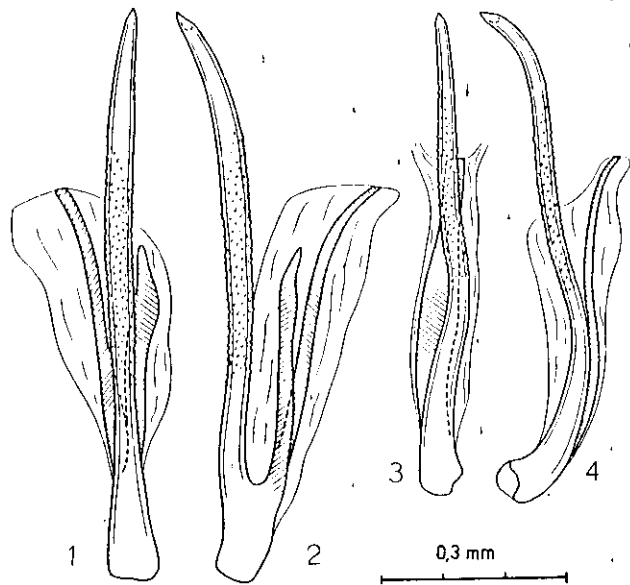
Autors:

DDR 8142 Radeberg, Postfach 62

Fig. 1, 2 - Penis. *Isomira* (Asiomira)
4 - Penis (2+4 nach DUBROVINA).

NGEN
 Check
 P. P. P.

Reichenbachia, Mus. Tierk. 1981
 OLLI RAB
 S. P. P. P.
 Homopterological reports I-III. (Homoptera, Auchenorrhyncha).
 Staatliches Museum für Tierkunde, Dresden
 Taxonomy of *Gargara* and *Kotogargara*
 Reichenbachia (Staatliches Museum für Tierkunde, Dresden) 19(28):159-173.
 Anufriev, G. A. 1981a. Auchenorrhyncha. Reichenbachia (Staatliches Museum für Tierkunde, Dresden) 19(28):159-173.
 Anufriev, G. A. 1981b. Auchenorrhyncha. Reichenbachia (Staatliches Museum für Tierkunde, Dresden) 19(28):159-173.



Figs. 1-4. 1-2: *Megamelus notula* (GERM), specimen from Litva, Zhuvintas Reservation, 1 - penis from below, 2 - penis from side. 3-4: *Megamelus flavus* CRAWF, specimen from Kurile Islands (Shikotan Isl., Tserkovnaya Bay). 3 - penis from below, 4 - penis from side.

M. notula (GERM.) (Figs. 1-2)

Penis shaft nearly straight, with apex only slightly curved ventrally.

Aedeagal brace of theca not set close to base of penis.

Theca besides aedeagal brace is supplied with strong tooth.

Comparison of Far Eastern materials of *M. flavus* with American ones kindly loaned by Dr. E. C. MATYS shows their full conspecificity.

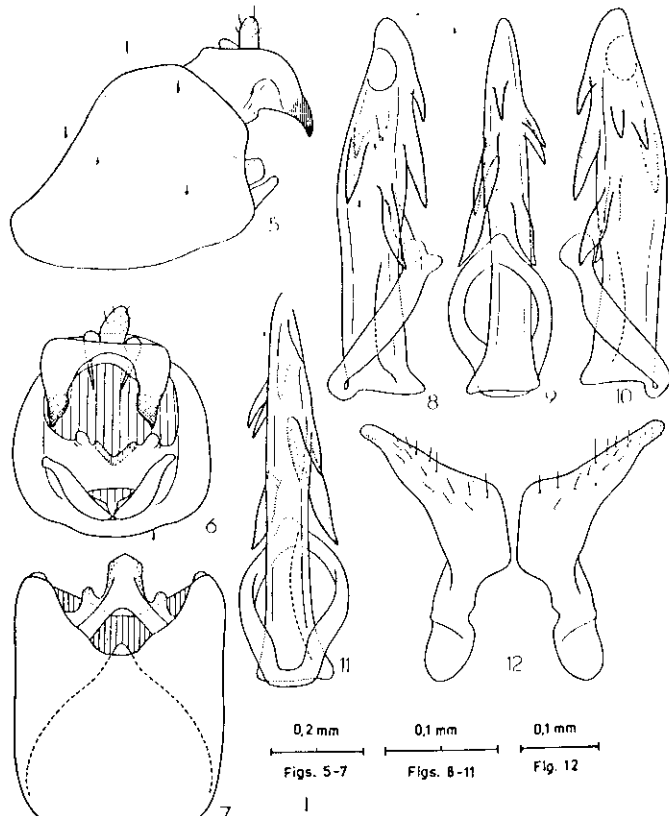
Since *M. flavus* easily confused with well known *M. notula* widely distributed in western part of Palaearctic Region was discovered in the Far East it is necessary to specify limits of distribution of both species in order to revise and confirm or disprove all earlier records of *M. notula* from Asiatic part of Palaearctic, from Kazakhstan (EMELJANOV, 1969; MITJAEV, 1975), Tuva Autonomous Republic (VILBASTE, 1980), Mongolia (ILABCHIA, 1967 b; EMELJANOV, 1977), Sakhalin and Kurile Islands (ANUFRIEV, 1977), Japan (ISHIHARA, 1952; MOCHIDA & OKADA, 1971). As contribution to this I may offer the list of Asiatic specimens revised by me.

M. flavus CRAWF. (Figs. 3-4)

Penis shaft markedly undulatory.

Aedeagal brace of theca set close to base of penis.

Theca has no additional tooth.

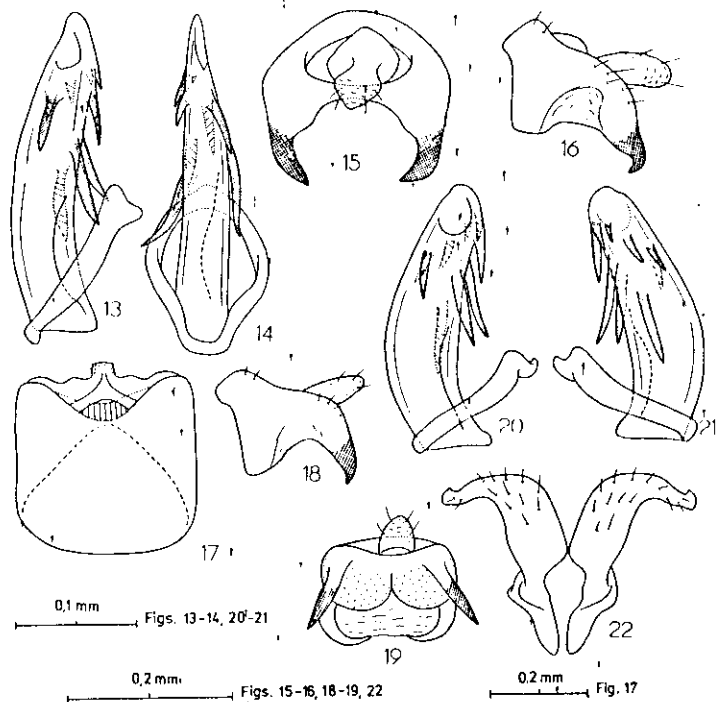


Figs. 5-12. *Pastiroma clypeata* (HORV), type specimen from Szamosfalva. 5 - male genital segment from side, 6 - the same from behind, 7 - the same from below, 8 - penis from the right, 9 - penis from above, 10 - penis from the left, 11 - penis from below, 12 - styles on the plate.

Megamelus hotula (GERMAR, 1830) (Figs. 1-2)

Kazakhstan: Kokshetau, July 31, 1957, 1 male, EMELJANOV coll. (ZIN); Tselinograd Region, 38 km SW Malyy Sarybulak, July 24, 1954, 2 males and 1 female, MITJAEV coll. (GSU).

Distribution. Europe, Kazakhstan, ? W. Siberia, ? Altai Mountains, ? Tuva Autonomous Republic, ? Mongolia.

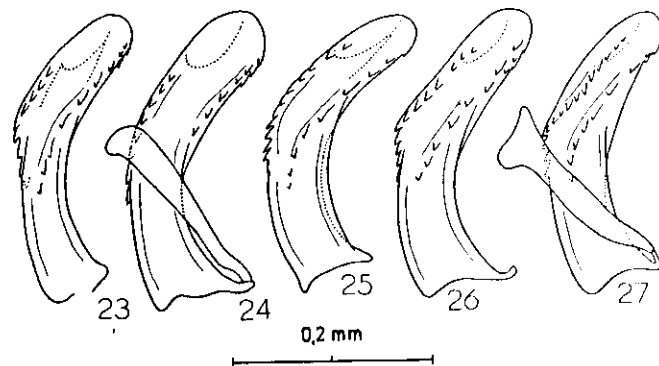


Figs. 13-22. 13-16: *Pastiroma transbaicalica* (KUSN.), specimen from Mongolia, 50 km E Ulangom. 13 - penis from the right, 14 - penis from below, 15 - anal tube from behind, 16 - the same from side. 17-22: *Pastiroma melanthes* EM., type specimen from Mongolia, Yelkhon. 17 - male genital segment from below, 18 - anal tube from side, 19 - the same from behind, 20 - penis from the right, 21 - penis from the left, 22 - styles on the plate.

Megamelus flavus CRAWFORD, 1914 (Figs. 3-4)

Megamelus notula, non GERMAR - ANUFRIEV, 1977: 861; EMELJANOV, 1977: 108.

Mongolia: Ara-Khangai aimak, 10 km NW Tsetserleg, Aug. 31, 1967, 2 males and 5 females, EMELJANOV coll. (ZIN). Yakutia: Amginskaya sloboda, Aug. 10-12, 1925, 78 specimens, BIANKI and IVANOV coll. (ZIN); Muorlyar, Anga-Yakutsk highway, Aug. 19, 1925, 1 female, BIANKI coll. (ZIN). Kurile Islands: all specimens listed by me earlier (ANUFRIEV, 1977) (ZIN, GSU); Shikotan Isl., Malokurilsk, July 20, 1976, 2 specimens, ANUFRIEV coll. (GSU); Kunashire Isl., Tretyakovo, Aug. 3, 1976, 11 imago and 12 larvae, ANUFRIEV coll. (GSU); Kunashire Isl., Sernovodsk and Sernovodsk-Alyokhino, Sept. 4-7, 1976, 36 specimens, ANUFRIEV coll. (GSU); Iturup Isl., Burevestnik, Aug. 20, 1976, 23 specimens, ANUFRIEV coll. (GSU); Sakhalin: Taranaï, June 24, 1973, 1 male, SEMENSOVA coll.

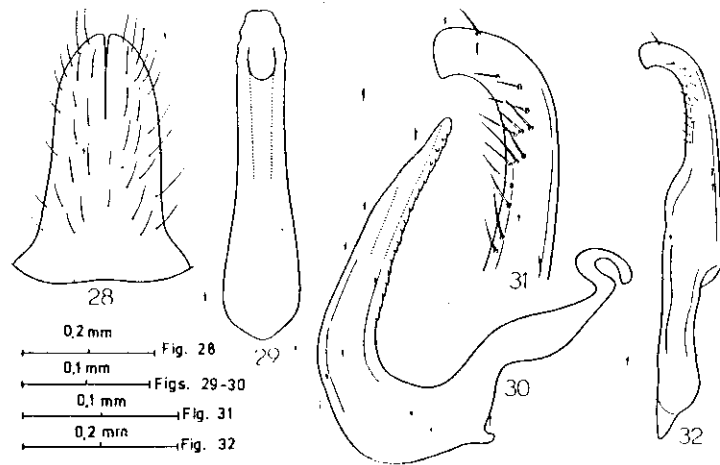


Figs. 23-27. *Ribautodelphax albostrigatus* (FIED), penis from side. 23 - holotype specimen of *Calligypona plicata* ENV. from Siberia; 24 - specimen from Gory Region; 25 - specimen from Penza Region, Lunino-Lomovka; 26 - specimen from Kazakhstan, Kamenka near Alma-Ata; 27 - specimen from Yakutia, between Yakutsk and Baischevskoe lake.

Distribution. North America (Alaska, Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba, Quebec, Colorado) (BEAMER, 1955; SCUDDER, 1964), Mongolia (new record), Yakutia (new record), Kurile Islands (Shikotan, Kunashire, Iturup Isl. (new records)), Sakhalin Isl. (new record), ? Japan (Hokkaido, Honshu) (ISHIHARA, 1952; MOCHIDA & OKADA, 1971).

II. Notes on the Genus *Pastiroma* DLAB. (Delphacidae)

Pastiroma was described by J. DLABOLA (1967a) during the examination of materials from Mongolia; as a type species *Calligypona odessana* DLAB. was designated; it was firstly described from the Southern Ukraine (DLABOLA, 1958) and by that time known from Rumania as well (DLABOLA, 1961). Later *P. melanthes* was described from Kirghizia and Mongolia (EMELJANOV, 1972) and *Eurysa transbaicalica* KUSN., the species known from Transbaicalia and Mongolia, was placed in the genus (EMELJANOV, 1977). V. N. LOGVINENKO (1975) considered *P. odessana* and *P. transbaicalica* to be synonyms; this point of view was adopted by J. VILBASTE (1980). All mentioned species were never compared though all of them were mentioned as separate by A. F. EMELJANOV (1969, 1972, 1977). So, it is not clear now how many species there are in the genus actually, in what they differ from each other and how they are distributed. Thanks to kindness of Dr. A. F. EMELJANOV and Dr. V. N. LOGVINENKO I have an opportunity to investigate a part of materials which were at their disposal and come to some conclusions about differences and partly about distribution of all species mentioned above; besides studying the type specimens of *Eurysa clypeata* HORN. from the collection of the Moravian Museum in Brno kindly loaned to me by Dr. P. LAJTERER, and Dr. J. STEHLIK I found that the species is identical with *P. odessana* (DLAB). The results of this investigation are given below.



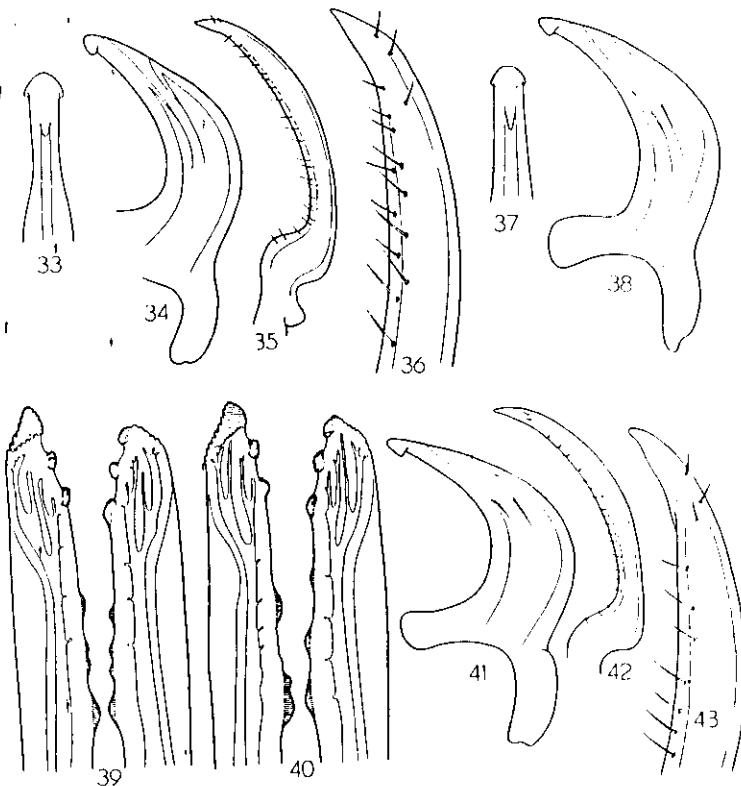
Figs. 28-32. *Gargara (Kotogargara) parvula* LINDL., specimen from the Soviet Maritime Territory, Khasan. 28 - genital plates, 29 - penis from above, 30 - penis from side, 31 - style apex, 32 - style.

The key for species of *Pastiroma*

- 1 (4) Males and females yellowish, with brown or black postclypeus, triangles of mesonotum and partly the sides of thorax and abdomen, styles comparatively abruptly narrowed from the middle, narrowly rounded at apex which is not widened. Penis comparatively long, the ratio of its length and greatest width is nearly 5.
- 2 (3) Anal tube processes right, with apices directed downwards. Penis with 7 teeth.
P. clypeata (HORV.) (Figs. 5-12)
- 3 (2) Anal tube processes curved, with apices directed inside. Penis with 9 teeth.
P. transbaicalica (KUSN.) (Figs. 13-16)
- 4 (1) Males black excluding legs, the second antennal segments, anteclypeus, rostrum and genae behind the carina which are brownish-yellow; posterior femorae in basal half and all coxae black. Females pale, brownish-yellow, without any patterns. Styles gradually narrowed, their apices broadened, with apical angle upwardly tapered. Anal tube with processes divergent. Penis supplied with 9 teeth; it is comparatively short, the ratio of its length and greatest width is less than 4.
P. melanthes EM. (Figs. 17-22)

Pastiroma clypeata (HORVÁTH, 1897), comb. n.

Euryssa clypeata HORVÁTH, 1897 b: 621. *Calligypona odessana* DIABOLA, 1958, syn. n.: 328-329, Abb. 50-54; 1961: 316. *Metadelphax odessana* - EMELJANOV, 1969: 367. *Pastiroma odessana* - MITJAEV, 1975: 22; LOGVINENKO, 1975: 165-166, fig. 139. *Pastiroma transbaicalica* - MITJAEV, 1979: 19-20.



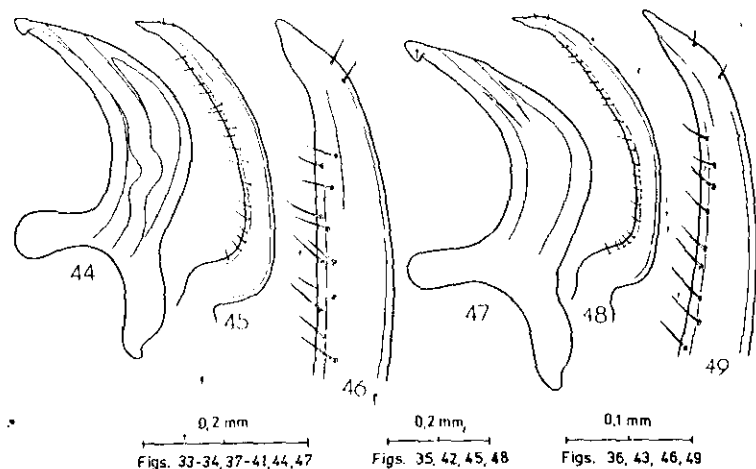
(Legend of figs. 33-43 see p. 166)

Materials investigated. Types of *Euryssa clypeata* HORV. (1 male and 1 female) with the labels: "Szamosfalva, 23. 6. 88", "HORVÁTH", "*Euryssa clypeata* HORV.", "Typus" (MM). The Ukraine: Kherson Region, Black-sea Reservation, June 21, 1968, 2 males, LOGVINENKO coll. (GSU). Kazakhstan: Betykdala, near Kense meteorological station, June 6, 1961, 1 male, EMELJANOV coll. (ZIN); 40 km S Zhana-Arka, May 24-30, 1960, 2 males, EMELJANOV coll. (ZIN). Kirghizia: 80 km W Naryp, July 16, 1966, 1 male, EMELJANOV coll. (ZIN).

Distribution. Austria, Hungary (HORVÁTH, 1897 b), Roumania (DIABOLA, 1961), the Ukraine (DIABOLA, 1958; LOGVINENKO, 1975), Kazakhstan (EMELJANOV, 1969; MITJAEV, 1975, 1979), Kirghizia (new record!)

Pastiroma transbaicalica (KUSNEZOV 1929) sp. dist.

Euryssa transbaicalica KUSNEZOV, 1929 b: 158. *Pastiroma odessana* - DIABOLA, 1967 a: 9, Abb. 6-11; 1967 b: 53; 1967 c: 139; 1967 d: 212; 1970: 3. *Pastiroma transbaicalica* - EMELJANOV, 1977: 116.



Figs. 33-49. *Macropsis notata* (PROLL). 33, 37 - penis apex from above; 34, 38, 41, 44, 47 - penis from side; 35, 42, 45, 48 - style; 36, 43, 46, 49 - style apex; 39, 40 - female inner gonapophyses. 33-36 - male specimen from Gorky Region, Staraya Pustyn'; 37-38 - the second male specimen from the same localisation; 39, 40 - two female specimens from the same localisation; 41-43 - male specimen from Krasnodar Region, Plastunovskaya; 44-46 - male specimen from N. Kazakhstan, 6 km W Arkalyk; 47-49 - male specimen from E. Kazakhstan, Razzdolny.

Materials investigated. Buryatia: Borgoi, July 18, 1928, macropterous female, LUKJANOVITSH coll. - holotype of *Eurysa transbaicalica* KUSN. (ZIN). Tchita Region: Kharanor station, June 3, 1963, 2 males, EMELJANOV coll. (ZIN). Sokhondo Reservation, Upper Bakukim, July 20, 1978, 1 macropterous female, ANUFRIEV coll. (GSU). Yakutia: Setgelyakh near Yakutsk, June 18, 1925, 2 males, BIANKI coll. (ZIN); Namskoc, 90 versts from Yakutsk, July 16, 1926, 1 brachypterous female, BIANKI coll. (ZIN). Mongolia: 50 km E Ulaanom, Ubsugol aimak, July 10-11, 1968, 3 males and 2 females, EMELJANOV coll. (ZIN); the lower Bogonchin-gol river 5 km SW Altay-somon, Kobdo aimak, Aug. 8, 1968, 1 male and 5 females, EMELJANOV coll. (ZIN).

Distribution. Buryatia (KUSNEZOV, 1929 b), Tchita Region (new record), Yakutia (new record), Mongolia (DLABOLA, 1967 a, 1967 b, 1967 c, 1967 d, 1970; EMELJANOV, 1977).

***Pastiroma melanthes* EMELJANOV, 1972**

Pastiroma melanthes EMELJANOV, 1972: 214-216, figs. 24-25, 1977: 116. Type series of the species was studied (ZIN).

Distribution. Kirghizia, Mongolia (EMELJANOV, 1972, 1977).

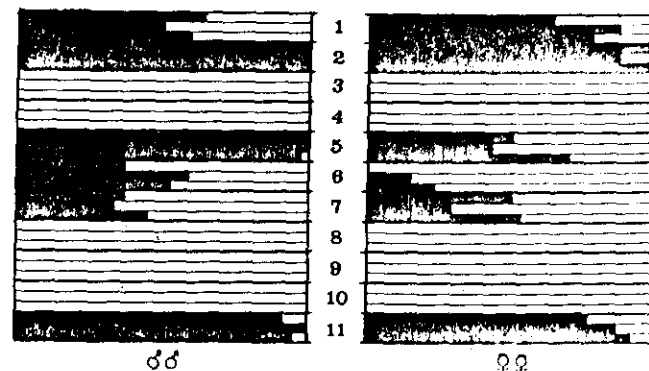


Fig. 50. Frequency of occurrence of pattern spots in *Macropsis notata* (PROLL), percentage of each spot (to the total number of specimens). Numbers of horizontal stripes correspond to numbers of spots in the text. Each wide stripe is subdivided into three narrow ones: the upper stripe shows the frequency of spot occurrence in specimens from Voroshilovgrad Region, the middle one - from Gorky Region, and the lower one - in all specimens examined from all localisations.

III. New Synonyms and New Names of Auchenorrhynchos Insects

1. ***Ribautodelphax albostriatus* (FIEBER, 1866) (= *Calgypona vicina* LINNAEUS, 1758), **syn. n.** (Delphacidae).**

Owing to the kindness of Dr. R. LINNAVUORI I had an opportunity to study the holotype specimen of *C. vicina* described from Western Siberia (LINNAVUORI, 1973). It is identical with *R. albostriatus* in outward appearance and in male genitalia, more narrow penis shaft in the holotype specimen in comparison with specimens of my collection is apparently the result of a few incorrect position of penis in the balsam slide mount. J. DLABOLA's (1970) record of *R. vicinus* from Mongolia does not apparently belong to *R. albostriatus* because real *R. albostriatus* is recorded from Mongolia by J. DLABOLA in the same work. There are good drawings of male genitalia of the species in the literature (VILBASTE, 1971; LOGVINENKO, 1975; OSSIANHSSON, 1978) but still I draw penis of specimens coming from various localisations (Figs. 23-27) to show its variability.

2. ***Gargara* (subgenus *Kotogargara* MATSUMURA, 1938, stat. n.) *parvula* LINDBERG, 1927 (= *Sipylus minutus* KATO, 1928; = *G. alini* FUNKHOUSER, 1940, **syn. n.**) (Membracidae).**

Gargara parvula LINDBERG, 1927 b: 27, figs. 5-10; METCALF & WADE, 1965: 345; NAST, 1972: 182. *Sipylus minutus* KATO, 1928 a: 15, Pl. 1; METCALF & WADE, 1965: 360-361. *Gargara alini* FUNKHOUSER, 1940: 144, fig. 1; METCALF and WADE, 1965: 361-362; NAST, 1972: 183.

I had an opportunity to study the paratype specimen of *G. parvula* from the Soviet Maritime Territory in the collection of Leningrad Zoological Institute and Manchurian

Formulas of pattern phenotypes	Zakarpatsky Region	Ivanovo-Frankovsk Region	Voronezh Region	Krasnodar Region	Georgia	Azerbaijan	Gorky Region	Moscow Region	Kazakhstan	Total
Males										
0 $\frac{1}{2}$ 00 1/2 00 000 :	:	:	1 :	:	:	1 :	:	:	:	1 :
0100 1/2 00 001 :	:	:	1 :	:	:	1 :	:	:	:	2 :
0100 10 00 001 :	:	:	1 :	:	:	1 :	:	1 :	:	3 :
0100 10 1/2 001 :	:	:	:	:	:	1 :	:	1 :	:	1 :
0100 11 1/2 00 001 :	:	:	:	:	:	2 :	:	1 :	:	2 :
0100 11 00 001 :	1 :	:	1 :	:	:	2 :	1 :	:	:	5 :
0100 11 10 001 :	:	:	1 :	:	:	1 :	:	1 :	:	1 :
1 $\frac{1}{2}$ 00 00 10 000 :	:	:	:	:	:	1 :	:	:	:	1 :
1 $\frac{1}{2}$ 00 1/2 10 001 :	:	:	1 :	:	:	:	:	:	:	1 :
1100 1/2 00 00 001 :	:	:	1 :	:	:	1 :	:	:	:	2 :
1100 1/2 10 00 1/2 :	:	:	1 :	:	:	:	:	1 :	:	1 :
1100 11 00 001 :	:	2 :	1 :	1 :	1 :	1 :	1 :	:	:	2 :
1100 10 00 001 :	:	:	1 :	1 :	1 :	1 :	1 :	:	:	1 :
1100 10 10 001 :	:	:	1 :	2 :	:	1 :	1 :	:	:	4 :
1100 11 00 001 :	2 :	:	:	:	:	:	:	:	:	2 :
1100 11 10 001 :	1 :	1 :	1 :	:	:	3 :	:	:	:	6 :
Total :	4 :	- :	11 :	4 :	- :	1 :	12 :	1 :	3 :	36 :
Females										
0 $\frac{1}{2}$ 00 00 00 001 :	:	:	2 :	:	:	1 :	:	:	:	2 :
0100 00 00 001 :	1 :	1 :	:	:	:	1 :	:	:	:	2 :
0100 1/2 10 000 :	:	:	1 :	1 :	:	:	:	:	:	1 :
0100 11 00 001 :	2 :	:	:	:	:	:	:	:	:	2 :
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1 $\frac{1}{2}$ 00 00 00 000 :	:	1 :	1 :	:	:	1 :	:	:	:	1 :
1100 00 00 001 :	:	1 :	:	:	:	2 :	:	:	:	3 :
1100 1/2 00 001 :	1 :	1 :	:	:	:	1 :	:	:	:	2 :
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1100 11 00 001 :	1 :	:	:	:	1 :	1 :	:	:	:	1 :
1100 10 00 001 :	:	:	:	:	:	1 :	1 :	:	:	1 :
1100 10 10 00 1/2 :	:	1 :	1 :	1 :	1 :	1 :	:	:	:	1 :
1100 10 10 001 :	:	2 :	1 :	1 :	1 :	1 :	:	:	:	3 :
1100 11 10 001 :	:	:	:	:	1 :	1 :	:	:	:	1 :
1100 11 10 001 :	2 :	:	:	1 :	1 :	1 :	:	:	:	3 :
Total :	8 :	1 :	8 :	- :	4 :	1 :	7 :	1 :	- :	30 :

Table 1. Phenotypic variability of pattern in *Macropsis notata* (PROHL) (number of specimens examined).

Pattern spots	Males			Females		
	Voronezhograd Region	Gorky Region	All specimens examined	Voronezhograd Region	Gorky Region	All specimens examined
Apical spot of face	7/63,6 ¹	6/50	21/58,3	5/62,5	6/65,7	23/76,7
Thyridial spots of face	11/100	12/100	36/100	6/100	6/65,7	23/76,7
Ocellar spots of face	0/0	0/0	0/0	0/0	0/0	0/0
Discoidal spots of face	0/0	0/0	0/0	0/0	0/0	0/0
Marginal spots of pronotum	11/100	12/100	35/97,2	4/50	3/42,9	21/70
Spots of mesonotum	4/36,3	7/50,3	19/52,8	0/0	1/14,3	11/31,3
Above epinotal spot	4/36,3	4/33,3	16/44,4	4/50	2/14,3	10/28,3
Epinotal spot	0/0	0/0	0/0	0/0	0/0	0/0
Tibial spot of fore legs	0/0	0/0	0/0	0/0	0/0	0/0
Tibial spot of hind legs	10/90,9	12/100	24/44,4	6/15	6/65,7	17/17,7
Total	11/100	12/100	36/100	6/100	7/100	23/100

Table 2. Frequency of occurrence of pattern spots (number of specimens/100 cent) in *Macropsis notata* (PROHL).

paratype specimens of *G. alimi* from the collection of Staatliches Museum für Tierkunde Dresden. This study shows the synonymy mentioned above. The picture of the type specimen of *S. minutus* from Taiwan in M. KATO's atlas (1933 a) resembles females of *G. parvula* (the same rusty colour, the same black longitudinal stripes in anterior part of pronotum etc.); the record of *G. parvula* from Oriental Region (Bukien) (JACOB, 1944) makes it more probable that the conclusion on synonymy of *G. parvula* and *S. minutus* made by J. VILBASTE (1968) is true. Differences of *Kotogargara* MATS. and *Gargara* A. S. listed by S. MATSUMURA (1938 a) are insignificant and therefore I prefer to restrict *Kotogargara* to subgeneric range before the genus *Gargara* as whole is investigated and its inner structure becomes clear.

Male genitalia of *G. parvula* were never described and figured, therefore I give the description below. Genital plates (Fig. 28) fused nearly along $\frac{2}{3}$ of its length; their total width nearly equal to half of their length. Style (Figs. 31-32) with long nearly parallel-sided apical part which is smoothly curved outside and truncated at the end. Penis (Figs. 29-30) nearly parallel-sided from above and gradually narrowed in profile; it has tile-like texture from below; gonopore subapical.

Materials examined. Soviet Maritime Territory - Spasskaja, Sept. 18, 1917, 1 specimen (paratype of *G. parvula* LINDB.), Y. WUGRENTAUS coll. (ZIN); Yakovlevka, Sept. 8, 1925, 2 specimens, DYAKONOV and FILIPIN coll. (ZIN); Vinogradovka, May 26, 1926, 2 specimens, KIRITSCHENKO coll. (ZIN); Vladivostok environs, June 26, 1927; 1 specimen, BELOV coll. (ZIN); Maikhe Forestry, June 8, 1929, 1 specimen, SHABLOVSKY coll. (ZIN); Kamen' Rybolov, Sept. 4, 1908, 1 specimen, CHERSKY coll. (ZIN); Kamen' Rybolov, May 22, 1908, 1 specimen, DEKIN coll. (ZIN); Suputinskij (Ussuriyskij) Reserve, July 16, 1937, 1 specimen, RICHTER coll. (ZIN); Mountain Forest Station near Ussuriysk, June 7, 1966, 6 females, ANUFRIEV coll. (ZM, GSU); Khasan, Aug. 6, 1966, 2 males, ANUFRIEV coll. (GSU). Manchuria: Erzendjanzsy, June 19, 1939, 2 specimens, V. N. ALIN coll. (paratypes of

G. alini FUNKH. (SMTD); June 14, 1953, 3 males and 5 females, V. N. ALIN coll. (ZM, GSU). North Korea: Koson, July 8, 1900, 1 specimen, SCHMIDT coll. (ZIN). Fukien: Kwangtich, Oct. 9, 1937, 2 specimens, J. KLAPPERICH coll. (SMTD).

Distribution. Soviet Maritime Territory (LINDBERG, 1927 b, 1929 b; VILBASTE, 1968). Manchuria (DIABOLA, 1955; FUNKHOUSER, 1940, 1951), Korea (K.D.P.R. (new record), Fukien (JACOBI, 1944), Taiwan (KATO, 1928 a, 1930 a, 1933 a, 1937 b; FUNKHOUSER, 1943, 1951). Record from Japan (METCALF & WADE, 1965: 357) is incorrect as a result of erroneous registration of *M. KATO's* (1933 a) record from Taiwan.

3. *Macropsis potata* (PROHASKA, 1923) (= *M. punctata* MITJAEV, 1971, syn. n.) (Cicadellidae, Macropsinae).

In the type series of *M. punctata* two species are mixed but the holotype corresponds to the description and figures of *M. notata* PROH. in W. WAGNER's excellent work (1950) on West European Salix-feeding representatives of the genus. Possessing materials of the species from the European part of the USSR I have an opportunity to compare them with the specimens from Kazakhstan and do not find any considerable differences (see Figs. 33-49). Peculiarities of male genitalia including the configuration and dimensions of penis, and styles correspond to W. WAGNER's (1950) description. All known localisations of *M. notata* including the firstly recorded here keep within the area of its fodder plant, Salix triandra L., as it is shown by H. E. MEUSEL et al. (1965) and by A. K. SKVORTSOV (1968, 1977).

Availability of materials from various localizations allows me to report information about phenotypic variability of the species absent in the literature. To designate variations of the pattern I use modified W. WAGNER's (1950) formula where figures 0, 1/2 and 1 mean the extent of spot development (0 - spot is absent, 1/2 - spot is only outlined, 1 - spot is normally developed). Figures in the formula are given in the following order: 1 - apical spot of face, 2 - thyridial spots of face, 3 - ocellar spots of face, 4 - discoidal spots of face, 5 - marginal spots of pronotum, 6 - spots of mesonotum, 7 - spot above pronotal episternum, 8 - spot on pronotal episternum, 9, 10, 11 - tibial spots of fore, middle and hind legs correspondingly. Data on phenotypes of specimens examined are given in Table 1.

Although the number of the specimens investigated from various localisations is not large nevertheless it is possible to make some conclusions on the nature of pattern variability of the species. Pattern variability is similar both in males and in females while in *M. prasina* (BOHEMAN, 1852) it is sexually different (KHOKHLOVA & ANUFRIEV, 1981). Frequency of occurrence of each pattern spot in specimens of *M. notata* is similar in both sexes in various localisations (Table 2); pattern phenograms of males and females resemble each other (Fig. 45). So, it is possible to conclude that *M. notata* possesses comparative homogeneity of populations in the most parts of its area and has no pronounced sexual dimorphism.

Material examined. The Ukraine: Zakarpatsky Region, Mukatchovo District, July 7, 1957, 1 male, LOGVINENKO coll. (UZIN). near Mukatchovo, Aug. 8, 1956, 3 males and 8 females, LOGVINENKO coll. (UZIN, GSU); Ivanovo-Frankovsk Region, July 14, 1958, 1 female, collector unknown (UZIN); Voroshilovgrad Region, Streletskaia Steppe, July 5-15, 1955, 11 males and 8 females, LOGVINENKO coll. (UZIN, GSU); Krasnodar Region, Plastunovskaya, June 5, 1966, 4 males, LOGVINENKO coll. (UZIN, GSU). Georgia: Lagodekhi, July 10, 1973, 2 females, LOGVINENKO coll. (UZIN, GSU); Sagaredzho, July 13, 1973, 2 females, LOGVINENKO coll. (UZIN, GSU). Azerbaijan: Talysh, Avrora, July 8, 1977, 1 male and 1 female,

LOGVINENKO coll. (UZIN). Gorky Region: Arzamas Area, Staraya Pustyn', June 30 - July 15, 1977, 12 males and 7 females, ANUFRIEV coll. (GSU, UZIN, ZINK). Moscow Region: Luzhki near Serpukhovo, June 22, 1947, 1 male from Salix triandra, ZHILTSOVA coll. (GSU). June 19, 1948, 1 female from Salix triandra, ZHILTSOVA coll. (ZM). Kazakhstan: Razdolny, June 15, 1962, 1 male (holotype of *M. punctata* MIT), MITJAEV coll. (ZINK); 6 km W Arkalyk, June 18, 1973, 2 males, MITJAEV coll. (ZINK, GSU).

Distribution. France, Netherlands, Austria, G.D.R./F.R.G., Italy, Czechoslovakia, Poland, Roumania, Yugoslavia (NAST, 1972); USSR: Ukraine, Georgia, Azerbaijan, Gorky and Moscow Regions (new records), Kazakhstan (MITJAEV, 1971, 1979).

4. *Macropsis fuscineris* (BOHEMAN, 1845) (= *M. nigricutum* MITJAEV, 1971, syn. n.) (Cicadellidae, Macropsinae).

The synonymy is ascertained by the comparison of holotype of *M. nigricutum* loaned to me by Dr. H. D. MITJAEV with the European and Asiatic materials of *M. fuscineris* from my collection. Slight differences in penis proportions seem to be the result of geographical variability and can not be considered essential; characteristic pattern including the band of forewings as well as feeding of both species on aspens remove all doubts in their synonymy.

Materials examined. Holotype male of *M. nigricutum* MIT with the label. Alma Ata, Botanical gardens, from asp. June 16, 1966, MITJAEV coll. (ZINE). Gorky Region: Staraya Pustyn', June 13-21, 1977, 33 specimens from asp. ANUFRIEV coll. (GSU). Kurile Islands: Kunashire Isl. Dubovoe, July 13, 1976, 1 male from asp. KORNEV coll. (GSU). Chita Region: Sokhondinsky Reserve, Bokukun, July 9-27, 21 specimens from asp. ISAEV coll. (GSU).

Distribution. Europe, Siberia, Kazakhstan, China (Sikiang) (NAST, 1972; VILBASTE, 1980). Kurile Islands (new record).

5. *Batracomorphus punctilligerus* ANUFRIEV, nom. n. pro *B. punctatissimus* ANUFRIEV, 1971, non MELICHIAR, 1908 (Cicadellidae, Lassinae).

Dr. A. R. V. KUMAR (Bangalore College of Agriculture, India) kindly attracted my attention to the homonymy of *B. punctatissimus* (MELICHIAR, 1908) and *B. punctatissimus* ANUFRIEV, 1971 which appeared due to transferring of *Batracomorphus punctatissimus* MEL. to *Batracomorphus* LEW. by R. LINNAVUORI and J. A. QUARTAU (1975). Now I suggest the new name *B. punctilligerus* for *B. punctatissimus* ANUFRIEV, non MELICHIAR.

References

- List of references comprises only those papers which have not been covered by Bibliography of Z. P. METCALF (1942).
- (ANUFRIEV, G. A., 1971). Новые виды Cicadellidae (Homoptera) из Приморского края. - Зоол. журн. 50, 5: 677-685.
- (-, 1977). - Цикадовые семейства Delphacidae (Homoptera, Auchenorrhyncha) фауны Курильских островов - Зоол. журн. 56, 6: 855-869.
- BEAMER, R. H., 1955: A revision of the genus *Megamelus* in America North of Mexico (Homoptera, Fulgoridae, Delphacinae). - J. Kans. Ent. Soc. 28: 29-46.
- DLABOLA, J., 1954: Křisi - Homoptera. - Fauna CSR, 1. Praha: 1-340.
- (-, 1955: Faunistika a některé nové druhy Palearktických křisů. - Acta Ent. Mus. Nat. Pragae 30, 446: 121-128.
- (-, 1958: Zikaden-Ausbeute vom Kaukasus (Homoptera Auchenorrhyncha). - Acta Ent. Mus. Nat. Pragae 32, 509: 317-352.
- (-, 1961: Neue und bisher unbeschriebene Zikaden-Arten aus Rumänien und Italien (Hom., Auchenorrh.). - Acta Soc. Ent. Cechoslav. 58, 4: 310-323.

- , 1967 a: Ergebnisse der 1. mongolisch-tschechoslovakischen entomologisch-botanischen Expedition in der Mongolei. Nr. 1: Reisebericht, Lokalitätenübersicht und Beschreibungen neuer Zikadeparten (Homopt. Auchenorrhyncha). — Acta Faun. Ent. Mus. Nat. Pragae 12, 115: 1–34.
- , 1967 b: Ergebnisse der 1. mongolisch-tschechoslovakischen entomologisch-botanischen Expedition in der Mongolei. Nr. 3: Homoptera Auchenorrhyncha (Ergänzung). — Acta Faun. Ent. Mus. Nat. Pragae 12, 118: 51–102.
- , 1967 c: Ergebnisse der zoologischen Forschungen von Dr. Z. KASZAB in der Mongolei. Nr. 122: Homoptera-Auchenorrhyncha. — Acta Faun. Ent. Mus. Nat. Pragae 12, 123: 137–152.
- , 1967 d: Ergebnisse der 2. mongolisch-tschechoslovakischen entomologisch-botanischen Expedition in der Mongolei. Nr. 12: Reisebericht, Lokalitätenübersicht und Bearbeitung der gesammelten Zikaden (Homopt. Auchenorrh.). — Acta Faun. Ent. Mus. Nat. Pragae 12, 131: 207–230.
- , 1970: Ergebnisse der zoologischen Forschungen von Dr. Z. KASZAB in der Mongolei. 220. Homoptera: Auchenorrhyncha. — Acta Zool. Acad. Sci. Hungaricae 16, 1–2: 1–25.
- (EMELJANOV, A. F., 1969). Емельянов, А. Ф.: Цикадовые (Homoptera, Auchenorrhyncha). — В кн.: Биологические исследования в Казахстане. Ч. I. Растительные сообщества и животное население степей и пустынь Центрального Казахстана. Л.: 358–381.
- (—, 1972). —: Новые цикадовые из Монгольской Народной Республики (Homoptera, Auchenorrhyncha). — В кн.: Пасекомые Монголии, вып. 1. Л.: 199–260.
- (—, 1977). —: Цикадовые (Homoptera, Auchenorrhyncha) Монгольской Народной Республики преимущественно по материалам Советско-Монгольских зоологических экспедиций 1967–1969 годов. — В кн.: Пасекомые Монголии, вып. 5. Л.: 96–195.
- FUNKHOUSER, W. D., 1943: Synonymy of the Membratidae of Formosa. — J. N. Y. Ent. Soc. 51, 4: 265–275.
- , 1951: Homoptera, Fam. Membracidae. — Genera Insectorum 208: 1–383, pls. 1–14.
- ISHIHARA, T., 1952: Delphacidae of Oze, Honshu, Japan (Hemiptera). — Insecta Matsumurana 18: 35–37.
- JACOBI, A., 1944: Die Zikadenfauna der Provinz Jukien in Südchina und ihre tiergeographischen Beziehungen. — Mitt. Münch. Ent. Gesell. 34: 5–66.
- (KHOKHLOVA, S. Ju., ANUFRIEV, G. A., 1981). Хохлова, С. Ю., Ануфриев, Г. А.: Изменчивость окраски и рисунка в двух отдаленных популяциях цикадки *Macropsis prasina* (BOHEMAN, 1852) (Homoptera, Cicadellidae). — Вестн. зоол. 1: 47–51.
- LINNAVUORI, R., 1953: Hemipterological studies. — Ann. Ent. Fenn. 19, 3: 107–118.
- LINNAVUORI, R., QUARTAU, J. A., 1975: Revision of the Ethiopian Cicadellidae (Hemiptera — Homoptera): Jassinae and Acroponinae. — Etud. Cont. African 3: 1–170.
- (LOGVINENKO, V. N., 1975). Логвиненко, В. М.: Фулгуроидні цикадові Fulgoroidea — фауна України, т. 20, вип. 2. Київ: 1–287.
- METCALF, Z. P., 1942: Bibliography of the Homoptera (Auchenorrhyncha). In 2 volumes. Raleigh, N. C.: 1–886 + 1–186.
- METCALF, Z. P., WADE, V., 1965: Membracoidea. P. 1 Membracidae. P. 2 Actaloniidae. P. 3 Bituritiidae. P. 4 Nicomiidae. — Gen. Cat. Homopt., 1, suppl. (in two sections). Raleigh, N. C.: 1–1560.
- MEUSEL, H. E., JÄGER, E., WEINERT, E., 1965: Vergleichende Chorologie der zentral-europäischen Flora. Jena: 1–346 + 1–258 (Karten).
- (MITJAEV, I. D., 1971). Митяев, И. Д.: Цикадовые Казахстана (Homoptera, Cicadinea). Определитель. Алма-Ата: 1–211.
- (—, 1975). —: фауна и биология цикадовых Казахстана. Алма-Ата: 1–180 (депонированная рукопись, ВИШНТИ № 1577–75).
- (—, 1979). —: Цикадовые Северного Казахстана. Алма-Ата: 1–135 (депонированная рукопись, ВИШНТИ № 1190–79).
- MOSHIDA, O., OKADA, T., 1971: A list of the Delphacidae (Homoptera) in Japan with special reference to host plants, transmission of plant diseases, and natural enemies. — Bull. Kyushu Agric. Exp. Sta. 15: 737–843.
- NAST, J., 1972: Palaearctic Auchenorrhyncha (Homoptera). An annotated check list Warszawa: 1–550.
- ANUFRIEV: Homopterological Reports 1–III
- OSSIANNILSSON, F., 1978: The Auchenorrhyncha (Homoptera) of Fennoscandia and Denmark. Part 1: Introduction, infraorder Fulgoromorpha. — Fauna Ent. Scandinavica 7, 1: 1–222.
- SCUDDER, G. G. E., 1964: Studies on the Canadian and Alaskan Fulgoromorpha (Hemiptera). II. The genus *Megamelus* Fieber (Delphacidae). — Canad. Ent. 96, 6: 813–820.
- (SKVORTSOV, A. K., 1968). Скворцов, А. К.: Ивы СССР. Систематический и географический обзор. М.: 1–262.
- (—, 1977). —: Карта 57. Арсали видов р. Salix. — В кн.: Арсали деревьев и кустарников СССР, т. 1. Л.: 1–164 + 91 карта.
- (VILBASTE, J., 1968). Вильбасте, Ю.: К фауне цикадовых Приморского края. Таллин: 1–180.
- , 1971: Eesti tirdid. Homoptera: Cicadinea I. Tallinn: 1–284.
- (—, 1980). —: фауна цикадовых Тувы. Таллин: 1–219.
- WAGNER, W., 1950: Die salicicolen *Macropsis*-Arten Nord und Mitteleuropas. — Not. Ent. 30: 81–114.

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