

FAUNISTISCHE ABHANDLUNGEN

Staatliches Museum für Tierkunde Dresden

Band 21

Ausgegeben: 30. September 1997

Nr. 4

New distributional records for several Palaearctic Chrysomelidae species with some systematic remarks (Insecta: Coleoptera)

With 23 Figures and 1 Table

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Abstract. New data on the distribution of *Donacia gracilicornis*, *D. ussuriensis*, *Neohaemonia voronovae*, *Chrysolina carnifex carnifex*, *Ch. koltzei lamii*, *Ch. septentrionalis*, *Ch. tesari*, *Oreina basilea basilea*, *Luperus semiflavus* and *Longitarsus plantagomaritimus* are presented. The systematic position of *N. voronovae* and *Ch. koltzei* is discussed. The holotype of *Ch. septentrionalis* was examined. The lectotype of *Luperus semiflavus* was designated. Diagnostic characters of all species and subspecies are included.

Kurzfassung. Neue Angaben zur Verbreitung einiger palaearktischer Arten der Chrysomelidae mit Anmerkungen zur Systematik (Insecta: Coleoptera). – Neue Daten zur Verbreitung von *Donacia gracilicornis*, *D. ussuriensis*, *Neohaemonia voronovae*, *Chrysolina carnifex carnifex*, *Ch. koltzei lamii*, *Ch. septentrionalis*, *Ch. tesari*, *Oreina basilea basilea*, *Luperus semiflavus* und *Longitarsus plantagomaritimus* werden vorgelegt. Die systematische Stellung von *N. voronovae* und *Ch. koltzei* wird diskutiert. Der Holotypus von *Ch. septentrionalis* wurde untersucht. Der Lectotypus von *Luperus semiflavus* wurde festgelegt. Diagnostische Merkmale aller Arten und Unterarten sind eingeschlossen.

Introduction

The distribution of Palaearctic Chrysomelidae is sufficiently studied on the whole in our time. Therefore the new data included in the present article are of special interest. All descriptions and figures are made from the specimens from new localities. The materials studied were kindly placed at my disposal by Dr. L.N. MEDVEDEV, Dr. O.N. KABAKOV and Mr. M.O. SKOMOROKHOV, also found during the systematic treatment of the Chrysomelidae collection of the Zoological Institute of Russian Academy of Sciences, St.-Petersburg and Zoological Museum of Moscow State University, or collected by the author. The specimens from new localities are in the author's collection, if not indicated otherwise.

Donacia gracilicornis JACOBSON, 1899

Before known distribution (Fig. 1, 1). Transcaucasia: Georgia, Abkhazia, Azerbaijan (ZAITZEV, 1930), Iran: Caspian Sea shore (BERTI & RAPILLY, 1976).

New record (Fig. 1, 1). Russia: Krasnodar Territory, between Sochi and Dagomys, near Mamajka, pond, on *Sparganium* spec., 1.9.1992: 1 ♀ (died beetle), A.O. BIEŃKOWSKI leg. *Donacia gracilicornis* is wide spread in Transcaucasia and found in the North Caucasus first.

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Description (♀). Body including legs dark bronze, pro- and mesothorax greenish, shining above, antennae and tarsi dark blue, head with golden pubescence, ventral surface with white, golden shining pubescence.

Pronotum covered by dense large punctures, as long as wide. Mesosternite as wide as coxa.

Elytra (Fig. 4). Rows with large punctures of similar size the full length of elytra. Puncture rows distinct up to elytra apex. Intervals between rows flat, covered by fine dense wrinkles. Interval 1 (near suture) with transverse wrinkles. Epipleura twice narrower than the extreme lateral interval.

Abdomen. Last sternite triangularly tapered. Pygidium with deep emargination at apex.

Legs. Hind femur moderately clavate, bearing small obsolete tubercle at lower side near apex (Fig. 5).

Length 9.0 mm, width 3.2 mm.

Remarks. The diagnostic characters of the described specimen check with the description by SUMAKOV (1909).

Diagnosis. *D. gracilicornis* belongs to the species group which would be characterized by the following features: elytra truncate apically, pronotum punctured, elytral intervals densely fine wrinkled, epipleura twice narrower than the extreme lateral interval, legs of metallic colour, hind femur not go beyond apex of abdomen and bearing small or obsolete tubercle. Species of this group are distinguished by the following key:

Key to species

- 1(2) Shining above. Elytra with puncture rows distinct up to apex, punctures large, of equal size the full length of elytra, interval 1 with transverse wrinkles (Fig. 4). ♂: body narrow, pronotum slightly longer than wide, greyish-metallic above, sometimes elytra with reddish or violaceous lateral band. ♀: body broad, pronotum as long as wide, dark bronze above.

D. gracilicornis JACOBSON, 1899

- 2(1) Dull above. Punctures become smaller and rows indistinct towards apex of elytra.

- 3(4) Elytra with interval 1 mostly transversely wrinkled. Bronze, rarely cupreous above, elytra with lateral violaceous band.

D. marginata HOPPE, 1795

- 4(3) Elytra with interval 1 longitudinally wrinkled. Cupreous or bronze above.

D. impressa (PAYKULL, 1799)

Additional materials. *D. gracilicornis*. Georgia: Poti: 1 ♂. – *D. marginata*. ♂♂ and ♀♀ from different localities in Russia and Ukraine. – *D. impressa*. 1 ♂, ♀♀ from the Crimea: Simferopol, Alushta and Yalta.

Donacia ussuriensis L. MEDVEDEV, 1973

Before known distribution (Fig. 1, 2). Russia: South of Primorski Krai, Tumangan river (MEDVEDEV, 1973; DUBESHKO & MEDVEDEV, 1989).

New record. Russia: Amur reg., Shimanovsk Distr., N.-Voskresenovka river, 3.8.1971: 1 ♂, Yu.M. ZAITZEV leg. Up to now *D. ussuriensis* was found only from the type locality; the new location is 1000 km distant from that to the north.

Description (♂). Pronotum and elytra blackish-violaceous, very shining, with golden reflection, which more distinct laterally, head entirely black, frons with weak golden reflection, antennomeres 1–5 except bases, 6–11 in apical ½, femora dorsally in apical ½, tibiae in apical ½ black, other parts of antennae and legs reddish, ventral body surface looks silvery-white because of dense short close-fitting hairs.

Head. Anterior frontal tubercles slightly convex, posterior ones obsolete.

Thorax. Pronotum (Fig. 6) with weak anterior and posterior lateral tubercles and strongly pressed middle line, shining, devoid of punctures, covered by fine transverse furrows mostly at sides. Mesosternite as wide as coxa.

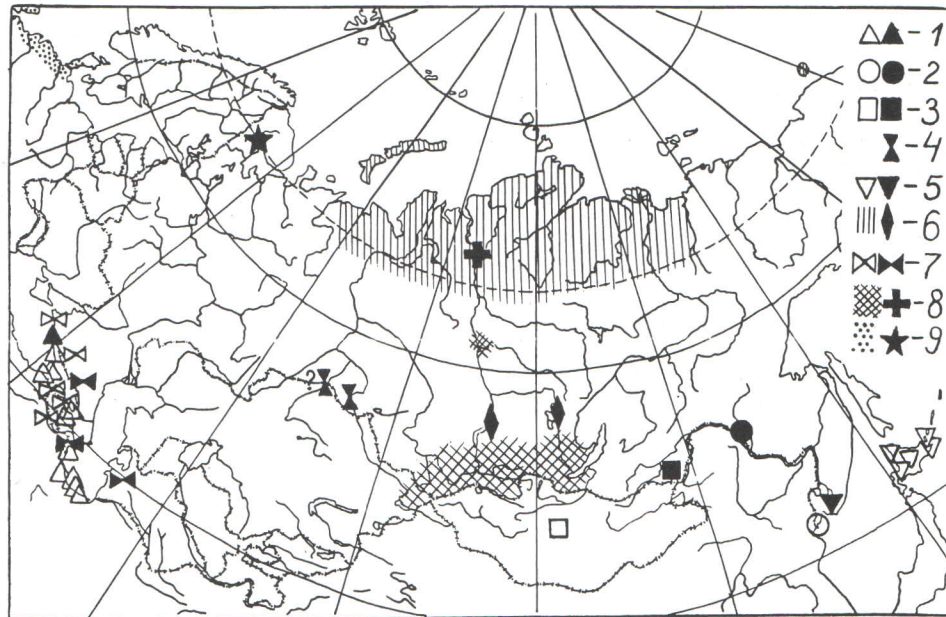


Fig. 1: Distribution of *Donacia gracilicornis* (1), *D. ussuriensis* (2), *Neohaemonia voronovae* (3), *Chrysolina carnifex* (4), *Ch. koltzei lamii* (5), *Ch. septentrionalis* (6), *Ch. tesari* (7), *Oreina basilea basilea* (8), *Longitarsus plantagomaritimus* (9) (white figures and shadings – before known distribution, black figures – new localities).

Elytra. Intervals between rows flat, shining, covered by microscopic irregular obsolete wrinkles and punctures.

Abdomen. Sternite 1 devoid of tubercles or denticles, last sternite widely obtuse and concave at apex. Pygidium narrowly rounded at apex.

Legs. Hind femur bearing 1 large acute denticle and 3 very small ones near apex at lower side (Fig. 9). Aedoeagus terminates in long narrow blade with parallel sides and triangular apex (Fig. 8).

Length 6.9 mm, width 2.6 mm.

Remarks. The diagnostic characters of the described specimen check with the *D. ussuriensis* original description (MEDVEDEV, 1973) and the place of this species in a key to *Donacia* (MEDVEDEV, 1992).

Diagnosis. *D. ussuriensis* is close to *D. crassipes* FABRICIUS, 1775 and differs from the latter by the shallow frontal furrow, large and convex eyes and smaller body size (MEDVEDEV, 1973). Besides, *D. ussuriensis* is rather like *D. lenzi* SCHOENFELD, 1888 by the general colour, body shape and size and distinguishes by the absence of denticles on abdominal sternite 1 in male.

Additional materials. *D. crassipes*. ♂♂ and ♀♀ from different localities in Russia. – *D. lenzi*. Russia: Primorski Krai, Hanka lake, Troitskoe, 15.7.1914: 1 ♂, A. CHERSKIJ leg.

Neohaemonia voronovae L. MEDVEDEV, 1977

Before known distribution (Fig. 1, 3). Mongolia: Ara-Khangaj aimak, lake Ugijnuur (MEDVEDEV, 1977, 1982).

New record (Fig. 1, 3). Russia: Chita reg., 30 km NE Borzja, altitude 900 m, 3.7.1989: 1 ♂, O.N. KABAKOV leg. (O.N. KABAKOV's collection, St.-Petersburg). Up to now *N. voronovae* was known only from the type locality. The new location is 1080 km distant from that to the east and 320 km to the north. Furthermore, the two mentioned locations belong to the different river basins with the watershed along the ridges Khentej and Cherskogo: the former belongs to the Selenga river

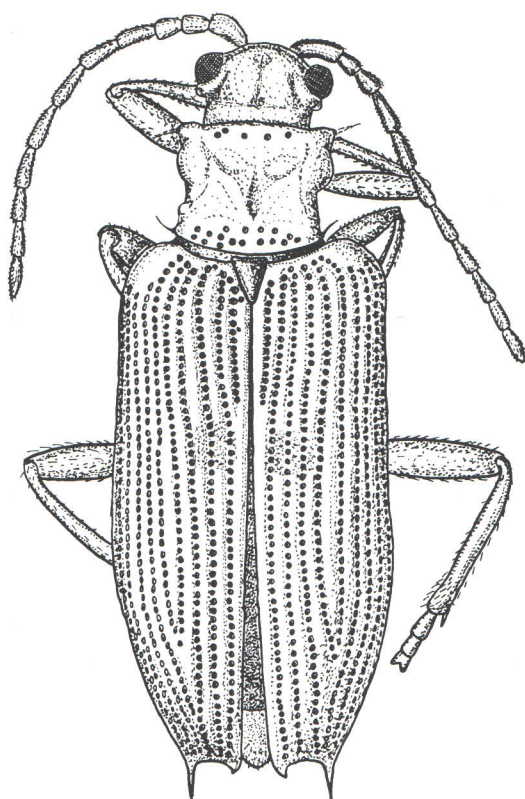


Fig. 2:
Neohaemonia voronovae, general view (Chita reg.).

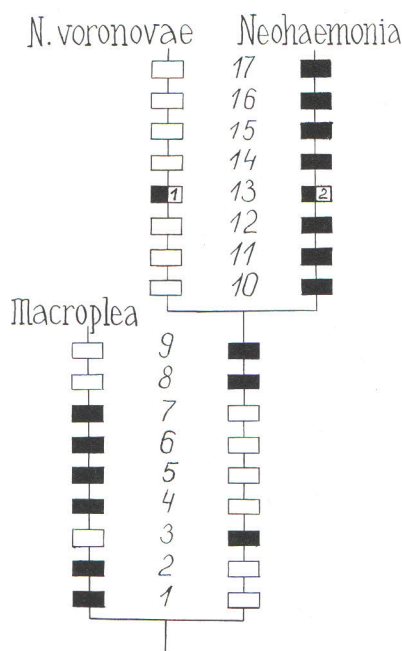


Fig. 3:
Cladogram. Proposed phylogeny of the tribe Haemoniini. Black squares are apomorphic character states, 1 – first step, 2 – second step, white – plesiomorphic ones. Numbers refer to characters listed in Table 1.

basin, the latter belongs to the Amur river basin. *N. voronovae* is found in Russia for the first time, and can be determined by the key to Mongolian Donaciinae (MEDVEDEV, 1982).

Description (♂) (Fig. 2). Elytra yellow with striae punctures black; pronotum, pygidium and legs reddish-yellow; head, thoracic lower surface, abdomen, scutellum and antennae black; last abdominal sternite partly reddish.

Head. Vertex densely pubescent, as in *Macroplea mutica* (FABRICIUS, 1792) and *M. appendiculata* (PANZER, 1794), with 2 tubercles. Mentum pubescent, with straight apical margin. Labial palpi flattened. Antennomeres 2–3 short, 4–9 long, the latter ones 2.8 times longer than broad.

Pronotal disk wrinkled; punctures present before posterior margin; 2 small tubercles situated anteriorly and inwardly from posterior angles at each side; beads on fore angles and anterior setiferous pores present. Proepisternal pubescence present.

Elytra glabrous; puncture striae at equal distance from each other, as in *N. flohri* (JACOBY, 1884).

Abdomen. Sternite 1 with oblong median depression; last sternite rounded apically, with median depression. Pygidium obtuse apically.

Legs. Brush of setae on base of posterior surface of profemur absent. Metafemora slender. Tarsomere 3 with distinct but reduced lobes. Tarsal pubescence reduced. Claw segment elongate, as long as segments 1–3 joined. Claw long.

Ventral surface fine punctured and wrinkled between punctures, covered by very dense short hairs and sparser long ones.

Aedoeagus (Fig. 7). Apex triangularly sharpened and slightly stretched.

Length 5.3 mm, width 2.1 mm.

character	character state	
	plesiomorphic	apomorphic
1 proepisternal pubescence	present	absent
2 profemoral brush	absent	present
3 metafemora	clavate	slender
4 metatibiae, females	straight	sinuate
5 elytral pubescence	absent	present
6 body pubescence	short+long	all short
7 ventral punctures	present	absent
8 ventral microsculpture	absent	present
9 labial mentum	glabrous	pubescent
10 pronotal disk	sculptured	smooth
11 pronotal beads	present	absent
12 pronotal tubercles	present	absent
13 vertex	normal	bituberculate (1 step), flat (2 step)
14 vertex	pubescent	glabrous
15 antennomeres	2,3 short, 4-9 long	2-9 short
16 anterior tactile setae on pronotum	present	absent
17 mentum, apical margin	straight	bilobed

Tab. 1: Characters and their proposed character states in *Haemoniini*.

Remarks. The specimen from Chita reg. checks with that from lake Ugijn-nuur and *N. voronovae* original description (MEDVEDEV, 1977).

Systematic position.

N. voronovae was originally included in genus *Neohaemonia* SZEKESY, 1941. All other species of this genus were recognized only from North America (MEDVEDEV, 1977). ASKEVOLD (1988) having examined the original description of *N. voronovae*, decided that the species in question occupies a solitary and most primitive position within the tribe *Haemoniini*.

In order to study the interrelationships between *N. voronovae*, other *Neohaemonia* and *Macroplea* SAMOUELLE, 1819 species I investigated the two available specimens of *N. voronovae* in the respect of the characters which were proposed by ASKEVOLD (1988) for the phylogenetic reconstruction of the *Haemoniini* genera. In addition, the original description of *N. voronovae* and specimens of *M. appendiculata*, *M. mutica*, *M. pubipennis* (REUTER, 1875) (= *M. piligera* WEISE, 1889), *N. flohri* and *N. melsheimeri* (LACORDAIRE, 1845) were studied. Plesiomorphic and apomorphic states of the used characters (Table 1) were proposed and discussed by ASKEVOLD (1988). The cladogram (Fig. 3) shows that the genus *Macroplea* has 6 apomorphic characters, whereas *N. voronovae* together with the other members of *Neohaemonia* has 3 synapomorphic characters. The latter are of a great phylogenetic value because they represent a transformation or acquisition but not a loss or reduction. Therefore, *N. voronovae* really should be treated as a member of the genus *Neohaemonia*. This species occupies the most primitive position within the genus (Fig. 3). This fact is consistent with the opinion that *N. voronovae* is a relict species (MEDVEDEV, 1977).

Additional materials. *N. voronovae*. Mongolia: Ara-Khangaj aimak, NW bank of lake Ugijn-nuur, altitude 1200 m, 3.8.1977: 1 ♂, L.N. MEDVEDEV & Yu.M. ZAITZEV leg. – *N. flohri*. Mexico: Mexico City: 1 ♂, 1 ♀. – *N. melsheimeri*. United States: Kentucky: 1 ♂. – *M. pubipennis*. China: Xinjian Uygur Autonomous Reg., Nija, 1.–20.4.1890: 1 ♂, 1 ♀, PEVTSOV leg. – *M. appendiculata*. ♂♂ and ♀♀ from Russia: Moscow reg. – *M. mutica*. Russia: Siberia: 1 ♀; Ukraine: the Crimea: 1 ♂.

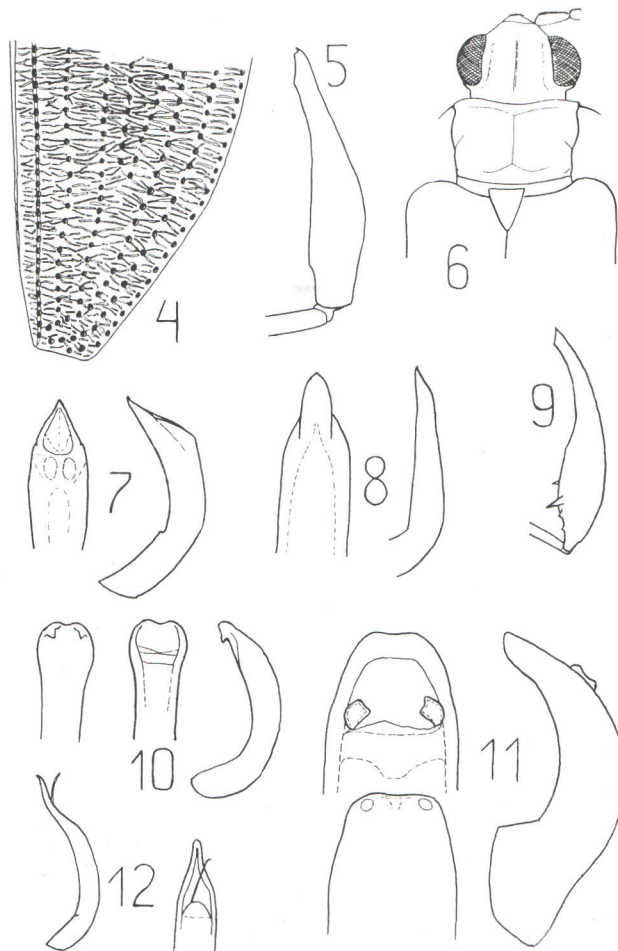


Fig. 4–5: *Donacia gracilicornis* ♀ (Krasnodar Territory): 4, right elytron; 5, hind femur. – Fig. 6, 8–9: *Donacia ussuriensis* ♂ (Amur reg.): 6, head and pronotum; 8, aedeagus, ventral and lateral view; 9, hind femur. – Fig. 7: *Neohaemonia voronovae* ♂ (Chita reg.), aedeagus, dorsal and lateral view. – Fig. 10: *Chrysolina koltzei lamii* ♂ (Primorski Krai), aedeagus, ventral, dorsal and lateral view. – Fig. 11: *Chrysolina septentrionalis* ♂ (Irkutsk reg., Nizhne-Ilimsk), aedeagus, dorsal, ventral and lateral view. – Fig. 12: *Chrysolina carnifex* ♂ (“river Ishim, Akmolinsk Distr.”), aedeagus, lateral and dorsal view.

Chrysolina (Chalcoidea) carnifex carnifex (FABRICIUS, 1792)

Before known distribution. Europe including European part of Russia (WARCHAŁOWSKI, 1993; MEDVEDEV & OKHRIMENKO, 1991).

New record (Fig. 1, 4). Russia: Omsk, 20.7.1912: 1 ♀, P. RJABOV leg.; “Ishim river, Spassk volost, Akmolinsk Distr.” [Ishim river flows through Northern Kazakhstan and Tyumen reg.], 9.6.1899: 1 ♂, Balykleisk. leg. *Ch. carnifex* is found in Asia, namely, south of Western Siberia and, perhaps, Northern Kazakhstan for the first time.

Description. Black, dull and shagreened above; dark brown below; epipleurae and elytra laterally up to pucture row 3 from outside and pygidium rufous; antennae dark brown with antennomeres 1–3 rufous below; legs black with tarsi dark brown.

Head. Last segment of maxillary palpus similar to the previous one in length and width, not differ in both sexes. Antennal insertion situated nearer to lateral margin of clypeus than to eye.

Prothorax. Lateral calli slightly convex, separated inwardly by depression with large fused punctures in basal $\frac{1}{3}$, and by broad stripe of large punctures anteriorly. Disk covered by dense small punctures. Prothoracic epimerae longitudinally convex, transverse rugose and weakly impressed along outside. Elytra. Puncture rows irregular and hardly visible because of dense interval punctuation.

Legs. Tarsomeres 1–3 dilated in ♂, wholly pubescent below in both sexes.

Aedoeagus terminates in long blade, which firstly curved upwards, and then scarcely turned downwards (Fig. 12).

Length (mm): 6.4 (♂), 7.2 (♀); width (mm): 4.5 (♂), 5.0 (♀).

Remarks. Specimens from Omsk and Ishim valley check with those from European part of Russia and correspond the position of *Ch. carnifex* in current keys to *Chrysolina* MOTSCHULSKY, 1860 species (MEDVEDEV & OKHRIMENKO, 1991; KIPPENBERG & DÖBERL, 1994).

Additional materials. *Ch. carnifex carnifex*. ♂♂ and ♀♀ from Russia: Saratov reg., Kursk reg., Orenburg reg.

Chrysolina (Allohypericia) koltzei lamii TAKIZAWA, 1970

Before known distribution (Fig. 1, 5). Japan: Hokkaido; Russia: Kurile Islands, Kunashir (TAKIZAWA, 1970).

New record (Fig. 1, 5). Russia: Primorski Krai, Vinogradovka, 19.5.1929: 1 ♀, KIRICHENKO leg.; Odarkovskij Zavod, 20.4.1911: 1 ♂, 30.4.1911: 1 ♀, A. CHERSKIJ leg. *Ch. koltzei lamii* is found in continental Asia for the first time.

Description. Body entirely blackish-blue or blackish-violaceous, shining.

Head. Last segment of maxillary palpus slightly broader than previous one (♂), or as broad as latter (♀). Antennal insertion situated nearer to lateral margin of clypeus than to eye.

Prothorax. Lateral calli convex, separated inwardly by weak depression at the entire length; depression covered by dense, large, partly fused punctures, which larger than those on disk. Prothoracic epimerae longitudinally convex, transverse rugose and impressed along outside.

Elytra covered by irregular paired rows of dense large punctures. Rows hardly visible among dense interval punctuation. Wings developed.

Legs. Tarsi not dilated, wholly pubescent below in both sexes.

Aedoeagus roundly broadened at sides of apical orifice, weakly emarginated apically, and bearing 2 small denticles near apex below (Fig. 10).

Length (mm): 7.2 (♂), 7.3–7.7 (♀); width (mm): 4.7 (♂), 5.1–5.6 (♀).

Remarks. Specimens from Primorski Krai check with those from Hokkaido and the *Ch. lamii* original description (TAKIZAWA, 1970).

Systematic position. BECHYNÉ (1950) included *Ch. koltzei* (WEISE, 1887) in the subgenus *Ch. (Hypericia)* (BEDEL, 1899) (type species: *Chrysomela hyperici* FORSTER, 1771). BOURDONNÉ & DOGUET (1991) tentatively assigned *Ch. brunneipennis* (MATSUMURA, 1911) and *Ch. lamii* to the subgenus *Ch. (Allohypericia)* BECHYNÉ, 1950 (type species: *Chrysomela lobicollis* FAIRMAIRE, 1887) on the basis of the aedoeagus structure; however, they treated *Ch. koltzei* as a member of the subgenus *Ch. (Hypericia)*. The specimens of *Ch. koltzei koltzei*, *Ch. koltzei brunneipennis* and *Ch. koltzei lamii* being at my disposal differ from *Ch. (Hypericia)* members by the following characters: antennal insertion placed nearer to lateral margin of clypeus than to eye, puncture rows of elytra more or less irregular. All these characters bring *Ch. koltzei* together with *Ch. (Allohypericia)*. Furthermore, the aedoeagus of *Ch. koltzei* has a general structure (it is roundly broadened near apical orifice, bearing 2 small denticles near apex below) similar to that of the following *Ch. (Allohypericia)* species: *Ch. perforata* (GEBLER, 1830), *Ch. aeruginosa* (FALDERMANN, 1835), and *Ch. purpurata* (FALDERMANN, 1833) (after MEDVEDEV, 1982 and specimens in my collection). *Ch. (Hypericia)* species have

absolutely different aedoeagus structure (BECHYNÉ, 1949, 1950). Females of *Ch. (Allohypericia)* members more often have tarsomere 1 bearing glabrous stripe below. However, *Ch. (Allohypericia) pubitarsis* BECHYNÉ, 1950 and *Ch. (Allohypericia) koltzei* females have tarsi wholly pubescent below. Therefore, *Ch. (Hypericia) koltzei* is transferred here to *Ch. (Allohypericia) koltzei*. All subspecies of *Ch. koltzei* have similar aedoeagus structure and are distinguished by the colour as follows:

1. Wholly blackish-blue or blackish-violaceous. Hokkaido, Kurile Islands (Kunashir), Primorskij Krai. *Ch. koltzei lamii* TAKIZAWA, 1970
2. Body blackish-bronze, elytra brown with bronze reflection. Krasnoyarsk Territory, Tuva, the Sayans, Amur reg. *Ch. koltzei koltzei* (WEISE, 1887)
3. Body black, shining, elytra brown without bronze reflection. Sakhalin. *Ch. koltzei brunneipennis* (MATSUMURA, 1911)

Additional materials. *Ch. koltzei koltzei*. 3 ♂♂ and 2 ♀♀ from Russia: Krasnoyarsk Territory, Irkutsk reg., Amur reg. – *Ch. koltzei brunneipennis*. Russia: Sakhalin, environs of Yuzhno-Sakhalinsk, Novoaleksandrovsk, 10.6.1954: 2 ♂♂, 2 ♀♀, G. GUSEV & I. EGOROVA leg. – *Ch. koltzei lamii*. Japan: Hokkaido: Jesso: 3 ♂♂, 2 ♀♀; Sapporo: 1 ♀.

Chrysolina (Arctolina) septentrionalis (MÉNÉTRIÉS, 1851)

Before known distribution (Fig. 1, 6). Russia: north-east of the European part, Novaya Zemlya, Wrangel Island, northern part of Western Siberia, Eastern Siberia up to river Yana eastward and Turukhansk southward (DUBESHKO & MEDVEDEV, 1989; MEDVEDEV & SHAPIRO, 1965).

New record (Fig. 1, 6). Russia: Irkutsk reg., Nizhne-Ilimsk, 2.6.1965: 2 ♂♂, 4 ♀♀, 31.5.1965: 2 ♀♀, 28.5.1965: 1 ♀, 3.6.1965: 1 ♀, A. KRESLAVSKIJ & V. ZHERIKHIN leg.; Krasnoyarsk Terr., env. of Krasnoyarsk, 7.9.1955: 1 ♂ (O.N. KABAKOV's coll., St.-Petersburg). The new location of *Ch. septentrionalis* is 960 km distant to the south from the before known limit of the distribution.

Description. Shining, shagreened, blackish-bronze-green, sometimes with blackish-blue head; legs black, shining, with tarsi dark brown, antennae dark brown with antennomeres 1–3 rufous below. Head. Last segment of maxillar palpi longer than previous one in both sexes, broadened and truncate at apex (♂), or as broad as previous segment (♀).

Prothorax. Pronotum broadest near middle of its length, rounded laterally. Disk covered by dense small punctures. Lateral calli convex, separated inwardly by very deep narrow furrow in basal $\frac{1}{2}$ or $\frac{1}{3}$, by shallow furrow with several large punctures anteriorly. Prothoracic epimerae slightly convex longitudinally.

Elytra covered by 9 complete puncture rows and 1 short juxtascutellar one. Rows placed at equal distance from each other or slightly paired, sometimes irregular, consist of dense punctures, which as large as those in furrow on pronotum. Intervals convex, covered by dense small punctures. Humeral calli and wings absent.

Abdomen. Last segment convex, with narrow transverse furrow along apical margin in both sexes. Legs. Tarsi wholly pubescent beneath in both sexes, dilated in male.

Aedoeagus strongly curved, obtuse and rounded apically, with 2 small tubercles on ventral side near apex; apical orifice with 2 small alae (Fig. 11).

Length (mm): 5.8 (♂), 6.1 (♀); **width (mm):** 3.5 (♂), 4.0 (♀).

Remarks. Specimens from Irkutsk reg. check with the type of *Ch. septentrionalis*, deposited in the Zoological Institute of Russian Academy of Sciences, St.-Petersburg, specimens from Arctic Siberia and north-east of the European part of Russia and the interpretation of this species in the modern literature (KONTKANEN, 1959; MEDVEDEV & DUBESHKO, 1992).

Additional materials. *Ch. septentrionalis*. Russia: Holotype (♂) with labels: "ad Matotschkin Shar. ab 28 Juli", "*Chr. septentrionalis*. Nova Semljia", "Holotype *Chrysolina septentrionalis* MÉNÉTRIÉS, 1851"; ♂♂ and ♀♀ from Taimyr Peninsula, the lower reaches of river Yenisei, Gydanskij Peninsula, Yamalo-Nenets Autonomous Area, Komi Republic.

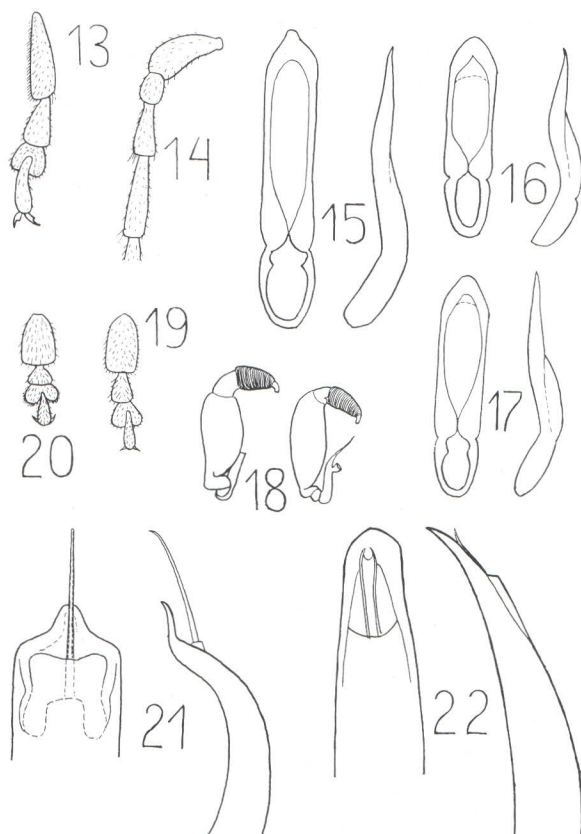


Fig. 13–14: *Luperus semiflavus* ♀ (Chita reg.): 13, hind tarsus; 14, antennomeres 1–4. – Fig. 15: *Longitarsus melanocephalus* ♂, aedeagus, ventral and lateral view. – Fig. 16: *Longitarsus plantagomaritimus* ♂ (White Sea shore), aedeagus, ventral and lateral view. – Fig. 17: *Longitarsus kutscherae* ♂, aedeagus, ventral and lateral view. – Fig. 18: *Longitarsus plantagomaritimus* ♀ (White Sea shore), spermatheca, variability. – Fig. 19–20: Fore tarsus: 19, *Longitarsus kutscherae* ♂; 20, *Longitarsus plantagomaritimus* ♂. – Fig. 21: *Chrysolina tesari* ♂ (Turkmenistan, B. Balkhan ridge), aedeagus, dorsal and lateral view. – Fig. 22: *Oreina basilea basilea* ♂ (Yenisei valley, Igarka Dudinka), aedeagus, dorsal and ventral view.

Chrysolina (Chalcoidea) tesari (ROUBAL, 1936)

Before known distribution (Fig. 1, 7). The Caucasus: Krasnodar Territory; Georgia; Armenia (MEDVEDEV & OKHRIMENKO, 1991).

New record (Fig. 1, 7). Ingushia: Salgi, 29.7.1927: 1 ♀, KIRICHENKO leg., North-Ossetia: Alagir canyon, Unal, Tragakantniki, altitude 1100 m, 15.9.1988: 1 ♂, N.A. SHEVCHENKO leg.; Azerbaijan: Lenkoran, 6.7.1901: 1 ♂, A. ZAVADSKIJ leg.; Turkmenistan: Bolshoj Balkhan ridge, N slope, 8.5.1976: 1 ♂, 3 ♀♀, G.S. MEDVEDEV leg.; “Trans Caspi. Eylandt [leg.]”: 1 ♂; “Transcaspia, in montibus prope Germab”: 1 ♀, V. PELTZ leg. *Ch. tesari* has been known as an endemic Caucasian species up till now. Therefore, a finding of this species in western Turkmenistan is of some interest. Some other Chrysomelidae species, namely *Cryptocephalus concolor* SUFFRIAN, 1847, *Chrysolina armeniaca armeniaca* (FALDERMANN, 1837), *Longitarsus linnaei scrutator* WEISE, 1890, have similar distribution (LOPATIN, 1977).

Description (based on specimens from Turkmenistan).

Black, slightly shining, shagreened, elongate, with almost parallel sides, weakly broadened posteriorly, epipleurae and elytra laterally up to puncture row 1 or 2 from outside rufous. Rufous lateral band does not cover humeral calli and has indistinct inner border. Antennomeres 1–3 brown.

Head. Clypeus and frons very fine punctured, punctures of the former denser than of the latter. Last segment of maxillar palpi oval, truncate at apex, longer than the previous one, as broad as the latter, similar in both sexes.

Prothorax. Pronotum broadest basally, roundly narrowed anteriorly, anterior margin deeply emarginate. Disk covered by dense small punctures. Lateral calli convex, separated inwardly by weak basal depression and by stripe of large punctures at the entire length. Prothoracic epimerae longitudinally convex, with narrow furrow along outside.

Elytra covered by regular paired puncture rows. Rows consist of large, dense punctures in anterior $\frac{3}{4}$, of small punctures, hardly visible among interval punctuation in posterior $\frac{1}{4}$. Humeral calli weak; wings developed.

Abdomen. Pygidium with deep furrow in basal $\frac{1}{2}$. Last sternite convex in both sexes.

Legs. Segments 1–3 of fore and mid tarsi moderately dilated in male, tarsi wholly pubescent beneath in both sexes.

Aedoeagus flat, strongly curved; short apical blade firstly curved upwards, and then turned downwards; flagellum long and thin (Fig. 21).

Length (mm): 7.8–7.9 (σ^7), 7.7–8.0 (f); width (mm): 4.3–4.6 (σ^7), 4.8–4.9 (f).

Remarks. Specimens from Turkmenistan check with the position of *Ch. tesari* in the key to the Caucasian *Ch. (Chalcoidea)* (MOTSCHULSKY, 1860) species (MEDVEDEV & OKHRIMENKO, 1991), the available specimens from the Caucasus and differ from the latter only by the some larger body size. Also, they correspond to the *Ch. tesari* original description (ROUBAL, 1936) in the main and differ only by the narrower lateral band of elytra. ROUBAL (1936) writes: "der Seitensaum der Flügeldecken rotgelb, breit, vorne ein Stückchen an die Flügeldeckenbasis greifend und bis auf die Schulterbeule emporsteigend, ein Stück hinter der Basis sich verschmälernd, dann breiter werdend und bis zur Spitze reichend; er nimmt drei äußere Punktreihen in Anspruch". However, all specimens of *Ch. tesari* from the Caucasus and Turkmenistan, that I have at my disposal, bear the lateral band which reaches only puncture row 1 or 2 from the outside. Probably, ROUBAL (1936) investigated the aberrant coloured specimens.

Additional material. *Ch. tesari*. Armenia: Burakan, 13.6.1960: 1 f , DLUSSKI leg.

Oreina (s. str.) basilea basilea (GEBLER, 1823)

Before known distribution (Fig. 1, 8). Russia: Altai, Tuva, Sayan Mountains (LOPATIN & KULENOVA, 1986; DUBESHKO & MEDVEDEV, 1989). JACOBSON (1924) found this species in Yenisei valley in the environs of Khantajka, latitude 68° North. Recently, *O. basilea* was also recorded from Turukhansk Distr. of Krasnoyarsk Territory on the base of the single specimen that was collected near Bolshaya Varlamovka river, right tributary of Yenisei river, 1000 km from the basic area to the north (MEDVEDEV, 1991).

New record (Fig. 1, 8). Russia: Taimyr Autonomous Area, Yenisei valley between Igarka and Dudinka, latitude 67°–69° North, 15.–18.6.1906: 2 σ^7 , S. TOLSTOV leg. New location is some more 700 km from river B. Varlamovka to the north and confirms the fact that *O. basilea basilea* is distributed far to the North from the mountains of southern Siberia.

Description. Body green. Antennae dark-metallic with antennomeres 1 and 2 rufous below. Elytra with weak longitudinal depression covered by transverse wrinkles along lateral margin. Aedoeagus gradually tapered, weakly emarginated laterally before apex (Fig. 22). Length (mm): 7.8; width (mm): 4.1.

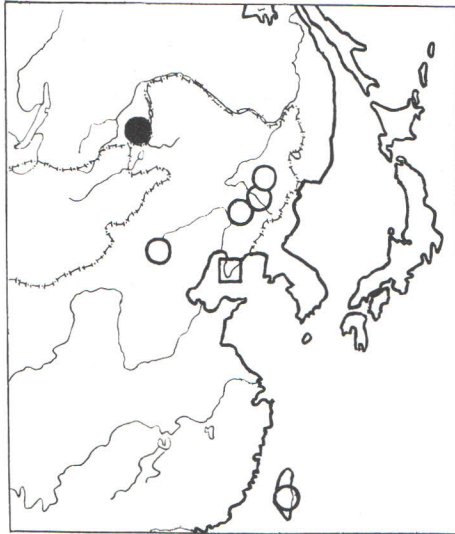


Fig. 23:
Distribution of *Luperus semiflavus* (white circle – before known distribution, black circle – new locality, white square – type locality of *L. mandzhuricus*).

Remarks. The specimens from new locality check with those from Altai and environs of river B. Varlamovka and correspond to the place of this subspecies in the keys to *Oreina* CHEVROLAT, 1837 (LOPATIN & KULENOVA, 1986; MEDVEDEV & DUBESHKO, 1992). Although JACOBSON (1925) and MEDVEDEV & DUBESHKO (1992) write the antennae of *O. basilea* have segments 2 and 3 rufous below, all available specimens have segments 1 and 2 rufous below, 3 entirely metallic.

Additional materials. *O. basilea basilea*. Russia: Krasnoyarsk Territory, Turukhansk Distr., bank of Yenisei 6 km above tributary of river Bolshaya Varlamovka, Mirnoje, 7.1987: 1 ♂, 1 ♀, V. Piliipenko leg., 7.1983: 2 ♂♂, V. LEBEDEV leg., 22.–27.6.1993: 7 specimens, M.O. SKOMOROKHOV leg.; ♂♂ and ♀♀ from Altai; Kazakhstan: East Kazakhstan reg., Ivanovskij ridge, 14.6.1983: 1 ♀.

Biological notes. *O. basilea* inhabits a zone of mountain forests and alpine grasslands in Altai, Tuva and Sayan Mountains and feed on *Saussurea latifolia* (Asteraceae) and *Heracleum dissectum* (Apiaceae) (DUBESHKO & MEDVEDEV, 1989). According to M.O. SKOMOROKHOV personal communication, *O. basilea basilea* inhabits floodlands of Yenisei in the environs of Mirnoje, beetles are very abundant from the end of June.

Luperus semiflavus OGLOBLIN, 1936

Before known distribution (Fig. 23). N.E. China; Taiwan (OGLOBLIN, 1936; GRESSITT & KIMOTO, 1963).

New record (Fig. 23). Russia: Chita reg., 30 km from Zabaikalsk, tributary of Argun river, 21.7.1963: 1 ♀. *L. semiflavus* is found in Russia for the first time.

Description (♀). Head, elytra, scutellum, meso- and metathorax black; prothorax dorsally and ventrally, antennomeres 1–4, legs, abdominal sternites rufous; pygidium and antennomeres 5–11 dark brown.

Head. Vertex shining, devoid of punctures. Antennomere 3 1.9 times longer than 2 and 1.7 times shorter than 4 (Fig. 14).

Prothorax. Pronotum shining, very finely punctured, 1.6 times broader than long.

Elytra densely punctured. Epipleura broad in basal part, narrowed at sides of abdominal segment 1 and not reach the apical margin.

Abdomen. Pygidium convex, evenly shagreened. Last sternite flattened, triangular.

Legs. Segment 1 of hind tarsi 1.6 times shorter than others combined (Fig. 13). Claws with large basal denticle.

Length (mm): 4.0; width (mm): 1.7.

Remarks. The female from Chita reg. checks with the type specimens of *L. semiflavus*, deposited in the Zoological Institute of Russian Academy of Sciences, St.-Petersburg, and mainly corresponds to the original description (OGLOBLIN, 1936), except the relative length of the hind tarsomeres. OGLOBLIN (1936) writes: "Le 1-er article des tarses posterieurs aussi long que les suivants reunis". Obviously, it is an inaccuracy, because the segment 1 of hind tarsi is 1.6 and 1.1–1.4 times shorter than others combined in specimen from Chita reg. and type specimens correspondently. OGLOBLIN (1936) described *L. semiflavus* on the base of 5 females, and a close species, *L. mandzhuricus* OGLOBLIN, 1936 on the base of 3 males from N.E. China, and separated them mainly by the colour of abdomen: rufous in *L. semiflavus* and black in *L. mandzhuricus*. GRESSITT & KIMOTO (1963) examined material from Girin (N.E. China) and believed *L. semiflavus* and *L. mandzhuricus* to represent males and females of the single species, and *L. mandzhuricus* to be a junior synonym of *L. semiflavus*.

Additional materials. *L. semiflavus*. China: Lectotype (designated here): 113 km SE Harbin, Imjanpo, 9.6.1911: 1 ♀, EMELYANOV leg.; paralectotypes: 60 km SW Changchun, Gunzhulin, 8.1905: 2 ♀♀. SERIKOV leg.; Taiwan (= Formosa): 1912: 1 ♀, MOLTRECHT leg.; another material: 260 km N Beijing, environs of Dolon-Nur: 1 ♀, LOMONOSOV leg.

Longitarsus plantagomaritimus DOLLMANN, 1912

Before known distribution (Fig. 1, 9). North Sea shore from Great Britain to Denmark (KIPPENBERG & DÖBERL, 1994).

New record (Fig. 1, 9). Russia: White Sea shore: Murmansk reg., Kandalaksha Distr., 12 km SE Poyakonda, sea littoral meadow, 26.8.1989: 1 ♂, 2 ♀♀; 7.6.1990: 1 ♀; 8.6.1990: 1 ♂; on decayed algae overgrown with grass plants, 15.8.1989: 1 ♀; 2.6.1989: 1 ♂; 8.6.1989: 3 ♂♂, 1 ♀ (1 ♂ and 1 ♀ deposited in Staatliches Museum für Tierkunde Dresden); on *Plantago salsa* (= *P. maritima*), 19.6.1989: 1 ♀; 26.6.1989: 1 ♀; Karelia, Loukhi Distr., Chornaja Reka, sea littoral meadow, on *P. salsa*, 12.7.1990: 1 ♂, 1 ♀; Kandalaksha Bay, Island Kastjan, littoral meadow, 17.6.1990: 1 ♀. All specimens were collected by A.O. BIENKOWSKI. *L. plantagomaritimus* is found in Russia for the first time.

Description. Head, pygidium, thoracic and abdominal sternites, hind femora, antennomeres 6–11 black; pronotum (sometimes rufous), antennomeres 1–5 (4–5 sometimes blackish at apex), tarsi, fore and middle femora, hind tibiae brown; other tibiae rufous; elytra yellow or brownish-yellow, with narrow blackish sutural stripe.

Head. Frontal keel narrow and convex. Frons with obsolete tubercles, without distinct furrow above them. Prothorax. Pronotum shining, shagreened, with punctures small or almost as large as those on elytra. Elytra dull or shining, shagreened; large and dense punctured; punctures mostly irregular, here and there they placed in longitudinal rows. Punctuation on apical slope similar to that on disk, intervals slightly wrinkled. Apical margin rounded and covered by short setae.

Legs. Segment 1 of fore and middle tarsi broadened in male, 1.4–1.5 times longer than wide.

Aedoeagus with parallel sides, 4.2–4.5 times longer than wide, triangularly tapered and hardly curved downward at apex (Fig. 16).

Spermatheca (terminology for the details after DÖBERL, 1986) (english variant by SAMUELSON).

Pump elongate, cone-shaped, appendix distinct, curved (Fig. 18).

Length (mm): 2.0–2.2 (♂), 2.1–2.4 (♀); width (mm): 1.0–1.2 (♂), 1.1–1.3 (♀).

Remarks. Available specimens check with the key to *Longitarsus* species by KIPPENBERG & DÖBERL (1994).

Diagnosis. *L. plantagomaritimus* distinguishes from the allied species by the following key:

Key to species

- 1(2) Aedeagus elongate, 5.2–5.8 times longer than wide (Fig. 15). Spermatheca with short, cylindrical pump and distinct appendix. Transpalaearctic species. On *Plantago lanceolata*, *P. salsa*, *P. media*, *P. major* (after MEDVEDEV & ROGINSKAJA, 1988).
L. melanocephalus (DEGEER, 1775)
- 2(1) Aedeagus short, 4.2–4.7 times longer than wide.
- 3(4) Segment I of fore and middle tarsi in male long, 1.8 times longer than wide (Fig. 19). Spermatheca with short, tapered pump, without appendix (after KIPPENBERG & DÖBERL, 1994). Aedeagus – Fig. 17. Europe, Siberia. On *Galeopsis luteum*, *G. tetrahit*, *Melampyrum nemorosum* (after MEDVEDEV & ROGINSKAJA, 1988).
L. kutscherae (RYE, 1872)
- 4(3) Segment I of fore and middle tarsi in male short, 1.4–1.5 times longer than wide (Fig. 20). Spermatheca with elongate cone-shaped pump and distinct appendix (Fig. 18). Aedeagus – Fig. 16. North Sea and White Sea shores. On *Plantago salsa* (= *P. maritima*).
L. plantagomaritimus DOLLMANN, 1912

Additional materials. *L. melanocephalus*. Russia: Moscow reg., 7 km W Zvenigorod, 24.5.–7.9.1981: 4 ♂♂, 1 ♀, I. SAMKOV leg. – *L. kutscherae*. Russia: Moscow reg., Zelenograd, bank of spring, on *Carex spec.*, 9.5.1990: 1 ♂, A.O. BIEŃKOWSKI leg.; Karelia, environs of Onega, 21.7.–7.8.1992: 1 ♂, M.O. SKOMOROKHOV leg.

Biological notes. According to my observations on the White Sea shore, adults of *L. plantagomaritimus* feed on *Plantago salsa* (= *P. maritima*), they gnaw leaves in nature and laboratory experiments. Beetles occur in their locality from the beginning of June till the middle of July. The emergence of the young generation takes place after the middle of August.

Summary

Donacia gracilicornis is found in the North Caucasus (Sochi), *D. ussuriensis* – in Amur reg., *Neohaemonia voronovae* – in Russia (Chita reg.), *Chrysolina carnifex carnifex* – in Asia (south of Western Siberia), *Ch. koltzei lamii* – in continental Asia (Primorskij Kraj), *Ch. septentrionalis* – in Irkutsk reg. and Krasnoyarsk Terr., *Ch. tesari* – in Ingushia, North-Ossetia, Azerbaijan and Turkmenistan, *Oreina basilea basilea* – in Yenisei valley at latitude 67°–69° North, *Luperus semiflavus* – in Russia (Chita reg.), *Longitarsus plantagomaritimus* – in Russia (Murmansk reg., Karelia) for the first time. On the base of the cladistic analysis of a number of characters, the notion about *N. voronovae* as a member of the genus *Neohaemonia* is confirmed. *Ch. koltzei* including subspecies *Ch. koltzei brunneipennis* and *Ch. koltzei lamii* is transferred to the subgenus *Ch. (Allohypericia)* based on the position of antennal insertion, elytrae punctuation and aedeagus structure.

Acknowledgements

I am grateful to Dr. L.N. MEDVEDEV, Dr. O.N. KABAKOV and Mr. M.O. SKOMOROKHOV for kindly disposed materials, to Prof. G.S. MEDVEDEV, Dr. N.B. NIKITSKIJ and Mr. V. SAVITSKIJ for the possibility to work with the collections of the Zoological Institute of Russian Academy of Sciences, Zoological Museum of Moscow State University and Entomology Department of the Biological Faculty, Moscow State University respectively. I am indebted to my wife M. Ja. ORLOVA-BIENKOWSKAJA for the suggestion to make the present work.

References

- ASKEVOLD, I.S. (1988): The genus *Neohaemonia* SZEKESY in North America (Coleoptera: Chrysomelidae): systematics, reconstructed phylogeny, and geographic history. – Trans. Amer. Ent. Soc. **113**: 360–430.
- BECHYNÉ, J. (1949): Notulae ad cognitionem generis *Chrysolina* MOTSCH. 4. – Folia ent. **12**: 48–55.
- BECHYNÉ, J. (1950): 7^e Contribution a la Connaissance du Genre *Chrysolina* MOTSCH. (Col. Phytophaga Chrysomelidae). – Ent. Arb. Mus. Frey **1**: 47–185.

- BERTI, N. & RAPILLY, M. (1976): Faune d'Iran. Liste d'espèces et revision du genre *Lilioceris* REITTER (Col. Chrysomelidae). – Ann. Soc. Ent. Fr. (N.S.) **12**, Nr. 1: 31–73.
- BOURDONNÉ, J.-C. & DOGUET, S. (1991): Données sur la biosystematique des *Chrysolina* l.s. (Coleoptera: Chrysomelidae: Chrysomelinae). – Ann. Soc. Ent. Fr. (N.S.) **27**, Nr. 1: 29–64.
- DÖBERL, M. (1986): Die Spermathek als Bestimmungshilfe bei den Alticinaen. – Ent. Bl. **82**, Nr. 1–2: 3–14.
- (DUBESHKO, L.N. & MEDVEDEV, L.N.) ДУБЕШКО, Л.Н.; МЕДВЕДЕВ, Л.Н. (1989): Экология листоедов Сибири и Дальнего Востока 1989, 224 с. Изд. Иркутского Университета, Иркутск.
- GRESSITT, J. & KIMOTO, S. (1963): The Chrysomelidae (Coleopt.) of China and Korea 2. – Pac. Ins. Mon., **1B**: 301–1026.
- (JACOBSON, G.G.) ЯКОБСОН, Г.Г. (1924): Географическое распространение видов рода *Chrysochloa* Hope (Coleoptera Chrysomelidae). – Доклады Российской Академии Наук: 20–21.
- (JACOBSON, G.G.) ЯКОБСОН, Г.Г. (1925): Определительная таблица жуков листоедов (Chrysomelidae) Южного Енисея. – Ежегодник Гос. Музея им. Н.М. Мартыанова **3**, № 1: 1–52.
- KIPPENBERG, H. & DÖBERL, M. (1994): Ergänzungen und Berichtigungen zu Freude-Harde-Lohse "Die Käfer Mitteleuropas" 9 (1966) 88. Familie: Chrysomelidae. – In: Die Käfer Mitteleuropas 14, 3. Supplement-Band mit Katalogteil: G.A. LONSE & W.H. LUCHT: 17–144.
- KONTKANEN, P. (1959): Über einige *Chrysolina*-Arten der Sectio Pleurosticha MOTSCH. sensu JACOBSON 1910 (Col., Chrysomelidae). – Ann. Ent. Fenn. **25**, Nr. 1: 27–35.
- (LORATIN, I.K.) ЛОПАТИН, И.К. (1977): Жуки-листоеды Средней Азии и Казахстана (Определитель), 270 с. Наука, Москва.
- (LORATIN, I.K. & KULENOVA, K.Z.) ЛОПАТИН, И.К.; КУЛЕНОВА, К.З. (1986): Жуки-листоеды (Coleoptera, Chrysomelidae) Казахстана: Определитель, 200 с. Наука, Алма-Ата.
- (MEDVEDEV, L.N.) МЕДВЕДЕВ, Л.Н. (1973): Новые жуки-листоеды (Coleoptera, Chrysomelidae) Палеарктики. – Энтомологическое обозрение **52**, № 4: 876–885.
- (MEDVEDEV, L.N.) МЕДВЕДЕВ, Л.Н. (1977): Нахождение представителя американского рода *Neohaemonia* SZEK. (Coleoptera, Chrysomelidae) в Монголии. – Доклады Академии Наук СССР **236**, № 2: 488–490.
- (MEDVEDEV, L.N.) МЕДВЕДЕВ, Л.Н. (1982): Листоеды МНР: Определитель, 304 с. Наука, Москва.
- (MEDVEDEV, L.N.) МЕДВЕДЕВ, Л.Н. (1991): К фауне листоедов (Coleoptera, Chrysomelidae) среднего Енисея. – В кн.: Биологические ресурсы и биоценозы Енисейской тайги. Москва: 200–209.
- (MEDVEDEV, L.N.) МЕДВЕДЕВ, Л.Н. (1992): Chrysomelidae. – В кн.: Определитель насекомых Дальнего Востока СССР **3** (2): 533–602.
- (MEDVEDEV, L.N. & DUBESHKO, L.N.) МЕДВЕДЕВ, Л.Н.; ДУБЕШКО, Л.Н. (1992): Определитель листоедов Сибири, 224 с. Изд. Иркутского Университета, Иркутск.
- (MEDVEDEV, L.N. & OKHRIMENKO, N.V.) МЕДВЕДЕВ, Л.Н.; ОХРИМЕНКО, Н.В. (1991): К познанию жуков-листоедов рода *Chrysolina* MOTSCH. (Coleoptera, Chrysomelidae) Кавказа. – Энтомологическое обозрение **70**, № 4: 866–874.
- (MEDVEDEV, L.N. & ROGINSKAJA, E.JA.) МЕДВЕДЕВ, Л.Н.; РОГИНСКАЯ, Е.Я. (1988): Каталог кормовых растений листоедов СССР, 192 с. Москва.
- (MEDVEDEV, L.N. & SHAPIRO, D.S.) МЕДВЕДЕВ, Л.Н.; ШАПИРО, Д.С. (1965): Chrysomelidae. – В кн.: Определитель насекомых Европейской части СССР **2**: 419–474.
- (OGLOBLIN, D.A.) ОГЛОБЛИН, Д.А. (1936): Листоеды, Galerucinae, XVI + 461 с. Изд. Академии Наук СССР, Москва, Ленинград (Фауна СССР. Насекомые Жесткокрылые **26**, № 1).
- ROUBAL, J. (1936): *Chrysolina Tesari* sp. n. – Ent. Nachrichtenblatt **10**, Nr. 2: 68–69.
- (SUMAKOV, G.G.) СУМАКОВ, Г.Г. (1909): Заметка о *Donacia gracilicornis* JACOBS. (Coleoptera, Chrysomelidae). – Известия Кавказского Музея **4**: 204–208.
- TAKIZAWA, H. (1970): Descriptions of five new species of the genus *Chrysolina* MOTSCHULSKY in Japan. – Kontyû **38** (2): 117–125.
- WARCZAŁOWSKI, A. (1993): Chrysomelidae. Stonkowate (Insecta: Coleoptera) 3. Warszawa. 279 S. (Fauna Polski; **15**).
- (ZAITZEV, Ph.) ЗАЙЦЕВ, Ф.А. (1930): К распространению на Кавказе видов трибы Donaciini (Coleoptera, Chrysomelidae). – Известия Кавказского Музея **5**: 105–114.

(Received on 2.I.1997)