

**A contribution to the revision of the genus *Rhamnusium* Latreille, 1829
(Coleoptera: Cerambycidae)**

Mikhail L. DANILEVSKY

A. N. Severtzov Institute of Ecology and Evolution
Russian Academy of Sciences
Leninsky prospect 33, Moscow, 119071, Russia
e-mail: danilevskym@rambler.ru, danilevsky@cerambycidae.net

Taxonomy, zoogeography, new subspecies, Coleoptera, Cerambycidae, *Rhamnusium*, Europe, Caucasus, Georgia, Armenia, Azerbajdzhan, Iran, Turkey, Syria

Abstract. In Europe, Caucasus and Near East the genus *Rhamnusium* Latreille, 1829 is represented by a single species *Rhamnusium bicolor* (Schrank, 1781) with 9 subspecies (two subspecies are described as new): *Rh. b. bicolor* (Schrank, 1781) - West Europe, *Rh. b. constans* ssp. nov. - East Europe, *Rh. b. demaggii* Tippman, 1956 - Italy: Lazio, Abruzzo, *Rh. b. italicum* Müller, 1966 - Italy: Basilicata and Calabria, *Rh. b. graecum* Schaufuss, 1862 - South Balkans, *Rh. b. testaceipenne* Pic, 1897 - West Caucasus, West Transcaucasia, north-east Turkey, *Rh. b. lenkoranum* ssp. nov. - South Armenia, Azerbajdzhan and North Iran, *Rh. b. juglandis* Fairmaire, 1866 - most parts of Turkey, *Rh. b. praeustum* Reitter, 1895 - South-east Turkey and Syria.

INTRODUCTION

The generally accepted (Löbl & Smetana, 2010) system of *Rhamnusium* is totally unnatural. The populations without any relative connections from marginal regions of the genus area were attributed to certain local subspecies: “*graecum graecum*” from Greece and from Azerbajdzhan or “*bicolor bicolor*” from France and from Urals in Russia.

Quite a natural position was formulated by Sama (2002): “All these taxa could be only geographic variations of one species”, but it was not accepted in any publication up to now.

In the article presented here, all the forms from Iberian Peninsula to Iran and from North Europe to Syria are attributed to *Rhamnusium bicolor* (Schrank, 1781). Two subspecies are described as new.

Only African *Rhamnusium algericum* Pic, 1896 could be accepted as the second species of the genus.

Chinese species were transferred into another genus: *Neorhamnusium* Hayashi, 1976.

MATERIAL AND METHODS

Abbreviations of collections:

- AN private collection of A. Napolov, Riga, Latvia;
AS private collection of A. Shamaev, Moscow, Russia;
BMNH collection of British Natural History Museum, London, England;
PK private collection of P. Kabátek, Prague, Czech Republic;

- SM private collection of S. Murzin, Moscow, Russia;
 TP private collection of T. Peterka, Veselí nad Lužnicí, Czech Republic;
 MD author's collection, Moscow, Russia;
 MR private collection of M. Rejzek, London, England;
 ZIN collection of Zoological Institute, Sankt-Petersburg, Russia;
 ZMM collection of Zoological Museum of Moscow University, Moscow, Russia.

RESULTS

Rhamnusium bicolor (Schrank, 1781) consists of 9 subspecies:

1. *Rh. bicolor bicolor* (Schrank, 1781) - West Europe
2. *Rh. bicolor constans* ssp. nov. - East Europe
3. *Rh. bicolor demaggii* Tippman, 1956 - Italy: Lazio and Abruzzo
4. *Rh. bicolor italicum* Müller, 1966 - Italy: Basilicata, Calabria
5. *Rh. bicolor graecum* Schaufuss, 1862 - South Balkans
6. *Rh. bicolor testaceipenne* Pic, 1897 - West Caucasus and West Transcaucasia, north-east Turkey
7. *Rh. bicolor lenkoranum* ssp. nov. - South Armenia, Azerbaidzhan, North Iran
8. *Rh. bicolor juglandis* Fairmaire, 1866 - Turkey
9. *Rh. bicolor praeustum* Reitter, 1895 - South-east Turkey, Syria

Rhamnusium bicolor (Schrank, 1781)

Cerambyx virgo Voet, 1778: 13 [unavailable name - ICZN, Art. 11.4] - "In India Occidentali".
Cerambyx bicolor Schrank, 1781: 132 - „Habitat Viennae“.

Type locality. Austria, Vienna environs - according to the original description.

Distribution. About whole Europe, from North Pyrenees to Urals, including Asian part of Orenburg Region and North-West Kazakhstan along Ural-river valley; Caucasus with Transcaucasia; North Iran, whole Anatolia, Syria.

Rhamnusium bicolor bicolor (Schrank, 1781)

(Figs 1-6)

Cerambyx virgo Voet, 1778: 13 [unavailable name - ICZN, Art. 11.4] - "In India Occidentali".
Cerambyx bicolor Schrank, 1781: 132 - „Habitat Viennae“.
Cerambyx glaucopterus Schaller, 1783: 284 - „Germania“.
Rhagium schrankii Laicharting, 1784: 118 - Tirol.
Stenocorus ruficollis Herbst, 1784: 92 - no locality.
Cerambyx rubroviolaceus Geoffroy, 1785: 86 - "in Agro Parisiensi".
Callidium salicis Fabricius, 1787: 154 "in Lipsia salicibus" (Germany).
Rhagium etruscum Rossi, 1790: 149 - „Florentiae“.
Rhamnusium bicolor var. *ambustum* Heyden, 1877: 394 - „Nassau und Frankfurt“, „Drei Linden“ bei Soden - unavailable name.
Rhamnusium gracilicorne Théry, 1895: cclxv - „Autriche“; Bedel, 1897: 43; Aurivillius, 1912: 167, part. - "Deutschland, Frankreich, Griechenland"; Winkler, 1929: 1147, part. - "E.c."; Plavilstshikov, 1936: 150, 506,

part. - "Mitteleuropa; Ukraine, Süden der UdSSR"; 1955: 498, part. - steppe and forest-steppe of European USSR, West Europe; Villiers, 1978: 91, part. - "Allemagne, Europe centrale et méridionale, Ukraine, Sud de l'U.R.S.S."; Tsherepanov, 1979: 85, part. - western and eastern Europe, eastwards South Urals; Lobanov et al., 1981: 795, part. - European part of USSR, West Europe; Pesarini & Sabbadini, 1994: 15, 70 - "Europa centrale"; Angelov, 1995: 54 - Middle and South Europe; Althoff & Danilevsky, 1997: 9, part. - about whole Europe; Ilić, 2005: 24 part. - Serbia; Bartenev, 2009: 31, part. - from France to Urals.

Rhamnusium bicolor var. *atripenne* Bedel, 1897: 43 - "Paris (jardin de Luxembourg)".

Rhamnusium bicolor var. *humerales* Bedel, 1897: 43 - no locality.

Rhamnusium bicolor var. *capitale* Pic, 1898: 2 - „Autriche“.

Rhamnusium gracilicorne var. *inapicale* Pic, 1901b: 31 - no locality published.

Rhamnusium rufotestaceum Pic, 1913: 138 - "Thuringe".

Rhamnusium virgo, Silfverberg, 1977: 93 - unavailable name; Pesarini & Sabbadini, 1994: 15, 70 (unavailable name) - "Europe centrale et meridionale".

Rhamnusium bicolor; Ganglbauer, 1882: 717 "Europa"; Aurivillius, 1912: 166, part. - Mittel- und Südeuropa, Sibirien; Winkler, 1929: 1147, part. - "E.c.m. Sib."; Plavilstshikov, 1936: 148, 505, part. - "Europa, Mittel- und Südteiler der UdSSR"; Heyrovský, 1955: 80, part.; Panin & Săvulescu, 1961: 86 - Romania; Mikšić, 1971: 9 - Slovenia, Croatia, Bosnia and Herzegovina, Serbia; Kaszab, 1971: 45 - Hungary; Allenspach, 1973: 36 - Switzerland; Villiers, 1978: 89, part. - "Europe centrale et méridionale, à l'Est jusqu'à l'Oural"; Lobanov et al., 1981: 795, part. - European part of USSR, West Europe; Bílý & Mehl, 1989: 39, part. - Finland, C. and S. Europe including Estonia; Švácha, 1989: 36, part. (larvae); Muylaert, 1990: 30 - Belgium; Angelov, 1995: 53 - Bulgaria; Bense, 1995: 109, part. (= *graecum*); Vives, 1984: 66, part.; 2000: 76, 221 - Iberian Peninsula; 2001: 119, part.; Burakowski, 1990: 29, part. - Europe "na wschód do południowego Uralu."; Zagaikevich, 1991: 147, 150, 151, 154, part. - Ukraine; Brustel et al., 2002: 445, part. (= *graecum*); Sama, 2002: 11, part.; Adlbauer, 2005: 71 - Austria; Sláma, 2006: 4 - Central Europe; Migliaccio et al., 2007: 17 - Bulgaria; Bartenev, 2009: 31, part. - West Europe.

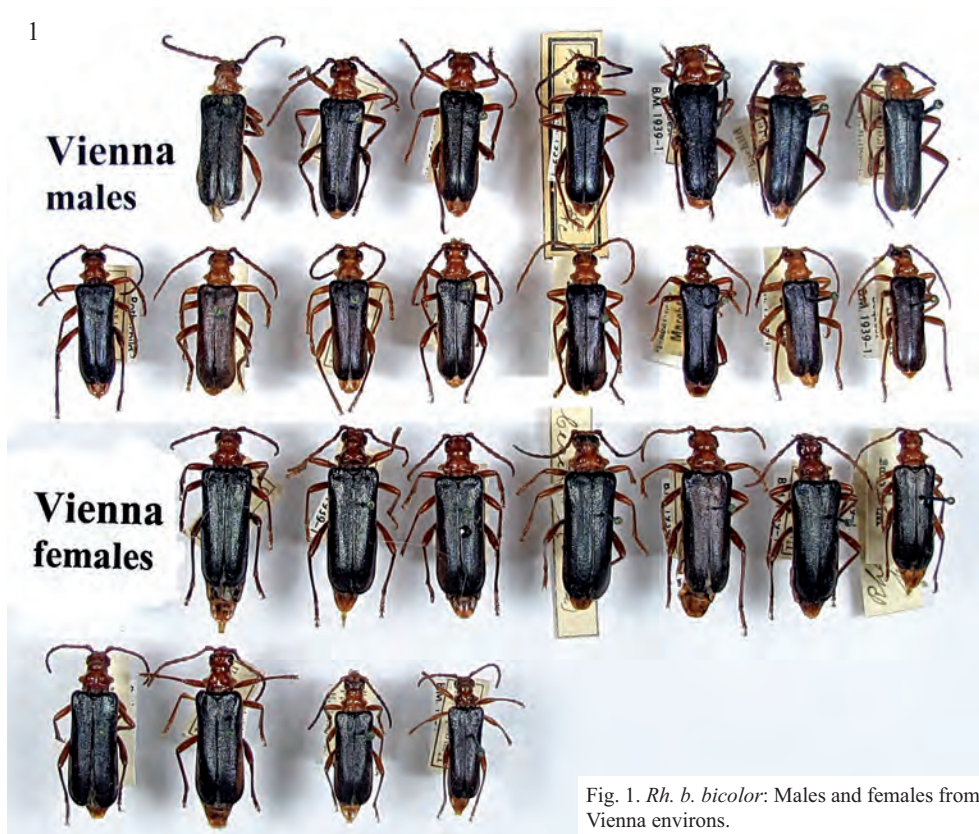
Rhamnusium bicolor bicolor; Althoff & Danilevsky, 1997: 9, part. - West Europe; Sláma, 1998: 187 - "Česká republika i Slovenská republika"; Vives & Alonso-Zarazaga, 2000: 597; Ilić, 2005: 23, part. - Serbia; Brelih et al., 2006: 113 - Slovenia; Löbl & Smetana, 2010: 135, part. - about whole Europe; Özdikmen & Turgut, 2010: 815.

Remarks. The name "*ambustum* Heyd." was introduced as *Rhamnusium bicolor* var. *ambustum* Heyden, 1877 among other variations from same locality: „Drei Linden“ bei Soden, so it was unavailable.

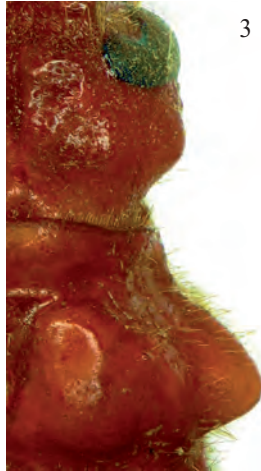
The name *Rhamnusium bicolor* var. *humerales* Bedel, 1897 was introduced without any locality data. Specimens with blue-black elytra and orange humeri are rather often in *Rh. bicolor graecum*, so the traditional attribution of the name to *Rh. b. bicolor* could be wrong.

Type locality. Austria, Vienna environs - according to the original description.

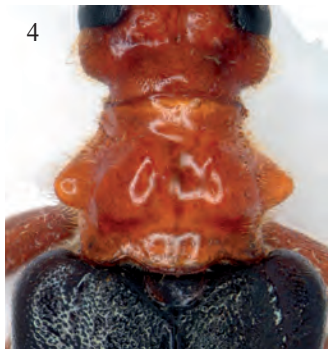
Material examined. 14 ♂♂, 11 ♀♀: "Wien Umg.", "Umgeb. von Wien", "Marchfeld Oberweiden" - BMNH; 1 ♂: "Wien" - ZMM; 1 ♂, 1 ♀: "Graz, Styria" and "Gonohits, Styria" - BMNH; 1 ♂: "Amras b. Innss." - BMNH; 4 ♂♂ and 2 ♀♀: "Germania, Reitter" - BMNH; 1 ♂, 1 ♀: with same label - ZMM; 1 ♂ with same label - MD; 2 ♂♂: "Umgebung München" and "München" - ZMM; 1 ♂: Pfalz, Medard, 12.vi.1977, leg. Schimmel - MD; 2 ♂♂, 6 ♀♀: "Hanau, Main" - BMNH; 1 ♂, 1 ♀ with same label - ZMM; 1 ♂ with same label - MD; 4 ♂♂, 1 ♀: "Pr. Sachsen" - BMNH; 1 ♀: "Sachsen" - ZMM; 1 ♂: "Silesia" - ZMM; 1 ♂: "Silesia, Guhrau" - MD; 2 ♂♂, 2 ♀♀: "Gallia" and "Gallia merid." - BMNH; Paris; 1 ♂, 4 ♀♀: "Gallia, Paris" and "Paris" - BMNH; 2 ♀♀: "Lyon" and "Lyon-la-Forêt" - BMNH; 3 ♂♂, 2 ♀♀: "Pouzadé, Gers, J. Dayrem" [Pouzadé, 43°55'17"N, 0°34'0"E, a farm at 1 km South of Coches, Gers Region, France] - BMNH; 1 ♂ (red-orange dorsally), "Coche, Gers, J. Dayrem" - BMNH; 1 ♂, 1 ♀: "Suisse" - BMNH; 1 ♂: "Emilia, Parma" - BMNH; 1 ♂: "Parma, Faenza" - MD; 1 ♀: "Trieste" - ZMM; 1 ♀: "Hungary" - BMNH; 1 ♂: "Kelecsényi" - ZMM; 2 ♂♂: "Bohemia" - ZMM; 1 ♂, 2 ♀♀: "Czech Republic, Bohemia mer., Hluboká nad Vltavou - Vondrov, 16.vi.2010, on *Aesculus*, leg. Tomáš Peterka - TP; 1 ♂: West Ukraine, "Podolien, Sokolow" "Kamenetz" - ZMM; 9 ♂♂ and 14 ♀♀ without geographical labels, but most probably from West Europe - BMNH.



Description. Males with blue elytra dominate in most populations from Austria, Germany and France. This character was also mentioned by Villiers (1978) for France. All known specimens from Belgium are with blue-black elytra (Muylaert, 1990). Among 29 available specimens from Vienna environs (16 ♂♂ and 13 ♀♀) all(!) ♂♂ (Fig. 1) have blue elytra, as well as five of seven males with the label: “Germania, Reitter” and five of seven males from France; but all (4 ex.) available males with label “Sachsen” have orange elytra, as well as two of three available males from Hanau-am-Main and a single male from Medard (Pfalz); scutellum of males with light elytra is usually black, but sometimes lightened; females are always with dark-blue elytra (Fig. 1); 5th antennal joint usually relatively wide; the shape of temples (Figs 2-3), shape of lateral prothoracic tubercles (Figs 4-6) and shape of last abdominal male sternite - characters used by Villiers (1978) - do not have any taxonomy value, as they often vary considerably inside one population. Obliterated temples (which were figured by Villiers as the character of the taxon) are extremely rare in *Rh. b. bicolor* (Fig. 2); temples are usually strongly developed (Fig. 3) similar to other subspecies. Lateral tubercles of prothorax (Figs 4-8) in population from near Vienna can be long and narrow, big and wide or rather obliterated; character of elytral sculpture (used by Plavilstshikov, 1936) is



Figs 2-3. *Rh. b. bicolor*: Shape of temples in females from Paris environs.



Figs 4-8. *Rh. b. bicolor*: Shape of prothoracic tubercles in males and females from Vienna environs.
4 - ♂-1, 5 - ♂-2, 6 - ♀-1, 7 - ♀-2, 8 - ♀-3.



also strongly variable inside Vienna population - from fine and regular to coarse and rugous; antennae from totally red to bicolored - black from 5th joint to the apex. In typical population from near Vienna about half of specimens have bicolored antennae, but in populations from France - about all. Legs (with the exception of certain coxae and sometimes bases of hind femora) and abdomen are red-orange, as well as head and prothorax, though head sometimes with black dorsal spot as well as anterior abdominal sternites (especially in specimens from western parts of the area). In general, males and females are bigger than specimens from East Europe. Length of available males: 14-23 mm, length of available females 15-24 mm.

Distribution. North Spain, about whole France (without Corsica), Switzerland, about whole Germany, Czech Republic, Austria, North Italy; all countries northwards Balcan Peninsula: Slovenia, Croatia, Serbia, Bosnia and Herzegovina, Macedonia, Albania. The transitional zone to *Rh. b. graecum* from the south of Balcan Peninsula is not clear. The situation in Central Italy is also not clear, most probably the transitional populations to *Rh. bicolor demaggii* Tippman, 1956 (with darker abdomen) from Lazio and to *Rh. bicolor italicum* from South Italy (similar to *Rh. b. graecum*) could occur here. The record of *Rh. b. bicolor* for Sicily (Sama, 1988) was most probably wrong - a local subspecies (yet not described) must be distributed here. The populations from the eastern part of West Europe (Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, West Ukraine) could be provisionally attributed to the nominative subspecies, but local specimens need special investigation because of its transitional character to the distinct new subspecies distributed in East Europe and described below.

Remark. The nominative subspecies is characterized first of all by the domination of ♂♂ with dark-blue or nearly black elytra (head, pronotum and legs always red) in most of populations. ♀♀ are usually similarly colored. Besides, the 5th antennal joint is relatively wide.

***Rhamnusium bicolor constans* ssp. nov.**

(Figs 9-12)

Rhamnusium bicolor var. *gracilicorne*, Zhuravlev, 1914: 37 - Kazakhstan, Uralsk Region.

Rhamnusium gracilicorne, Plavilstshikov, 1936: 150, 506, part. - "Mitteleuropa; Ukraine, Süden der UdSSR"; 1955: 498, part. - steppe and forest-steppe of European USSR, West Europe; 1965: 398, part. - steppe and forest-steppe of European USSR; Romadina, 1954: 216 - NW Kazakhstan, Ural-River Vally, Yanvartzevo; Kostin, 1973: 133 - NW Kazakhstan, Ural-River Vally; Mamaev & Danilevsky, 1975: 116, part. (larvae); Villiers, 1978: 91, part. - "Allemagne, Europe centrale et méridionale, Ukraine, Sud de l'U.R.S.S."; Tsherepanov, 1979: 85, part. - western and eastern Europe, eastwards South Urals; Lobanov et al., 1981: 795, part. - European part of USSR, Kazakhstan, West Europe; Magdeev, 1988: 61 - Kuybyshev [now Samara]; Althoff & Danilevsky, 1997: 9, part. - about whole Europe; Kasatkin & Arzanov, 1997: 68, part. - "Volgograd Region: Dubovka"; Bartenev, 2009: 31, part. - from France to Urals.

Rhamnusium bicolor, Aurivillius, 1912: 166, part. - Mittel- und Südeuropa, Sibirien; Winkler, 1929: 1147, part. - "E.c.m. Sib."; Plavilstshikov, 1932: 188, part. - centr and south of European USSR, Caucasus; 1936: 148, 505, part. - "Europa, Mittel- und Südteil der UdSSR"; 1955: 498, part. - from Volga Valley [!] to Urals and to Black Sea, West Europe; 1965: 398, part. - southwards from Leningrad, Gorkiy, Kazan; Mamaev & Danilevsky, 1975: 116, part. (larvae); Villiers, 1978: 89, part. - "Europe centrale et méridionale, à l'Est jusqu'à l'Oural"; Lobanov et al., 1981: 795, part. - European part of USSR, West Europe; [?] Bílý & Mehl, 1989: 39, part. - Finland, C. and S. Europe including Estonia; Švácha, 1989: 36, part. (larvae); Burakowski, 1990: 29, part. - Europe "na wschód do południowego Uralu."; Zagaikevich, 1991: 147, 150, 151, 154, part. - Ukraine; Kasatkin & Arzanov, 1997: 68, part. - Rostov Region: Mityakinskaya; Süda & Miländer, 1998: 44 - Estonia; Sama, 2002: 11, part.

Rhamnusium bicolor bicolor, Löbl & Smetana, 2010: 135, part. - about whole Europe.

Type locality. Central Russia, Samara.

Type material. Holotype (♂) (Fig. 9): Central Russia, Samara-city, 16.vi.2007, D. Magdeev leg. - MD. (64 paratypes): (18 ♂♂, 11 ♀♀) from same locality collected from the beginning of June to the beginning of July in 1982-2009 by D. Magdeev - MD; (1 ♀): Moscow, Ostankino, 1905 - MD; (1 ♀): Moscow, near "Sokol" subway station, 8.6.1986, V. Grachev leg. - MD; (3 ♂♂, 7 ♀♀): Moscow, near "Shchukinskaya" subway station, 10.v.-13.vi. 2005-2011, A. Shamaev leg. - AS; (1 ♂, 4 ♀♀): Moscow Region, Tomilino, 3-8.vi.2010, A. Shamaev leg. - AS; (1 ♀): Chuvashia, Morgaushi Distr., Kashmashi, 18.vi.2010, A. Shamaev leg. - AS; (1 ♂): Saratov Region, Krasnyy



Figs 9-10. *Rh. b. constans* ssp. n.: 9 - holotype, ♂; 10 - paratype, ♀, Russia, Samara.

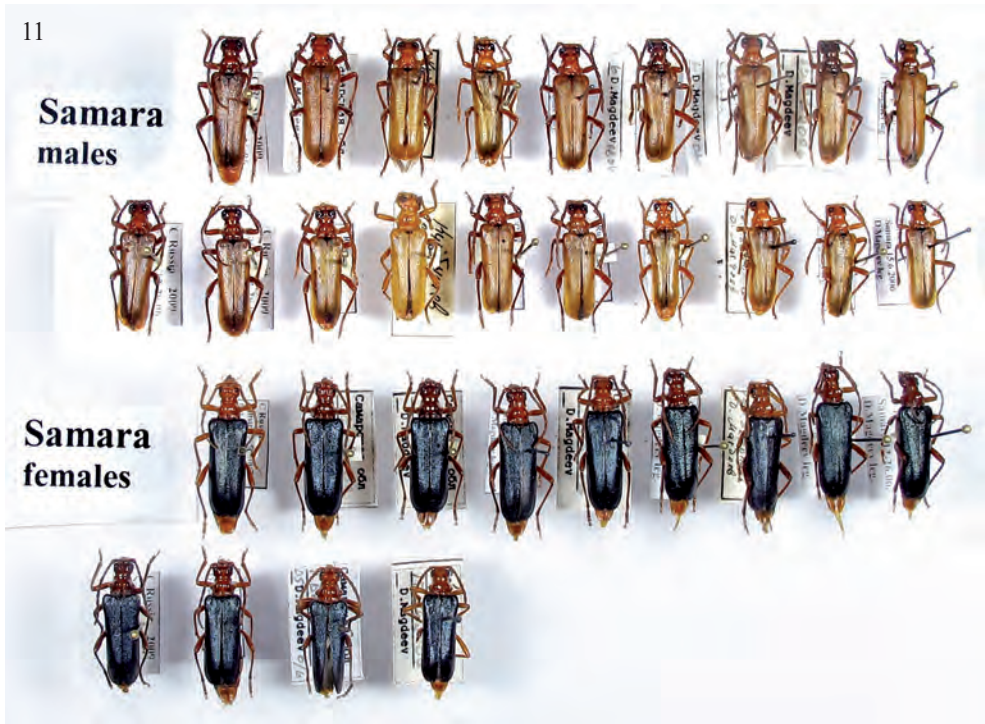


Fig. 11. *Rh. b. constans* ssp. n., type series, males and females from Samara-city .

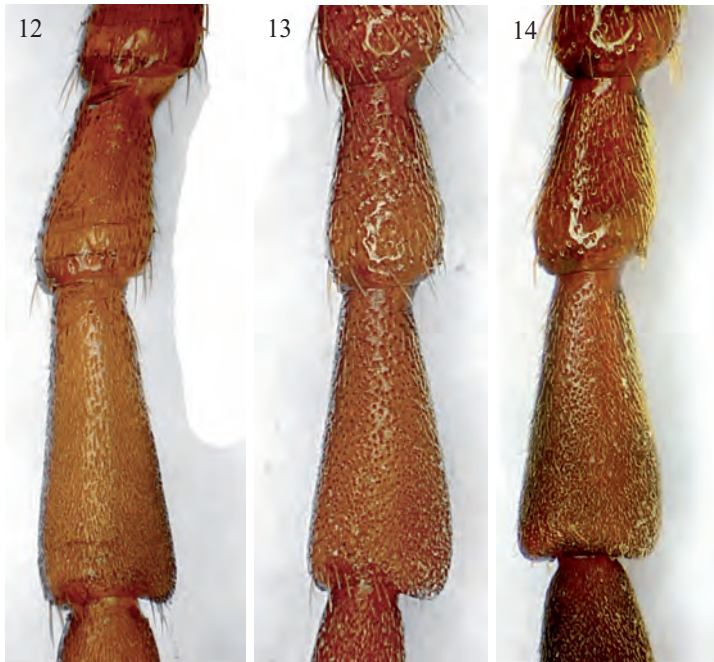
Kut, larva collected 24.ii.1979 from *Salix*, imago *ex.l.* 4.iv.1979 - MD; (1 ♀): “Gouv. Saratov, Fl. Achtuba, S. Achtuba, 11.vi.1928, A. Menstschikow” [now in Volgograd Region] - ZMM; (1 ♀): “Stalingrad, 1932, B.Brandt leg.” - ZMM; (1 ♂, 2 ♀♀): “Stalingrad, Beketovka [inside Volgograd -city], 18.v.1950, 7.v.1951, G.Mazokhin leg. - ZMM; (1 ♂): [Volgograd Region] “Kamyshin, 19.v.1950, L.Zhiltzova leg” - ZMM; (1 ♀): (with black-blue elytra), Rostov Region, Mityakinskaya, 25.v.1997 - SM; (1 ♂, 3 ♀♀): Ukraine, “Tschernigov, 29.vi.1919” - ZMM; (2 ♀♀): Ukraine, “Kiev, Sapernaya Datcha, 17.v.1907 and 17.v.1908, Panin leg.” - ZMM; (2 ♀♀): Ukraine, “Zhitomir” - ZMM; (1 ♀): “Ukraine, Kharkov env., 10.vi.1940, A. Shachbasov leg.” - MD; (1 ♀): “Ukraine, Cherkasy Region, Kanev distr., Mikhaylovka, 15.6.1984, V.Gracev leg.” - MD.

Description. Males usually with red-orange elytra (Figs 9, 11); females are usually with dark-blue elytra (Figs 10, 11); no males with blue elytra are known from Volga Valley and east of the Volga; according to Shapovalov (2010), in Orenburg Region all males dorsally red and all females with black-blue elytra (all specimens with totally reddish antennae); among 17 specimens (4 ♂♂, 13 ♀♀) known to me from Moscow-city with suburbs only 1 male has blue elytra, and only 1 female has red elytra; scutellum in males usually black, but sometimes lightened; 5th antennal joint elongated (Fig. 12); strongly obliterated temples, figured by Villier (1978) for his “*Rh. bicolor*” could also be sometimes observed in specimens from near Samara; lateral prothoracic tubercles can also be rather different among one population, with different shape and relative size; elytral punctation is usually fine and regular, but sometimes a little rugous; antennae almost always totally red, but sometimes bicolored - a single male in the type series (Samara); legs (with the exception of certain coxae and sometimes bases of hind femora) and abdomen red-orange, as well as head and prothorax; about half of males of the type series (including holotype) with a pair of black spots between eyes; females usually with blue elytra; but all females (4 specimens available) from Volgograd Region with red elytra. Males and females are in general smaller than the specimens from West Europe. Length of available males: 15-20 mm, length of available females: 17-21 mm.

Distribution. About whole European Russia with the exception of marginal northern areas, but with transural Asian localities of Orenburg region; North-West Kazakhstan along Ural river valley. Most probably the records of *Rh. bicolor* from Baltic republics and South Finland were connected with *Rh. b. constans* ssp. nov. All records from Central and Eastern Ukraine must concern *Rh. b. constans* ssp. nov., as well as records from Belorussia. The species was not found in Sankt-Peterburg environs. It is rather common inside Moscow-city along boulevards with *Populus* and in city parks, as well as inside Samara-city; known from Tula Region and rather common in Voronezh Region; many records were published from Middle Volga areas (Chuvashia, Tatarstan, Samara, Ulyanovsk) and from South Volga (Saratov, Volgograd), but the taxon was not found in Astrakhan Region; absent in Udmurtia. The southernmost localities in European Russia are Mityakinskaya environs in Rostov Region (Kasatkin & Arzanov, 1997) and Akhtubinsk in Volgograd Region. No records from North Caucasus (including whole Krasnodar and Stavropol regions) could be connected with *Rh. b. constans* ssp. nov., corresponding specimens being absent in the collections.

Name derivation. “Constans” means constant - with small range of individual variability.

Remark. The main character of the new subspecies is a very high level of sexual dimorphism: the domination of red (dorsally) males and bicolored females (head and prothorax red, but



Figs 12-14. Shape of 5th antennal joint (right antenna):
 12 - *Rh. b. constans* ssp. nov.;
 13 - *Rh. b. testaceipenne*;
 14 - *Rh. b. juglandis*.

elytra black-blue) in about all known populations (with only one exception: in Volgograd population males and females have same color - both red), besides 5th antennal joint with obliterated outer angle.

***Rhannusium bicolor testaceipenne* Pic, 1897**
 (Figs 15-16)

Rhannusium testaceipenne Pic, 1897: 299 - "Caucase"; 1901b: 31 - "Caucase"; Aurivillius, 1912: 167, part. - "Kaukasus, Amasia, Türkei"; Winkler, 1929: 1147, part. - Caucasus, Asia Minor, Turcia europae; Plavilstshikov, 1932: 188 - Caucasus; 1936: 152, 506, part. - "Kleinasien, Syrien, Krim, Kaukasus, Transcaucasien"; 1948: 33, part.; 1955: 498, part.; Lobanov et al., 1981: 795 - European part of USSR, Caucasus, Near East; Danilevsky & Miroshnikov, 1985: 126, part.; Zagaikovich, 1991: 147, 153 - Crimea; Althoff & Danilevsky, 1997: 9 - Crimea; Kasatkin & Arzanov, 1997: 68 - Krasnodar; Özdikmen, 2007: 192, part. - "Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Iran"; Bartenev, 2009: 33, part. - Crimea, Caucasus, Transcaucasia, Near East, Syria, Turkey, North Iran; Cebeci & Özdikmen, 2010: 136, part. - "Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Persia".

Rhannusium testaceipenne var. *mesmini* Pic, 1931: 6 ("Caucase").

Rhannusium bicolor, Plavilstshikov, 1955: 498, part. - from Volga Valley to Urals and to Black Sea, West Europe.

Rhannusium juglandis, Sama, 2002: 11, part; Löbl & Smetana, 2010: 135, part. - South Russia, Transcaucasia, Near East, Iran.

Type locality. North-West Caucasus - according to the original description and the area of the taxon.

The name "Caucase" was traditionally used for North Caucasus, and the taxon is still only known from the west part of North Caucasus.

Material examined. 1 ♂: Russian Black Sea Coast, "Cauc. occ. bor., Gelendzhik, 17.v.1926" - ZMM; 1 ♂, "Gelendzhik, 26.v.1974, L. Solovyev leg." - MD; 1 ♂: "Krasnodar env., 6.vi.1992" - MD; , 1 ♀ (ex larva): "Krasnodar

env., 4.iii.1973” - MD; 2 ♀♀: Krasnodar env., 3.vi.1994 and 29.v.1995, A. Abramov leg.; 3 ♀♀: “Armenia, Tavush prov., 2 km S Zovk, 930 m, 40°47’N, 45°02’E, 28.v.2005, M. Kalashian leg.” - MD; 1 ♀: “Caucas, Kutais” - ZMM; 1 ♂: South Crimea, “Karadag Mt., 20.v-2.vi.1919” - ZMM; 1 ♂: “Crimea, Otusy, 19.v.1907” - ZMM; 1 ♂: “Simferopol, 21.v.1931” - ZMM.

Description. Males and females (Figs 15-16) are always similarly colored, with red-orange elytra; scutellum black or also red-orange; 5th antennal joint relatively short and wide (Fig. 13); temples often very long, diverging posteriorly, but sometimes more or less obliterated; lateral prothoracic tubercles can be rather different within one population, with different shape and relative size; elytral punctuation usually fine and regular, but sometimes a little rugous; antennae about always totally red, but sometimes a little darkened distally from 5th



Figs 15-16. *Rh. b. testaceipenne*: 15 - ♂, Krasnodar env.; 16 - ♀, Krasnodar.

joined, but never really bicolored; legs with dark bases of hind femora, but other femora and all tibiae are always totally light; abdomen almost always partly darkened anteriorly. Length of available males: 16-18 mm, length of available females: 16-20 mm.

Distribution. Most part of Krasnodar region, many specimens being known from the nearest environs of the city; Black Sea coast of Russia, as well as all Black Sea Transcaucasian coast; the taxon is known from Georgia eastwards to about Kutaisi (a female from Kutaisi is available - ZMM); a big series was collected in Armenia near Idzhevan; south coast of Crimea Peninsula; North-east Turkey close to Caucasus.

Remark. The main character of the subspecies is same color pattern in males and in females; both always with red head, prothorax, elytra and legs; besides 5th antennal joint relatively wide; abdomen and femora bases partly darkened.

Rhamnusium bicolor lenkoranum ssp. nov.

(Figs 17-22)

Rhamnusium graecum, Plavilstshikov, 1932: 188 - Caucasus; 1936: 147, 505, part. - "Griechenland, Syrien, Kleinasien, Transcaucasien"; 1948: 33, part.; Zaitzev, 1954: 6, part. - Tbilisi (1ex.), Armenia, Azerbajdzhan, Greece, Anatolia; Lobanov et al., 1981: 795, part. - Caucasus, Near East, Balkans; Danilevsky & Miroschnikov, 1985: 126, part.; Sama, 1988: 12, part. - "Grecia, Asia Minore, Siria, Caucaso".

Rhamnusium testaceipenne, Villiers, 1967: 347, part. - "Iran: Tariki Rud"; Švácha, 1989: 37 - larvae; Özdikmen, 2007: 192, part. - "Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Iran"; Bartenev, 2009: 33, part. - Crimea, Caucasus, Transcaucasia, Near East, Syria, Turkey, North Iran; Cebeci & Özdikmen, 2010: 136, part. - "Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Persia".

Rhamnusium juglandis, Löbl & Smetana, 2010: 135, part. - South Russia, Transcaucasia, Near East, Iran.

Rhamnusium graecum graecum, Löbl & Smetana, 2010: 135, part. - Transcaucasia, Greece, Turkey; Cebeci & Özdikmen, 2010: 135, part. - Greece, European Turkey, Transcaucasia, Azerbaijan, Armenia, Syria, Turkey, Persia.

Rhamnusium juglandis, Löbl & Smetana, 2010: 135, part. - Turkey, Syria, South Russia, Caucasus, Ukraine, Iran.

Type locality. Azerbajdzhan, Lenkoran District, Avrora, 38°39'N, 48°47'E.

Type material. Holotype (♀): Azerbajdzhan, Lenkoran District, Avrora, 38°39'N, 48°47'E, 14.5.1980, M. Danilevsky leg. - MD. (25 paratypes): (1 ♂): Azerbajdzhan, Kumbashi, 20km N Lenkotran, 28.v.1909, Kirichenko leg. - ZIN; (1 ♂): "N Iran, p. Mazandaran, Kandelous, 60 km SE Calus, 3624N, 5131E, 1315 m, 24-25.v.2003, lgt. P. Kabatek" - MD; (2 ♂♂): with same label - PK; (3 ♂♂, 4 ♀♀): N Iran, p. Gilan, 40 km E Rudbar, 3648N 4938E, 1127 m, 27.v.2003, adults in a hollow *Fagus*, lgt. M. Rejzek - MR; (2 ♀♀): "N Iran, p. Gilan, 42 km SSE Rast, 3651N, 4941E, 1059 m, 28.v.2003, leg. P. Kabatek" - PK; (3 ♂♂, 4 ♀♀): with same data, adults in a hollow *Quercus* sp., lgt. M. Rejzek - MR; (1 ♂): "Iran, Mazandaran, Now Kandel, 14.v. 1997, leg. M. Skorpik" - PK; (2 ♂♂): Armenia, Megri, 10.v.1983, V.Tuzov leg. - MD; (1 ♀): Armenia, Megri, 15.v.1972 - MD; (1 ♀): [NW Azerbajdzhan] "Kaukasus, Nukha [now Sheki], Maljushenco" - ZMM.

Description. Males (Figs 18, 20, 22) are always with red head, prothorax, elytra and legs; scutellum black or also red-orange; females (Figs 17, 19, 31, 22) are always totally blue-black or nearly black; 5th antennal joint wide and short; temples usually relatively long, but sometimes more or less obliterated; lateral prothoracic tubercles well developed; elytral punctuation rather different in different specimens: fine and regular, or more or less rugous; antennae in males totally red or strongly bicolored; legs in males usually with dark bases of hind femora, but other femora and all tibiae are always totally light; head without black spots;





22

Figs 17-22. *Rh. b. lenkoranum* ssp. nov.: 17 - holotype, ♀; 18 - paratype, ♂, Azerbaydzhan, Lenkoran distr., Kumbashi; 19 - paratype, ♀, Azerbaydzhan, Sheki; 20 - paratype, ♂, Armenia, Megri; 21 - paratype, Armenia, Megri; 22 - ♀♀ (blue-black) and ♂♂ (red): paratypes from North Iran (photo by M. Rejzek).

abdomen about always partly darkened anteriorly. Length of available males 14-24.1 mm, length of available females 18-24 mm.

Distribution. East Transcaucasia (the record for Tbilisi needs confirmation); the westernmost definitely known localities are Megri environs in South Armenia and Sheki environs in North West Azerbajdzhan; most of known Transcaucasia specimens were collected in Lenkoran District of Azerbajdzhan; North Iran in Gilan and Mazanderan; most probably absent in Turkey.

Name derivation. The specific epithet “lenkoranum” is connected with the name of the type locality – Lenkoran District in Azerbajdzhan.

Remark. The taxon was usually traditionally treated within *Rh. graecum*, because of totally black-blue females but the new subspecies is strongly distant and geographically isolated from *Rh. b. graecum*, known from Balcan Peninsula only. All the known populations of *Rh. b. graecum* are also characterized by a strong level of individual variability in males and females, while *Rh. b. lenkoranum* ssp. n. is rather constant - males have always red elytra, females being always totally black-blue.

Rhamnusium bicolor graecum Schaufuss, 1862

(Figs 23-29)

Rhamnusium graecum Schaufuss, 1862: 311 - „Graecia“; Ganglbauer, 1882: 717, part. - “Griechenland, Syrien”; Bedel, 1897: 44, part.; Aurivillius, 1912: 167, part. - “Griechenland, Kleinasien, Syrien”; Winkler, 1929: 1147, part. - “Gr. Asm. Ca. Syr.”; Plavilstshikov, 1936: 147, 505, part. - “Griechenland, Syrien, Kleinasien, Transcaucasien”; 1948: 33, part.; Lobanov et al., 1981: 795, part. - Caucasus, Near East, Balkans; Danilevsky & Miroshnikov, 1985: 126, part. - Transcaucasia, Balkans, Near East, Turkey, Iran; Sama, 1988: 12, part. - “Grecia, Asia Minore, Siria, Caucaso”; Švácha, 1989: 36, part. (larvae [Turkey, Ankara, Kizilkahamam; Turkey, Büyükkadar; Greece, Tripolis]) - “East of Mediterranean area (Greece, Turkey, Syria), up to Transcaucasia”; Pesarini & Sabbadini, 1994: 15, part. - “Italia meridionale, Grecia, Turchia europea”; Bartenev, 2009: 31, part. - Italy, Greece, Turkey.

Rhamnusium graecum var. *limbatum* Pic, 1897a: 30 - “Veluchi, dans la Turquie d’Asie”; Pic, 1901b: 31 - “Grèce, Veluchi”.

Rhamnusium gracilicorne, Aurivillius, 1912: 167, part. - “Deutschland, Frankreich, Griechenland”.

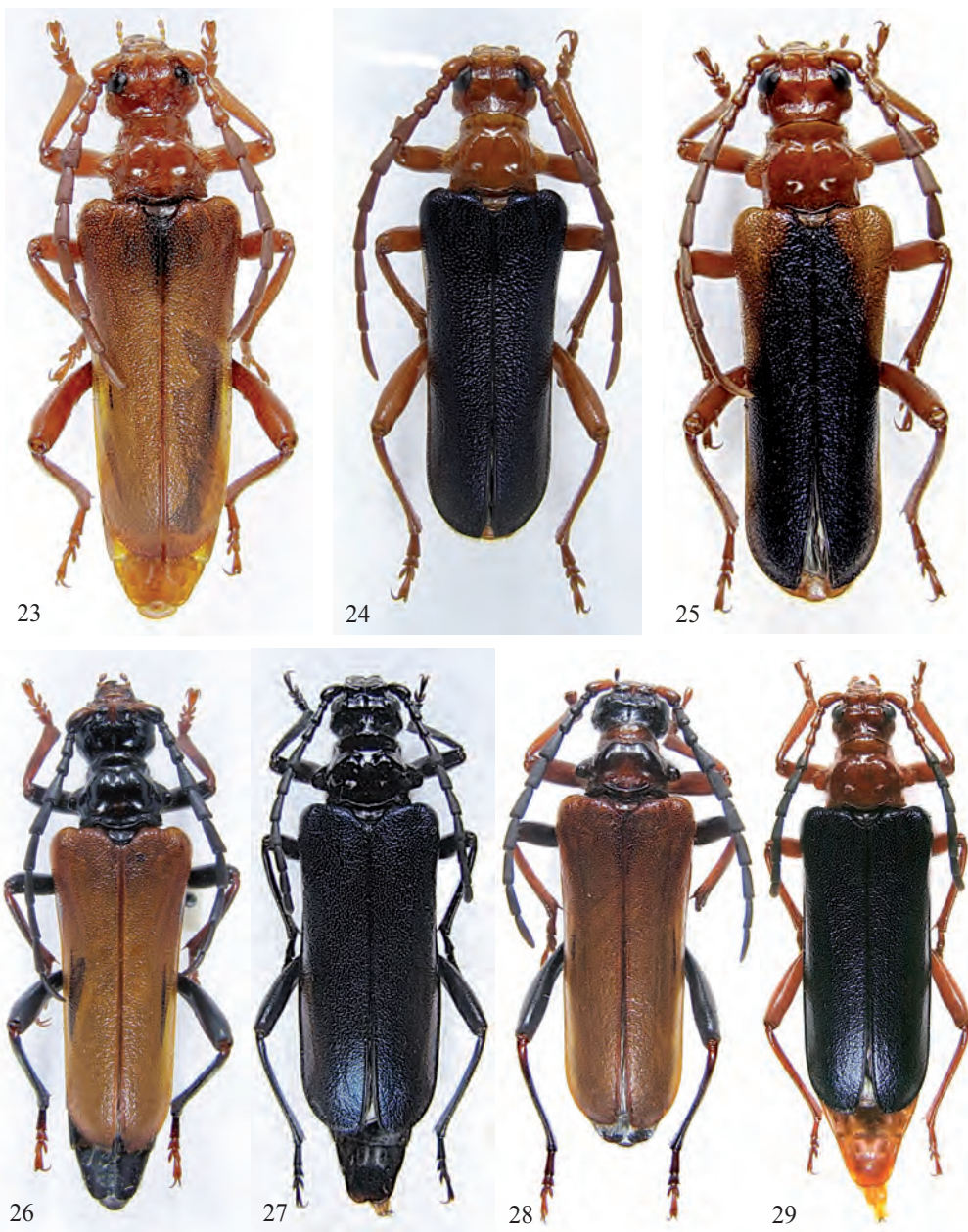
Rhamnusium bicolor, Bense, 1995: 109, part. (= *Rh. graecum*).

Rhamnusium bicolor graecum, Sláma & Slámová, 1996: 128 - Greece. West Makedonia: Kosani; Epirus: Ioannina; Thessaly: Metalio; Peloponnese: Kalavrita, Tripoli.

Rhamnusium graecum graecum, Althoff & Danilevsky, 1997: 9, part. - Italy, Greece, Turkey; Sama, 2002: 11 - “Greece”; Özdikmen, 2007: 192, part. - Europe (Greece, European Turkey), Transcaucasia, Turkey, Iran; Löbl & Smetana, 2010: 135, part. - Transcaucasia, Greece, Turkey; Cebeci & Özdikmen, 2010: 135, part. - Greece, European Turkey, Azerbaijan, Armenia, Syria, Turkey, Iran.

Type locality. Greece - according to the original description.

Material examined. 1 ♀ [bicolored]: “Graec.” - ZIN; 1 ♀ [black-blue]: “Veluchi, Dr. Krüper” - BMNH; 1 ♀ [black-blue]: “Graecia, Pelop., Tripolis, vi.1981, J. & M. Sláma lgt.” - ZIN; 4 ♂♂ [1 - red, 1 - bicolored, 1 - bicolored with red humeri, 1 - black with brown elytra], 4 ♀♀ [3 - blue-black, 1 - bicolored]: “Greece, (Peloponnese), Menalo Mt. r., Vytina, h=1010 m, on trunk of old *Populus* sp., 25-27.v.2010, lg. A. Napolov & I. Roma - AN; 3 ♂♂ [1 - red, 1 - bicolored with red humeri, 1 - with partly black head and prothorax and brown elytra]; same locality, 16-25.v.2010, leg. Tomáš Peterka - TP; 1 ♂ [red elytra, abdomen nearly totally black]: “Greece - Corfu bor., Acharavi, 14.v.1999, leg. T. Peterka - TP.



Figs 23-29. *Rh. b. graecum*: 23-26 - ♂♂, Greece (Peloponnese), Menalo Mt. r., Vytina; 27 - ♂, same locality; 28-29 - ♀♀, Greece (Peloponnese), Menalo Mt. r., Vytina.

Description. The subspecies is characterized by a considerable number of totally black-blue females in populations (Fig. 28); bicolored females (Fig. 29) with red head, prothorax and legs are also known; males are extremely variable: from normal red (Fig. 23) form (with red head, prothorax, legs, and elytra) to normal (Fig. 24) bicolored (with red head, prothorax and legs, but black-blue elytra), but also known bicolored males with orange humeri (Fig. 25) and males with black body, legs and antennae, but brown elytra (Fig. 26) or thorax and legs partly lightened (Fig. 27); red legs usually with black bases of hind femora; pale forms usually with partly black abdomen; antennae from strongly bicolored to totally red; 5th antennal joint with strongly exposed outer apical angle; temples rather long. Length of available males 17-21.3 mm, length of available females 17-21.3 mm.

Distribution. Greece; most of known specimens were collected in Peloponnese; several localities are also known in Central and North Greece; one totally black female is known from Olympus Mt. near Leptokaria (personal message by M. Rejzek, 2011).

Remark. The subspecies is characterized by considerable number of totally dark-blue females in the populations. Normal bicolored females are also known, as well as many differently colored males. Besides, 5th antennal joint is relatively wide.

***Rhamnusium bicolor praeustum* Reitter, 1895**
(Figs 30-34)

Rhamnusium graecum var. *praeustum* Reitter, 1895: 85 - "Akbes in Syrien" [now Antakya in Turkish Hatay]; Bedel, 1897: 44.

Rhamnusium graecum, Ganglbauer, 1882: 717, part. - "Griechenland, Syrien"; Aurivillius, 1912: 167, part. - "Griechenland, Kleinasien, Syrien"; Winkler, 1929: 1147, part. - "Gr. Asm. Ca. Syr."; Plavilstshikov, 1936: 147, 505, part. - "Griechenland, Syrien, Kleinasien, Transcaucasien"; 1948: 33, part.; Sama, 1988: 12, part. - "Grecia, Asia Minore, Siria, Caucaso";

Rhamnusium (?var.) *praeustum*, Pic, 1897: 300.

Rhamnusium testaceipenne, Plavilstshikov, 1936: 152, 506, part. - "Kleinasien, Syrien, Krim, kaukasus, Transcaucasien"; 1948: 33, part.; 1955: 498, part.; Özdikmen, 2007: 192, part. - "Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Iran"; Bartenev, 2009: 33, part. - "Crimea, Caucasus, Transcaucasia, Near East, Syria, Turkey, North Iran; Cebeci & Özdikmen, 2010: 136, part. - "Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Persia".

Rhamnusium cf. *testaceipenne*, Rejzek et al., 2003: 12 - 3ex. "NW. Syria: Şlinfah E. Latakia".

Rhamnusium juglandis, Löbl & Smetana, 2010: 135, part. - Turkey, Syria, South Russia, Caucasus, Ukraine, Iran.

Rhamnusium graecum graecum, Cebeci & Özdikmen, 2010: 135, part. - Greece, European Turkey, Transcaucasia, Azerbaijan, Armenia, Syria, Turkey, Iran.

Type locality. Turkey, Hatay, Antakya environs - according to the original description.

Material examined. 2 ♂♂, 1 ♀: "Amanus Mts., Asia Minor, 1903. 357 - BMNH; 1 ♂: "Syria, Akbes, Stmgr." - ZMM; 1 ♀: "Hoch-Syrien, Akbes, (Staudinger)" - ZIN.

Description. The subspecies is characterized by the presence of light males (orange-red head, prothorax and legs) with black apices of reddish elytra (Figs 31-32), abdomen from totally red to totally black; male with strongly reduced black elytral area is also available (Fig. 30); two available females (Figs 33-34) are normally bicolored (orange-red head, prothorax, legs, abdomen, but black-blue elytra); antennae in a small number of available specimens



30



31



32



33



34

Figs 30-34. *Rh. b. praeustum*: 30-31 - ♂♂, Mt. Amanus; 32 - ♂, Akbes; 33 - ♀, Akbes; 34 - ♀, Mt. Amanus.

are always strongly bicolored. Length of available males: 17-21.3 mm, length of available females: 19.7-23 mm.

Distribution. Hatay province in Turkey; north Syria.

***Rhamnusium bicolor juglandis* Fairmaire, 1866**

(Figs 35-38)

Rhamnusium juglandis Fairmaire, 1866: 276 “Bosz-Dagh”; Sama, 2002: 11, part. - “Turkey and Caucasus”; Löbl & Smetana, 2010: 135, part. - Turkey, Syria, South Russia, Caucasus, Ukraine, Iran.

Rhamnusium geniculatum Pic, 1901a: 10 - “Anatolie: Ak-Chéhir”; 1901b: 30, part. - “Grèce, Asie Mineure”.

Rhamnusium delagrangi Pic, 1901a: 10 - “Smyrne”; 1901b: 31; Aurivillius, 1912: 166, part. - “Smyrna”; Winkler, 1929: 1147, part. - “Asm.”.

Rhamnusium testaceipenne var. *anatolicum* Pic, 1901a: 10 - “Anatolie: Ak-Chehir et Amasia; 1901b: 31 - “Amasie”.

Rhamnusium anatolicum var. *obscuripes* Pic, 1903: 163 - “Turquie”.

Rhamnusium testaceipenne var. *rufotibialis* Pic, 1917: 3 - “M^{is} Taurus”.

Rhamnusium graecum, Aurivillius, 1912: 167, part. - “Griechenland, Kleinasien, Syrien”; Winkler, 1929: 1147, part. - “Gr. Asm. Ca. Syr.”; Plavilstshikov, 1936: 147, 505, part. - “Griechenland, Syrien, Kleinasien, Transcaucasien”; Demelt, 1963: 141 - Turkey, “Büyükdar”; Lobanov et al., 1981: 795, part. - Caucasus, Near East, Balkans; Sama, 1988: 12, part. - “Grecia, Asia Minore, Siria, Caucaso”; Švácha, 1989: 36, part. (larvae [Turkey, Ankara, Kizilkahamam; Turkey, Büyükdar; Greece, Tripolis]) - “East of Mediterranean area (Greece, Turkey, Syria), up to Transcaucasia”.

Rhamnusium graecum var. *juglandis*, Bedel, 1897: 43, part.; Plavilstshikov, 1936: 148, 505, part.

Rhamnusium bicolor, Demelt, 1963: 141 - Turkey, “Büyükdar”.

Rhamnusium testaceipenne, Aurivillius, 1912: 167, part. - “Kaukasus, Amasia, Türkei”; Winkler, 1929: 1147, part. - Caucasus, Asia Minor, Turcia europae; Plavilstshikov, 1936: 152, 506, part. - “Kleinasien, Syrien, Krim, kaukasus, Transcaucasien”; 1948: 33, part.; 1955: 498, part.; Demelt, 1963: 141 - Turkey, “Cubuk” [northwards Ankara]; Danilevsky & Miroshnikov, 1985: 126, part.; Özdikmen, 2007: 192, part. - “Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Iran”; Bartenev, 2009: 33, part. - Crimea, Caucasus, Transcaucasia, Near East, Syria, Turkey, North Iran; Cebeci & Özdikmen, 2010: 136, part. - “Europe (Crimea), Caucasia, Transcaucasia, Near East, Turkey, Syria, Persia”.

Rhamnusium graecum, Švácha, 1989: 36, part. (larvae).

Rhamnusium graecum graecum, Özdikmen, 2007: 192, part. - Europe (Greece, European Turkey), Transcaucasia, Turkey, Iran; Löbl & Smetana, 2010: 135, part. - Transcaucasia, Greece, Turkey; Cebeci & Özdikmen, 2010: 135, part. - Greece, European Turkey, Azerbaijan, Armenia, Syria, Turkey, Iran.

Rhamnusium bicolor bicolor, Cebeci & Özdikmen, 2010: 133 - Turkey, Muğla prov.

Type locality. Turkey, Izmir prov., Boz-dagh - according to the original description.

Material examined. 2 ♂♂ (red-orange dorsally): “Port Baklar” [Turkey, north of Gallipoli Peninsula] - BMNH; 1 ♀ (red-orange dorsally): Erzurum, 10km NW Espir 27.vii.1992 Keith & Olivier leg. - MD.

Two photos (Figs 37-38) by M. Rejzek of ♂ and ♀ (MR) collected North of Hatay in the foothills of the Taurus Mts. are also available.

The taxon was described based on differently colored specimens: with black-blue elytra and with red-orange elytra. The presence of two color forms in Anatolia is now the only one distinct character, which separates *Rh. b. juglandis* from *Rh. b. testaceipenne*. A small number of available specimens (all are red-orange dorsally - Figs. 35-36) do not make it possible to understand the real morphological characters of the taxon. According to several forms described, it is clear that legs and abdomen are often more or less darkened. Turkish



35



36

Figs 35-38. *Rh. b. juglandis*: 35 - ♂, Turkey, Gallipoli; 36 - ♀: Turkey, Erzurum, 10 km NW Espir; 37-38 - ♂ and ♀: Turkey, North of Hatay in the foothills of Taurus Mts. (photos by M. Rejzek)



37



38

specimens with blue elytra were also described as *Rhamnusium anatolicum* var. *obscuripes* Pic, 1903. Bicolored specimens from Muğla were illustrated (Cebeci & Özdikmen, 2010).

Distribution. Turkey, about whole Anatolia; most probably penetrates to European Turkey.

Remark. Most probably several local subspecies will be described from Anatolia.

ACKNOWLEDGEMENTS. The author is heartily grateful to all friends and colleagues for their help with information and specimens for study and specially to: Maxwell Barclay (The Natural History Museum, London), Alain Drumont (Brussels); Aleksey Gusakov and Andrey Ozerov (Zoological Museum of Moscow University), Petr Kabatek (Prague), Mark Kalashian (Erevan); Jacek Kurzawa (Tomaszow Maz), Andrey Lobanov (Zoological Institute, St.-Petersburg), Tomáš Peterka (Veselí nad Lužnicí), Martin Rejzek (London), Sergey Murzin (Moscow), Alexander Napolov (Riga), Andrey Shamaev (Moscow).

REFERENCES

- ADLBAUER K. 2005: Cerambycidae (Insecta: Coleoptera). *Checklisten der Fauna Österreichs, No. 2. Biosystematics and Ecology Series No. 23*. Wien: Österreichische Akademie der Wissenschaften: 65-96.
- ALLENSPACH V. 1973: Coleoptera Cerambycidae. *Insecta Helvetica. Catalogus, Bd. 3*. Zürich: 216 pp.
- ALTHOFF J. & DANILEVSKY M. L. 1997: *Seznam kozličev (Coleoptera, Cerambycoidea) Evrope. A check-list of longicorn beetles (Coleoptera, Cerambycoidea) of Europe*. Ljubljana: Slovensko Entomološko Društvo Štefana Michielija, 64 pp.
- ANGELOV P. 1995: *Coleoptera, Cerambycidae. Part 1 (Prioninae, Lepturinae, Necydalinae, Aseminae, Cerambycinae). Fauna Bulgarica. 24*. Sofia: In Aedibus Academiae Scientiarum Bulgaricae: 206 pp.
- AURIVILLIUS C. 1912: Cerambycidae: Cerambycinae. Pars 39. In: Schenkling S. (ed.): *Coleopterorum Catalogus. Volumen 22. Cerambycidae I*. Berlin: Junk, 108 + 574 pp.
- BARTENEV A. F. 2009: [Longicorn-beetles of Left-Bank Ukraine and Crimea. Kharkov: Kharkov National University], 405pp. [in Russian]
- BEDEL L. 1897: Les *Ramnusium* Latr. et leurs variétés de coloration. *L'Abeille, Journal d'Entomologie* 29 [1896-1900]: 43-44.
- BILÝ S. & MEHL O. 1989: *Longhorn beetles (Coleoptera, Cerambycidae) of Fennoscandia and Denmark. Fauna Entomologica Scandinavica Volume 22*. Leiden: E. J. Brill, 203 pp.
- BRELIH S., DROVENIK B. & PIRMAT A. 2006: Gradivo za favno hroščev (Coleoptera) Slovenije: 2. prispevek: Polyphaga: Chrysomeloidea (= Phytophaga): Cerambycidae [Material for the beetle fauna (Coleoptera) of Slovenia: 2nd contribution: Polyphaga: Chrysomeloidea (= Phytophaga): Cerambycidae]. *Scopolia* 58: 1-442.
- BRUSTEL H., BERGER P. & COCQUEMOT C. 2002: Catalogue des Vesperidae et des Cerambycidae de la faune de France (Coleoptera). *Annales de la Societe Entomologique de France* (n. s.) 38: 443-461.
- BURAKOWSKI B., MROCKZOWSKI M. & STEFAŃSKA J. 1990: *Katalog fauny Polski XXIII (16), Coleoptera, Chrysomelidae I*. Warszawa: Państwowe Wydawnictwo Naukowe, 279 pp.
- CEBECI H. & ÖZDIKMEN H. S. 2010: A synopsis on the genus *Rhamnusium* Latreille, 1829 with a new record (Coleoptera: Cerambycidae) for Anatolian fauna from a new host plant, *Liquidambar orientalis* Miller (Hamamelidaceae). *Munis Entomology & Zoology* 5 (1): 131-139.
- DANILEVSKY M. L. & MIROSHNIKOV A. I. 1985: *Zhuki-drovoseki Kavkaza (Coleoptera, Cerambycidae). Opredelitel*. Krasnodar: Kubanskiy Selskokhozyaistvennyy Institut, 417 pp., 10 pls.
- DEMELT C. 1963: Beitrag zur Kenntnis der Cerambycidenfauna Kleinasiens und 13. Beitrag zur Biologie palaearkt. Cerambyciden, sowie Beschreibung einer neuen Oberea-Art. *Entomologische Blätter* 59 (3): 132-151.
- FABRICIUS J. C. 1787: *Mantissa insectorum, sistens eorum species nuper detectas adiectis characteribus genericis, differentiis specificis, emendationibus, observationibus. Tomus I. Hafniae*: C. G. Proft, xx + 348 pp.
- FAIRMAIRE L. 1866: Notice sur les coléoptères récoltés par M. J. Lédérer sur le Bosz-Dagh (Asie Mineure). *Annales de la Société Entomologique de France* (4) 6: 249-280.
- GANGLBAUER L. 1882: Bestimmungstabellen der europäischen Coleopteren. VII. Cerambycidae. *Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien* 31 [1881]: 681-758, pl. 22.
- GEOFFROY E. L. 1785: [new taxa]. In: FOURCROY A. F. de.: *Entomologia parisiensis; sive Catalogus Insectorum quae*

- in Agro Parisiensis reperiuntur; Secundum methodum Geoffraeanam in sectiones, genera et species distributus: cui addita sunt nomina trivialia et fere trecentae novae Species. Pars prima.* Parisiis: Privilegio Academiae, vii + [1] + 231 pp. [new names attributed to Geoffroy by Fourcroy].
- HERBST J. F. W. 1784: Kritisches Verzeichniss meiner Insectensammlung. Fortsetzung. Curculio-Dytiscus. *Archiv der Insectengeschichte, herausgegeben von J. C. Fuessly* 5 (1): 69-128, pls 24-28.
- HEYDEN L. F. J. D. von. 1877: Die Käfer von Nassau und Frankfurt. *Jahrbücher des Nassauischen Vereins für Naturkunde* 29-30 [1876-1877]: 55-412.
- HEYROVSKÝ L. 1955: *Fauna ČSR, Svazek 5. Tesaříkovití- Cerambycidae. (Řád brouci - Coleoptera)*. Praha: Nakladatelství Československé Akademie Věd, 346 + [1] pp.
- ILIĆ N. 2005: *Stržibube Srbije (Coleoptera, Cerambycidae)*. Fainistički preglad. Beograd: 180 pp.
- KASATKIN D. G. & ARZANOV Ju. G. 1997: [Der Bockkaffler (Cerambycidae). Material für fauna der Kaffer (Coleoptera) norden Kaukasus und untere Don. *Records of Kharkov Entomological Society*] 5 (2): 63-70. [in Russian]
- KASZAB Z. 1971: Cincérek-Cerambycidae. *Fauna Hungariae*, Bd. 106. Budapest: 1-283, 1-17.
- KOSTIN I. A. 1973: *Zhuki-dendrofagi Kazakhstana (koreedy, drovoseki, zlatki)*. Alma-Ata: Akademiya Nauk Kazakhskoy SSR, 288 pp.
- LAICHARTING J. N. E. von. 1784: *Verzeichniss und Beschreibung der Tyroler-Insecten. 2. Theil*. Zürich: Johann Caspar Füessly, xiv + 176 pp.
- LOBANOV A. L., DANILEVSKY M. L. & MURZIN S. V. 1981: Sistematischeskiy spisok usachei (Coleoptera, Cerambycidae) fauny SSSR. I. *Entomologicheskoe Obozrenie* 60: 784-803.
- LÖBL I. & SMETANA A. (ed.) 2010: *Catalogue of Palaearctic Coleoptera, Vol. 6. Chrysomeloidea*. Stenstrup: Apollo Books, 924 pp.
- MAGDEEV D. V. 1988: Redkie vidy zhukov-usachey Kuybyshevskoy oblasti, pp. 61-65. In: GORELOV M. S. (red.): *Okhrana zhivotnykh v Srednem Povolzhye*. Kuybyshev: Kuybyshevskiy Gosudarstvennyy Pedagogicheskiy Institut, 102 pp. (in Russian)
- MAMAEV B. M. & DANILEVSKY M. L. 1975: [Larvae of Timber Beetles]. "Nauka", Moscow: 282 pp. (in Russian)
- MIGLIACCIO E., GEORGIEV G. & GASHTAROV V. 2007: An annotated list of Bulgarian Cerambycids with special view on the rarest species and endemics (Coleoptera: Cerambycidae). *Lambillionea. Revue internationale d'entomologie* 107, N1, supplément 1: 1-79.
- MIKIĆ R. 1971. *Katalog der Bockkäfer (Cerambycidae) Jugoslawiens (Insecta-Coleoptera)*. Sarajevo: 70 pp.
- MUYLART A. 1990: *Longicornes (Cerambycidae). Faune de Belgique*. Bruxelles: Edition de l'Institut de Sciences naturelles de Belgique, 139 pp.
- ÖZDIKMEN H. 2007: The Longicorn Beetles of Turkey (Coleoptera: Cerambycidae). Part I - Black Sea Region. *Munis Entomology & Zoology* 2(2): 179-422.
- ÖZDIKMEN H. & TURGUT S. 2010: Proposed conservation of the specific name *Rhamnusium bicolor* (Schrank, 1781) threatened by an older name with comments on subspecific status (Coleoptera: Cerambycidae: Lepturinae). *Munis Entomology & Zoology* 5 (2): 812-818.
- PANIN S. & SĂVULESCU N. 1961: *Familia Cerambycidae (Croitori). - Fauna Republicii Populare Romine, Insecta 10 (5). Coleoptera*. Bucuresti: Editura Academiei Republicii Populare Romine: 523 pp.
- PESARINI C. & SABBADINI A. 1994: Insetti della Fauna Europea. Coleotteri Cerambycidi. *Natura. Rivista di Scienze Naturali* 85 (1/2): 132 pp.
- PIC M. 1897a: Nouvelles variétés de longicornes. *Revue Scientifique du Bourbonnais* 10: 30-32.
- PIC M. 1897b: Descriptions de coléoptères. *Bulletin de la Société d'Histoire Naturelle d'Autun* 10, 2^{de} partie: 295-300.
- PIC M. 1898: Supplément pour la faune franco-algérienne (Variétés). Pp. 1-14. *Matériaux pour servir à l'étude des longicornes. 2ème cahier*. Lyon: Imprimerie L. Jacquet, v + 59 pp.
- PIC M. 1900: Catalogue bibliographique et synonymique d'Europe et des régions avoisinantes comprenant les régions suivantes: Région circuméditerranéenne. Région caucasique. Région transcaspienne. La Perse, le Turkestan, la Sibirie. *Matériaux pour servir à l'étude des longicornes 3ème cahier, 2ème partie*: 1-66.
- PIC M. 1901a: Liste des espèces et variétés récemment décrites, avec notes complémentaires. Pp. 4-9. *Matériaux pour servir à l'étude des longicornes. 3ème cahier, 3ème partie*. Lyon: Imprimerie Jacquet Frères, 33 pp.
- PIC M. 1901b: Contribution à l'étude du genre *Rhamnusium* Lat. Pp. 29-31. *Matériaux pour servir à l'étude des longicornes. 3ème cahier, 3ème partie*. Lyon: Imprimerie Jacquet Frères, 33 pp.
- PIC M. 1903: Espèces et variétés nouvelles de coléoptères. *L'Échange, Revue Linnéenne* 19: (226): 161-163.
- PIC M. 1913: Notes diverses, descriptions et diagnoses (Suite.). *L'Échange, Revue Linnéenne* 29 (342): 137-139.

- PIC M. 1917: Notes diverses et diagnoses (1). Pp. 3-10. *Matériaux pour servir à l'étude des longicornes. 10ème cahier, 2ème partie.* Saint-Amand (Cher): Imprimerie Bussière, 20 pp.
- PLAVILSTSHIKOV N. N. 1932: *Zhuki-drovoseki vrediteli drevesiny.* Moskva-Leningrad: Gosudarstvennoe Lesnoe Tekhnicheskoe Izdatel'stvo, 200 pp.
- PLAVILSTSHIKOV N. N. 1936: *Fauna SSSR. Nasekomye zhestokrylye. T. XXI. Zhuki-drovoseki (ch. 1).* Moskva – Leningrad: Izdatel'stvo Akademii Nauk SSSR, 612 + [1] pp.
- PLAVILSTSHIKOV N. N. 1948: *Opredelitel' zhukov-drovosekov Armenii.* Erevan: Izdatel'stvo Akademii Nauk Armianskoi SSR, 231 + [1] pp.
- PLAVILSTSHIKOV N. N. 1955: [15. *Fam. Cerambycidae - timber beetles, longicorn beetles.* Pp.: 493-546. In: Shtakelberg A. A. (red.) *Pests of forest.*] Moscow-Leningrad: Izdatel'stvo AN SSSR: 1097 pp. [in Russian]
- PLAVILSTSHIKOV N. N. 1965: [75-th *Fam. Cerambycidae - Timber Beetles, Longicornes.* Pp. 389-419. In: BEY-BIENKO A. A. (red.) *A Key to Insects of the European Part of the USSR, v. 2, Coleoptera and Strepsiptera.*] Moscow-Leningrad: "Nauka": 668pp. [in Russian]
- REITTER E. 1895: Beschreibung neuer oder wenig bekannter Coleopteren aus der Umgebung von Akbes in Syrien. *Wiener Entomologische Zeitung* 14: 79-88.
- REJZEK M., KADLEC S. & SAMA G. 2003: Contribution to the knowledge of Syrian Cerambycidae fauna (Coleoptera). *Biocosme Méditerranéenne, Nice* 20 (1): 7-50.
- ROMADINA K. G. 1954: [Woodboring Longicorn (Cerambycidae) beetle-larvae of Ural river valley. *Archives of the Zoological Institute of the Academy of Sciences of the USSR*] 16: 211-228. [in Russian]
- ROSSI P. 1790: *Fauna Etrusca sistens insecta quae in provinciis Florentina et Pisana praesertim collegit. Tomus primus.* Liburni: Typis Thomae Masi & Sociorum, xxii + 272 pp., 10 pls.
- SAMA G. 1988: *Fauna d'Italia. Coleoptera Cerambycidae. Catalogo topografico e sinonimico.* Bologna: Ed. Calderini, xxxvi + 216 pp.
- SAMA G. 2002: *Atlas of Cerambycidae of Europe and the Mediterranean area. Vol. 1: northern, western, central and eastern Europe, British Isles and continental Europe from France (excl. Corsica) to Scandinavia and Urals.* Zlín: Kabourek, 173 pp.
- SCHALLER J. G. 1783: Neue Insecten. *Abhandlungen der Hallischen Naturforschenden Gesellschaft* 1: 217-328.
- SCHRANK F. 1781: *Enumeratio insectorum Austriae indigenorum.* Augustae Vindelicorum: E. Klett et Franck, [24] + 548 + [4] pp., 4 pls.
- SHAPOVALOV A. M. 2010: [An annotated list of Longicorn-Beetles (Coleoptera, Cerambycidae) of Orenburg Region, version 5.2010] <http://www.cerambycidae.ru/content-view-4.html> [in Russian].
- SILFVERBERG H. 1977: Nomenclatoric notes on Coleoptera Polyphaga. *Notulae Entomologicae* 57: 91-94.
- SLÁMA M. 2006: Coleoptera: Cerambycidae. *Folia Heyrovskyana Serie B, Icones Insectorum Europae Centralis* 4: 1-40.
- SLÁMA M. & SLÁMOVÁ J. 1996: Contribution to the recognition of Greek and Yugoslavian longicorn beetles. *Biocosme Méditerranéenne* 12 [1995]: 117-143.
- SÜDA I. & MILÄNDER G. 1998: *Eesti putukate levikuatlas. Distribution Maps of Estonian Insects. 1. Siklased - Cerambycidae. Kaardid/Maps 1-97.* Tartu: 88 pp.
- ŠVÁCHA P. 1989: Lepturinae, pp. 3-201. In: Švácha P. & Danilevsky M.L. 1989: Cerambycoid larvae of Europe and Soviet Union (Coleoptera, Cerambycoidea). Part III. *Acta Universitatis Carolinae* 32 [1988] (1-2): 1-205.
- THÉRY A. 1895: [Description de deux longicornes: Rhammusium et Clytus]. *Bulletin de la Société Entomologique de France* 1894: cclxv-cclxvi.
- TSHEREPANOV A. I. 1979: *Usachi Severnoy Azii (Prioninae, Disteniinae, Lepturinae, Aseminae).* Novosibirsk: Nauka, 472 pp.
- VILLIERS A. 1967: Contribution à la faune de l'Iran. I: Coléoptères Cerambycidae. *Annales de la Société Entomologique de France* (N. S.) 3: 327-379.
- VILLIERS A. 1978: *Faune des coléoptères de France I. Cerambycidae. Encyclopédie Entomologique XLII.* Paris: Editions Lechevalier, xxvii + 611 pp.
- VIVES E. 1984: Cerambycidos (Coleoptera) de la Peninsula Iberica y de les Islas Baleares.-*Treballs del Museu de Zoologia* 2. Barcelona: 137 pp.
- VIVES E. 2000: *Fauna Iberica, Vol 12: Coleoptera, Cerambycidae.* Madrid: Museo Nacional de Ciencias Naturales, Consejo Superior de Investigaciones Científicas, 724 pp.
- VIVES E. 2001: *Atlas fotografico de los cerambycidos ibero-baleares.* Barcelona: Argania editio. 287 pp.
- VIVES E. & ALONSO-ZARAZAGA M. A. 2000: Apéndice 1. Nomenclatura: Lista de sinónimos y combinaciones. In:

- VIVES E.: *Fauna Iberica, Vol 12: Coleoptera, Cerambycidae*. Madrid: Museo Nacional de Ciencias Naturales, Consejo Superior de Investigaciones Científicas, 724 pp., 204 figs.
- VOET J. E. 1806: *Catalogus systematicus Coleopterorum - Catalogue systématique des coléoptères - Systematische Naamlyst van dat geslacht van Insecten dat men Torren noemt. Volume 2*. La Haye: Bakhuisen, 82 + 85 + 87 pp.
- WINKLER A. 1929: Cerambycidae. Pars 9: 1135-1136; pars 10: 1137-1226. In: *Catalogus Coleopterorum regionis palaearcticae*. Wien: A. Winkler Verlag, 1698 pp.
- ZAGAIKEVICH I. K. 1991: *Taksonomiya i ekologiya usachey*. Kiev: Naukova Dumka, 178 pp.
- ZAITZEV F. A. 1954: [Timber-beetles (Cerambycidae) in the fauna of Georgia.- *Archives of the Institute of Zoology of the Academy of Sc. of Georgian SSR*] 13: 5-27. [in Russian]
- ZHURAVLEV S. M. 1914: [Contribution à la faune des Coléoptères de la province d'Uralsk]. *Horae Societatis Entomologicae Rossicae* 41 (3): 33-61. [in Russian]

Received: 30.8.2011
Accepted: 30.10.2011

