

**PROPOSED CONSERVATION OF THE SPECIFIC
NAME *RHAMNUSIUM BICOLOR* (SCHRANK, 1781)
THREATENED BY AN OLDER NAME WITH
COMMENTS ON SUBSPECIFIC STATUS
(COLEOPTERA: CERAMBYCIDAE: LEPTURINAE)**

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ABSTRACT: Proposed conservation of the specific name *Rhamnusium bicolor* (Schrank, 1781) threatened by an older name with comments on subspecific status (Coleoptera: Cerambycidae: Lepturinae).

KEY WORDS: Conservation of name, *Rhamnusium bicolor*, Lepturinae, Cerambycidae.

First of all, the genus *Rhamnusium* Latreille, 1829 had been a classification problem on tribal rank until recent times. Traditionally, it was placed by authors in the tribe Rhagiini Kirby, 1837. Vives (2000) separated the genera *Rhamnusium* Latreille, 1829 and *Rhagium* Fabricius, 1775 from other Rhagiini and he grouped the others in the tribe Toxotini Mulsant, 1839. However, the genus *Rhamnusium* was given by Althoff and Danilevsky (1997) under the tribal name Rhamnusiini Danilevsky, 1997 firstly. Several tribes (Rhamnusiini, Oxymirini, Enoploiderini) were named in Althoff and Danilevsky (1997). However, the tribal names Rhamnusiini Danilevsky, 1997 and Enoploiderini Danilevsky, 1997 was not available according to the Art. 13.1 of ICZN (1999). The same opinion was shared by Vitali in Zicha et al. (2009). He also mentioned that Enoploiderini and Rhamnusiini compared only in electronic papers. In addition to this, the separation as Rhamnusiini Danilevsky, 1997 seems to be required. According to Šýkorová (2008), the three lepturine genera [*Enoploderes*, *Rhamnusium* and *Sachalinobia*] probably should not be included in any of the existing tribes (Xylosteini, Oxymirini, Rhagiini s.l., Lepturini). Therefore, Rhamnusiini required as valid tribe name.

Finally, Sama in Sama & Sudre (2009) described tribe Rhamnusiini with the type genus *Rhamnusium* Latreille, 1829.

Tribe RHAMNUSIINI Sama, 2009

(Type genus: *Rhamnusium* Latreille, 1829)

Genus *RHAMNUSIUM* Latreille, 1829

(Type species: *Callidium salicis* Fabricius, 1787 [= *Cerambyx bicolor* Schrank, 1781 nec Voet, 1778]).

As commonly accepted that the palaearctic genus *Rhamnusium* has five species in the world fauna as *Rhamnusium algericum* Pic, 1896; *R. bicolor* (Schrank, 1781); *R. graecum* Schaufuss, 1862; *R. rugosipenne* Pic, 1939 and *R.*

testaceipenne Pic, 1897. *R. algericum* Pic, 1896 is endemic to Algeria and *R. rugosipenne* Pic, 1939 is endemic to China. The remaining species have more or less distributional areas. *R. bicolor* (Schrank, 1781) has European chorotype, *R. graecum* Schaufuss, 1862 has Turano-Mediterranean (Turano-Appenninian) chorotype and *R. testaceipenne* Pic, 1897 has Turanian (Ponto-Caspian) chorotype.

In Europe and Turkey, this genus includes 3 species as *R. bicolor* (Schrank, 1781); *R. graecum* Schaufuss, 1862 and *R. testaceipenne* Pic, 1897. According to Bense (1995), it is represented by one species, *R. bicolor* (Schrank, 1781), in Europe. He stated that *Rhamnusium gracilicorne* (Théry, 1894) and *R. graecum* Schaufuss, 1862 are chromatic variations of *R. bicolor* (Schrank, 1781). Nevertheless, Althoff and Danilevsky (1997) gave three species as mentioned above for Europe. Sama (2002) also accepted one species, *R. bicolor* (Schrank, 1781), for Europe. According to him, all taxa [*R. bicolor* (Schrank, 1781); *R. ruficollis* (Herbst, 1784); *R. graecum* Schaufuss, 1862 and *R. juglandis* Fairmaire, 1866 (= *R. testaceipenne* Pic, 1897)] could be only geographic variations of one species. He also supposed *R. testaceipenne* Pic, 1897 is a synonym of *R. juglandis* Fairmaire, 1866, but according to Plavilstshikov (1936) var. *juglandis* is a red form of *R. graecum* Schaufuss, 1862. However, three species were presented by Sama for Europe in Fauna Europeae (2009). The old records from Turkey of *R. graecum* and *R. testaceipenne* summarized in Ozdikmen (2007 and 2008). *R. bicolor* (Schrank, 1781) was firstly recorded by Cebeci & Özdikmen (2010) for Anatolian fauna.

***Rhamnusium bicolor* (Schrank, 1781)**

Schrank, Enum. Ins. 1781: 132. - Mulsant, Col. Fr. Long. ed. 2, 1863: 450. - Fairmaire, Gen. Col. d'Eur. IV, 1864, t. 56, f. 264. - Ganglbauer, Best.-Tab. VII, 1881: 717. - Seidlitz, Fauna Balt. ed. 2, 1891: 741. - Everts, Col. Neerl. II, 1, 1901: 349. - Pic, Longic. III, 3, 1901: 31. - Csiki, Rov. Lapok X, 1903: 103. - Jacobson. Käfer Russl. 1910, t. 63, f. 10. - Pickard, Faun. Fr. Col., 1929: 66. - Plavilstshikov, Faun. URSS, 1936: 148. - Villiers, Faun. Col. Fr., 1978: 89. - Svacha & Danilevsky, 1988: 36. - Bense, Long. Beet., 1995: 109. - Althoff & Danilevsky, Check. Long. Beet. Eur., 1997: 9. - Sama, Atl. Cer. Eur. Med., 2002: 11. - Brustel et al., Ann. Soc. ent. Fr., 2002: 445. - Cebeci & Özdikmen, Mun. Ent. Zool., 2010: 133.

Original combination: *Cerambyx bicolor* Schrank, 1781

Type locality: Austria: Vienna

Some important synonyms: *Cerambyx virgo* Voet, 1778: 13, t. 11, f. 47; *Cerambyx glaucopterus* Schaller, 1783: 284; *Rhagium schranki* Laicharting, 1784: 118; *Stenocorus ruficollis* Herbst, 1784: 92; *Callidium salicis* Fabricius, 1787: 154; *Cerambyx rubroviolaceus* Geoffroy, 1785: 86; *Rhagium etruscum* Rossi, 1790: 149; *Rhamnusium bicolor* ab. *ambustum* Heyden, 1876: 77; *Rhamnusium bicolor* var. *atripenne* Bedel, 1892: 43; *Rhamnusium bicolor* var. *humerale* Bedel, 1892: 43; *Rhamnusium gracilicorne* Théry, 1894: 265; *Rhamnusium gracilicorne* ab. *limbatum* Pic, 1897: 30; *Rhamnusium bicolor* ab. *capitale* Pic, 1898: 2; *Rhamnusium gracilicorne* ab. *occipitale* Plavilstshikov, 1936: 152; *Rhamnusium bicolor* var. *bergeri* Villiers, 1978: 90 (nomen nudum); *Rhamnusium bicolor* var. *bedeli* Villiers, 1978: 90 (nomen nudum).

Rhamnusium gracilicorne Théry, 1894 is a synonym of *Rhamnusium bicolor* (Schrank, 1781). Since, both described from Austria (Vienna env.). Although it was regarded as a separate species by some authors (e.g., Aurivillius, 1912; Plavilstshikov, 1936; Villiers, 1978; Pesarini & Sabbadini, 1994). Théry (1894) stated that it is very close to *R. bicolor* and he also mentioned perhaps it is a smaller sized variety in his original description. However, he described by using

some characters as a separate species. He used only some antennal features (completely brown colored antennae and less thick, more cylindrical and externally less angled antennal segments in the first half of the antennae). Plavilstshikov (1936) also separated it from *R. bicolor* in his key on the base of the same distinguishing characters. Villiers (1978) and Pesarini & Sabbadini (1994) added the shape of temples to these characters. Nevertheless, as commonly accepted that *R. gracilicorne* Théry, 1894 is a synonym of *R. bicolor* (Schrank, 1781). All distinguishing characters listed by authors seem to be wrong. These features are in the variability of the species.

Historical usage of *Rhamnusium virgo* (Voet, 1778) and reversal of precedence

The name *virgo* was firstly introduced by Voet (1778) in page 13. Then, Panzer (1794) used the name *virgo* in page 33, t. 11, f. 47. Later, many authors used the name *Rhamnusium bicolor* (Schrank, 1781) as a valid name (e.g., Mulsant, 1863; Fairmaire, 1864; Ganglbauer, 1881; Seidlitz, 1891; Everts, 1901; Pic, 1901; Csiki, 1903; Jacobson, 1910; Aurivillius, 1912; Pickard, 1929; Plavilstshikov, 1936). On the contrary of prevailing usage of the name, *Rhamnusium bicolor* (Schrank, 1781), Silfverberg (1977) replaced the name with the oldest synonym name *Rhamnusium virgo* (Voet, 1778). Since he regarded *Cerambyx bicolor* Schrank, 1781 as a junior primary homonym of *Cerambyx bicolor* Voet, 1778 (now in the genus *Chydarteres* Hüdepohl, 1985 in Tachyderini). Nevertheless, Villiers (1978: 89) used *Rhamnusium bicolor* (Schrank, 1781) as the specific name without mention the name *virgo* Voet, 1778. Bílý & Mehl (1989: 39) gave *Cerambyx virgo* Voet, 1778 as an unavailable name under the name *Rhamnusium bicolor* (Schrank, 1781), but did not give any interpretation on it. In 1994, the name *Rhamnusium virgo* (Voet, 1778) was formalized by Pesarini & Sabbadini again.

The name *virgo* was originally given by Voet (1778) in page 13 with the specific epithet *melanocephalus*, at the end of the genus *Cerambyx*. He stated that its type locality is India Occidentali. He also gave the specific epithets *fasciatus* and *magnificus* in page 14. These four specific epithets have not a generic name. They are uninominal (catalogical names). In his catalogue, the all other names of *Cerambyx* by this author and by Linnaeus or Fabricius were presented as binominal. Voet's (1778) original description as follows:

48.VIRGO.

*Indica haec beftiola cinnamomei coloris caput habet rotundius, collum anguftius; thorax prominentias habet duas mammiformes.
Habitat in India Occidentali.*

Therefore, these uninominal names by Voet (1778) must be regarded only as catalogical names, and should not be accepted as available names according to the principle of binominal nomenclature recommended by the article 5 of ICZN (1999). The same opinion was shared by Brustel et al. (2002) and Sama (2002). Moreover Sama (2002) stated that "*the identity of *Cerambyx virgo* Voet, 1778 appears extremely doubtful*". Even Vitali in Zicha et al. (2009) claimed that "*Cerambyx virgo is invalid since it does not respect the binomial nomenclature, can not be accepted, since "virgo" clearly belongs to the genus Cerambyx. Nonetheless, the identity of C. virgo with the well-known European species is very uncertain, since the original description mentions a completely red beetle, with two bulges on the pronotum, inhabiting in West Indies*". Also we agree somewhat with these approaches. Status of the species *C. virgo* Voet, 1778 is

unclear now. Anyway, Aurivillius (1912) gave the name *virgo* Voet, 1778 under the species *Rhamnusium bicolor* (Schrank, 1781) with the question mark.

Remarks on the subspecific status

The species has European chorotype (from Spain to European Russia and Kazakhstan). As commonly accepted that *Rhamnusium bicolor* (Schrank, 1781) has two subspecies in the world fauna as the nominotypical subspecies and *R. bicolor demaggii* Tippmann, 1956. *R. bicolor demaggii* was described by Tippman (1956) from Italy (Lazio = Latium) as the original combination *Rhamnusium bicolor* var. *demaggii*. Even he also described an aberration of this variety as *Rhamnusium bicolor* var. *demaggii* ab. *aeneomicans* Tippmann, 1956 from Italy. After that, *Rhamnusium bicolor* var. *demaggii* was regarded as a subspecies for Italy by authors (e.g., Villiers, 1978 and Sama, 2002). Nevertheless, it was synonymized with *R. bicolor* by Pesarini & Sabbadini (2005) ex Vitali in Zicha et al. (2009), but Pesarini & Sabbadini stated that we never synonymized it with *R. bicolor* according to personal communication (February 2010). Besides, according to Biscaccianti (2007) gave it as a synonym of *R. bicolor*. However, we think that it should be regarded as a subspecies of *R. bicolor*. Since, Villiers (1978) mentioned that the subspecies has rough elytral punctuation, and abdominal segments black spotted under blue colored elytra. These characters are enough to separate it as a subspecies (especially the rough elytral punctuation is characteristic) (Fig. 1A, C). This subspecies which has a local distributional area is distributed only in Italy (Lazio and Abruzzo).

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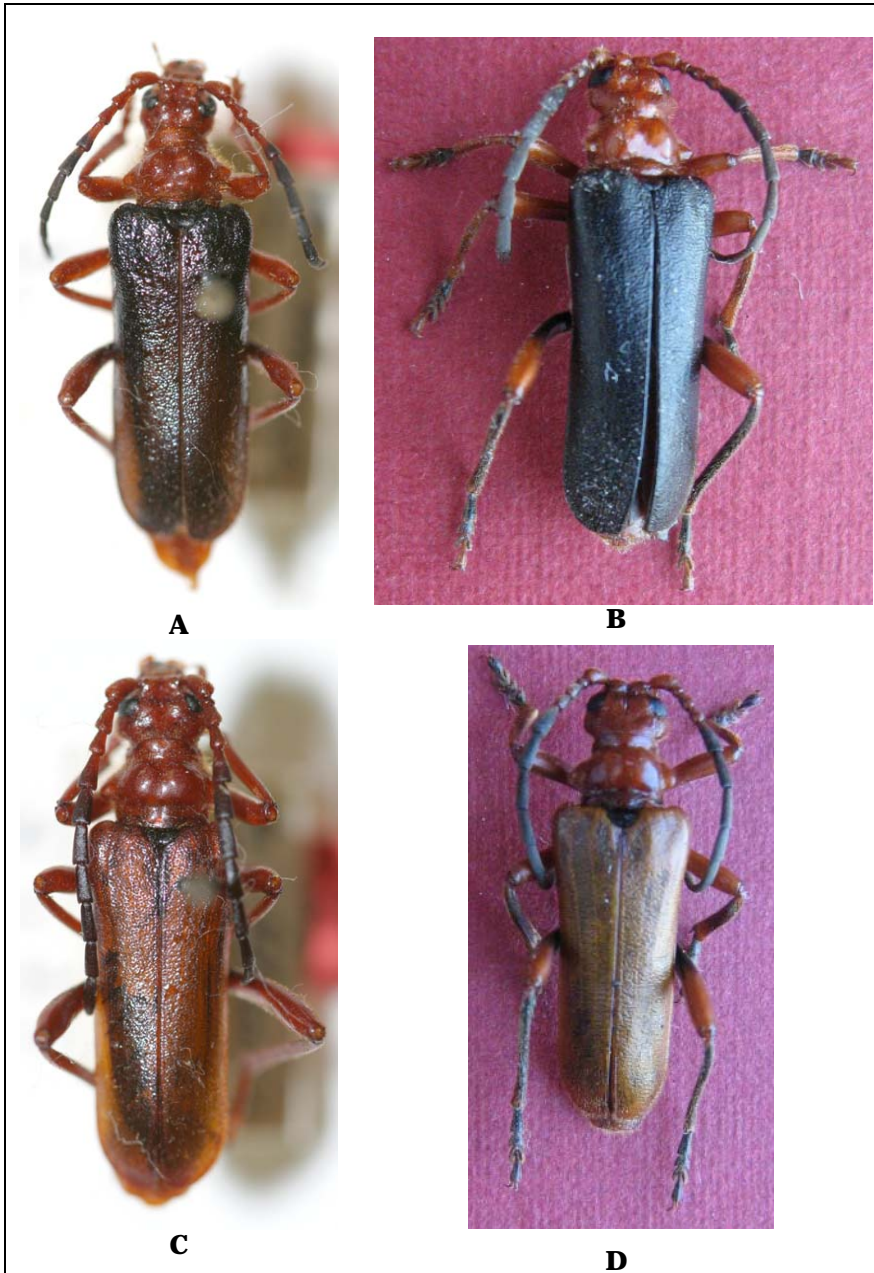


Figure 1. A. Holotype of *Rhamnusium bicolor* var. *demagii* Tippmann, 1956 from Italy (from Lingafelter et al., 2010) B. *Rhamnusium bicolor bicolor* (Schrank, 1781) male from Turkey (from Cebeci & Özdikmen, 2010) C. Holotype of *Rhamnusium bicolor* var. *demagii* ab. *aeneomicans* Tippmann, 1956 from Italy (from Lingafelter et al., 2010) D. *Rhamnusium bicolor bicolor* (Schrank, 1781) female from Turkey (from Cebeci & Özdikmen, 2010).