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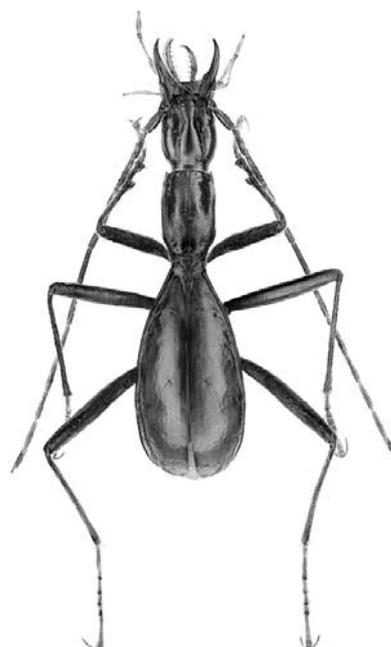


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New and poorly known Longicorn-beetles of the genus *Cortodera* Mulsant, 1863 (Coleoptera: Cerambycidae) from South-East Europe

Новые и малоизученные жуки-усачи рода *Cortodera* Mulsant, 1863 (Coleoptera: Cerambycidae) из Юго-Восточной Европы

M.L. Danilevsky
М.Л. Данилевский

A.N. Severtzov Institute of Ecology and Evolution, Russian Academy of Sciences, Leninsky prospect, 33, Moscow 119071 Russia. E-mail: danilevskym1@rambler.ru, danilevsky@cerambycidae.net

Институт проблем экологии и эволюции им. А.Н. Северцова РАН, Ленинский пр., 33, Москва 119071 Россия

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Ключевые слова: Coleoptera, Cerambycidae, *Cortodera*, новые подвиды, Россия, Украина.

Abstract. *Cortodera villosa krasnobaevi* ssp. n. from East Ukraine and *C. v. mariae* ssp. n. from near Sukko (Krasnodar Region of Russia) are described, as well as a female of *C. kiesenwetteri subtruncata* Pic, 1934. A new yellow form of *C. villosa magdeevi* Danilevsky, 2010 is also described. The right position of *C. villosa mikhailovi* Danilevsky, 2001, described as *C. reitteri mikhailovi*, is established. Several taxonomy problems in the genus *Cortodera* Mulsant, 1863 are discussed.

Резюме. Описаны *Cortodera villosa krasnobaevi* ssp. n. из Восточной Украины и *C. v. mariae* ssp. n. из окрестностей Сукко (Краснодарский край России), как и самка *C. kiesenwetteri subtruncata* Pic, 1934. Описана также новая желтая форма *C. villosa magdeevi* Danilevsky, 2010. Установлена правильная позиция *C. villosa mikhailovi* Danilevsky, 2001; подвид был первоначально описан как *C. reitteri mikhailovi*. Обсуждаются некоторые таксономические проблемы в роде *Cortodera* Mulsant, 1863.

Numerous very rare representatives of the genus *Cortodera* Mulsant, 1863 distributed in East Europe and neighbor regions rest very poorly investigated up to know. More than a hundred newly collected specimens in Zhiguli Natural Reserve in May 2010 allow to describe two new subspecies, understand the real taxonomy position of some taxa and specify morphology diagnosis of several others.

Cortodera villosa Heyden, 1876

The species included [Danilevsky, Smetana, 2010] 6 subspecies up to now: *C. v. villosa* Heyden, 1876 (Europe), *C. v. circassica* Reitter, 1890 (NW Caucasus), *C. v. miroshnikovii* Danilevsky, 2010 (Bakuriani, Georgia), *C. v. nakhichevanica* Miroshnikov, 2007 (Ordubad, Nakhichevan Republic), *C. v. magdeevi* Danilevsky, 2010 (Samara env.), *C. v. major* Miroshnikov, 2007 (Ufa environs).

The records [Özdikmen, 2003; Özdikmen et al., 2009] of the species for Turkey (Ankara environs) were connected with a single similarly colored specimen of *C. colchica* Reitter, 1890 from central part of Aksaray province (the published indication to Ankara province was simply

a mistake – according to the personal message by the author). The identification of corresponding specimen was made by me on the base of color photo just sent to me by H. Özdikmen together with the exact label.

Now the taxonomy, distribution and diagnosis of *C. villosa* must be revised because of several new data.

The new study of the composition of the species was started after the discovery of new form of *C. v. circassica* with orange-yellow elytra by A. Miroshnikov [see www.zin.ru/Animalia/Coleoptera/rus/cormir.htm]. Similar forms from East Europe and Ural were identified before as *Cortodera reitteri* auct. (not Pic, 1891).

The revision of available materials allows to fix the real nature of several populations, to specify the morphology of others and to describe two new subspecies.

Cortodera villosa magdeevi Danilevsky, 2010
(Color plate 3: fig. 1–6; 4: fig. 7–9)

Cortodera villosa magdeevi Danilevsky, 2010b: 43 (Zhiguli Mountains near Samara and Radishchevo District of Ulianovsk Region, about 30km SW Syzran).

Cortodera villosa: Magdeev, 1990: 139; 1996: 41; 2003: 203; 2007: 175; Isaev, Ishutov, 2001: 87; Isaev, Magdeev, 2003: 293; Isaev et al., 2004: 37; Isaev, 2007: 28.

Cortodera reitteri: Isaev, Ishutov, 2001: 87; *Cortodera villosa major* Miroshnikov, 2007: 211, part.; Krasnobayeva, 2009: 296.

Cortodera reitteri reitteri: Danilevsky & Smetana, 2010: 123, part.

The subspecies is characterized by great degree of individual color variability. Many collected specimens in 2010 allow concluding forms with brown elytra (which were identified before as *C. reitteri*) represent about a half of the population. Totally 86 specimens were collected: 39 males and females (fig. 5–9) with brown elytra (abdominal apex is always red); 34 males and females (fig. 3–4) were totally black (usually with lightened anterior tibiae) and only 13 males and females (fig. 1–2) were typically colored (black elytra, red legs and abdominal apex). No morphological differences were observed between color forms. The form with brown elytra could have all legs red with black tarsi

(6 specimens, fig. 8–9) or legs differently colored (33 specimens, fig. 5–7): anterior legs red with black tarsi and other legs totally black, or middle femora partly red in the middle, or anterior legs with black femora bases, black tibia apices and sometimes darkened femora apices; elytra could be more or less darkened near scutellum (fig. 5–7). Body length of males in *C. v. magdeevi* is 9–13 mm, in females 11.5–14 mm.

The main distinguishing characters between *C. villosa* and *C. reitteri* are the shape, sculpture and pubescence of prothorax. Prothorax of *C. reitteri* relatively wider, more widened posteriorly, with partly recumbent setae in males (only erected setae present in males of *C. villosa*), pronotal punctation very dense, conjugated (in *C. villosa* pronotal punctures distinctly distant).

Material (all specimens in author's collection). Holotype, ♂: Samara Region, Zhiguli Natural Reserve, Mt. Malaya Bakhilova, 53°24'N / 49°39'E, 360 m, 28.5.2009, T. Krasnobaeva leg.; 6 paratypes: 1♂ with the same label as in holotype, but collected one day before – 27.5.2009; 1♀ with 4 labels: a) Zhigulevsk, Bakhilova Polyana, 14.6.1985, Galasyeva T.V., b) *Cortodera villosa* Heyd. det. M. Danilevsky 1985, c) Paratypus *Cortodera villosa major* ssp. n. det. A. Miroshnikov, 2007 (red), d) Paratypus *Cortodera villosa magdeevi* ssp. n. M. Danilevsky det. 2009 (red); 1♂ and 1♀ – both totally black, see photos published by Miroshnikov [2007, table 6: 21–22], each with 4 labels: a) Samarskaya Luka, Zhiguli Mts., 6–18.06.[19]82; b) *Cortodera villosa* (?) det. M. Danilevsky 1988; c) Paratypus *Cortodera villosa major* ssp. n. det. A. Miroshnikov, 2007 (red), d) Paratypus *Cortodera villosa magdeevi* ssp. n. M. Danilevsky det. 2009 (red); 1♀ with 6 labels: a) Samara Region, Zhiguli Natural Reserve, 23.6.[19]91; b) *Centaurea ruthenica*. Исаев; c) *Cortodera villosa* Heyd. Isaev det. 92; d) *Cortodera villosa* Heyden, 1876 M. Danilevsky det. 2006; e) Paratypus *Cortodera villosa major* ssp. n. det. A. Miroshnikov, 2007 (red), f) Paratypus *Cortodera villosa magdeevi* ssp. n. M. Danilevsky det. 2009 (red); 1♀ – see photo published by Miroshnikov [2007, table 6: 23] with 5 labels: a) Ulyanovsk Region, Radishchevo, Ashtala, 1.6.[19]92; b) *Jurinea ledebourii*. Isaev A.Yu.; c) *Cortodera reitteri* Pic. Isaev det. 92; d) Paratypus *Cortodera villosa major* ssp. n. det. A. Miroshnikov, 2007 (red), e) Paratypus *Cortodera villosa magdeevi* ssp. n. M. Danilevsky det. 2009 (red); 1♂, Zhiguli Natural Reserve, Mt. Malaya Bakhilova, 53°24'N / 49°39'E, 360 m, 27.05.2009, T. Krasnobaeva leg.; 70 males and 16 females, Zhiguli Natural Reserve, Strel'naya Mt., 13–21.05.2010, 300–360 m, collected by G.B. Danilevskaya, M.L. Danilevsky, M.M. Lazarenko.

Bionomy. All known populations are connected with very special landscape of the region, so called, “stony steppe”. The larval food plants of *C. v. magdeevi* are not directly established. Most of available specimens were collected among numerous *Centaurea ruthenica* (fig. 17) just near border of the forest, so it must be the main food plant of species. Several specimens were collected a little higher (about 360 m) in another locality of the same slope near watershed (fig. 18) on flowers of *Jurinea ledebourii*, as well as on flowers of *Linum uralense*.

Distribution. Several populations occur in small stony-steppe areas around the summits of Zhiguli Mountains (Samara Region) above forest. Two populations are definitely known: at Bolshaya Bakhilova Mountain and at Strel'naya Mountain. One population is known in Ulyanovsk Region: Radishchevo District, Srednikovo env., Atmala Forest.

Cortodera villosa krasnobaevi ssp. n.
(Color plate 4: fig. 10–12)

Cortodera villosa: Zagaikovich, 1960: 97 (Lugansk Region, Proval'skaya Steppe); Martynov, Pisarenko, 2004: 48.

Cortodera reitteri reitteri: Danilevsky, 2001: 6 (“the fifth form”); 2010a: 123, part.; Bartenev, 2009: 67, part.

Cortodera villosa villosa: Miroshnikov, 2007: 210, part.; Bartenev, 2009: 66, part.

The taxon was briefly described and figured [Danilevsky, 2001] as a form (“the fifth form”) of *Cortodera reitteri reitteri* from Lugansk Region of Ukraine (“Streletskaia Steppe”) on the base of a single female with light-brown elytra; 3 more specimens from “North Donets River Valley” were recognized as close to the “fifth form”.

All 4 specimens are similar to the yellow form of *C. villosa magdeevi* and are described below as representatives of a new subspecies.

Description. Body black with red abdominal apex, elytra light-brown, legs totally or partly red. Specimens with black elytra are also known [Zagaikovich, 1960], but not available now.

Head with strongly exposed angulated temples; apical palpal joint triangular, axe-like; antennae black or with partly lightened basal joints, in males reaching apical elytral forth, in females – apical elytral third; 1st joint about as long as 4th and shorter than 3rd, which is shorter than 5th.

Prothorax slightly transverse, in males about 1.2 times wider at base than long; in females – 1.1 and 1.3 times; with sides rounded or slightly angulated, widened posteriorly; pronotum in males with only erected setae, in females also with recumbent and oblique setae; pronotal punctation rather dense, but punctures never conjugated with distinct interspaces, which are wider than dots near middle; with narrow smooth elongated area along middle.

Elytra in females parallelsided, in males with sides slightly converging posteriorly; in males and in females about 2.2 times longer than wide; with numerous long erect setae anteriorly in males, which are absent in females; elytral punctation rather dense, the distance between punctures usually smaller than each dot.

Legs in males totally red with black tarsi, apices of posterior femora slightly darkened; in females legs totally red with slightly darkened tarsi, or only anterior legs red with slightly darkened tarsi, middle and posterior tibiae and tarsi black, middle and posterior femora with black apical half.

Abdomen black with red two posterior sternites and red hind margin of 3rd sternite, but female with red legs has three posterior abdominal sternites red and red hind margins of other sternites; posterior margins of last abdominal segments more or less rounded.

Body length in males: 10.6 mm (holotype) and 10.5 mm, in females: 10 mm and 11 mm; body width in males: 3.3 mm (holotype) and 3.1 mm, in females: 3 mm and 3.1 mm.

Remark. The new subspecies differs from similar brown form of *C. v. magdeevi* by much smaller size (especially in females), considerably lighter elytral color, smaller elytral punctation, strong development of anterior erect elytral setae.

Material. Holotype (fig. 10), ♂, Ukraine, Voroshilovgrad Region (now Lugansk), Proval'skaya Steppe, Grushevaya Balka, 1.06.1952, S. Medvedev leg. (Zoological Museum of Moscow University); 3 paratypes: 1♂ (fig. 11) and 1♀ (fig. 12) with the same label (Zoological Museum of Moscow University); 1♀, Lugansk Region, Streletskaia Steppe near Chertkovo, 12.06.1952, K. Arnoldi leg. (author's collection).

A specimen with black elytra, which was the base for the record of *C. villosa* for Ukraine [Zagaikovich, 1960] had just same label as holotype. The subspecies attribution of typically colored specimens [Plavilstshikov, 1936; Miroshnikov, 2007] from Rostov region (Novocherkassk) needs further investigations, as well as the taxonomy position of a male [Miroshnikov, 2007] from Kherson Region (Rybalche).

Distribution. Both known populations are situated in Lugansk Region of Ukraine (Proval'skaya Steppe – type locality and Streletskaia Steppe) very close to the border line between Ukraine and Rostov Region of Russia, so the area of the taxon must penetrate in Russia. The record [Miroshnikov, 2007] of *C. villosa villosa* for the north of Donetsk Region (Tatianovka, Sviatogorsk) must be also

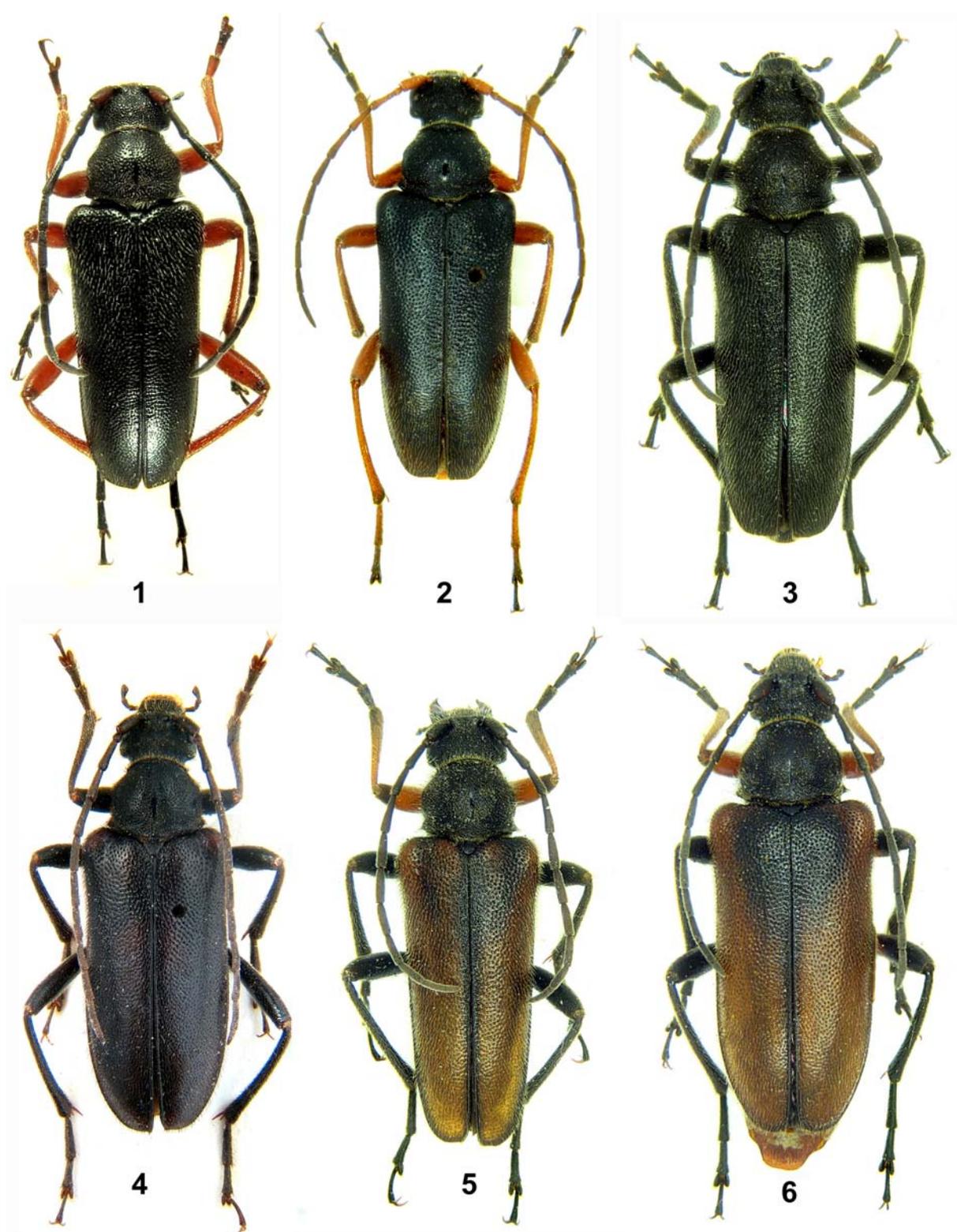


Fig 1-6. *Cortodera villosa magdeevi*.

1 – male, holotype; 2 – female, paratype from Zhiguli, 14.6.1985 Galasyeva leg.; 3 – male from Zhiguli, Mt. Strelnaya, 13.5.2010, Danilevsky leg.; 4 – female from Atmala forest of Ulianovsk Region, 1.6.1992, Isaev leg.; 5 – male from Zhiguli, Mt. Strelnaya, 17.5.2010, Danilevsky leg.; 6 – male from Zhiguli, Mt. Strelnaya, 13.5.2010, Danilevsky leg.

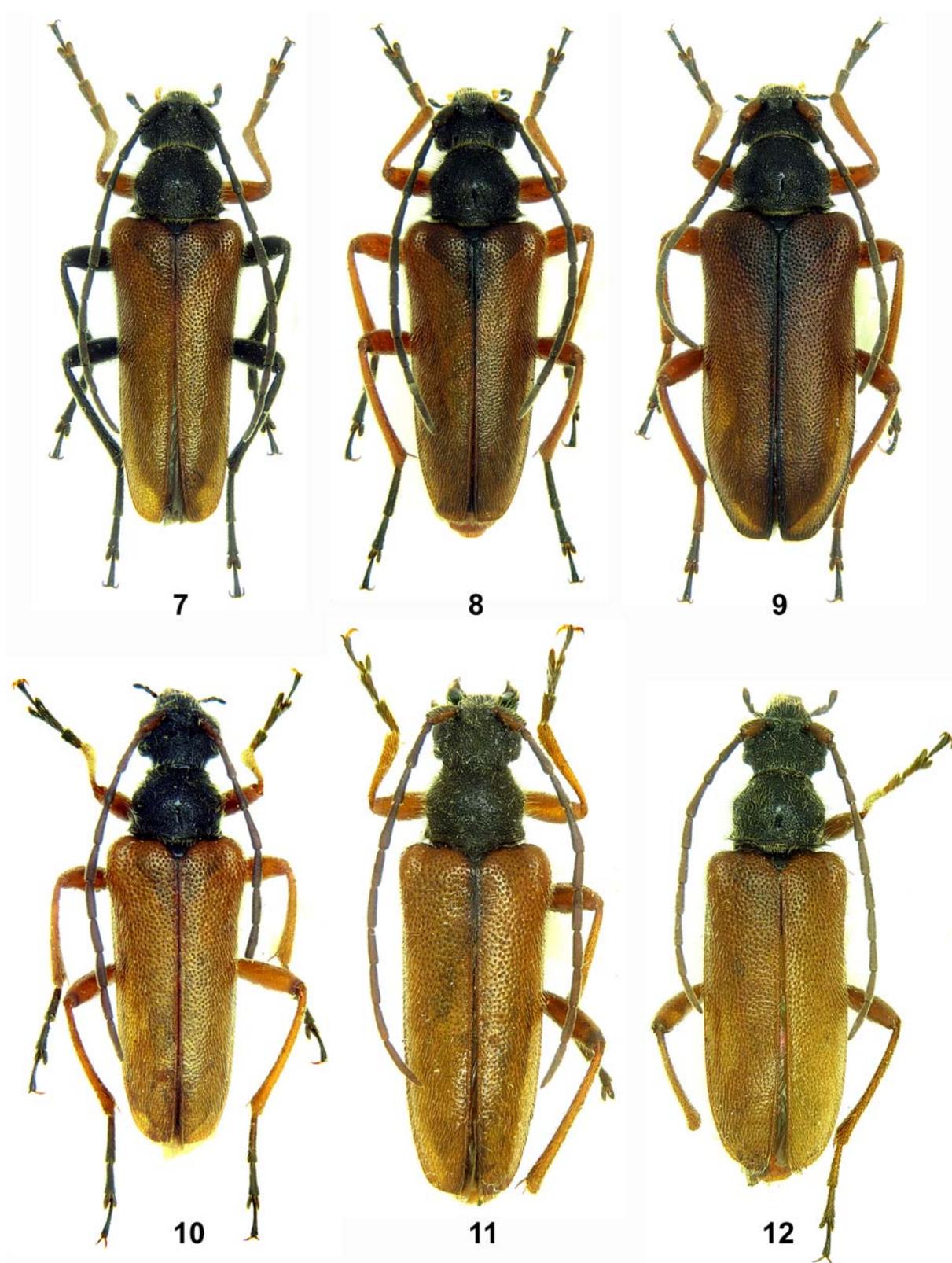


Fig 7-9. *Cortodera villosa magdeevi*.

7 - male from Zhiguli, Mt. Strel'naya, 18.5.2010, Danilevsky leg.; 8 - male from Zhiguli, Mt. Strel'naya, 20.5.2010, Danilevsky leg.; 9 - female from Zhiguli, Mt. Strel'naya, 20.5.2010, Danilevsky leg.

Fig. 10-12. *Cortodera villosa krasnobaevi* **ssp. n.**

10 - male, holotype, Lugansk Region, Proval'skaya Steppe, Grushevaya Balka, 1.6.1952, S.Medvedev leg.; 11 - male, paratype with same label; 12 - female, paratype with same label.

connected with *C. v. krasnobaevi* **ssp. n.**

Etymology. The new taxon is dedicated to Yuriy Petrovich Krasnobaev, director of Zhiguli Natural Reserve, who friendly supported our *Cortodera* study in the area during three spring seasons 2008–2010.

Cortodera villosa mariae **ssp. n.**
(Color plate 5: fig. 13)

Cortodera villosa villosa Miroshnikov, 2007: 211, fig. 7–10, 33–34, part.

The corresponding population was adequately described and figured by Miroshnikov [2007] as a special form of *Cortodera villosa villosa*, but was not accepted as a subspecies and was not named. Now that population is separated from the nominative subspecies by the area of *C. v. krasnobaevi* **ssp. n.**, so its subspecies status is evident.

Description. Body black with red abdominal apex, elytra always black; legs red with partly darkened tarsi, middle and posterior femora with black apices, middle and posterior tibiae usually partly darkened.

The new subspecies is very close to *C. v. villosa*, but pronotal punctation is usually larger, elytra (at least in males) shorter, about 2.13–2.15 times longer than wide; in females the distance between antennal insertions is about as long as 3rd antennal joint or a little shorter (in other subspecies it is usually shorter than 3rd antennal joint in about 1.2–1.4 times); head is relatively larger, pronotum more convex; epipleurae are usually dark.

Body length in males: 9.8–10.4 mm, in females: 8.5–11.3 mm; body width in males: 3.1–3.6 mm, in females: 2.9–3.9 mm.

Material (all specimens in the collection of A. Miroshnikov, Krasnodar). Holotype (fig. 13), ♂, NW Caucasus, Krasnodar Region, Anapa env. near Sukko, 44°46'N / 37°23'E, 25.05.1997, A. Miroshnikov leg.; 26 paratypes: 5♂ and 20♀ with the same label; 1♀ from the same locality, 21.05.1999, A. Miroshnikov leg.

Distribution. Only one population is known: Krasnodar Region, Anapa env. near Sukko, about 44°46'N / 37°23'E.

Bionomy. All specimens were collected on *Potentilla* flowers.

Etymology. The new taxon is named in honour of my daughter Maria Lazarenko, who took active part in our expedition of 2010 to Zhiguli and Black Sea coast and personally collected the most number of *C. villosa magdeevi*.

Cortodera villosa mikhailovi Danilevsky, 2001

Cortodera reitteri mikhailovi Danilevsky, 2001: 8 (Arkaim); Danilevsky, Smetana, 2010: 123.

The taxon was mistakenly described as a subspecies of *C. reitteri*, mostly because of yellow elytra and big size. Now its nature is evident because both type females are very close to the pale form of *C. villosa magdeevi*, by the relatively rare pronotal punctation.

C. v. mikhailovi differs from *C. villosa magdeevi* by smaller size and rather pale elytral color.

The occurrence (personal message by A. Shapovalov) of typically colored *Cortodera villosa* in Orenburg Region (Kuvandyk District, Maloe Churaevo, 51°38'N / 57°31'E, 10.06.2009, R. Filimonov leg.) could be the evidence of the presence of such form in *C. v. mikhailovi* with the penetration of the subspecies to Orenburg Region, or

extend the area of *C. v. major* to Orenburg Region, or can be the base for the description of a new subspecies as well.

Cortodera villosa (collected on Rosacea flowers) was also recorded for Uralsk Region long ago [Zhuravlev, 1914]. Now that record looks reliable.

New materials from the regions are strongly desirable.

Cortodera kiesenwetteri subtruncata Pic, 1934
(Color plate 5: fig. 14–16)

Cortodera kiesenwetteri var. *subtruncata* Pic, 1934: 19 (“Samara”).

Cortodera kiesenwetteri ssp. *subtruncata*: Danilevsky, 2001: 13; Danilevsky, Smetana, 2010: 123.

Cortodera kiesenwetteri: Isaev, Magdeev, 2003: 293 (south of Syzran District); Isaev et al., 2004: 37 (Ulyanovsk Region).

The taxon up to now was represented by single specimens in the collections. Females were never described. A newly collected big series of 26 specimens allow to study the morphological variability of the species and recognize the very peculiar females.

Description. Males (fig. 14–15) are characterized by black body with yellow elytra; black legs with partly lightened anterior tibiae; antennae black with more or less lightened apical joints; elytra from uniformly light-yellow to yellow with dark area near scutellum; prothorax and elytral base with long erect setae, recumbent setae absent; 2nd and 3rd antennal joints are short, similar in length and about as long as 1st joint.

Females (fig. 16) are totally different: dorsal and lateral parts of prothorax, abdomen, antennae and legs red (with darkened tarsi and black apices of middle and posterior femora); head, ventral part a prothorax, mesothorax, metathorax and elytra black; antennae reaching last elytral third, also with short 2nd and 3rd joints similar in length and about as long as 1st joint; prothorax with short erect, oblique and recumbent setae; elytral base with single erect setae.

Body length in males: 8.7–11.8 mm, in females: 9.6–11.8 mm; body width in males: 2.9–3.8 mm, in females: 3.2–4 mm.

Material. Holotype, ♂, “Rossia mer. or. fl. Volga, S Samara” (Zoological Museum of Moscow State University); all other specimens in author’s collection: 1♂, Samarskaya Luka, Zhiguli Mts., 6–18.06.1982, D. Magdeev leg.; 1♂, Kuybyshev Region, Zhiguli, stony steppe, 2.06.1989, Lyubvina leg.; 1♂, Ulyanovsk Region, Radishchevo District, Ashtala [=Atmola], 8.06.1992, V. Isaeva leg.; 1♂, Samara Region, Zhiguli, Mt. Malaya Bakhilova, 100 m, 27.05.2009, T. Krasnobaeva leg.; 23♂ and 3♀, Zhiguli Natural Reserve, Strelnaya Mt., 13–20.05.2010, 300–360 m, M.L. Danilevsky and M.M. Lazarenko leg.

Distribution. The area of *C. k. subtruncata* is just same as in *C. v. magdeevi*: stony-steppe areas in Samara and Ulyanovsk regions. Two populations are definitely known Strelnaya Mountain in Zhiguli Natural Reserve and Atmala Forest in Radishchevo District (Srednikovo environs). Besides one more locality was published [Isaev, Magdeev, 2003]: south of Syzran District in Samara Region.

Bionomy. All known populations are connected with very special landscape of the region, so called, “stony steppe”. The larval food plants of *C. k. subtruncata* are not directly established. Several available specimen were collected among numerous *Centaurea ruthenica* (fig. 17) just near the forest, so *C. ruthenica* could be one of the food plants of the species. Most of the specimens were collected a little higher (about 360 m) in another locality of the same slope near watershed (fig. 18) on flowers of *Jurinea ledebourii*, as well as on flowers of *Linum uralense*.

Remarks. The females are very close to the female of *C. ciliata ciliata* Danilevsky, 2001 described from near Ust-

Kamenogorsk (NE Kazakhstan); differ by relatively longer 2nd and 3rd antennal joints and a little sparser ptonotal punctuation. Such degree of similarity of so distant taxa could be the evidence of conspecific nature of 5 subspecies: *C. k. kiesenwetteri* Pic, 1898, *C. k. subtruncata* Pic, 1934, *C. c. ciliata* Danilevsky, 2001, *C. c. milaenderi* Danilevsky, 2001 (Ufa environs) and *C. c. sakmarensis* Danilevsky, 2006 (Orenburg Region). Infortunalely two last taxa are known by holotype males only, as well as *C. k. kiesenwetteri* Pic, 1898.

The holotype of *C. kiesenwetteri* Pic, 1898 (preserved in Pic's collection in Muséum Nationale d'Histoire Naturelle, Paris) differs from the most of specimens of *C. k. subtruncata* by narrow prothorax with sparse punctuation, but the smallest specimen of *C. k. subtruncata* (Color plate 5: fig. 15) is quite identic to the holotype of *C. kiesenwetteri*. So, the reality of two subspecies is doubtful. The type locality of *C. kiesenwetteri* Pic, 1898 published as "Astrakan" could be hardly connected with Astrakhan-city environs (or with modern Astrakhan Region), as there are no corresponding biotopes ("stony steppe") in the area. Most probably the holotype was collected somewhere in Volgograd Region – that area was included in XIX century in Astrakhan Region.

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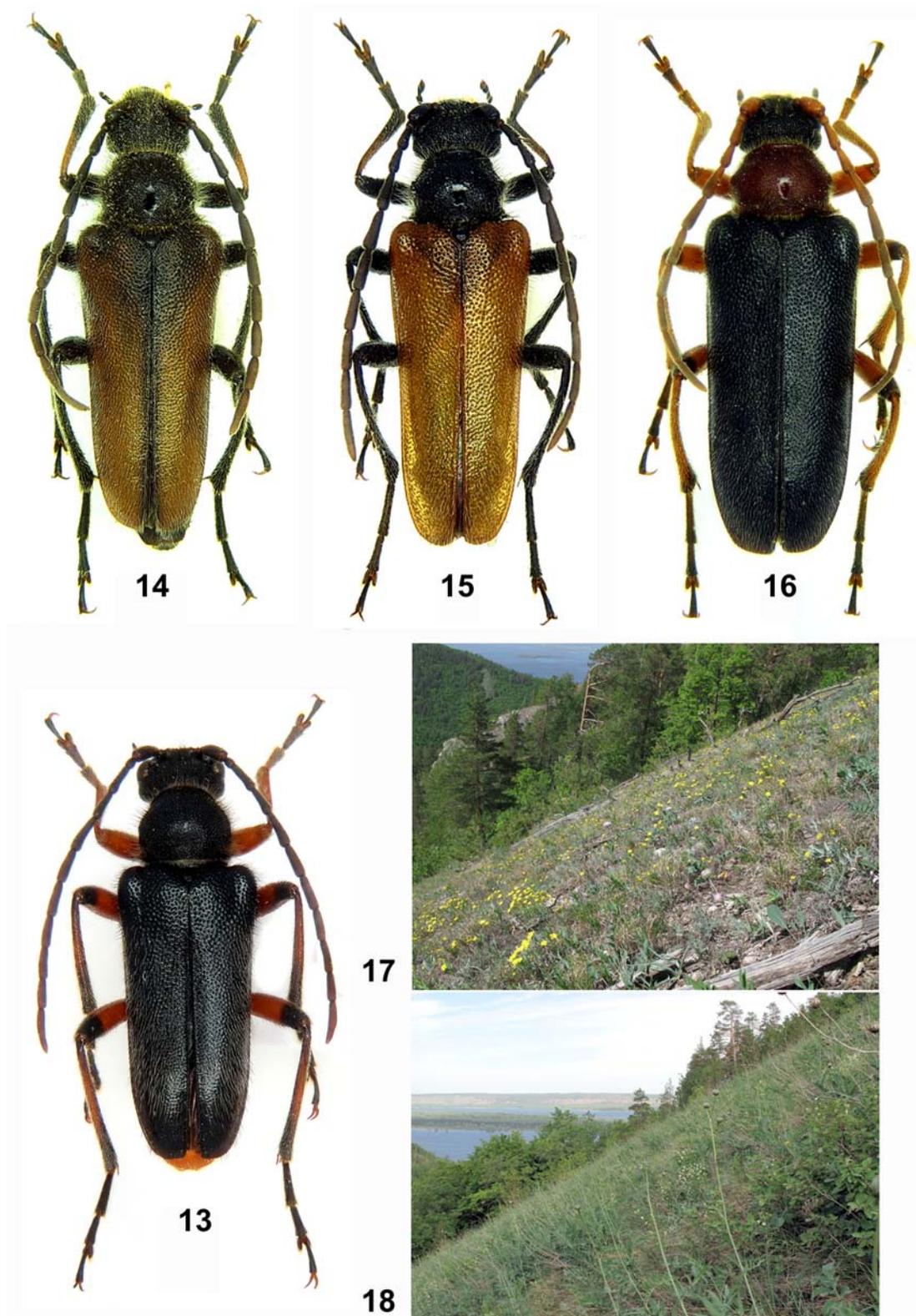


Fig. 13. *Cortodera villosa mariae* ssp. n. holotype

Fig. 14-16 *Cortodera kiesewetteri subtruncata*.

14 - male from Zhiguli, Mt. Strelnaya, 14.5.2010, Danilevsky leg.; 15 - male from Zhiguli, Mt. Strelnaya, 18.5.2010, Danilevsky leg.; 16 - female from Zhiguli, Mt. Strelnaya, 20.5.2010, Danilevsky leg.;

Fig. 17. Upper level of Strelnaya Mt. near watershed about 360m.

Fig. 18. Middle level of Strelnaya Mt near forest border.

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