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## A REVIEW OF SUBSPECIFIC CONFIGURATION OF *DORCADION (CARINATODORCADION) CARINATUM* (PALLAS, 1771) WITH A DESCRIPTION OF NEW SUBSPECIES (COLEOPTERA: CERAMBYCIDAE)

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**Abstract** - The distribution and variability of the nominate subspecies and of *D. carinatum cylindraceum* is discussed. Three new subspecies are described: *D. c. igrenum* ssp.n. (near Dnepropetrovsk, Ukraine), *D. c. sunzhenum* ssp. n. (North Ossetia, South Russia), and *D. c. uralense* ssp. n. (Mugodzhary mountains, Kazakhstan). Photographs, morphological descriptions, and exact localities with a map are given for all taxa.

**Izvleček** - PREGLED PODVRSTNE SESTAVE VRSTE *DORCADION (CARINATODORCADION) CARINATUM* (PALLAS, 1771) Z OPISOM NOVIH PODVRST (COLEOPTERA: CERAMBYCIDAE)

Obravnavani sta razširjenost in raznolikost tipične podvrste in podvrste *D. carinatum cylindraceum*. Opisane so tri nove podvrste: *D. c. igrenum* ssp.n. (bližina Dnepropetrovska, Ukrajina), *D. c. sunzhenum* ssp. n. (Severna Osetija, južna Rusija), in *D. c. uralense* ssp. n. (pogorje Mugodzhary, Kazahstan). Vse podvrste so predstavljene s fotografijami, morfološkimi opisi in natančnimi lokalitetami z zemljevidom.

### Introduction

The type locality of *D. (C.) carinatum* (Pallas, 1771), according to the original description, is situated in the valley of the Volga river in Central Russia. The species area (fig. 15) covers most parts of Ukraine, southern half of European Russia, North-East Azerbaijan and North-West Kazakhstan. In Russia it is known to the south

from the Voronezh and Samara districts, and is not rare in Belgorod, Rostov, Saratov, and Volgograd districts, is very common in the planes and low mountains of Ciscaucasia from the Krasnodar and Stavropol regions through Chechnia to Dagestan. In Ukraine it is distributed to the south from Kiev and Kharkov and is very common in Crimea. In Kazakhstan the species was recorded from Dzhanybek to the east nearly as far as the Mugodzhary mountains. I found *D. carinatum* on the west slope of Mugodzhary (near Emba) and near Aktiube - the most eastern points of the area. In Azerbaidzhan it was known along the Caspian coastal area from the north border to about the Apsheron peninsula. I also collected *D. carinatum* on the low hills of the east part of the Caucasian mountain ridge near Altyagach and far to the south in the Shemakha district.

Many local morphological forms exist in this vast area, but only the subspecies *D. c. cylindraceum* Reitter, 1886 has been described as a species from near Derbent. It is distributed in Dagestan and the Azerbaidzhan part of the species area.

I examined several geographical forms represented in the area and describe here three of them as new subspecies. All type materials are deposited in the author's collection.

**Acknowledgements:** I wish to express my hearty gratitude to all my friends and colleagues who provided me with the materials for study.

#### *Dorcadion carinatum carinatum* (Pallas, 1771) (Figs 1-5)

I regard as the representatives of the typical population my specimens from the Saratov regions (Melovoe - right bank of Volga river, fig. 1-2).

Body big and relatively wide; prothorax wide, with moderately developed lateral spines, not curved backwards; pronotum evenly and rather densely punctate, both large and small punctures very distinct, interspaces a little wider or narrower than punctures; elytrae oval, moderately flat; deep and long humeral furrows as well as humeral carinae with very rough sculpture.

Very similar populations are distributed further down the Volga river valley near Volgograd and in West Kazakhstan around Dzhanybek.

Populations from the northernmost part of the species area (near Voronezh and Belgorod) consist of smaller specimens (fig. 3) with short lateral spines of prothorax and flat elytrae.

Southern populations (Kharkov, Crimea, Krasnodar, Stavropol) represent the largest specimens (fig. 4), with longest prothoracic spines; large pronotal punctures are wider and interspaces relatively narrow, often without small punctuation, specially in the middle of pronotum; elytrae moderately convex with very deep and large punctures on anterior third.

Specimens from near Maikop (fig. 5) look rather peculiar because of very strong and dense, partly conjugated, irregular punctuation, small punctuation in interspaces is indistinct, lateral spines are longest among all forms; elytrae relatively wide with rather distinct and long humeral carinae, bearing very coarse sculpture, with deep humeral

furrows; elytral surface coarsely punctured in two anterior thirds, punctures near base are very large, dense, partly conjugated. Still, I regard this form to be within the rate of variations of *D. c. carinatum*.

Body length: males - 18.0-23.5mm, females - 17.2-24.0mm; body width: males - 6.0-7.0mm, females - 6.3-8.3mm.

*Dorcadion carinatum cylindraceum* Reitter, 1886 (fig. 6-8)

Differs from the nominative subspecies by very narrow body; pronotum with long and deep pubescent furrow along its middle, usually with smooth shining areas along both sides; prothoracic spines short, conical, not curved backwards; elytrae strongly convex, mostly without coarse sculpture; humeral carinae and furrows poorly developed and usually indistinct.

Body length: males - 17.0-22.0mm, females - 18.0-23.5mm; body width: males - 4.9-7.0mm, females - 6.3-8.6mm.

The area (fig. 15) of the subspecies (Plavilstshikov, 1958) lies to the east from Chechnia (Naurskaia). The narrowest specimens are known to me from the Caspian coast near Makhachkala. I collected very typical specimens from the western environs of Baku (Perekishkiul) to Maraza (Shemakha district). The most western Transcaucasian population is known from near Demirchi. The population from the surroundings of Altyagach consists of wider specimens with distinct humeral carinae that look like a transitional form to *D. c. carinatum*, but pronotum always with deep long furrows.

*Dorcadion carinatum igrenum* ssp. n. (fig. 9-10)

**Description:** Similar to *D. c. carinatum*, differs by small narrow body; prothoracic lateral spines short, conical, not curved backwards; pronotum with very dense punctuation, interspaces usually smaller than punctures (specially in females), without microsculpture; elytrae oval with widest point near middle or slightly anteriorly, but sometimes with nearly parallel sides; usually convex along suture, without strong punctuation even near base, humeral carinae and furrows poorly developed without coarse sculpture; femora and sometimes 1st antennal joint can be slightly reddish (!).

Body length: males - 17.0-19.0mm, females 18.0-21.0mm; body width: males - 5.2-5.5mm, females - 6.1-7.3mm.

**Materials:** holotype, male, Ukraine, Dnepropetrovsk distr., Khoroshevo, 2.5.1984, Barsov leg.; paratypes: male and female with same label and male and female from same locality, 2.5.1984, Barsov leg.; female from same region, Andreevka, 11.5.1984, Barsov leg.; male from east suburb of Dnepropetrovsk (Igren), 4.5.1984, Kovtunovitch leg.

The subspecies inhabits several steppe localities on a plane east of Dnepropetrovsk - one of the most western points of the species area (fig. 15).

***Dorcadion carinatum sunzhenum* ssp. n. (fig. 11-12)**

**Description:** Similar to *D. c. carinatum*, but elytrae more strongly rounded, with size more converging anteriorly, with widest point usually before middle. Pronotum with moderately dense small punctation, interspaces larger than punctures, microsculpture present mostly in females; thoracic lateral spines are short but rather acute and distinctly curved backwards; elytrae slightly convex, without coarse sculpture, with moderately developed humeral carinae and furrows.

Body length: males - 20.5-23.0mm, females 21.0-23.8mm; body width: males - 6.2-7.0mm, females - 7.2-9.0mm.

**Materials:** holotype, male, North Osetia, Sunzhenskiy mountain ridge, Kardzhin, 450m, 19.6.1985, S. Alekseev leg.; paratypes: 10 males and 11 females with same labels.

The subspecies inhabits north steppe foothills of the Caucasus mountain ridge in North Osetia (fig. 15).

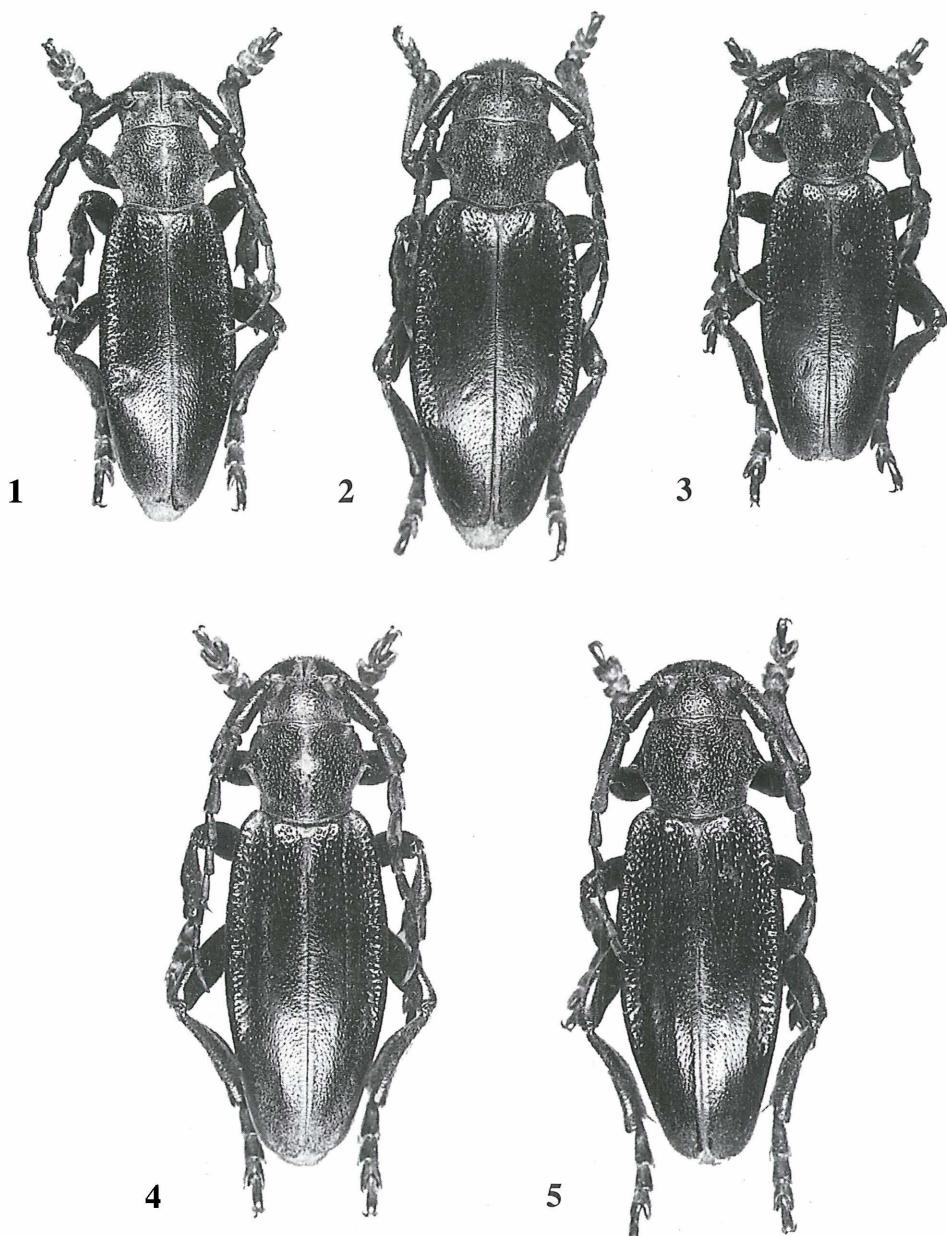
***Dorcadion carinatum uralense* ssp. n. (fig. 13-14)**

**Description:** Similar to *D. c. carinatum*, but body small, smaller than any others of the species; pronotum with dense punctation, interspaces about equal in size to punctures or smaller, microsculpture usually distinct in females; prothoracic spines rather acute and slightly curved backwards; elytrae slightly convex, oval, widest near middle, with poorly developed humeral carinae and furrows, with very feeble sculpture, even basal elytral portions with very sparse indistinct punctation, humeral furrows nearly without sculpture.

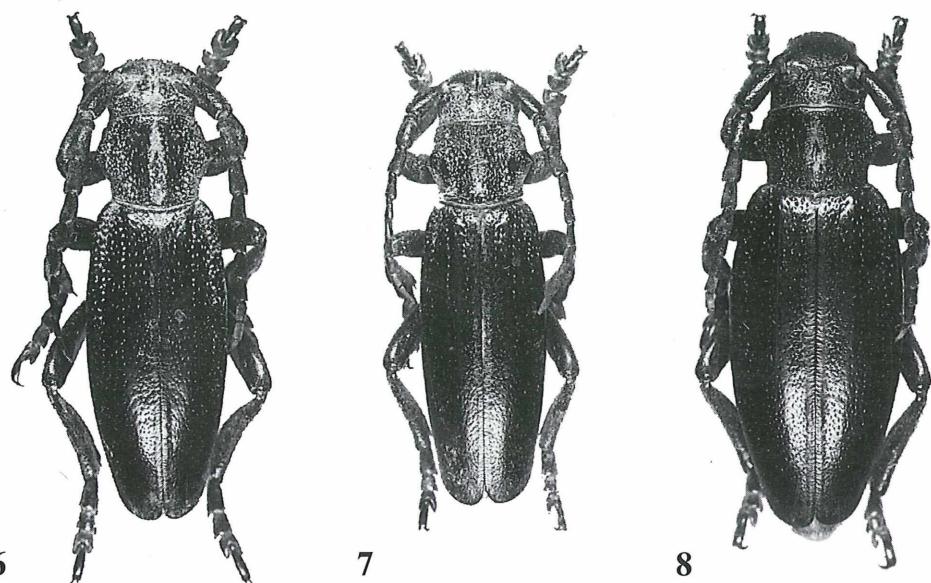
Body length: males - 18.2-20.2mm, females 18.0-20.3mm; body width: males - 6.0-6.3mm, females - 6.3-7.5mm.

**Materials:** holotype, male, Kazakhstan, Aktiube district, near Kara-Tugai, 300m, 25-26.5.1996, M. Danilevsky leg.; paratypes: 4 males and 4 females with same labels; 2 males and 2 females, Kazakhstan, Aktiube distr, Mugodzhary mountains, west slope near Emba, 250m, 12.5.1992, M. Danilevsky leg.

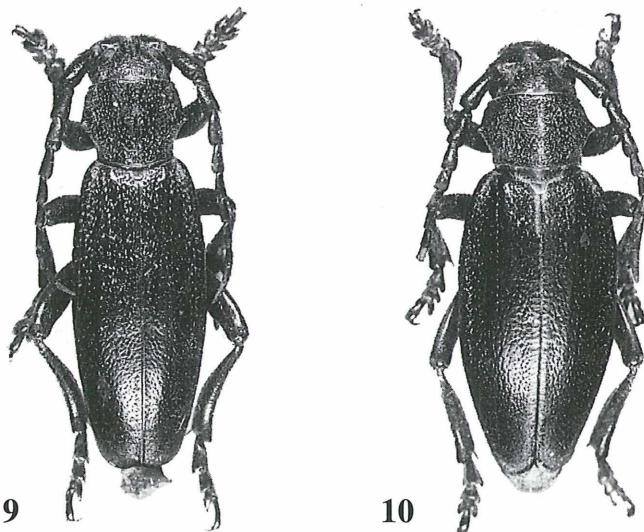
The subspecies inhabits low steppe hills in the south part of Ural mountain system - the most eastern point of the species area (fig. 15).



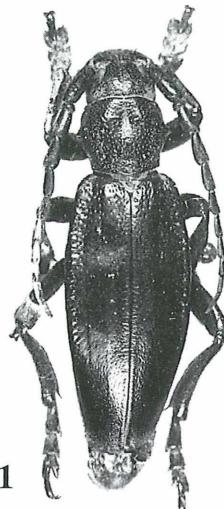
Figs. 1-5: *Dorcadion carinatum carinatum* (Pall.): 1-2 male and female from near Saratov; 3 male from near Belgorod; 4 - male from near Stavropol; 5 - male from near Maikop.



**Fig. 6-8:** *Dorcadiion carinatum cylindraceum* Reitt.: 6 - male from near Baku; 7 - male from near Makhachkala; 8 - female from near Maraza.



**Figs. 9-10:** *Dorcadiion carinatum igrenum* ssp. n.: 9 - male (holotype); 10 - female.

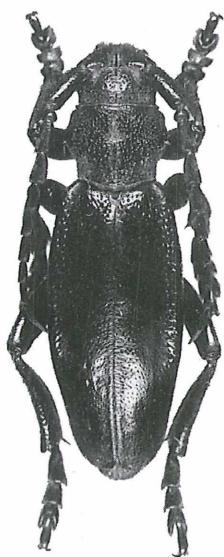


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Figs. 11-12: *Dorcadion carinatum sunzhenum* ssp. n.: 11 - male (holotype); 12 - female.

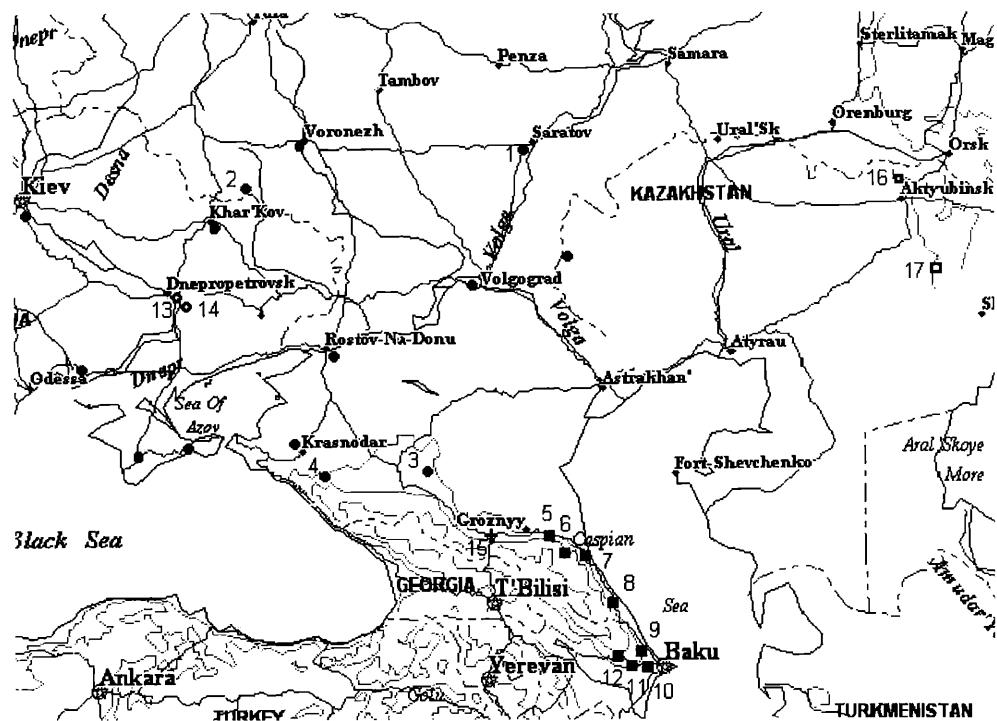


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Fig. 13-14: *Dorcadion (C.) carinatum uralense* ssp. n.: 13 - male (holotype); 14 - female.



**Fig. 15:** Localities of *Dorcadion carinatum* s.l.

- - several localities of *D. c. carinatum* (1 - Melovoe, near Saratov; 2 - Belgorod; 3 - Alexandrovskoe near Stavropol; 4 - Maikop)
- - localities of *D. c. cylindraceum* (5 - Naurskaia, 6 - Khasaviurt, 7 - Makhachkala, 8 - Derbent, 9 - Altyagach, 10 - Perekishkiul, 11 - Maraza, 12 - Demirchi)
- - localities of *D. c. igrenum* ssp. n. (13 - Igren, 14 - Khoroshevo)
- + - locality of *D. c. sunzhenum* ssp. n. (15 - Kardzhin)
- - localities of *D. c. uralense* ssp. n. (16 - Kara-Tugai; 17 - Emba, Mugodzhary Mts.)

## References

Plavilstshikov, N.N., 1958: [Longicorn beetles. Part 3. Subfamily Lamiinae, part 1]. In: Fauna USSR, Coleoptera, 23 (1). Moscow. 592pp [in Russian].

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