Description of *Dorcadion gashtarovi* n.sp. (Coleoptera, Cerambycidae) from Romania and Bulgaria with review of the closely related species

Gianfranco SAMA¹, Maria-Magdalena DASCĂLU²,* and Carlo PESARINI³

1. Via Raffaello 84, 47023 Cesena, Italy.
2. «Al. I. Cuza» University, Faculty of Biology, Bd Carol I, 20A, 700506 Iaşi, Romania.
3. Museo Civico di Storia Naturale, Corso Venezia, 55 I-20121 Milano, Italy.

* Corresponding author, M.M. Dascălu; e-mail: dascalumm@yahoo.com

Abstract – *Dorcadion gashtarovi* n.sp. from the historical region Dobruja (North-Eastern Bulgaria and South-Eastern Romania) is described. The new species belongs to the *D. divisum* species group. It is compared to three other similar species known to occur in Continental Europe (*D. divisum* dissimile, *D. subinterruptum*, *D. granigerum*) and a key is provided to separate them. *Dorcadion subinterruptum* is recorded for the first time in Europe.

Key words: Cerambycidae, *Dorcadion*, Bulgaria, Romania, new species.

Introduction

*Dorcadion* Dalman, 1817 is a large genus which represents about 21% of the European cerambycid fauna, increasing to 40% if all species of *Iberodorcadion* Breuning, 1943 (regarded by some authors as a *Dorcadion* subgenus) and all subspecies are included (data derived from Danilevsky 2009). The highest number of species occurs in the Iberian Peninsula (Vives 2000) and Greece (Pesarini & Sabbadini 2004), with species richness gradually decreasing to the north of these areas. Taking into consideration the high number of taxa with restricted geographical distribution, allopatric speciation seems to be very active in this group. The large intraspecific variability, the number of varieties described by previous workers and occasional interspecific hybridization (Bahillo 1999, Dascălu 2007) make the study of this group difficult and complex. Until recently, the only reference to the identification of this group was the monograph of Breuning (1962); however the present paper contributes to larger study on the revision of *Dorcadion* of Continental Greece (Pesarini & Sabbadini 2004, 2007, 2008).
The new species described hereunder is attributed to the subgenus Pedestredorcadion Breuning, 1943. This subgenus was synonymised with Cribridorcadion Pic, 1901 by Danilevsky et al. (2004) on the basis of similar structures of endophallus in the type species of both subgenera. While the former subgenus includes hundreds of quite heterogeneous taxa, the latter, based on the unique species D. mniszechi Kraatz, 1873, is very well characterized through the features briefly but exactly described by Pic (1901) in the original description and it has been always regarded as a monospecific subgenus. A further distinctive feature of Cribridorcadion, mentioned by Breuning (1943) is the rounded tip of the median lobe of aedeagus.

**Dorcadion (Pedestredorcadion) gashtarovi** n. sp.

**Type material:**


Holotype in coll. Museo civico di Storia Naturale, Milano, (Italy); paratypes in USNMNH (Washington, USA), the T. Săvulescu collection.

The structure of the endophalus in Cribridorcadion sensu Pic and Pedestredorcadion is the most ancient within the tribe and similar to that of Morimus (Danilevsky et al. 2004). Using Morimus as outgroup (for a photograph of the endophalus in this genus see Kasatkin, 2006) it is clear that endophalus structure of both Cribridorcadion sensu Pic and Pedestredorcadion is a plesiomorphic character state within the tribe and so, cannot be used to support monophyly of Cribridorcadion sensu Danilevsky, Kasatkin, & Rubenyan. As this is the only character used to synonymise the two subgenera, we prefer to consider Cribridorcadion and Pedestredorcadion as separate subgenera, the former including only D. mniszechi and the closely related taxa (species or well-differentiated subspecies) semi-brunneum Pic, 1903 and ananasum Pic, 1934.
Description of male:
Body length: 11.5–13.8 mm; width: 4.2–5.3 mm.

Head black with white sparse pubescence and two elongated patches of black pubescence on vertex; antennae reddish brown, darkened towards apex; first antennal segment about 1.2–1.5 times longer than third; first three antennal segments with dense white pubescence, the remainder covered with reddish pubescence.

Pronotum quadrate to 1.1 times wider at base than long, with a median longitudinal white stripe bordered by two moderately wide black stripes, the sides are strongly punctate and largely covered with white, sparse pubescence; lateral spines of pronotum conical, moderately short, acute and slightly curved upwards.

Elytra about 1.9 times longer than wide, with weakly developed carinae and a shallow depression between the humeral and dorsal carinae, this depression weakly granulate near humeral callus, granules hidden by white clothing of humeral and dorsal stripes. Dorsum covered with dense, compact and dull black pubescence and longitudinal stripes of white pubescence: lateral stripe wide; humeral stripe wide, not interrupted or (in one specimen) interrupted close to apical third of elytra; dorsal stripe well-developed, as wide as the interval between the dorsal and humeral stripes or slightly narrower, pattern extremely variable: in some specimens not interrupted, with few dark spots, usually clearly interrupted at beginning of its apical third and/or behind its proximal third, usually does not reach the apex of elytra and is not fused with humeral stripe but occasionally (in one specimen) partially fused with the humeral stripe at the elytral apex; presutural stripe present as a short, slightly oblique basal stroke which may be interrupted by black pubescence or prolonged with small white spots; sutural stripe white and narrow (Fig. 2a, b, 3d).

Underside black, with white pubescence; legs reddish brown with darker tarsi and covered with white pubescence.

Median lobe of aedeagus relatively slender; its apical constriction subsinuate at sides (Fig. 4.1a). Parameres rather short, less than twice as long as broad, broadly rounded at tip, with short setae only on their apical third (Fig. 4.1b).

Description of female:
Body length: 12.2–14.5 mm; width: 4.6–5.5 mm.

The females always androchromatic and differ from males by characters linked with sexual dimorphism. Antennae slightly surpassing elytral half (in males reaching apical fourth), and first antennal segment 1.5 times longer than third. Pronotum more transverse, 1.2 times wider at base than long, with lateral spines slightly longer than in male. Elytra ovoid, less elongate than male, 1.7-1.8 times as long as wide with slightly better developed carinae; shallow depression between humeral and dorsal carinae wider. Humeral white stripe usually not interrupted, but in few specimens partly or entirely obliquely interrupted or just abruptly narrowed after anterior third of elytra (Fig. 2c, 3e).

Etymology: *D. gashtarovi* n. sp. is dedicated to our friend and colleague Victor Gashtarov (Sofia, Bulgaria) who firstly paid attention to the new species.

Distribution: *Dorcadion gashtarovi* has been collected from six localities in Romania and Bulgaria along the coast of the Black Sea, in the historic region of Dobruja (Fig. 1).
Description of *Dorcadion gashtarovi* new species

Comparison with related species

*Dorcadion gashtarovi* is well distinguished from *D. divisum* Germar, 1839 s. lat. and other species of this species group occurring in Continental Europe by the weakly developed rasp-like granulation on the base of the elytrae and the considerably shorter and stouter parameres. The different shape of median lobe of aedeagus also separates the new species from the currently ill-defined Anatolian forms of *D. divisum* s. lat., the precise systematic definition of which is beyond the scope of this paper and requires further study. The new species is able to be distinguished from *D. divisum dissipilum* Ganglbauer, 1884 which occurs in European Turkey (Kadlec 2006) by the reduction of the presutural stripe, being limited at most to the anterior third of elytra, instead of being nearly complete (but not always, as written by Kadlec 2006); and by having shorter antennae that in
D. gashtarovi reach the apical fourth of the elytra in males and slightly beyond half in females, while in D. divisum dissimile they reach the apical fifth of the elytra in males and the apical two-fifths in females. The new species can be distinguished from the Greek species D. granigerum Ganglbauer, 1884 (which has sometimes a similar elytral pattern) by the more developed humeral callus of elytra and the quite different shape of male genitalia (see also Pesarini & Sabbadini 2007, Fig. 36).

To the list of species currently known from Continental Europe, we add here D. subinterruptum Pic, 1900 of which we examined a small series of specimens found near Enez (European Turkey, province of Edirne, 02.V.2008, leg. Pesarini & Sabbadini). This species is easily distinguishable from all other European members of the D. divisum group (sensu Pesarini & Sabbadini 2008) by its entirely black legs and having the dorsal band of elytra always broken into three or four well-separated stretches. The old record of this species by Montandon (1908) from Mangalia, Romania (as Dorcadion divisum Germ. v. subinterruptum Pic), was clearly based on specimens of D. gashtarovi since this is the only species of the group occurring near Mangalia.

Another erroneous record connected with D. gashtarovi is that of Balaci (2000) who published D. septemlineatum Waltl, 1838 from Romania on the basis of ten specimens collected by N. Săvulescu on 29.V.1963 at Hagieni. We have not seen these specimens but all material from Hagieni collected and identified provisionally by N. Săvulescu as D. septemlineatum belongs to D. gashtarovi (see under type material).

These apparently similar species can be separated by the following key:

1. Elytral base with weak rasp-like granulation, granules hidden by white clothing of humeral and dorsal stripes. Parameres short and stout, broadly rounded apically and with setae covering less than the apical half; median lobe of aedeagus with a moderately elongate apex and a moderately developed opercular dorsal portion (Fig. 4.1a,b). Bulgaria, Romania.................................................................gashtarovi n. sp.
2. Elytral base with strong rasp-like granulation, granules well visible among white clothing of humeral and dorsal stripes. Parameres at least moderately elongate, slender; median lobe of aedeagus sometimes different .................................................................subinterruptum Pic
3- Elytra with receding humeri (Fig. 3c). Parameres elongate, slender, apex narrowly rounded and with setae covering more than the apical half; median lobe of aedeagus with a stout apex and with a narrow opercular dorsal portion (Fig. 4.3a,b). Continental Greece.................................................................granigerum Ganglbauer
- Elytra with well-marked humeri (Fig.3b). Parameres moderately elongate, apex broadly rounded and with setae covering less than the apical half; median lobe of aedeagus with a moderately elongate apex and with a broad opercular dorsal portion (Fig. 4.4a,b). European Turkey.................................................................divisum dissimile Ganglbauer
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**Figure 3.** Habitats photographs of: a) *D. subinterruptum*, ♂ from 2 km W Enez, vil. Edirne, European Turkey; b) *D. divisum* sp. *dissimile*, ♂ from 15 km SW Gelibolu, vil. Edirne, European Turkey; c) *D. granigerum*, ♂ from 4 Km S Erithres, nom. Attiki, Greece; d) ♂, ♀ *D. gashtarovi* n. sp., paratypes from Mangalia Lake, Romania.

**Fig. 4.** Male genitalia of the European species in the *D. divisum* group: (a. apex of median lobe of aedeagus; b. parameres). 1) *Dorcadion gashtarovi* n. sp., holotype ♂ from Mangalia Lake, Romania; 2) *D. subinterruptum*, ♂ from 2 km W Enez, vil. Edirne, European Turkey; 3) *D. granigerum*, ♂ from 4 Km S Erithres, nom. Attiki, Greece; 4) *D. divisum dissimile*, ♂ from 15 km SW Gelibolu, vil. Edirne, European Turkey.

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References


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