

Dorytomus carpathicus Petryszak, 1984 (Coleoptera, Curculionidae) a new weevil for the Nordic countries

FRODE ØDEGAARD

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The weevil *Dorytomus carpathicus* Petryszak, 1984 is reported from Saltdal and Junkerdal in northern Norway. One male and two females were found by beating *Salix caprea* trees. This is the first confirmed record of the species from the Nordic countries. *D. carpathicus* is previously known from Poland, Austria and Slovakia. The new record expands the geographical range for this species substantially towards the north. The species is illustrated and described with diagnostic characters.

Key words: Coleoptera, Curculionidae, *Dorytomus*, weevils, Norway, Fennoscandia, Palaearctic, new record.

Frode Ødegaard, Norwegian University of Science and Technology (NTNU), University Museum, Department of Natural History, NO-7491 Trondheim, Norway. E-mail: frode.odegaard@ntnu.no

Introduction

The genus *Dorytomus* Germar, 1817 belongs to the tribe Ellescini within the subfamily Curculioninae (Curculionidae). It is a medium sized genus including 65 species and 3 subspecies in the Palaearctic region (Löbl & Smetana 2013). Of these, 17 species is known from Fennoscandia, and 15 from Norway after adding the species reported here (Fägerström & Lundkvist 2020). The North American fauna was revised by O'Brian (1970), and includes 21 species (Poole & Gentili 1996).

The *Dorytomus* species are medium sized weevils with a long rostrum, parallel body shape, and mottled dark and light brownish appearance. They have toothed femora and free claws. Males differ from females by having shorter, and more sculptured rostrum, antennae inserted closer to apex of rostrum, slightly curved front tibiae, and a shallow impression along the middle of first and second sternite.

Dorytomus carpathicus Petryszak, 1984 belongs to the *taeniatus*-group (former subgenus

Praeolamus Zumpt, 1932) within the large subgenus *Dorytomus* Germar, 1817 (Löbl & Smetana 2013). The *taeniatus*-group is characterized by the lack of standing bristles of elytra, a simple fore margin of prosternum without notch, and side margin of prosternum without forward-facing row of bristles (Zumpt 1933).

All species of *Dorytomus* are associated with shrubs and trees within the willow family (Salicaceae) which includes willows (*Salix* spp.), aspen and poplars (*Populus* spp.). Most *Dorytomus*-species develop in catkins during springtime. The development continues after the catkins fall to the ground where the larvae eventually pupate. The adults hibernate, and occur in the host trees from early springtime in March to beginning of June. The new generation emerges from the ground in late summer, and newly hatched individuals can be found on the host trees again during autumn (Hansen 1965). In this paper, the first record of *Dorytomus carpathicus* from the Nordic countries is reported.

Material and methods

The specimens were collected by the author by beating willow trees at several localities in Saltdal and Junkerdal in Nordland county as a part of a larger survey of the insect fauna of the valley during 2020. The morphological study of the specimen was conducted with Wild M10 stereomicroscope. The images were created using the photography technique of focus stacking. Several partially focused images were taken with a Nikon D850 mounted on a Nikon PB-4 Bellow with microscope objectives of different magnifications. The separate images were combined using Zerene Stacker 1.04[©] (2009–2017) software. The specimens have been deposited in the NTNU, University Museum in Trondheim, Norway.

Results

Two females and one male of *Dorytomus carpathicus* Petryszak, 1984 were recorded with the following data: Norway, NORDLAND [NSI], Saltdal municipality: Junkerdalsurda [66.81517°N–15.41529°E], 135 m asl., 3 June 2020, 1♀, leg. Frode Ødegaard; Litlalmeningen [66.97052°N–15.30487°E], 30 m asl., 4 June 2020, 1♀, leg. Frode Ødegaard; 3 October 2020, 1♂, leg. Frode Ødegaard (Figures 1–5).

Dorytomus carpathicus is closely related to *D. taeniatus* (Fabricius, 1781) and *D. dejeani* Faust, 1883, but by the first glance it appears larger, broader and more compact, with body shape more like that of *D. rubrirostris* Gravenhorst, 1807. The size of the male is 4.2 mm, and the females 4.5 and 4.9 mm, respectively. *D. carpathicus* can be distinguished from all these species by

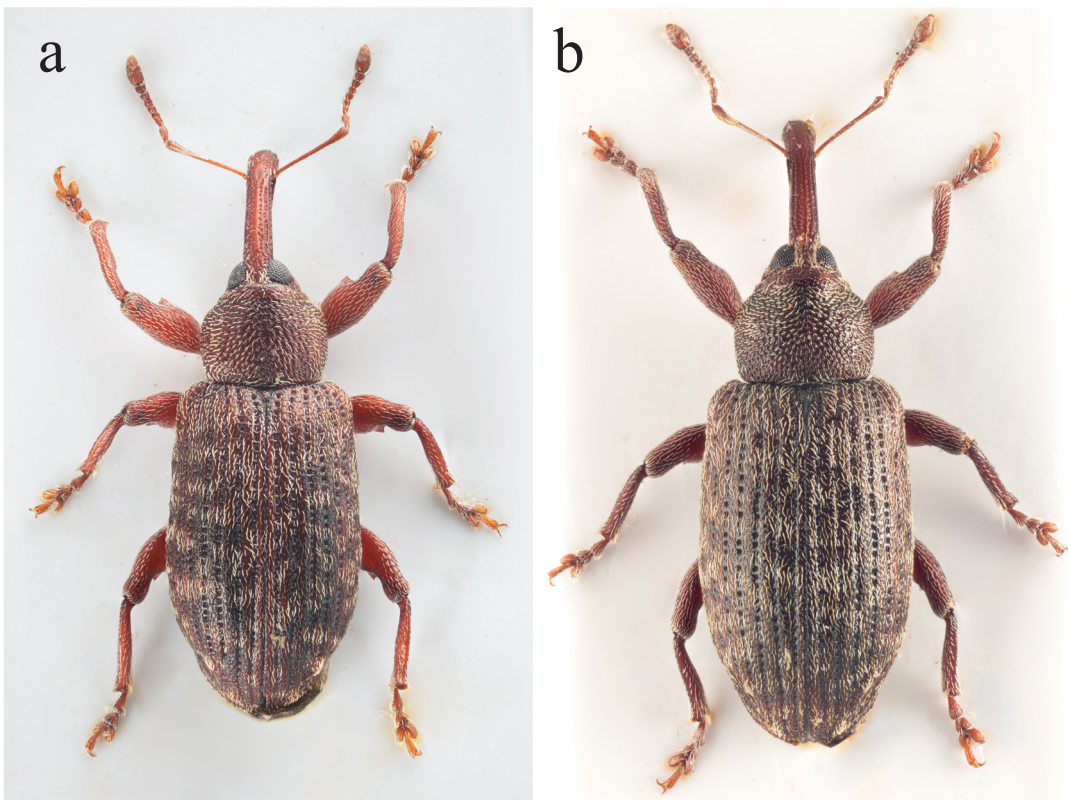


FIGURE 1. Male (a) and female (b) of *Dorytomus carpathicus* Petryszak, 1984 dorsal view. Photo: Arnstein Staverløkk/NINA.



FIGURE 2. Female of *Dorytomus carpathicus* Petryszak, 1984 lateral view. Photo: Arnstein Staverløkk/NINA.



FIGURE 3. Aedeagus of *Dorytomus carpathicus* Petryszak, 1984 dorsal view (a) and lateral view (b). Photo: Arnstein Staverløkk/NINA.



FIGURE 4. Spermatheca of *Dorytomus carpathicus* Petryszak, 1984. Photo: Arnstein Staverløkk/NINA.

the combination of coarse and dense puncture on pronotum, reddish brown color of head, rostrum and legs. Rostrum is hairless except for

a few hairs or scales along the eye rim. Color of pronotum and elytra is solid brownish to black, and scales on elytra are rather evenly distributed, leaving a less mottled impression than in closely related species. Elytra are broader and more convex, and the femura and rostrum are slightly thicker and shorter than in *D. taeniatus* and *D. dejeani*. However, the rostrum is longer than in *D. rubrirostris* for both sexes. *D. carpathicus* can easily be separated from *D. rubrirostris* by the hairless rostrum and the pronotum having dense and coarse puncture, and more curved side margins. Aedeagus and spermatheca of *D. carpathicus* are unique in morphology (Figures



FIGURE 5. Beating catkins of *Salix* spp. in Nordland, Saltdal: Junkerdalen, Junkerdalsurda, 4 June 2020. Photo: Frode Ødegaard.

3–4). Penis is distinctly broader than in *D. taeniatus* and *D. dejeani*, and rather parallel, not expanded towards apex, in dorsal view. (Petryszak 1984, Lohse & Lucht 1994).

Discussion

The present finding of *Dorytomus carpathicus* Petryszak, 1984 represents the first confirmed record of the species from Fennoscandia. As the fauna of weevils is quite well known in northern Norway and Fennoscandia in general, it is rather surprising to find a distinct species of weevil new for this region that may not be associated with climatic range expansions. Elsewhere, *D. carpathicus* is reported from Poland, Austria and Slovakia (Löbl & Smetana 2013).

D. carpathicus was described as late as in 1984, which may indicate a very rare and

restricted distributed species, or a species introduced to Europe in recent times. There is no further indication that the species is on spread in Europe, however it is hard to find any particular habitat trait indicating that this is a species with restricted distribution. The future may reveal a more nuanced picture of the species range and possible spread to new areas.

It may well be that rare and restricted distributed *Dorytomus* species are largely overlooked as they have a rather short activity time in spring and utilize a narrow habitat that require specific search by adapted methods for being detected. In Norway, *D. carpathicus* occur together with the very common *D. taeniatus*, and the two species may be mixed up in the field. One should therefore pay particular attention to unusual large and convex specimens in *D. taeniatus*-samples.

As *Dorytomus carpathicus* may resemble *D. rubrirostris* Gravenhorst, 1807 (= *D. affinis*

Paykull, 1800), it is interesting that Strand (1944) reported “*Dorytomus* sp. probe *affinis*” as a possible new species from Jotkajavrre in Finnmark. Particularly since *D. rubrirostris* still is not reported from Northern Norway, I found it worth to review this record. The specimen, deposited in Bergen Museum, turned out to be a true *D. rubrirostris* (det. Victor Hansen; vid. F. Ødegaard).

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References

- Fägerström, C. & Lundkvist, H. 2020. BeetleBase. www.beetlebase.com (accessed Oct. 2020).
- Hansen, V. 1965. *Biller XXI. Snudebiller*. G.E.C Gads Forlag. København. 524 pp.
- Lohse, G.A. & Lucht, W.H. 1994. *Die Käfer Mitteleuropas. Band 14. 3. Supplementband mit Katalogteil*. Goecke & Evers, Krefeld. 403 pp.
- Lobl, I. & Smetana, A. (eds) 2013. *Catalogue of Palaearctic Coleoptera, Volume 8: Curculionoidea II*. Apollo Books. 700 pp.
- O'Brien, C.W. 1970. A taxonomic revision of the weevil genus *Dorytomus* in North America (Coleoptera: Curculionidae). *University of California Publications in Entomology* 60, 1–80.
- Petryszak, B. 1984. *Dorytomus carpathicus* sp. n. aus Polen (Coleoptera, Curculionidae). *Reichenbachia* 22 (19), 147–150.
- Poole, R.W. & Gentili, P. 1996. Coleoptera and Strepsiptera. Nomina Insecta Nearctica. A Check List of the Insects of North America. Volume 1. Entomological Information Services, Rockville, Maryland. 827 pp.
- Strand, A. 1946. Nord-Norges Coleoptera. Tromsø Museums Årshefter 67 (1944) (1), 1–699.
- Zumpt, F. 1933. Bestimmungstabellen der Subgenera *Dorytomus* s. str. und *Paradorytomus* Zpt. nebst Beschreibungen neuer paläarktischer Arten.