



Three new species of *Quedius elpenor* group (Coleoptera: Staphylinidae: Staphylinini: Quediina) from China

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Abstract

Three new species of the subgenus *Distichalius* Casey, 1915 of the genus *Quedius* Stephens, 1829 are described based on specimens collected in China: *Q. (Distichalius) biprominulus* sp. nov., Yunnan; *Q. (Distichalius) fusus* sp. nov., Beijing; and *Q. (Distichalius) paululus* sp. nov., Sichuan. The new species belong to the *Quedius elpenor* group and increase the number of species of this group to 10. Line drawings and color illustrations of adults and genitalia of the new species are given. A key to all species of this group is provided and their geographical distribution is mapped.

Key words: Coleoptera, Staphylinidae, Quediina, *Quedius*, *Distichalius*, *elpenor* group, new species, China

Introduction

Distichalius Casey, 1915 is a subgenus of the genus *Quedius* Stephens, 1829 in the subtribe Quediina (Staphylininae, Staphylinini). Up to date, the subgenus *Distichalius* Casey has been found to occur in Holarctic and Oriental regions and a total of 49 species have been described, of which 21 have been discovered in China. Originally, the present subgenus was established by Casey (1915) as a genus, but was treated by most subsequent researchers as a subgenus of *Quedius* Stephens (e.g. Hatch, 1957). However, the original diagnostic characters of this subgenus (Casey, 1915), such as the presence of two punctures arranged transversely on the discal part of the frons on head, or the instability of elytral sculptures, were actually found not only in *Distichalius* Casey, but also in several other subgenera of *Quedius* Stephens. Hence, the somewhat inaccurate and unclear definition of the subgenus in some extent blurred the boundary between *Distichalius* Casey and other subgenera for a long time in the history of taxonomic studies (Smetana, 1971, 1976). It was not until the recent time that Smetana (1971) in his "Revision of the tribe Quediini of America north of Mexico" redefined this subgenus based on more modern and rigorous taxonomic analysis, and confirmed the validity of the subgenus *Distichalius* Casey as a natural and clearly distinguishable group under the genus *Quedius* Stephens. *Distichalius* species can be well characterized by the following character combination (Smetana, 1971, 1976, 1988): head with infraorbital ridge well developed and complete, with two additional setiferous punctures ('a' in Fig. 1A) between anterior frontal setiferous punctures ('e' in Fig. 1A) in most species, and with two basal setiferous punctures ('g' in Fig. 1A) between posterior frontal setiferous punctures ('c' in Fig. 1A) and nuchal constriction; scutellum impunctate; elytra in many species with punctuation unequal and irregular, showing distinct tendency to be arranged in longitudinal rows and to leave more or less large areas impunctate.

Smetana (2008a) redescribed two Chinese species *Quedius kozlovi* Boháč 1988 from Sichuan and *Q. tibetanus* Boháč 1988 from Sichuan and Qinghai, which were previously in the subgenus *Raphirus* Stephens, 1829. In the same year, Smetana (2008b) published another five species from China: *Q. ladas* Smetana and *Q. phormio* Smetana from Yunnan, *Q. elpenor* Smetana and *Q. muma* Smetana from Sichuan, *Q. menippus* Smetana from Gansu. Smetana (2008b) recognized that the species above-mentioned were closely allied in the subgenus *Distichalius* Casey, but he did not propose a species group for these species. Here, we described three new species,

setae ventrally, segment II slightly wider than apex of tibia; sternite VII with a very inconspicuous medioapical emargination at apical margin, a very small triangular area around the emargination impunctate; tergite VIII with basal ridge complete, nearly straight, without any long seta; sternite VIII (Fig. 4-1A) with basal ridge very vague, with two long setae on each side, apical margin with a deep and wide medioapical emargination, a relatively large acute triangular area in front of the emargination impunctate; sternite IX (Fig. 4-1B) with basal portion wide and short, with two slightly differentiated setae on each side of apical margin; tergite X (Fig. 4-1C) with basal side broadly and shallowly concave, apical margin widely rounded; aedeagus in lateral view (Fig. 4-1D) with apex of paramere not quite reaching that of median lobe, median lobe with apical 1/4 distinctly attenuate and curved toward paramere, with a short median carina at apex pointing toward paramere side; aedeagus in parameral view (Fig. 4-1E) with paramere moderately narrowed laterally at basal 1/4, and then gradually widened to apical 1/4, apical 1/4 gradually narrowed forming subtriangular apex, lateral margins thinned and widely expanded; median lobe wide at base, then evenly narrowed to acute apex (Figs. 4E, 4-1G); apical portion of paramere with two apical setae clustered at middle and three subapical setae on each side, underside with 19 very small sensory peg setae arranged in two longitudinal groups along sides (Figs. 4D, 4-1F).

Female unknown.

Distribution. China (Sichuan).

Diagnosis. This new species and *Q. (Distichalius) numa* Smetana are slightly similar in male genitalia by having aedeagus in relatively similar shape and sensory peg setae on underside of paramere in small size, but they can be distinguished by the new species having paramere relatively wider in apical half, distinctly covering apical portion of median lobe except for apex, lateral margins thinned and expanded, and median lobe evenly narrowed to acute apex; whereas *Q. (Distichalius) numa* Smetana has paramere relatively narrower in apical half, barely covering apical portion of median lobe, lateral margins not thinned or expanded, and median lobe suddenly narrowed into rod-like, acute apex.

Etymology. The specific name is from Latin adjective *paululus* (very small), referring to the small size of the sensory peg setae on underside of paramere.

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