

**Contributions to the knowledge of the *Quediina*
(Coleoptera, Staphylinidae, Staphylinini) of China.
Part 30. Genus *Quedius* Stephens, 1829. *Quedius kozlovi* Boháč, 1988
and *Quedius tibetanus* Boháč, 1988**

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**Taxonomy, redescriptions, geographical distribution, Coleoptera, Staphylinidae, Staphylinini, *Quediina*,
mainland China**

Abstract. The two species *Quedius kozlovi* Boháč, 1988 and *Quedius tibetanus* Boháč, 1988 are redescribed and illustrated, based on the study of the type material. Both species are newly transferred from the subgenus *Raphirus* Stephens, 1829 to the subgenus *Distichalius* Casey, 1915 of the genus *Quedius* Dejean, 1833. Geographical distributions of both species are discussed and revised.

INTRODUCTION

This paper resulted from the need to complement the descriptions of the two species by the character states, particularly the sexual ones, that were either insufficiently described, or omitted, in the original descriptions. Also, the subgeneric affiliation of both species within the genus *Quedius* Dejean, 1833 needed attention, as well as their actual geographical distribution in mainland China.

SYSTEMATICS

***Quedius (Distichalius) kozlovi* Boháč, 1988 comb. n.
(Figs 1-6)**

Quedius (Quediops) kozlovi Boháč, 1988: 555.

Quedius (Quediops) kozlovi Boháč, 1989: 38.

Quedius (Quedius) kozlovi: Herman, 2001: 3179.

Quedius (Raphirus) kozlovi: Smetana, 2004: 666.

Quedius (Quedius) kozlovi: Zhu, Li & Hayashi, 2006: 39.

Type material. The species was described from 2 ♂♂ and 2 ♀♀ specimens. The collection of the Zoological Institute of the Russian Academy of Sciences, St. Petersburg, contains

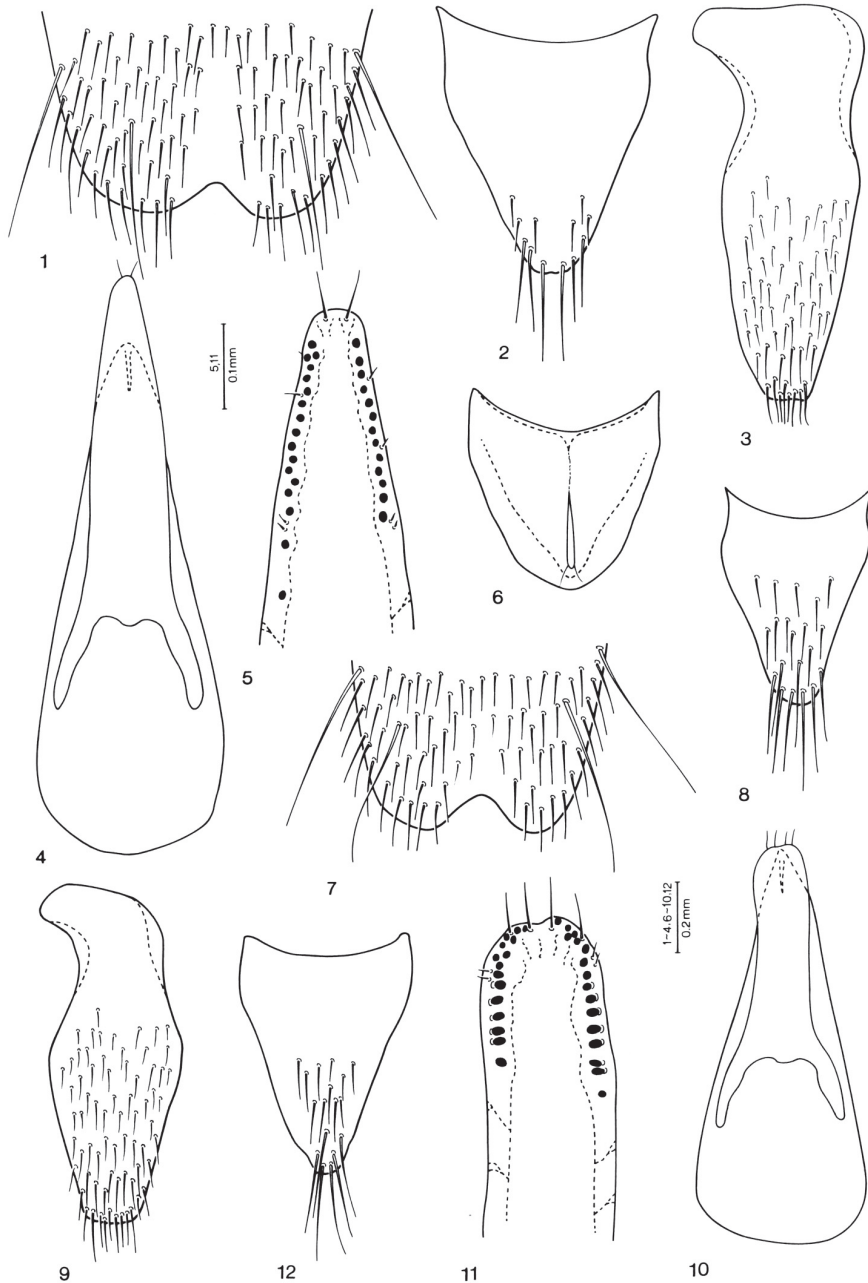
3 conspecific specimens in the original series of *Q. kozlovi*. They are labelled as follows: Spec. No. 1 (male): “Dol r. Dzhagyn. 14.000’. Nach. vii. 1901. Eksp. *Kozlova*.”/”Holotypus” [red label]”/”*Quedius kozlovi* n. sp. J. Boháč det. 88”. Spec. Nos. 2, 3 (females): “Vodorazd. Golub. i Zhelt. Rr. Bass. Goluboy. (Nagor’e). 13.500’. Kon. vii. 1901. Eksp. *Kozlova*.”/”Paratypus” [purple label]”/”*Quedius kozlovi* n. sp. J. Boháč det. 88”.

All specimens were remounted to white mounting plates; the holotype and the first female paratype were dissected and parts (genital segments, aedeagus) were mounted in Canada balsam on transparent plates and attached to the pins with the beetles.

The second male paratype (not seen) is in the Boháč collection, České Budějovice, Czech Republic

Redescription. Piceous-black to black, elytra brownish piceous to piceous-black, apical margins of abdominal tergites more or less paler; abdomen moderately iridescent. Palpi and antennae piceous, legs dark brunneous to piceous with slightly paler tarsi. Head rounded, wider than long (ratio 1.14); eyes moderately large and convex, tempora shorter than length of eyes seen from above (ratio 0.72); two additional setiferous punctures between anterior frontal punctures (but see Comments); posterior frontal puncture situated about midway between posteromedial margin of eye and posterior margin of head, two punctures between it and posterior margin of head (but see Comments); one small puncture at posterior margin of eye; temporal puncture about midway between posterior margin of eye and posterior margin of head; surface of head with fine, dense microsculpture of irregular transverse waves. Antenna short, segments 2 and 3 subequal in length, segments 4 and 5 slightly longer than wide, following segments becoming gradually shorter, outer segments wider than long, last segment about as long as two preceding segments combined. Pronotum about as long as wide, broadly arcuate basally, evenly transversely convex, slightly narrowed anteriorly; dorsal rows each with three punctures, one puncture between each dorsal and sublateral row, sublateral rows each with two punctures, posterior puncture situated behind level of large lateral puncture; surface of pronotum with microsculpture similar to that on head but finer and denser. Scutellum with very fine, dense microsculpture of transverse waves, impunctate. Elytra moderately long, at suture about as long as, at sides somewhat longer (ratio 1.18) than pronotum at midline; punctation coarse, moderately dense, transverse interspaces between punctures mostly somewhat larger than diameters of punctures, punctation becoming markedly finer along posterior margin of each elytron; surface between punctures with extremely fine, microscopic punctulation, piceous-black pubescence moderately long and dense. Wings fully developed. Abdomen with tergite 7 (fifth visible) with whitish apical seam of palisade setae; tergite 2 (in front of first visible tergite) with extremely fine, sparse punctures; punctation of tergites considerably finer than that of elytra, evenly covering first two visible tergites, on remaining tergites becoming gradually sparser toward apical margin of each tergite, and in general toward apex of abdomen; surface between punctures with excessively fine microsculpture of rudimentary striae.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally, segment 2 wider than apex of tibia (ratio 1.20); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side, apical margin with moderately deep and wide, obtusely triangular medioapical emargination,



Figs 1-12. *Quedius kozlovi*: 1- apical portion of male sternite 8; 2- tergite 10 of male genital segment; 3- sternite 9 of male genital segment; 4- aedeagus, ventral view; 5- apical portion of underside of paramere with sensory peg setae; 6- tergite 10 of female genital segment. *Quedius tibetanus*: 7- apical portion of male sternite 8; 8- tergite 10 of male genital segment; 9- sternite 9 of male genital segment; 10, aedeagus, ventral view; 11, apical portion of underside of paramere with sensory peg setae; 12, tergite 10 of female genital segment.

small triangular area before emargination flattened and smooth (Fig. 1). Genital segment with tergite 10 rather wide, markedly narrowed toward arcuate apex, sparingly setose on apical portion (Fig. 2); sternite 9 with short basal portion, as in Fig. 3. Aedeagus (Figs 4-5) relatively large and robust, median lobe gradually, evenly narrowed into subacute apical portion, on face adjacent to paramere with distinct, moderately long median carina. Paramere large, parallel-sided in middle portion, anteriorly gradually narrowed into narrowly arcuate apex; apex of paramere considerably exceeding apex of median lobe; two apical setae at apex of paramere; sensory peg setae on underside of paramere small, forming long, unequally long, longitudinal row at each lateral margin of apical portion of paramere.

Female. First four segments of front tarsus similar to those of male, but markedly less dilated, segment 2 about as wide as apex of tibia. Tergite 10 of genital segment of characteristic shape, with longitudinal carina on apical portion bearing two setae at apex (Fig. 6).

Length 5.8- 6.5 mm.

Bionomics. Nothing is known about the collection circumstances of the specimens of the original series, except that they were collected at high elevations of 13.500-14.000 feet (4115-4267 m).

Geographical distribution. *Quedius kozlovi* was described from specimens originating from the material collected during the Kozlov expedition to “eastern Tibet” in 1901. At that time “eastern Tibet” included areas that today do not belong to Tibet. The localities listed under the type material of *Q. kozlovi* are all basically in “bassein Goluboy reki”, i.e. in northern Sichuan, therefore *Quedius kozlovi* is at present known only from northern Sichuan. This situation escaped the attention of the authors, as Zhu, Li & Hayashi (2006: 39) still record *Quedius kozlovi* (and *Q. tibetanus*) as occurring in Xizang (Tibet).

Comments. *Quedius kozlovi* was assigned by the author (Boháč, 1988: 555) to the subgenus *Quediops* Coiffait, 1963 (a synonym of *Raphirus*). Subsequently, the species was listed as a member of “*Quedius*” (Herman, 2001: 3179, error for *Quediops* ?), *Raphirus* (Smetana, 2004: 666), and most recently again *Quedius* (Zhu, Li & Hayashi, 2006: 39).

Based on several character states, mainly on the chaetotaxy of the head (presence of two additional punctures between the anterior frontal punctures, combined with the presence of two punctures between the posterior frontal puncture and the posterior margin of the head), by the shape of the aedeagus and that of tergite 10 of female genital segment, there is little doubt that *Quedius kozlovi* is a member of the subgenus *Distichalius* Casey, 1915.

Within the subgenus, *Q. kozlovi* (as well as *Q. tibetanus*) differs from all members of the subgenus known at present from the mainland China by the distinctive shape of the aedeagus, combined with the regular, coarse punctation of elytra and, in female sex, by the quite characteristic shape of tergite 10 of the genital segment.

There is some variability in the chaetotaxy of the head of the specimens of the original series: in the holotype the right additional puncture between the anterior frontal punctures is missing, and in the holotype and in the first paratype there are three punctures between the posterior frontal puncture and the posterior margin of head on the left side.

Quedius (Distichalius) tibetanus Boháč, 1988 comb. n.

(Figs 7-12)

Quedius (Quediops) tibetanus Boháč, 1988: 555.

Quedius (Quediops) tibetanus Boháč, 1989: 39.

Quedius (Quediops) tibetanus: Herman, 2001: 3283.

Quedius (Raphirus) tibetanus: Smetana, 2004: 669.

Quedius (Raphirus) tibetanus: Zhu, Li & Hayashi, 2006: 39.

Type material. The species was described from 1 ♂ and 3 ♀♀ specimens. The collection of the Zoological Institute of the Russian Academy of Sciences, Leningrad, contains 3 conspecific specimens in the original series of *Q. tibetanus*. They are labelled as follows: Spec. No 1 (♂): “Bass. Golub. r.: r. Gochyu. 13.500’. v. 1901. Eksp. Kozlova.”/”*Quedius tibetanus*, sp. n. J. Kirschenblatt det.”/”Holotypus” [red label]/ “*Quedius tibetanus* sp. n. J. Boháč det. 88”. Spec. No. 2 (♀): “Yu.-v. ber. oz. Orin-nur. Kon. v. 1901. Eksp. Kozlova.”/”Paratypus [purple label]/ “*Quedius tibetanus* sp. n. J. Boháč det. 88”. Spec. No. 3 (♀): same labels as holotype, except for label “Paratypus” [purple label].

All specimens were remounted to white mounting plates; the holotype and the first female paratype were dissected and parts (genital segments, aedeagus) were mounted in Canada balsam on transparent plates and attached to the pins with the beetles.

The last female paratype (not seen) is in the Boháč collection, České Budějovice, Czech Republic.

Description. In all character states very similar to *Q. kozlovi*, different mainly by the male and female sexual characters, and by a few external characters: average size slightly smaller, head slightly narrower, eyes larger, tempora more distinctly shorter than eyes (ratio 0.48, corresponding ratio in *Q. kozlovi* = 0.75); posterior frontal puncture situated closer to posteromedian margin of eye, separated from it by distance about equal to diameter of puncture.

Male. First four segments of front tarsus similar to those of *Q. kozlovi*, but less dilated, second segment about as wide as apex of tibia. Medioapical emargination of sternite 8 somewhat deeper (Fig. 7). Genital segment with tergite 10 narrower, with more numerous setae (Fig. 8); sternite 9 smaller and shorter (Fig. 9). Aedeagus (Figs 10-11) similar to that of *Q. kozlovi*, but much smaller; median lobe anteriorly narrowed into narrow subacute apex, on face adjacent to paramere with distinct median carina. Paramere much shorter than that of *Q. kozlovi*, parallel-sided, with broadly arcuate, vaguely sinuate apex just about reaching apex of median lobe; four apical setae at anterior margin; sensory peg setae on underside of paramere forming longitudinal row at each lateral margin of apical portion of paramere.

Female. First four segments of front tarsus similar to those of male, but less dilated, second segment narrower than apex of tibia. Genital segment with tergite 10 quite different, simple, markedly narrowed toward narrowly arcuate apex, sparingly setose as in Fig. 12.

Length 5.2-5.8 mm.

Bionomics. Nothing is known about the collection circumstances of the specimens of the original series, except that they were collected at high elevation of 13.500 feet (4115 m).

Geographical distribution. As with *Q. kozlovi*, *Q. tibetanus* was also described from specimens originating from the material collected during the Kozlov expedition to “eastern Tibet” in 1901. What was said about the localities listed under the type material of *Q. kozlovi* applies also to the localities listed under the type material of *Q. tibetanus*, except for “Orin-Nur” (lake Ngoring-Hu), which is in Qinghai. *Quedius tibetanus* is therefore at present known from northern Sichuan and Qinghai. As with the previous species, this situation escaped the attention of the authors, as Zhu, Li & Hayashi (2006: 39) still record *Q. tibetanus* as occurring in Xizang (Tibet).

Comments. *Quedius tibetanus* was assigned by the author (Boháč, 1988: 555) to the subgenus *Quediops* Coiffait, 1963 (a synonym of *Raphirus*). Subsequently, the species was listed in *Quediops* (Herman, 2001: 3179), or in *Raphirus* (Smetana, 2004: 666; Zhu, Li & Hayashi, 2006: 39).

Based on the same set of character states listed under *Q. kozlovi*, there is no doubt that *Q. tibetanus* belongs to the subgenus *Distichalius*. It differs from all other members of the subgenus, known to occur in mainland China at present, by a similar set of character states that were given for *Q. kozlovi*. It differs from *Q. kozlovi* by the character states given in the description above.

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