

A New Micropterous Species of the Genus *Quedius* (Coleoptera, Staphylinidae) from the Japan Alps

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Abstract *Quedius akaishiensis* sp. nov. is described from high altitude area of the South Alps of Japan.

A micropterous species of the genus *Quedius* (*Raphilus*) STEPHENS, 1829 is found in Alpine zone of the Japan Alps. After close examination we concluded that it is new to science. The wings are two-third as long as elytral length. It is closely related to *Quedius* (*Raphilus*) *sugayai* SMETANA, 2002 from Hokkaido and *Q. (R.) ningxiaensis* CAI et ZHOU, 2015 in similar appearance and male genitalia.

We wish to express cordial thanks to Messrs. T. KATÔ (Shizuoka) and M. MATSUMOTO (Shizuoka) for their kindly offering many interesting specimens of the new species, and to Dr. K. ANDO (Faculty of Agriculture, Ehime University) for critically reading the manuscript of this paper.

The main terminology and abbreviations used herein are as follows: HW — head width (maximal head width, including eyes); HL — head length (from apex of clypeus to neck constriction); PW — pronotal width (maximal pronotal width); PL — pronotal length (midline of midline of pronotum); EW — elytral width (maximal elytral width); EL — elytral length (maximal elytral length).

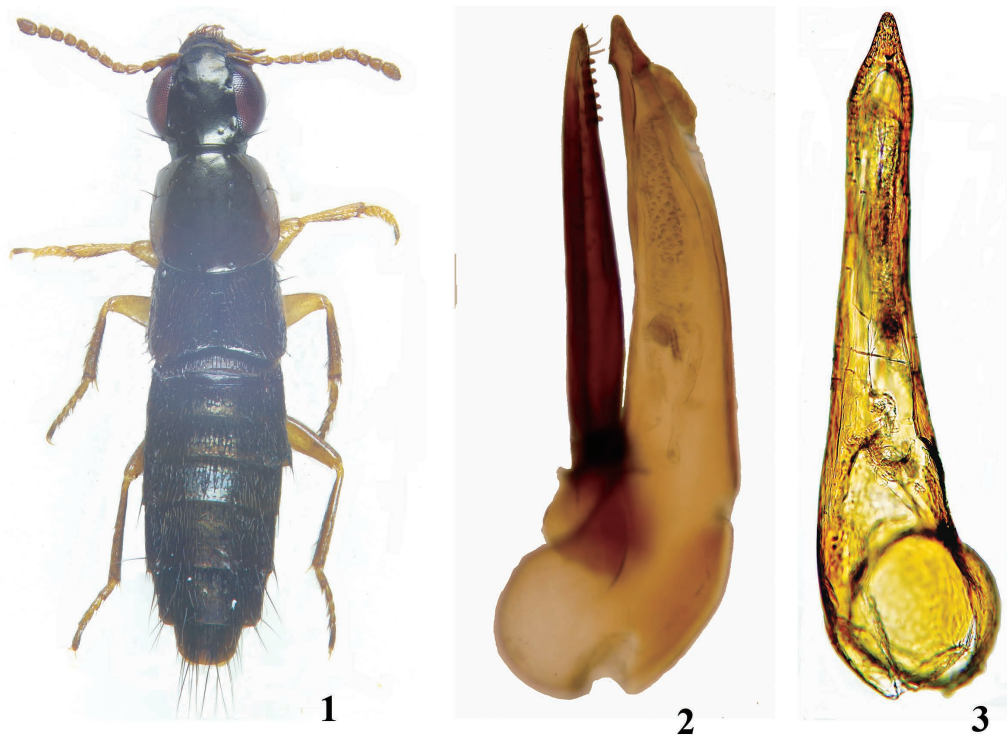
Quedius (*Raphilus*) *akaishiensis* sp. nov.

(Figs. 1–11)

Body elongate, well shining; black, mandibles and palpi brown, labrum blackish brown, antennae yellow, pronotum brownish black, with sides and base dusky brown to blackish brown, elytra dark brown to blackish brown, posterior margins of abdominal ventrites sometimes brownish black, with 8th ventrite generally paler.

M a l e. Head rounded, a little wider than long (HW/HL = 1.15), slightly narrower and a little shorter than pronotum (HW/PW = 0.94 and HL/PL = 0.86), and narrower than abdomen; disc slightly convex, wholly with distinct microsculpture which is coriaceous in clypeo-frontal area and transversely wave in the rest, no punctures except characteristic large punctures (sensu HAYASHI, 2012), and frons faintly depressed besides base of supra-orbital macroseta; eyes very large strongly convex, occupying almost all of lateral sides, and temples very short, less than 0.1 times of eye length; antennae slender, not so long, barely reaching to middle of pronotum, 1st to 9th antennomeres and 11th longer than wide, 2nd as long as 3rd, 10th as long as wide, and each segment with the following relative length from base to apex: 35 : 24 : 24 : 18 : 20 : 18 : 18 : 15 : 17 : 18 : 31.

Pronotum subquadrate, nearly as long as wide, a little narrower and longer than elytra (PW/EW = 0.90 & PL/EL = 1.23), widely rounded at all angles, weakly narrowed anteriorly, nearly straight in middle of anterior and posterior margins, and weakly arcuate at sides; disc strongly convex, markedly deflexed in anterior corners, with striate microsculpture which is a little weaker than those on head, and dorsal rows each with three coarse punctures, and sublateral rows each with one coarse puncture.



Figs. 1–3. *Quedius akaishiensis* sp. nov. — 1, Habitus; 2, male genitalia (with inner copulatory pieces), lateral view; 3, ditto, ventral view.

Scutellum flat, not microsculptured, with a few small punctures.

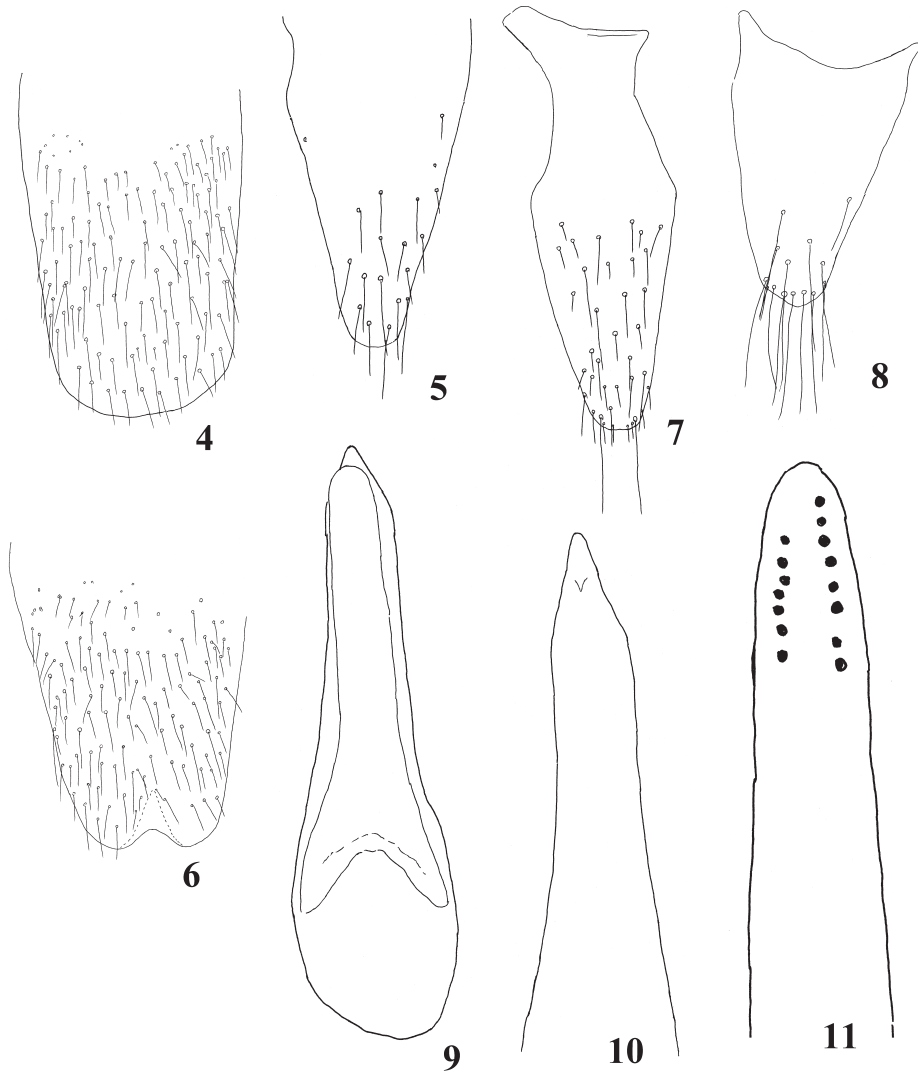
Elytra widened posteriad, nearly straight at sides, widely rounded at posterior angles, and nearly as wide as 5th segment of abdomen; disc somewhat uneven, coarsely and sparsely punctured, without microsculpture. Wings markedly reduced, two-thirds as long as elytra.

Abdomen elongate fusiform, widest in 5th segment, finely, sparsely punctured on tergites, coarsely and more sparsely so on ventrite, and fringed with close pubescence along posterior margin of each tergite; 7th tergite weakly emarginate at posterior margin, without whitish apical seam of palisade setae; 8th tergite (Fig. 4) rounded at posterior margin; 10th tergite (Fig. 5) sparsely pubescent, feebly arcuate at apex; 8th ventrite (Fig. 6) rather widely and shallowly emarginate at apex and triangularly flattened around the emargination; 9th ventrite (Fig. 7) sparsely setose, truncate at apex.

Legs rather short; protarsi dilated in basal four tarsomeres.

Male genitalia (Figs. 2, 3 and 9–11) symmetrical, slender; penis weakly curved ventrad in lateral view, extending slightly beyond parameres, gradually tapered toward apex and rapidly convergent to acute apical tip in apical fifth; parameres unilobed, slender and flat, parallel-sided, and rounded at apex, with inner face bearing a pair of rows of peg-setae in apical fifth, which are consisting about seven ones in each row.

F e m a l e. Eighth tergite feebly emarginated at posterior margin; 10th tergite (Fig. 8) rounded at apical margin, with several long setae which are concentrate in apical portion; 8th ventrite widely



Figs. 4–11. *Quedius akaishiensis* sp. nov. — 4, Male 8th tergite; 5, male 10th tergite; 6, male 8th ventrite; 7, male 9th ventrite; 8, female 10th tergite; 9, male genitalia, ventral view; 10, penis, apical portion of ventral face; 11, parameres, apical portion of inner face.

rounded at posterior margin; protarsi less widened than in male.

Holotype: ♂, South of Mt. Kurogouchi-dake (in soil), Tashiro, Aoi-ku, Shizuoka C., Japan, 19.X.2009, T. KATÔ leg. Paratype: 2 ♂♂, 2 ♀♀, Same data as the Holotype; 3 ♂♂, Mt. Senmai-dake (alt. 2,770 m; just beneath the summit), Tashiro, Aoi-ku, Shizuoka C., Japan, 26.IX.2010, M. MATSUMOTO leg.; 2 ♂♂, Mt. Senmai-dake – Maruyama, Tashiro, Shizuoka C., Japan, 29.VII.2000, T. KATÔ leg.; 8 ♂♂, 2 ♀♀, Komadori-ike (2,430 m; from soil), Tashiro, Shizuoka C., Japan, 25.VIII.2000, T. KATÔ leg.; 1 ♂, Mt. Senmai-dake–Man'nôsawa-no-atama (alt. 2,580; from soil), Tashiro, Aoi-ku, Shizuoka C., Japan, 13.VIII.2009, T. KATÔ leg.; 1 ♂, Sanpuku-tôge (alt. 2,600 m), Tashiro, Shizuoka C.,

Japan, 8.VI.2002, Y. TAHIRA leg.; 2 ♂♂, Mt. Senmai-dake (near the summit; from soil), Tashiro, Aoi-ku, Shizuoka C., Japan, 13.VIII.2009, T. KATÔ leg.; 1 ♂, Mt. Aino-dake (South detour; from soil), 18.X.2009, T. KATÔ leg.; 1 ♀, Mt. Ainodake: Mikunidaira (from soil), Tashiro, Aoi-ku, Shizuoka C., 18.X.2009, T. KATÔ leg.; 3 ♀♀, Mt. Arakawa-dake: on the ridge of Nakadake (alt. 2970 m; shifting of moss and leaf litter under *Pinus pumilio*), Tashiro, Aoi-ku, Shizuoka C., Japan, 25.IX.2010, Y. TAHIRA leg.; 2 ♀♀, Mt. Chausu-dake (alt. 2,470m), Shizuoka-shi, 25.VII.2016, T. KISHIMOTO leg.

Type depository: Holotype and three paratypes are preserved in the Collection of Osaka Museum of Natural History, Japan.

Bionomics. *Quedius akaishiensis* occurred above 2,400 m in alpine zone. Specimens captured from leaf litter and soil under *Pinus pumilo*.

Remarks. The present new species belongs to the *boops*-group (SMETANA, 1971), and is well similar in general appearance and male genitalia to *Quedius sugayai* SMETANA from Hokkaido, Japan and *Quedius ningxiaensis* CAI et ZHOU from China. In *Q. sugayai* 8th to 10th antennomeres are as long as wide; scutellum is microsculptured; elytra are densely punctured; hind wings are longer than elytral length; penis is linearly convergent to subacute apex; parameres are bearing ten and more peg setae; female 10th tergite is scattered with numerous setae. In *Q. ningxiaensis* the head is shorter than elytra; 8th to 10th antennomeres are transverse; scutellum is microsculptured; elytra are densely punctured; 10th tergite and 9th ventrite are rather numerously setose. While in the new species 1st to 9th antennomeres are longer than wide, only 10th antennomeres is longer than wide: scutellum is not microsculptured; elytra are sparsely punctured; penis is rapidly convergent in apical portion; parameres are bearing two rows of about seven peg-seta in apical portion; 10th tergite and 9th ventrite are rather sparsely setose, and female 10th tergite is scattered with ten and a few long setae only in apical portion.

Etymology. Specific name is derived from Akaishi Mountains (alias “the Japan Alps) of the type locality.

要 約

林 靖彦・多比良嘉晃：南アルプス（赤石山脈）産ツヤムネハネカクシの新種（鞘翅目ハネカクシ科）。——南アルプスの高山帯，ハイマツの落葉，表土中からツヤムネハネカクシの一種が見つかり，検討の結果，新種と認めたので *Quedius (Raphilus) akaishiensis* sp. nov. タカネコバナツヤムネハネカクシ（新称）と命名記載した。本種は北海道から記載された *Q. (R.) sugayai* SMETANA に非常によく似ているが，第10腹背板，第9腹板，♂交尾器の構造などが異なることで区別できる。また，中国から報告された *Q. ningxiaensis* CAI et ZHOU にも極めてよく似ているが頭部と上翅の長さの比率，触角，小盾板，第10腹背板，第9腹板，♂交尾器の構造などの差により区別できる。

なお，資料は環境省国立公園特別保護区の採集許可を得て行われた：南アルプス国立公園特別保護地区採集許可番号——2000年：環南関許265号；2002年：同340号；2009年：環南地国許090907002号；2010年：同100419003号。

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