

Contributions to the Knowledge of the Quediina (Coleoptera, Staphylinidae, Staphylinini) of China

Part 22. Genus *Quedius* STEPHENS, 1829.
Subgenus *Microsaurus* DEJEAN, 1833. Section 12

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Abstract Taxonomic and faunistic data of the species of the genus *Quedius*, subgenus *Microsaurus*, from the People's Republic of China are provided. Four species are described as new: *Q. raan* (Shaanxi), *Q. tzwu* (Shaanxi), *Q. huenn* (Shaanxi), and *Q. rong* (Hubei). The entire tergite 10 of the female genital segment of *Q. gueyi* is illustrated for the first time. Comments concerning the taxonomy of *Q. antennalis* are presented. *Quedius antennalis* is recorded for the first time from the People's Republic of China, based on specimens taken in Shaanxi. *Quedius inquietus* is recorded for the first time from Shaanxi, *Q. beesoni* from Hubei, *Q. decius* from Hubei, *Q. holzschuhi* from Shaanxi, and *Q. przewalskii* from Sichuan.

This is the twenty-second of a series of papers dealing with the Quediina of the People's Republic of China. It presents the descriptions of further new species of the subgenus *Microsaurus* DEJEAN, 1833, most of them collected as recently as last summer, during a joint field trip of the author, Michael SCHÜLKE and David WRASE (both from Berlin) to Shaanxi and Hubei, with most of the field work done in Qinling Shan and Daba Shan (see also "Contributions" 21 and 23 that are published in the same issue of the *Elytra*). Additional distributional and taxonomic information is presented for numerous species of the subgenus *Microsaurus*.

Quedius (Microsaurus) inquietus (CHAMPION)

Velleius inquietus CHAMPION, 1925, 107.

Quedius inquietus: SMETANA, 1997 c, 129.

New records. [Shaanxi]: Qinlingshan, 12 km SW Xunyangba, 1900–2250 m, 14.–18. 6. 2000, C. Holzschuh, 5 ♂, 5 ♀♀ in the Naturhistorisches Museum, Wien, Austria and in the SMETANA collection, Ottawa, Canada.

Comments. This is the first record of this species from Shaanxi. It was previ-

ously known from Sichuan and Yunnan (SMETANA, 2001 b, 194).

***Quedius (Microsaurus) beelsoni* CAMERON**

Quedius beelsoni CAMERON, 1932, 285.

New records. [Shaanxi]: border Shaanxi/Sichuan, Daba Shan, pass 20 km SSE Zhenping, 1700–1800 m, 31°44'N 109°35'E, 9. VII. 2001, A. Smetana [C96b], 1 ♂. [Hubei]: Daba Shan, mtn. range NE Muyuping, creek valley 4 km N Muyuping, 1,700 m, 21. VII. 2001, A. Smetana [C116], 1 ♂, 1 ♀; Daba Shan, pass E of Mt. Da Shennongjia, 12 km NW Muyuping, 31°30'N 110°21'E, 1950 m, A. Smetana [C117], 1 ♀, all specimens in the SMETANA collection, Ottawa.

Comments. The specimen with code C96b was taken by sifting a pile of decaying weeds at the edge of a corn field; the specimens with code C116 were taken by sifting debris under the branches of a freshly felled tree; the specimen coded C117 was taken by sifting deep leaf litter under broadleaved evergreen trees.

This is the first record of this species from Hubei. It was previously known from Fujian, Guangxi, Shaanxi and Sichuan (SMETANA, 2001 b, 194).

***Quedius (Microsaurus) antennalis* CAMERON**

Quedius antennalis CAMERON, 1932, 285.

Quedius antennalis: SMETANA, 1988, 201.

New records. [Shaanxi]: Daba Shan SE pass 20 km NW Zhenping 1680 m 31°59'N 109°22'E 11. VII. 2001 A. Smetana [C100], 1 ♂, in the SMETANA collection, Ottawa; same data as above but leg. M. Schülke [C01–10A]. In the SCHÜLKE collection, Berlin.

Comments. This is the first record of this species from mainland China. Only one specimen (holotype) of this species, taken in the Darjeeling area in the Himalaya, was previously known (SMETANA, 1988, 202).

Quedius antennalis is the third Chinese species of the *beelsoni* group (SMETANA, 2001 b, 207). It is very distinctive and it cannot be confused with any other species of the group, occurring in mainland China. In addition to the quite distinctive aedoeagus (see figs. 17–20 in SMETANA, 1988, 394–395), it differs from *Q. acco* SMETANA, 1996 a by the larger and robuster body form with more voluminous, wider pronotum, and by the markedly coarser and more asperate punctation of the elytra with the interspaces lacking appreciable microsculpture. It differs from *Q. beelsoni*, which occurs in the same area, by the markedly larger and robuster body form with more voluminous, wider pronotum with lateral portions more explanate, the longer antennae which become slightly paler toward apex (they are entirely black in *Q. beelsoni*), by the posterior puncture of the sublateral rows on the pronotum situated before the level of the large lateral puncture (in *Q. beelsoni* this puncture is situated behind the level of the large lateral puncture) and by the evenly punctate first visible abdominal tergite (in *Q. beelsoni*

the tergite bears a small impunctate area in the middle).

In the holotype of this species, the large lateral puncture on the pronotum is situated quite close to the lateral margin (see SMETANA, 1988, 201 for details) and I have used this character to separate *Q. antennalis* from the only known female specimen (holotype) of *Q. birmanus* CAMERON, 1932 (SMETANA, 1988, 186, 187). In the two Chinese specimens of *Q. antennalis* the large lateral puncture on the pronotum is situated away from the lateral margin (as usual), making the position of this puncture useless for distinguishing these two species. This supports my suggestion (SMETANA, 1988, 203) that *Q. birmanus* may be conspecific with *Q. antennalis*.

Quedius (Microsaurus) decius SMETANA

Quedius decius SMETANA, 1996 a, 12.

New records. [Hubei]: Daba Shan, pass E of Mt. Da Shennongjia, 12 km NW Muyuping 31°30'N 110°21'E, 2050 m, 19. VII. 2001, A. Smetana [C112], 1 ♂, in the SMETANA collection, Ottawa. [Sichuan]: Gongga Shan, 29°41'N 101°58'E, 2800 m, 14.–19. VI. 1999, Siniaev & Plutenko, 1 ♀, in the SCHÜLKE collection.

Comments. The specimen coded C112 was taken by sifting fairly fresh mushrooms growing on a fallen tree.

This is the first record of this species from Hubei.

Quedius (Microsaurus) chremes SMETANA

Quedius chremes SMETANA, 1996 a, 10.

New records. [Shaanxi]: Daba Shan, mtn. range N pass 22 km NW Zhenping, 32°01'N 109°21'E, 2850 m, 14. VII. 2001, A. Smetana [C103], 2 ♂, 1 ♀, in the SMETANA collection; Qinling Shan, mtn. range W pass on road Xi'an–Shagoujie, 45 km SSW Xi'an, 33°52'N 108°46'E, 2675 m, A. Smetana [C119], 1 ♂, 2 ♀, M. Schülke [C01–20], 2 ♂, 3 ♀, in the SCHÜLKE and SMETANA collections.

The specimens coded C103 were taken, together with specimens of *Q. huenn*, in a remnant of an original *Abies* forest by sifting various debris, rotting wood and fallen mouldy bark around bases of dead, standing or fallen *Abies* trees; those coded C 119 and C01–20 were sifted from floor litter and vegetation under *Abies*, *Betula* and *Rhododendron* trees.

Quedius (Microsaurus) adjacens CAMERON

Quedius adjacens CAMERON, 1926, 368.

New records. China: [Shaanxi]: Qinlingshan, 12 km SW Xunyangba, 1900–2250 m, 14.–18. 6. 2000, C. Holzschuh, 1 ♂, in the Naturhistorisches Museum, Wien, Austria; Qinlingshan, 6 km E Xunyangba, 1000–1300 m, 23.5.–13. 6. 2000, C. Holzschuh, 4 ♂♂, 6 ♀♀, in the Naturhistorisches Museum, Wien, Austria and in the

SMETANA collection, Ottawa, Canada.

Comments. Only one record of this species from Shaanxi was previously known (SMETANA, 1999, 214).

***Quedius (Microsaurus) holzschuhi* SMETANA**

Quedius holzschuhi SMETANA, 1999, 220.

New record. [Shaanxi]: Qinlingshan, 6 km E Xunyangba, 1000–1300 m, 23. 5.–13. 6. 2000, C. Holzschuh, 1 ♂ in the Naturhistorisches Museum, Wien, Austria.

Comments. This specimen is markedly smaller than the two male specimens of the original series (7.4 mm), but it agrees in all characters, including the shape of the aedoeagus and of the sternite 9 of the male genital segment (figs. 12–16 in SMETANA, 1999 a, 221) with the holotype. This is the first record of this species from Shaanxi. It was previously known only from Emei Shan, Sichuan (SMETANA, 2001 b, 199).

***Quedius (Microsaurus) schuelkei* SMETANA**

Quedius schuelkei SMETANA, 1997 b, 455.

New records. [Shaanxi]: Qinlingshan, 6 km E Xunyangba, 1000–1300 m, 23. 5.–13. 6. 2000, C. Holzschuh, 6 ♂♂, 8 ♀♀, in the Naturhistorisches Museum, Wien, Austria and in the SMETANA collection, Ottawa, Canada.

Comments. The species is at present known only from Qinlingshan, but since it seems to occur mainly at lower mountain elevations, it may be more widely distributed.

***Quedius (Microsaurus) germanorum* SMETANA**

Quedius germanorum SMETANA, 1997 b, 457.

New record. [Shaanxi]: Qinling Shan, pass on road Zhouzhi–Foping, 105 km SW Xi'an, N slope, 33°44'N 107°59'E, 1990 m, 4. VII. 2001, A. Smetana [C93], 1 ♂; M. Schülke [C01–01], 1 ♂, 1 ♀, in the SMETANA and SCHÜLKE collections.

The specimens were taken by sifting various debris and dead wood along a small creek in a mixed deciduous forest.

***Quedius (Microsaurus) przewalskii* REITTER**

Quedius przewalskii REITTER, 1887, 211.

New record. [Sichuan]: northern Sichuan, Zoigé, 13. VI. 1996, Beneš & Štěpař leg., 1 ♂, in the SMETANA collection.

Comment. This is the first record of this species from Sichuan. It was previously known from Qinghai, Tibet and Yunnan (SMETANA, 2001 b, 206).

***Quedius (Microsaurus) duh* SMETANA**

Quedius duh SMETANA, 2001, 186.

New records. [Shaanxi]: Qinling Shan, mt. range W pass on road Xi'an–Shagoujie, 45 km SSW Xi'an, 33°52'N 108°46'E, 2600 m, 25. VII. 2001, A. Smetana [C118], 1♂, 5♀; same but 2675 m, 26. VII. 2001, A. Smetana [C119], 1♂, 5♀; same but 2675 m, 25. VII. 2001, M. Schülke [C01–20], 2♂, 2♀; same but 25.–26. VII. 2001, pitfall traps, M. Schülke [C01–20B], 3♀, 3♂; same but 2675 m, 25. VII. 2001, Wrase [20], 1♂; all specimens in the SCHÜLKE and SMETANA collections.

Comments. The above specimens come from the same area as the two specimens of the original series of this species. The habitat is an area of subalpine meadows with more or less large patches of *Abies*, *Betula*, *Rhododendron* and some *Larix* trees with shrubby undergrowth. *Quedius duh* is fairly frequent there, most specimens were taken by sifting various forest floor debris, rotting pieces of wood and bark around bases of trees, and by sifting various forest floor vegetation. It occurs together with *Q. chremes* in the habitat under the *Rhododendron* trees on the north slope.

***Quedius (Microsaurus) zheduo* SMETANA**

Quedius zheduo SMETANA, 1999, 235.

New record. [Sichuan]: Daxue Shan, Tsheto La Pass, 30°05'N 101°48'E, 4300–4350 m (alpine meadows), 25. VII. 1999, D. W. Wrase, 1♀, in the SCHÜLKE collection.

Comment. Judging from the coordinates, this collecting site is situated close to the type locality (see SMETANA, 1999, 236) and the name “Tsheto La” must be another name for the same pass.

***Quedius (Microsaurus) euander* SMETANA**

Quedius euander SMETANA, 1997 a, 63.

New record. [Sichuan]: Luding Co., Erlang Shan Pass, road 318, cca 3000 m, 8 km SE Luding, 190 km SW Chengdu, 21.–29. VI. 1999, D. W. Wrase, 1♂, 2♀, in the SCHÜLKE collection.

Comment. This additional record from Erlang Shan (see SMETANA, 2001 a, 184) confirms that *Q. euander* is fairly common in this mountain range.

***Quedius (Microsaurus) guey* SMETANA**

(Fig. 1)

Quedius guey SMETANA, 2001 a, 188.

New records. [Shaanxi]: Qinling Shan, Autoroute 93 km S Zhouzhi, 108 km SW Xi'an, 107°56'E 33°45'N, 1650 m, mountain forest, 1.–2. IX. 1995, leg. A. Pütz, 1♀, in the PÜTZ collection; Qinling Shan, pass on road Zhouzhi–Foping, 105 km SW Xi'an,

N-slope, 107°59'E 33°44'N, 1990 m, 2. VII. 2001, A. Smetana [C89], 4 ♀, in the SMETANA collection; same but 4. VII. 2001 and [C93], 2 ♀, in the SMETANA collection.

Comments. The specimen collected by PÜTZ was actually taken at the type locality (see SMETANA, 2001 a, 190); the remaining specimens [C89, C93] come from the same area and the same forest, the collecting site lies just higher up, above the pass. They were collected in a mixed deciduous forest by sifting various forest floor debris along a small creek.

Based on the shape of the tergite 10 of the female genital segment, as well as on the fact that both collecting sites [C89 and C93] lie close to the type locality of the species, there is little doubt that the specimens belong to *Q. guey*.

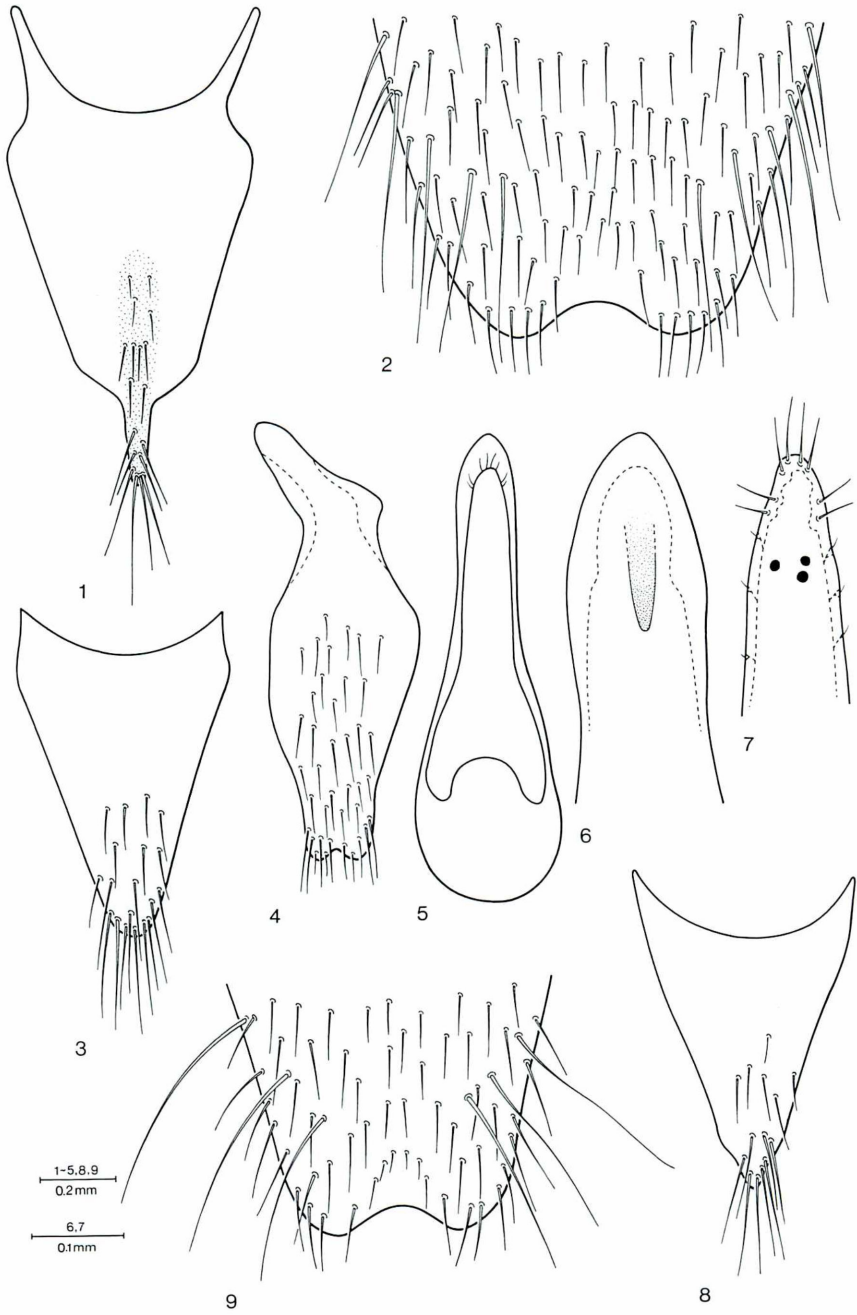
Since the tergite 10 of the female allotype of this species was badly damaged with only the characteristic apical portion present, the entire tergite 10 is illustrated here (Fig. 1).

Quedius (Microsaurus) raan sp. nov.

(Figs. 2–8)

Description. Piceous with piceous-black head, apical margin of elytra narrowly paler, apical margins of abdominal tergites and apex of abdomen paler, abdomen slightly iridescent; maxillary and labial palpi testaceobrunneous to brunneous, legs brunneous with paler tarsi, medial faces of middle and hind femora darkened. Head relatively narrow, of rounded quadrangular shape, about as long as wide (but appearing, due to its configuration behind eyes, slightly longer than wide), lateral margins behind eyes evenly, gradually narrowed toward neck, head therefore entirely lacking even traces of posterior angles; eyes moderately large and convex, tempora about as long as eyes seen from above; no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated away from posteromedial margin of eye, but markedly closer to it than to posterior margin of head, one additional setiferous puncture present at posterior margin of eye and numerous additional punctures present anterior and posterior of posterior frontal puncture between two usual setiferous punctures at posterior margin of head; temporal puncture situated away from posterior margin of eye, markedly closer to posterior margin of head than to posterior margin of eye; tempora with numerous fine punctures; surface of head with very fine, dense microsculpture of transverse waves. Antenna moderately long, slightly widened toward apex, segment 3 somewhat longer than segment 2 (ratio 1.25), segments 4–6 longer than wide, gradually becoming shorter, segments 7–10 about as long as wide, last seg-

Figs. 1–9. — 1. *Quedius guey*: tergite 10 of female genital segment. — Figs. 2–8. *Quedius raan*: 2, apical portion of male sternite 8; 3, tergite 10 of male genital segment; 4, sternite 9 of male genital segment; 5, aedoeagus, ventral view; 6, apical portion of median lobe, paramere removed; 7, apical portion of underside of paramere; 8, tergite 10 of female genital segment. — 9. *Quedius tzwu*: apical portion of male sternite 8.



ment about as long as two preceding segments combined. Pronotum about as long as wide, widest at about posterior third, markedly narrowed anteriorly, with lateral margins continuously arcuate with broadly rounded base, transversely convex, lateral portions not explanate; dorsal rows each with three punctures; sublateral rows each with three or four punctures, posterior puncture situated behind level of large lateral puncture; one additional puncture between dorsal and sublateral rows; surface of pronotum with microsculpture similar to that on head, but markedly finer and denser. Scutellum impunctate, with very fine and dense microsculpture of transverse striae. Elytra relatively long, at base narrower than pronotum at widest point, slightly widened posteriorly, at suture about as long as, at sides somewhat longer than pronotum at midline (ratio 1.15); punctation moderately fine, dense, transverse interspaces between punctures mostly about as wide as diameters of punctures; pubescence brownish; surface between punctures without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) with fine whitish apical seam of palisade fringe; punctation and brownish pubescence of abdominal tergites fine and moderately dense, almost evenly covering each tergite, in general becoming indistinctly sparser toward apex of abdomen; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Sternite 8 with five long setae on each side, with moderately wide and deep, arcuate medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 2). Genital segment with tergite 10 triangular, evenly narrowed toward narrowly arcuate apex, with numerous long setae at and near apical margin, and with several shorter setae in front of them (Fig. 3); sternite 9 with rather short basal portion, apical portion widened basally and then narrowed into subtruncate, medially emarginate apex, with two indistinctly differentiated subapical setae on each side before emargination (Fig. 4). Aedoeagus (Figs. 5–7) narrow and elongate; median lobe subparallel-sided, anteriorly narrowed into narrowly arcuate apex, with markedly developed, long medial carina on face adjacent to paramere. Paramere elongate, narrow, with narrowly arcuate apex distinctly not reaching apex of median lobe; four fine setae at apex, two slightly finer setae at each lateral margin below apex; underside of paramere with three sensory peg setae far below apex. Internal sac without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but less dilated; segment 2 slightly narrower than apex of tibia (ratio 0.87). Genital segment with tergite 10 narrowly triangular, with slightly differentiated, subacute apical portion, with several long setae at and near apical margin, and with several markedly shorter setae in front of them (Fig. 8).

Length 7.8–8.00 mm.

Type material. Holotype (male) and allotype (female): China: “China: Shaanxi, Qin Ling Shan 110°06'E, 34° 25'N Hua Shan Mt., S.-top, 1950–2000 m Forest, sifted 19.08. 1995, leg. Pütz”. In the PÜTZ collection, Eisenhüttenstadt. Holotype temporarily

in the SMETANA collection, Ottawa.

Paratype: China: [Shaanxi]: same data as holotype, but leg. M. Schülke, 1 ♀, in the SCHÜLKE collection, Berlin.

Geographical distribution. *Quedius raan* is at present known only from the type locality in Qinling Shan in southern Shaanxi.

Bionomics. The specimens were sifted in a presumably mixed deciduous forest, but no details are known.

Recognition and comments. *Quedius raan* is another member of the *mukuensis* group. It differs from all other members, in addition to the male sexual characters (particularly the very distinctive, long median carina of the median lobe on the face adjacent to the paramere), by the distinctive shape of the head combined with its chaetotaxy and the presence of numerous additional punctures (see above), and by the presence of five long setae on each side of the male sternite 8. The shape of the head of *Q. raan* resembles that of the Nearctic species *Q. peregrinus* (GRAVENHORST, 1806).

The female paratype of the original series is markedly teneral.

Etymology. The specific epithet is the Chinese word “raan” (meaning “gradually”). It refers to the shape of the head, that narrows gradually toward the neck behind the eyes.

Quedius (Microsaurus) tzwu sp. nov.

(Figs. 9–15)

Description. In all characters similar to *Q. epytus* SMETANA, 1995 and different mainly by both male and female sexual characters. On average smaller and less robust, antennae and legs slenderer, elytra shorter, at suture slightly shorter (ratio 0.87), at sides about as long as pronotum at midline (corresponding ratios for *Q. epytus*: 1.07 and 1.15).

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Sternite 8 with three long setae on each side; with moderately wide and shallow, arcuate medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 9). Genital segment with both tergite 10 and sternite 9 similar to those of *Q. epytus* (Figs. 10, 11). Aedoeagus (Figs. 12–14) narrow and elongate, similar to that of *Q. epytus*; median lobe narrower, particularly anteriorly, paramere narrower, subparallel-sided, not quite covering median lobe, with vaguely emarginate apex, apex appreciably not reaching apex of median lobe; with four fine setae at apex, medial pair longer than lateral setae, and with two minute setae at each lateral margin close to apex; underside of paramere with three sensory peg setae near apical margin. Internal sac without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but less dilated, segment 2 slightly narrower than apex of tibia (ratio 0.90). Genital segment with tergite 10 similar to that of *Q. epytus*, but in general shorter, and with differentiated

apical portion markedly shorter (Fig. 15).

Length 6.7–6.9 mm.

Type material. Holotype (male) and allotype (female): China: “CHINA: S-Shaanxi (Daba Shan) mountain range N pass 22 km NW Zhenping, 32°01'N 109°21'E 2850 m, 14. VII. 2001, leg M. Schülke [CO1–12]. In the SCHÜLKE collection, Berlin.

Paratype: [Shaanxi]: same data as holotype, 1 ♂. In the SMETANA collection, Ottawa.

Geographical distribution. *Quedius tzwu* is at present known only from the type locality in Daba Shan in southern Shaanxi.

Bionomics. The specimens were collected in an original *Abies* forest on the northern slope near the top of the mountain; they bear the following habitat data: “*Abies*, bushes, dead wood (sifted)”.

Recognition and comments. *Quedius tzwu* is another member of the *mukuensis* group (see SMETANA, 2001 b, 201). The aedeagus of *Q. tzwu* is most similar to those of *Q. epytus* and *Q. antoni*. It differs from that of *Q. antoni* by the paramere of the aedeagus reaching markedly closer to the apex of median lobe and by the lower number of sensory peg setae on the paramere (figs. 12, 14, and figs. 10, 13 in SMETANA, 1995, 235). The aedeagus of *Q. epytus* differs by the wider paramere, which is slightly, arcuately dilated anteriorly and covers the entire anterior portion of the median lobe, except for the very tip, and by the larger number of sensory peg setae on the paramere (figs. 17, 19 in SMETANA, 1995, 235, 237).

There is an extra puncture in the left dorsal row on the pronotum in the male paratype.

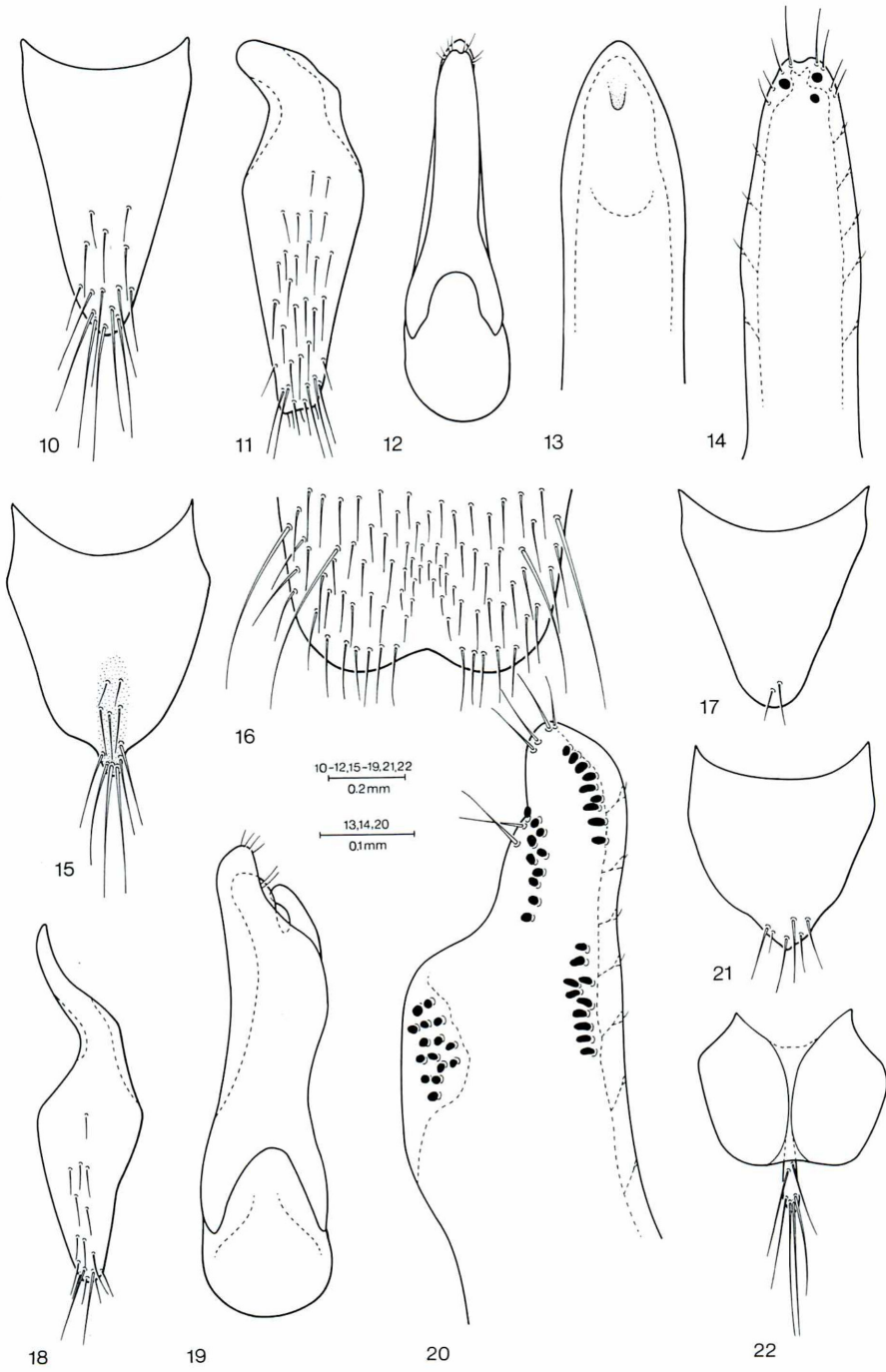
Etymology. The specific epithet is the Chinese word “*tzwu*”, which in one of its meanings means “relatives in a group”. It refers to the apparent close relationship of *Q. tzwu* to the above two members of the *mukuensis* group.

Quedius (Microsaurus) huenn sp. nov.

(Figs. 16–21)

Description. In all external characters similar to *Q. liau* SMETANA, 1999 a, but different as follows: somewhat larger and more robust, coloration darker: piceous black, antenna piceous with first three segments paler, legs pale brunneous with inner faces of middle and hind tibiae darkened; paler color of pronotal margins much less apparent and mostly appreciable only at basal margin; head wider and less narrowed

Figs. 10–22. — 10–15. *Quedius tzwu*: 10, tergite 10 of male genital segment; 11, sternite 9 of male genital segment. 12, aedeagus, ventral view; 13, apical portion of median lobe, paramere removed; 14, apical portion of underside of paramere; 15, tergite 10 of female genital segment. — 16–21. *Quedius huenn*: 16, apical portion of male sternite 8; 17, tergite 10 of male genital segment; 18, sternite 9 of male genital segment; 19, aedeagus, ventral view; 20, apical portion of underside of paramere; 21, tergite 10 of female genital segment. — 22. *Quedius rong*: tergite 10 of female genital segment.



posteriad, slightly wider than long (ratio 1.13); punctuation of abdominal tergites slightly sparser

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Segment 8 of abdomen with two long setae on each side, regular setation rather fine and sparse; with moderately wide and deep, obtusely triangular medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 16). Genital segment with tergite 10 triangular, markedly narrowed toward narrowly arcuate apex, with two fine setae in middle before apex (Fig. 17); sternite 9 with basal portion very long and narrow, apical portion wide, markedly narrowed toward narrowly arcuate apex, with two slightly differentiated subapical setae (Fig. 18). Aedoeagus (Figs. 19, 20) of quite characteristic, and in general of spectacular, shape; median lobe asymmetrical, anteriorly divided into two unequal lobes. Paramere large, on left side curved around body of median lobe, apical portion quite asymmetrical, apex distinctly exceeding apex of median lobe, apical setae situated as in Fig. 20, sensory peg setae on underside of paramere numerous, arranged into four, quite separated groups. Internal sac without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but less dilated; segment 2 vaguely narrower than apex of tibia (ratio 0.92). Genital segment with tergite 10 short and wide, markedly narrowed toward wide, subacute apex, with a few setae at and near apical margin (Fig. 21).

Length 5.4–6.0 mm.

Type material. Holotype (male) and allotype (female): China: “CHINA Shaanxi Daba Shan mtn. range N pass 22 km NW Zhenping”/“32°01'N 109°21'E 2850 m, 14. VII. 2001 A. Smetana [C103]”. Both holotype and allotype in the SMETANA collection, Ottawa.

Paratypes: China: [Shaanxi]: same data as holotype, 2 ♀, in the SMETANA collection.

Geographical distribution. *Quedius huenn* is at present known only from the type locality in Daba Shan in southern Shaanxi.

Bionomics. The specimens of the original series were taken, together with specimens of *Q. chremes* (see above) in a remnant of the original *Abies* forest by sifting mouldy fallen pieces of bark and rotting wood, accumulated around bases of standing or fallen, dead *Abies* trees.

Recognition and comments. *Quedius huenn* is another member of the *szechuanus* group. It differs from all members but *Q. szechuanus* BERNHAUER, 1933, by the apical portion of the median lobe of the aedoeagus divided into two unequal lobes, and by all of them by the quite conspicuous, asymmetrical apical portion of the paramere, bearing on the underside four entirely separated, characteristically located, groups of sensory peg setae (Fig. 20).

Etymology. The specific epithet is the Chinese word “huenn”, which in one of

its meanings means confused or disorderly. It refers to the unusual, "confused" shape of the aedoeagus, particularly of the paramere.

Quedius (Microsaurus) rong sp. nov.

(Fig. 22)

Description. Black, lateral portions of first two visible abdominal tergites indistinctly reddish-brown, abdomen hardly iridescent; maxillary and labial palpi pale testaceous, with apices of last segments minutely, inconspicuously darkened, first four segments of antennae pale testaceous, remaining segments piceous-black; legs pale testaceous. Head small, about as long as wide, markedly narrowed posteriad behind eyes, posterior angles entirely obsolete; eyes moderately large and convex, tempora shorter than eyes seen from above (ratio 0.58); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated quite close to posteromedial margin of eye, almost touching it, two punctures between it and posterior margin of head; temporal puncture situated about midway between posterior margin of eye and posterior margin of head; tempora with some fine punctures; surface of head with extremely fine, dense, superficial microsculpture of transverse waves. Antenna moderately long, segment 3 slightly longer than segment 2 (ratio 1.20), segments 4 and 5 slightly longer than wide, segment 6 as long as wide, segments 7–10 slightly wider than long, last segment about as long as two preceding segments combined. Pronotum slightly wider than long (ratio 1.11), widest at posterior third, distinctly narrowed anteriorly, with lateral margins continuously arcuate with broadly rounded base, transversely convex, lateral portions not explanate; dorsal rows each with three punctures; sublateral rows each with three punctures, posterior puncture situated distinctly behind level of large lateral puncture; surface of pronotum with microsculpture similar to that on head, but even finer and more superficial, partially rudimentary. Scutellum impunctate, smooth, with very fine microsculpture of transverse waves. Elytra relatively long, at base slightly narrower than pronotum at widest point, moderately widened posteriad, at suture vaguely longer (ratio 1.12), at sides longer (ratio 1.25) than pronotum at midline; punctation moderately coarse and dense, transverse interspaces between punctures mostly about as large as diameters of punctures; pubescence pale yellowish; surface between punctures shiny, without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) bearing distinct whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites distinctly finer than that on elytra, becoming gradually sparser toward apex of each tergite, and in general toward apex of abdomen; tergite 3 (first visible) with impunctate middle area; pubescence brownish; surface between punctures with exceedingly dense and fine, almost imperceptible, microsculpture of transverse striae.

Female. First four segments of front tarsus dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Genital segment with tergite 10 of quite

characteristic shape, wide and short, subdivided medially, narrowed toward widely truncate apex with narrow, rod-like apical portion bearing two quite long apical setae and several somewhat shorter setae in front of them (Fig. 22).

Male. Unknown.

Length 7.0 mm.

Type material. Holotype (female): China: “CHINA: W-Hubei (Daba Shan) pass E of Mt. Da Shennongjia 12 km NW Muyuping, 31°30'N 110°21'E, 19. VII. 2001, leg. M. Schülke [C01–13C]”/“creek valley 1950–2050 m, mixed deciduous forest, moss, dead wood, mushrooms (sifted) [C01–13C]”/“Sammlung M. Schülke Berlin”. In the SCHÜLKE collection Berlin, temporarily in the SMETANA collection, Ottawa.

Geographical distribution. *Quedius rong* is at present known only from the type locality in Daba Shan in western Hubei.

Bionomics. The holotype was taken by sifting in a mixed deciduous forest in a valley of a small creek, but the exact habitat is not known.

Recognition and comments. *Quedius rong* is a member of the *pallens* group (SMETANA, 2001 b, 210), which so far contained only one species, *Q. pallens* SMETANA, 1996 b from Fujian. The shape of the tergite 10 of the female genital segment of *Q. rong* is of a similar, characteristic configuration, as it was described and illustrated for *Q. pallens* (SMETANA, 1996 b, 129 [fig. 39], 131). *Quedius rong* differs from *Q. pallens*, in addition to the differences on the female tergite 10, by the darker coloration of the body, by the narrower head that is more distinctly narrowed posteriad, and by the narrower pronotum that is more distinctly narrowed anteriad.

Etymology. The specific epithet is the Chinese adjective “rong”, which in one of its meanings means splendid, glorious. It refers to the appearance of the species.

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要 約

A. SMETANA: 中国産ツヤムネハネカクシ亜族に関する知見. 22. ツヤムネハネカクシ属 *Microsaurus* 亜属の12. — *Microsaurus* 亜属のツヤムネハネカクシ類の4新種を中国陝西省および湖北省から記載し, これらに *Quedius raan*, *Q. tzwu*, *Q. huenn* および *Q. rong* という新名を与えた. また, 従来ヒマラヤのダージリンのみから知られていた *Q. antennalis* CAMERON を陝西省南部の大巴山から記録し, 他の13種について新産地やその他の新しい知見を報告した.

References

BERNHAEUER, M., 1933. Neuheiten der chinesischen Staphylinidenfauna. *Wien. ent. Ztg.*, **50**: 25–48.

- CAMERON, M., 1926. New species of Staphylinidae from India. Part II. *Trans. r. ent. Soc. London*, **1925**: 341–72.
- 1932. Coleoptera. Staphylinidae. Vol. III. *The Fauna of British India, including Ceylon and Burma*. XIII+443 pp., 4 pls. London.
- CHAMPION, G. C., 1925. Some Indian (and Tibetan) Coleoptera (16). *Entomologist's mon. Mag.*, **61**: 101–112.
- DEJEAN, P. F. M. A., 1833. Catalogue des Coléoptères de la collection de M. le Baron DEJEAN. Ed. 2, fasc. 1–2, pp. 1–176. Méquignon-Marvis, Paris.
- GRAVENHORST, J. L. C., 1806. Monographia Coleopterorum Micropterorum. 216+236+13 pp. Gottingae.
- REITTER, E., 1887. Insecta in itinere Cl. N. PRZEWALSKII in Asia Centrali novissime lecta. VI. Clavicornia, Lamellicornia et Serricornia. *Horae Soc. ent. ross.*, **21**: 201–234.
- SMETANA, A., 1988. Revision of the tribes Quediini and Atanygnathini. Part II. The Himalayan region (Coleoptera: Staphylinidae). *Quaest. ent.*, **24**: 163–464.
- 1995. Contributions to the knowledge of the Quediina (Coleoptera, Staphylinidae, Staphylinini) of China. Genus *Quedius* STEPHENS, 1829. Part 2. Subgenus *Microsaurus* DEJEAN, 1833. Section 2. *Bull. natn. Sci. Mus., Tokyo*, (A), **21**: 231–250.
- 1996 a. Ditto. Part 3. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 3. *Ibid.*, **22**: 1–20.
- 1996 b. Ditto. Part 5. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 4. *Ibid.*, **22**: 113–132.
- 1997 a. Ditto. Part 6. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 5. *Ibid.*, **23**: 51–68.
- 1997 b. Ditto. Part 9. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 7. *Elytra, Tokyo*, **25**: 451–473.
- 1997 c. Ditto. Part 8. Quediini collected by S. UENO and Y. WATANABE in Yunnan. *Ibid.*, **25**: 129–134.
- 1999. Ditto. Part 13. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 8. *Ibid.*, **27**: 213–240.
- 2001 a. Ditto. Part 19. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 11. *Ibid.*, **29**: 181–191.
- 2001 b. Ditto. Part 20. Subgenus *Microsaurus* DEJEAN, 1833. Section 12. *Ibid.*, **29**: 193–216.
- STEPHENS, J. F., 1829. The Nomenclature of British Insects; being a compendious list of such species as are contained in the Systematic Catalogue of British Insects, and forming a guide to their classification. 68 columns. Baldwin & Cradock, London.

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DNAでたどるオサムシの系統と進化. 大澤省三・蘇智慧・井村有希著, 264 pp. 哲学書房, 東京. 定価 9800円.

遺伝子の本体であるDNAの研究成果について, 最近ではまず疑いの目で見ないだ