

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

Part 33. Genus *Quedius* STEPHENS, 1829.

Subgenus *Microsaurus* DEJEAN, 1833. Section 18

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**Abstract** Six species of the genus *Quedius* are described as new: *Q. ana* (Gansu), *Q. nian* (Gansu), *Q. liukuensis* (Yunnan), *Q. songpanoides* (Sichuan), *Q. cephalus* (Gansu), and *Q. jaangoides* (Yunnan). Tergite 10 of the female genital segment of *Q. lanugo* SMETANA, 2006 is described and illustrated for the first time.

**Key words:** Coleoptera, Staphylinidae, Staphylininae, *Quedius*, Palaearctic, mainland China, taxonomy, new species, distribution.

### Introduction

This is the thirty-third of a series of papers dealing with the Quediina of the People's Republic of China. It presents the descriptions of further six new species of the subgenus *Microsaurus* DEJEAN, 1833. They are all members of the *Euryalus* Group. Tergite 10 of the female genital segment of *Q. lanugo* SMETANA, 2006 is described and illustrated for the first time.

### *Quedius lanugo* SMETANA

(Fig. 1)

*Quedius lanugo* SMETANA, 2006, 91.

**New record.** [Yunnan]: Yunnan [CHO 7–24], Nujiang Lisu Aut. Pref., Gaoligong Shan, 3020 m, 27° 47' 54" N 98° 30' 13" E, mixed forest, litter, moss, wood sifted, 7.VI.2007, M. SCHÜLKE, 1 ♀, in the SCHÜLKE collection, Berlin, Germany.

**Comments.** The specimen was taken in a mixed forest by sifting litter, moss and decaying wood. The habitat is very close to the habitat the male holotype of this species was taken two years ago (coordinates for holotype 27° 47' 90" N 98° 30' 19" E).

Only male holotype of this species was known until now. The female specimen agrees in all external characters perfectly with the male holotype. There is hardly any doubt that the specimen represents the female of *Q. lanugo*. The female sexual characters are described below.

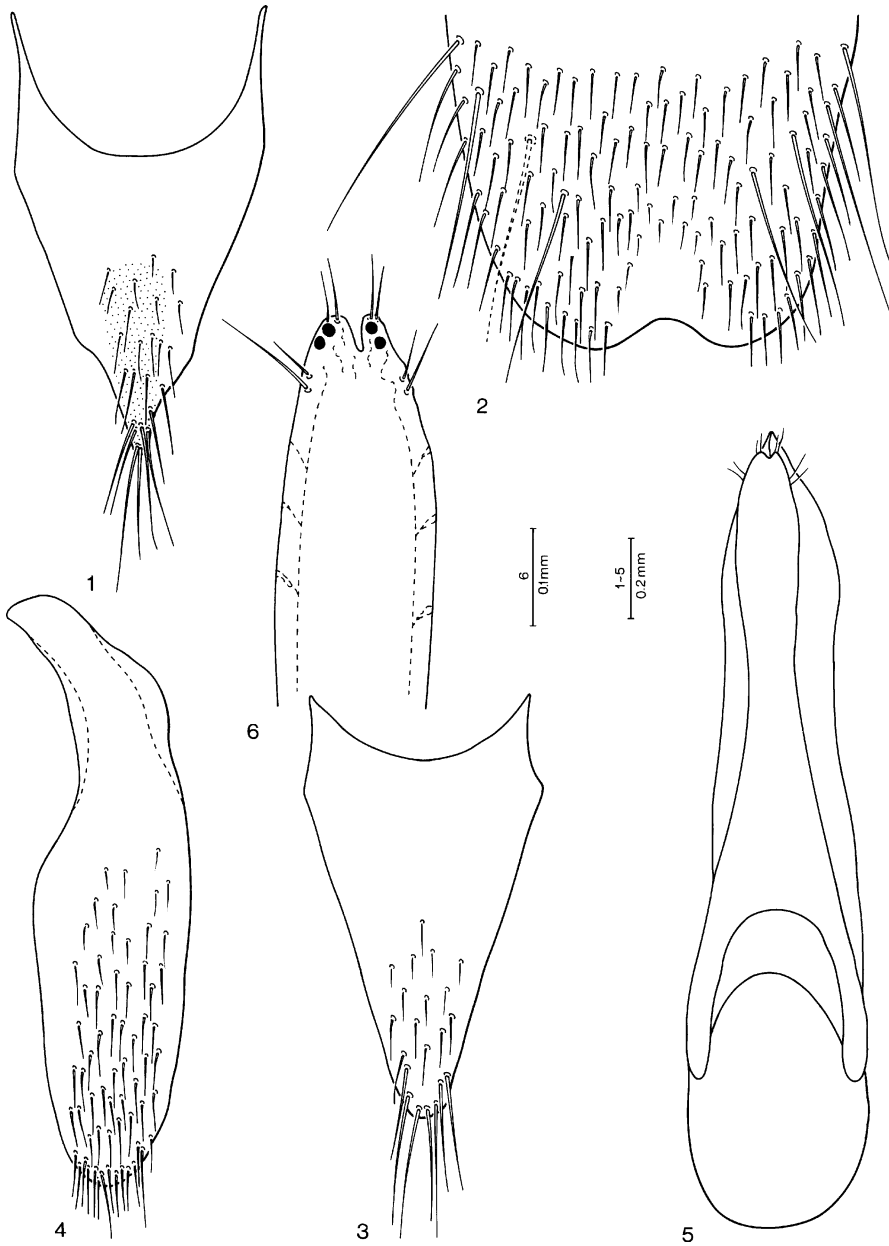
**F e m a l e.** First four segments of front tarsus similar to those of male, but less dilated, segment 2 about as wide as apex of tibia. Genital segment with tergite 10 markedly narrowed anteriorly, pigmented medioapically, apical portion slightly differentiated, with acute apex, setation as in Fig. 1.

*Quedius (Microsaurus) ana* sp. nov.

(Figs. 2–7)

**Description.** Piceous-black to black, elytra with slight metallic lustre, abdomen slightly iridescent; maxillary and labial palpi brunneous, antennae brunneo-piceous to piceous, legs piceous to piceous-black with tarsi more or less paler. Head rounded, about as long as wide; posterior angles entirely rounded; eyes relatively large, only moderately convex, tempora shorter than eyes seen from above (ratio 0.65); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to posteriomedial margin of eye, separated from it by distance slightly longer than diameter of puncture, two punctures between it and posterior margin of head, one additional puncture between posterior frontal puncture and temporal puncture, situated at 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 fine, dense microsculpture of transverse waves, with sparse micropunctulation. Antenna moderately long, moderately widened toward apex, segment 3 longer than segment 2 (ratio 1.38), segments 4 and 5 longer than wide, following segments becoming gradually shorter, outer segments as long as wide, last segment about as long as two preceding segments combined. Pronotum slightly wider than long, widest at about posterior third, more narrowed anteriorly than posteriorly, 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 two punctures, posterior puncture situated behind level of large lateral puncture; microsculpture similar to that on head but finer and denser. Scutellum impunctate, surface with very fine microsculpture of transverse waves. Elytra relatively long, at base narrower than pronotum at widest point, slightly widened posteriorly, at suture as long as, at sides slightly longer than pronotum at midline (ratio 1.16); punctation and pubescence fine and moderately dense, transverse interspaces between punctures mostly slightly larger than diameters of punctures; pubescence pale brownish; surface between punctures without microsculpture. Wings probably functional. Abdomen with tergite 7 (fifth visible) with fine whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites finer and slightly denser than that on elytra, becoming slightly sparser toward apex of each tergite, and in general toward apex of abdomen; pubescence dark brown; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

**M a l e.** First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 slightly wider than apex of



Figs. 1-6. — 1. *Quedius lanugo*: tergite 10 of female genital segment. — 2-6: *Quedius ana*: 2, apical portion of male sternite 8; 3, tergite 10 of male genital segment; 4, sternite 9 of male genital segment; 5, aedeagus, ventral view; 6, apical portion of underside of paramere.

tibia; segment 4 narrower than preceding segments. Sternite 8 with four or five long setae on each side, with shallow, moderately wide, subarcuate medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 2). Genital segment with tergite 10 narrow, long, with narrowly rounded apex, with several long setae at and near apex, otherwise with only sparse, fine setae (Fig. 3); sternite 9 with moderately long basal portion, arcuate apically, without differentiated setae, finely setose as in Fig. 4. Aedoeagus (Figs. 5, 6) relatively large; median lobe slightly, widely constricted in middle portion, then gradually widened into rather long apical portion with acute apex, with distinct apicomedial carina on face adjacent to paramere; paramere very long, shaped as in Figs. 5, 6, with narrowly emarginate apex not reaching apex of median lobe; two fine setae at each side of apical emargination and two unequally long setae at each lateral margin below apex; underside of paramere with two sensory peg setae situated at apex on each side of medial emargination; internal sac without larger sclerotized structures.

*Female.* First four segments of front tarsus similar to those of male, but markedly less dilated, segment 2 slightly narrower than apex of tibia. Tergite 10 of genital segment pigmented medioapically, with markedly differentiated, narrow, subacute apical portion, with several long setae at apex and with shorter setae in front of them (Fig. 7).

Length 8.0–9.5 mm.

*Type material.* Holotype (male) and allotype (female): China: “CHINA: S.-Gansu Minshan Mts., 60 km NW Wudu, 2,000 m, 10.–20.VI.2005, V. Patrikeev”. Holotype in the SCHÜLKE collection, Berlin, Germany; allotype in the SMETANA collection, Ottawa, Canada.

*Paratypes:* same data as holotype, 2 ♂♂ in the SCHÜLKE and SMETANA collections.

*Geographical distribution.* *Quedius ana* is at present known only from the type locality in southern Gansu.

*Bionomics.* The specimens of the original series were apparently taken from pitfall traps, but nothing is known about the habitat the traps were set in.

*Recognition and comments.* *Quedius ana* is a member of the *Euryalus* Group (see SMETANA, 2001, 208). It is distinctive by the dark coloration, and the rather large eyes, in combination with the characteristically shaped aedoeagus and tergite 10 of the female genital segment.

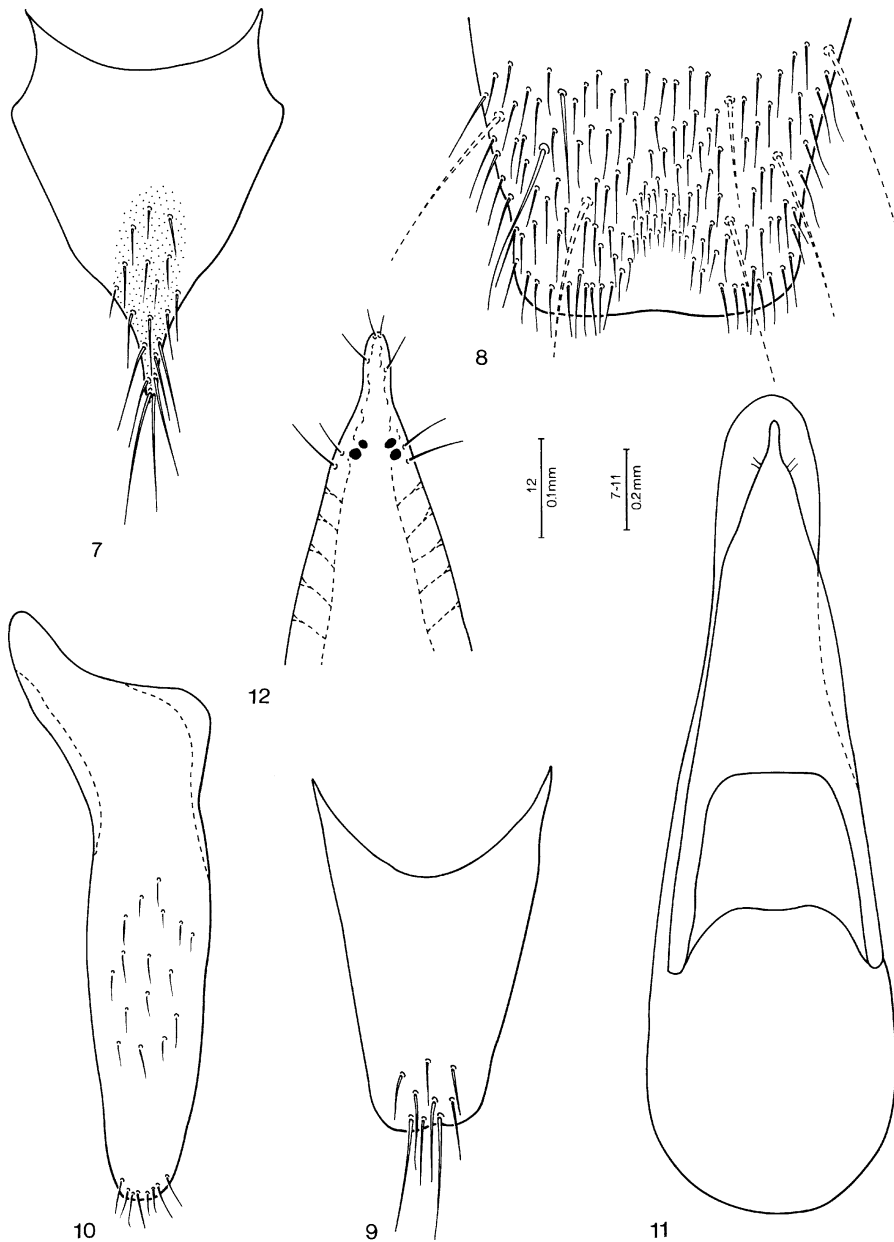
One of the paratypes is missing the last segment of both front tarsi, the entire middle leg, the tarsus of the right middle leg, and four segments of the right hind tarsus.

*Etymology.* The specific epithet is the Chinese word “ana”, which means “dark”, in apposition. It refers to the coloration of the species.

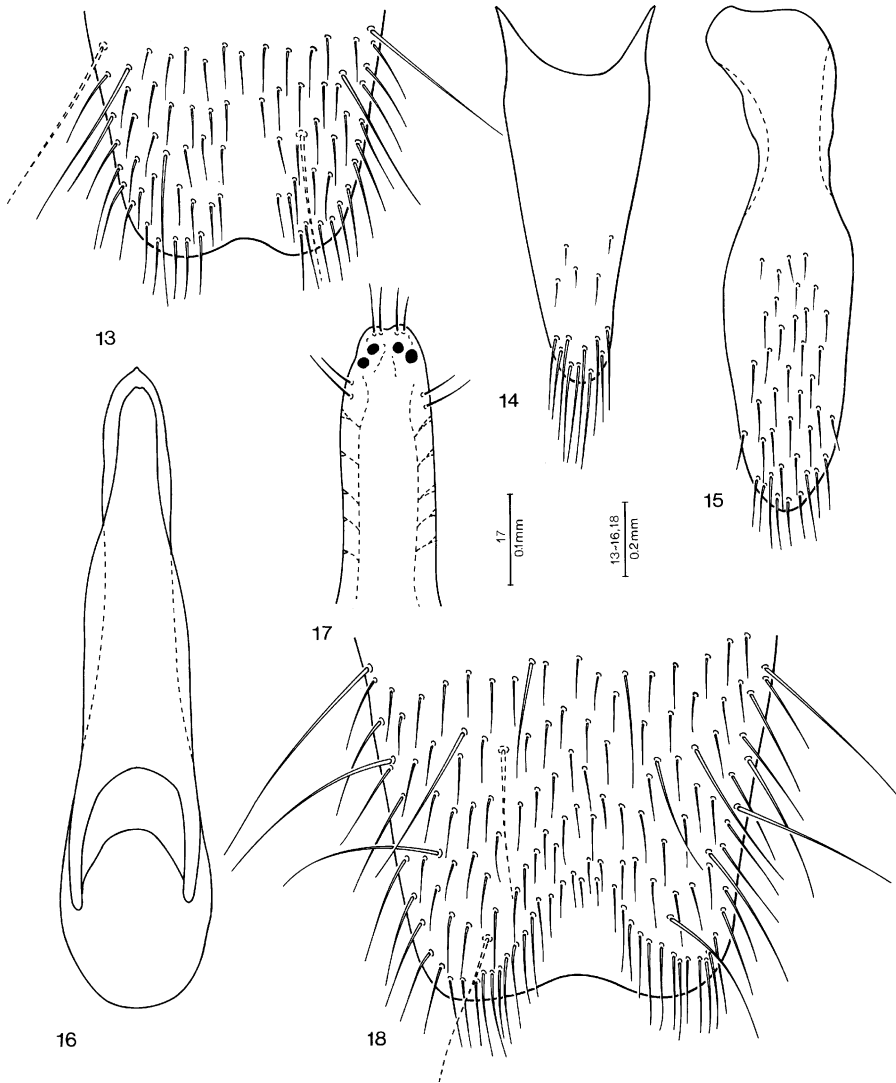
*Quedius (Microsaurus) nian* sp. nov.

(Figs. 8–12)

*Description.* Head black, pronotum piceous-black, elytra brunneous, abdomen

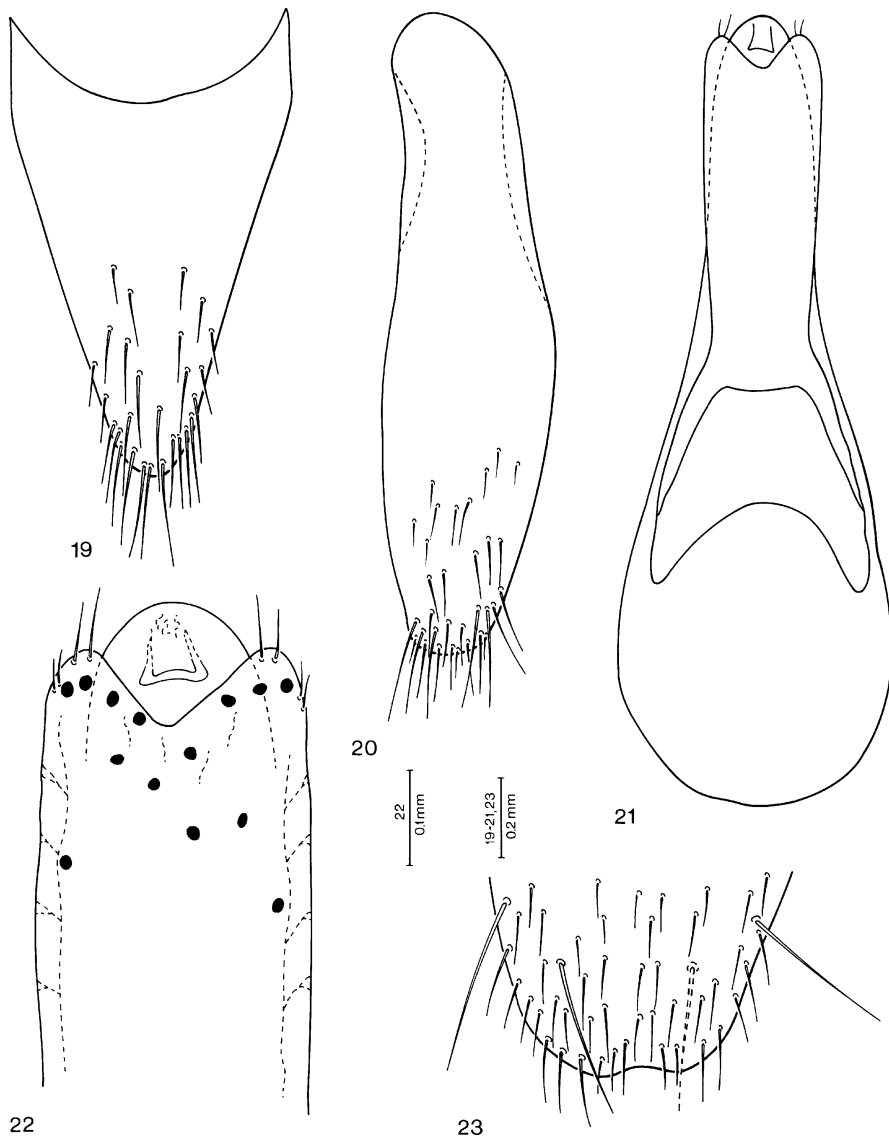


Figs. 7-12. — 7. *Quedius ana*: tergite 10 of female genital segment. — 8-12. *Quedius nian*: 8, apical portion of male sternite 8; 9, tergite 10 of male genital segment; 10, sternite 9 of male genital segment; 11, aedeagus, ventral view; 12, apical portion of ventral side of paramere.



Figs. 13–18. — 13–17. *Quedius liukuensis*: 13, apical portion of male sternite 8; 14, tergite 10 of male genital segment; 15, sternite 9 of male genital segment; 16, aedeagus, ventral view; 17, apical portion of underside of paramere. — 18. *Q. songpanoides*: apical portion of male sternite 8.

slightly iridescent, piceous with apical margins of tergites slightly, narrowly paler; maxillary and labial palpi testaceous, antennae testaceous, legs brunneous with paler tarsi, inner faces of middle and hind tibiae, and hind femora darkened. Head rounded, slightly wider than long (ratio 1.20), markedly narrowed posteriad behind eyes, posterior angles entirely obsolete; eyes large and convex, tempora markedly shorter than eyes



Figs. 19–23. — 19–22. *Quedius songpanoides*: 19, tergite 10 of male genital segment; 20, sternite 9 of male genital segment; 21, aedeagus, ventral view; 22, apical portion of underside of paramere. — 23. *Q. cephalus*: apical portion of male sternite 8.

seen from above (ratio 0.36); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture touching posteriomedial margin of eye, two punctures between it and posterior margin of head, one additional puncture between posterior frontal puncture and temporal puncture, situated at posterior margin of eye;

temporal puncture situated close to posterior margin of eye, almost touching it; tempora with some fine punctures; surface of head with very fine, very dense microsculpture of transverse waves, with sparse micropunctulation. Antenna relatively long, moderately widened toward apex, segment 3 longer than segment 2 (ratio 1.33), following segments longer than wide, becoming gradually shorter, outer segments 9 and 10 only vaguely longer than wide, last segment somewhat shorter than two preceding segments combined. Pronotum about as long as wide, widest at about posterior third, more narrowed anteriorly than posteriorly, 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 two punctures, posterior puncture situated behind level of large lateral puncture; microsculpture similar to that on head but somewhat denser. Scutellum impunctate, surface with very fine microsculpture of transverse waves. Elytra moderately long, at base narrower than pronotum at widest point, slightly widened posteriorly, at suture somewhat shorter (ratio 0.78), at sides about as long as pronotum at midline; punctation and pubescence fine and moderately dense, transverse interspaces between punctures mostly slightly larger than diameters of punctures; pubescence pale brownish; surface between punctures without microsculpture. Wings probably not functional. Abdomen with tergite 7 (fifth visible) with very fine whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites finer and slightly denser than that on elytra, becoming slightly sparser toward apex of each tergite, and in general toward apex of abdomen; pubescence pale brownish; 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 wider than apex of tibia (ratio 1.25); segment 4 narrower than preceding segments. Sternite 8 with four long setae on each side, with apical margin almost imperceptibly, arcuately subemarginate in middle, small triangular area before emargination flattened and smooth (Fig. 8). Genital segment with tergite 10 with obtusely subtruncate apex, with two long setae at apex and only a few shorter setae around them, otherwise asetose (Fig. 9); sternite 9 (Fig. 10) elongate, with robust basal portion, arcuate apically, with very fine setae at apex, without differentiated setae, apparently finely setose (see comments). Aedoeagus (Figs. 11, 12) of characteristic shape; median lobe widely constricted in middle portion, then gradually widened into apical portion with broadly rounded apex; paramere long, wide basally, covering most of middle portion of median lobe, gradually narrowed into narrow apical portion with rod-like apex, not quite reaching apex of median lobe; two minute setae at apex, one equally minute seta at each lateral margin of rod-like portion, and two unequally long setae at each lateral margin way below apex; underside of paramere with two fine sensory peg setae situated at each side below rod-like apex; internal sac without larger sclerotized structures.

**Female** unknown.

Length 8.0 mm (abdomen somewhat extended).

*Type material.* Holotype (male): China: "CHINA: S.-Gansu Minshan Mts., 60 km



NW Wudu, 2,000 m, 10.–20.VI.2005, V. Patrikeev". Holotype in the SMETANA collection, Ottawa, Canada.

*Geographical distribution.* *Quedius nian* is at present known only from the type locality in southern Gansu.

*Bionomics.* The holotype was apparently taken from a pitfall trap, but nothing is known about the habitat the trap was set in.

*Recognition and comments.* *Quedius nian* is a member of the *Euryalus* Group (see SMETANA, 2001, 208). It is distinctive by the rather large eyes, in combination with the inconspicuous medioapical emargination of male sternite 8 (see the description), and the characteristically shaped aedoeagus. *Quedius faang* SMETANA, 1999 shows a similarly inconspicuous medioapical emargination of male sternite 8 (see fig. 7 in SMETANA, 1999, 539), but it is markedly larger with entirely differently shaped aedoeagus (see fig. 10 in SMETANA, 1999, 539).

The setation of sternite 9 of the male genital segment is largely destroyed. Figure 10 shows therefore only the setae that are present.

*Quedius nian* occurs apparently together with *Q. ana* in the same habitat in the Minshan Mts.

*Etymology.* The specific epithet is the Chinese word "nian", which in one of its meanings means "to attach to". It refers to the attachment of this species to the *Euryalus* Group.

#### *Quedius (Microsaurus) liukuensis* sp. nov.

(Figs. 13–17)

*Description.* Head piceous, gradually becoming brunneous toward clypeus, pronotum, elytra and abdomen brunneous, abdomen conspicuously iridescent; maxillary and labial palpi testaceous, antennae testaceous, legs testaceo-brunneous with paler tarsi, inner faces of middle and hind tibiae darkened. Head rounded, slightly wider than long (ratio 1.15), markedly narrowed posteriad behind eyes, posterior angles entirely obsolete; eyes large and convex, tempora markedly shorter than eyes seen from above (ratio 0.33); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture touching posteriomedial margin of eye, two punctures between it and posterior margin of head, one additional puncture between posterior frontal puncture and temporal puncture, situated at posterior margin of eye; temporal puncture situated close to posterior margin of eye, separated from it by distance about equal to diameter of puncture; tempora with some fine punctures; surface of head with very dense, extremely fine microsculpture of transverse waves, with very sparse micropunctulation. Antenna long, moderately widened toward apex, segment 3 longer than segment 2 (ratio 1.29), following segments longer than wide, becoming gradually shorter, with outer segments 9 and 10 still appreciably longer than wide, last segment markedly shorter than two preceding segments combined. Pronotum somewhat wider than long (ratio 1.15), widest at about posterior third, more narrowed anteriorly than posteriorly, 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 two punctures, posterior puncture situated behind level of large lateral puncture; microsculpture similar to that on head but still finer and denser. Scutellum impunctate, surface with microsculpture similar to that on pronotum. Elytra relatively short, at base narrower than pronotum at widest point, slightly widened posteriad, at suture somewhat shorter (ratio 0.80), at sides vaguely shorter than pronotum at midline (ratio 0.95); punctation slightly asperate, fine and moderately dense, transverse interspaces between punctures mostly slightly larger than diameters of punctures; pubescence pale brownish; surface between punctures without microsculpture. Wings reduced, not functional. Abdomen with tergite 7 (fifth visible) without fine whitish apical seam of palisade fringe; punctation of abdominal tergites simple, finer and about equally dense as that on elytra, becoming slightly sparser toward apex of each tergite, and in general toward apex of abdomen; pubescence pale brownish; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

**M a l e.** 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 three long setae on each side, apical margin with moderately wide, shallow arcuate medioapical emargination, narrow triangular area before emargination flattened and smooth (Fig. 13). Genital segment with tergite 10 very narrow, elongate, with narrowly arcuate apex, setose at and around apex, otherwise asetose except for a few minute setae (Fig. 14); sternite 9 with robust basal portion, arcuate apically, with very fine setae at apex, without differentiated setae, finely setose, as in Fig. 15. Aedoeagus (Figs. 16, 17) rather large, elongate, of characteristic shape (Fig. 16); paramere long, wide basally, covering most of median lobe, gradually narrowed into rather narrow, subparallel-sided apical portion with rounded apex, not reaching apex of median lobe; four fine setae at apex and two unequally long setae at each lateral margin below apex; underside of paramere with four sensory peg setae situated as in Fig. 17; internal sac without larger sclerotized structures.

**F e m a l e** unknown.

Length 8.5 mm.

**Type material.** Holotype (male): China: "CHINA: Yunnan [CH 0-21], Nujiang Lisu Aut. Pref., Gaoligong Shan, creek valley 20 km NW Liuku, 25° 58' 49" N, 98° 41' 48" E 3,000 m, bamboo, shrubs, litter sifted, 9.VI.2007, M. Schülke." In the SMETANA collection, Ottawa, Canada.

**Geographical distribution.** *Quedius liukuensis* is at present known only from the type locality in the Gaoligong Shan, a mountain range west of the Salween river near the Myanmar border.

**Bionomics.** The holotype was taken by sifting litter under bamboo and shrubs, at the elevation of 3,000 m.

**Recognition and comments.** *Quedius liukuensis* is another member of the *Euryalus*

Group. It is distinctive by the rather pale coloration, the long antennae, the extremely fine and dense microsculpture on the head and pronotum, and the markedly iridescent abdomen, in combination with the characteristically shaped aedeagus.

*Etymology.* The specific epithet is the Latinized adjective derived from the name of the type locality (Liuku).

*Quedius (Microsaurus) songpanoides* sp. nov

(Figs. 18–22)

*Description.* In all characters very similar to *Q. songpan* SMETANA, 1999 and different only by the male sexual characters.

*Male.* First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally, segment 2 somewhat wider than apex of tibia (ratio 1.15), segment 4 narrower than preceding segments. Sternite 8 with seven long setae on each side, with wide, rather shallow, subarcuate medioapical emargination, triangular area before emargination flattened and smooth, sides of emargination each bordered by a row of more densely set setae (Fig. 18). Genital segment with tergite 10 markedly narrowed toward narrowly arcuate apex, about equally setose to that of *Q. songpan* (Fig. 19); sternite 9 similar in shape to that of *Q. songpan*, but less setose (Fig. 20). Aedeagus (Figs. 21, 22) similar to that of *Q. songpan*, but median lobe with sclerotized structure below apex in front of the apical emargination of paramere, and without brief bilateral dilatation in front of basal bulbus (Figs. 21, 22); paramere with sensory peg setae on underside more numerous, some of them located far below apex of paramere (Fig. 22). Internal sac without larger sclerotized structures.

*Female.* Not known.

Length 8.2 mm.

*Type material.* Holotype (male): China: "CHINA: Sichuan Monggo-gou 53 km NW Lixian, 2,800 m, 9.–10.VI.2002 leg. S. Murzin & I. Shokhin". In the SMETANA collection, Ottawa, Canada.

*Geographical distribution.* *Quedius songpanoides* is at present known only from the type locality in central Sichuan.

*Bionomics.* Nothing is known about the collection circumstances of the holotype.

*Recognition and comments.* *Quedius songpanoides* is indeed quite similar to *Q. songpan*, but there is no doubt that it represents a different species. This is based mainly on the different development of the apical portion of the male sternite 8 (in *Q. songpan* the male sternite 8 bears four to six long setae on each side, and is quite characteristic by the wide and moderately deep, subarcuate emargination margined by membranous seam, without flattened and asetose medioapical area; see Fig. 27 in SMETANA, 1999, 549, Fig. 27), and on the different aedeagus (see the description).

*Etymology.* The specific epithet is a noun in apposition, expressing the similarity of the new species to *Q. songpan*.

*Quedius (Microsaurus) cephalus* sp. nov.

(Figs. 23–27)

*Description.* Head black, pronotum piceous-black, elytra dark brunneous, abdomen slightly iridescent, piceous-black with apical margins of tergites markedly, narrowly paler, paler portion on fifth visible tergite distinctly wider than that on previous tergites; maxillary and labial palpi piceous, antennae piceous, with first segment and base of second segment pale brunneous; legs brunneous with paler tarsi, inner faces of all tibiae and most of hind femora darkened. Head large, rounded, wider than long (ratio 1.50), markedly narrowed posteriorly behind eyes, posterior angles entirely obsolete; eyes moderately large, convex, tempora slightly longer than eyes seen from above (ratio 1.10); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to posteriomedial margin of eye, separated from it by distance somewhat larger than diameter of puncture, two punctures between it and posterior margin of head, one additional puncture between posterior frontal puncture and temporal puncture, situated at posterior margin of eye; temporal puncture situated closer to posterior margin of eye than to posterior margin of head; two or three fine punctures along medial margin of eye between anterior and posterior frontal punctures; temporal area with numerous rather coarse punctures, some of which come close to two regular punctures at posterior margin of head; surface of head with dense, very fine microsculpture of transverse waves, with sparse micropunctulation, micropunctulae becoming denser and somewhat coarser on areas medially and posteromedially of eyes. Antenna rather short, moderately widened toward apex, segment 3 slightly longer than segment 2 (ratio 1.17), segments 4 to 6 about as long as wide, following segments becoming gradually wider than long, segment 10 markedly wider than long, last segment about as long as two preceding segments combined. Pronotum about as long as wide, widest at about middle, equally narrowed anteriorly and posteriorly, 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, with posterior puncture situated behind level of large lateral puncture (left side), or with two punctures with posterior puncture situated at about level of large lateral puncture (right); microsculpture similar to that on head but somewhat finer and denser. Scutellum impunctate, surface with extremely fine and dense microsculpture of transverse waves. Elytra rather long, at base narrower than pronotum at widest point, slightly widened posteriorly, at suture somewhat (ratio 1.17), at sides distinctly longer than pronotum at midline; punctation fairly coarse and dense, transverse interspaces between punctures mostly smaller than diameters of punctures; pubescence pale brownish; surface between punctures without microsculpture. Wings probably functional. Abdomen with tergite 7 (fifth visible) with distinct whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites finer and sparser than that on elytra, evenly covering each tergite, in general becoming gradually sparser toward apex of abdomen; pubescence pale brownish; surface between punctures with

exceedingly dense and fine microsculpture of transverse striae.

**M a l e.** First four segments of front tarsus only slightly 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 markedly sparingly setose, with two long setae on each side, with apical margin vaguely, arcuately sub-emarginate in middle; impunctate, flattened area before subemargination not present (Fig. 23). Genital segment with tergite 10 moderately long, with arcuate apex, with four long setae at apex and only a few shorter setae around them, otherwise asetose (Fig. 24); sternite 9 with short, wide basal portion, subtruncate apically, setose as in Fig. 25. Aedoeagus (Figs. 26, 27) small and relatively wide; median lobe markedly constricted before anterior third, apical portion with narrowly arcuate apex; paramere as in Figs. 26, 27, with subacute apex not quite reaching apex of median lobe; four minute setae at apex and two similar setae at each lateral margin below apex; underside of paramere with fine sensory peg setae situated at each side below apex, two on right side, four on left side; internal sac without larger sclerotized structures.

**F e m a l e** unknown.

Length 5.2 mm.

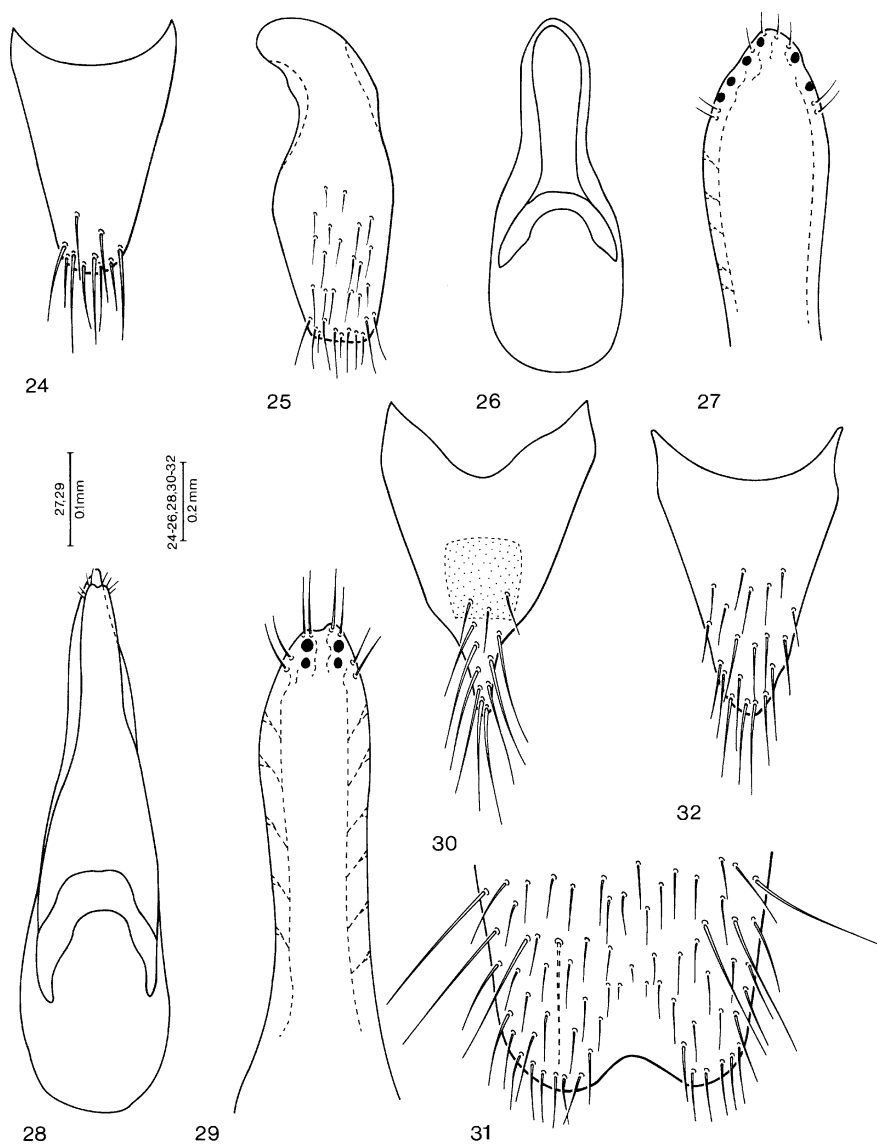
**Type material.** Holotype (male): China: “CHINA: Gansu province DAG-CANGLHAMO (=Langmusi) env., 34°04.6–05.1′ N 102°37.7–38.1′ E, 3,464–3,644 m (GPS), [Ch 5]”/“25.VI.2005, J. Hájek, D. Král & J. Růžička leg.; wet coniferous forest (*Picea*, *Abies*, *Rhododendron*) on N slope”. In the SMETANA collection, Ottawa, Canada.

**Geographical distribution.** *Quedius cephalus* is at present known only from the type locality in Gansu (at the border with Sichuan).

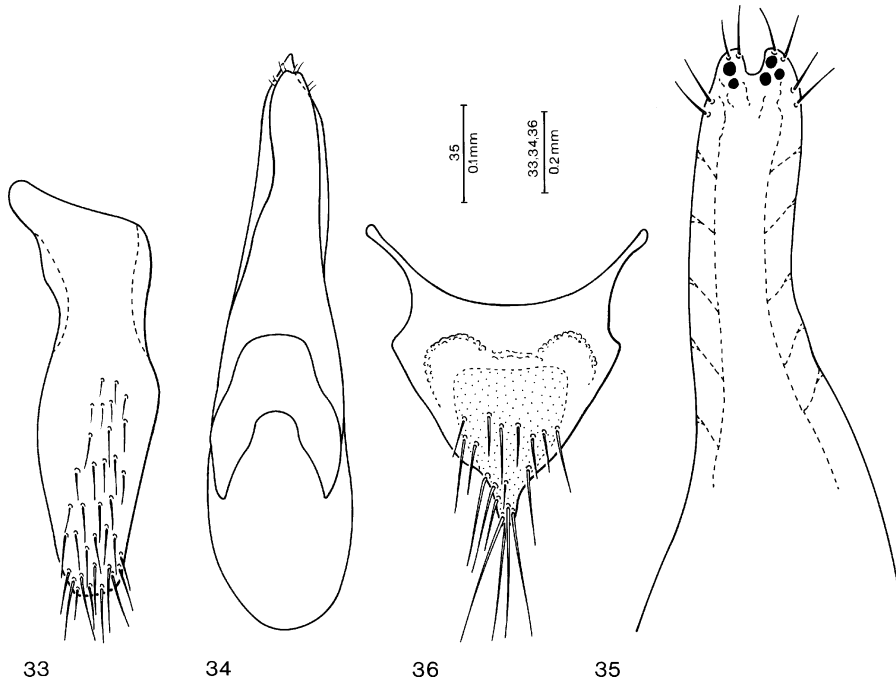
**Bionomics.** The holotype was found in wet coniferous forest (*Picea*, *Abies*) with rhododendron undergrowth, but no details are known about collecting circumstances.

**Recognition and comments.** *Quedius cephalus* is a conspicuous species, due to the shape and chaetotaxy of the head, the short antennae and long elytra, as well as due to the male sexual characters (first four segments of front tarsus only slightly dilated, the shape and setation of sternite 8, and tergite 10 of the genital segment). The aedoeagus is quite similar to that of *Q. kabateki* SMETANA, 1997. *Quedius kabateki* is of similar size, similar body and appendices coloration and has also additional punctures between anterior and posterior frontal punctures along the medial margin of the eye. However, it differs by the shape of the head and the eyes, the different chaetotaxy of the pronotum (additional puncture between dorsal and sublateral rows of punctures), the different male sternite 8, etc.

**Etymology.** The specific epithet is the latinized Greek word κεφαλη (head). It refers to the size and shape of the head of this species.



Figs. 24–32. — 24–27. *Quedius cephalus*: 24, tergite 10 of male genital segment; 25, sternite 9 of male genital segment; 26, aedeagus, ventral view; 27, apical portion of underside of paramere. — 28–30. *Quedius jaang*: 28, aedeagus, ventral view; 29, apical portion of underside of paramere; 30, tergite 10 of female genital segment. — 31, 32. *Quedius jaangoides*: 31, apical portion of male sternite 8; 32, tergite 10 of male genital segment.



Figs. 33–36. *Quedius jaangoides*: 33, sternite 9 of male genital segment; 34, aedoeagus, ventral view; 35, apical portion of underside of paramere; 36, tergite 10 of female genital segment.

***Quedius (Microsaurus) jaang* SMETANA, 2006**

(Figs. 28–30)

*Quedius jaang* SMETANA, 2006, 83

*Comment.* The original series of this species unfortunately included two in all characters, including those on the aedoeagus, very similar species, *Q. jaang* and an undescribed species, both occurring in the same habitat.

The original series is composed of the holotype, allotype and 8 paratypes. Two males bear the same locality label as the holotype (with “[C169]” at the end) and are in the SMETANA collection; four males and two females bear the same data as holotype, but were collected by SCHÜLKE and the locality labels bear “[C2000–16]” at the end, these specimens are both in the SCHÜLKE and SMETANA collections. Only the holotype, allotype and one paratype, collected by A. SMETANA [C169], represent the original series of *Q. jaang*. All remaining paratypes, including those in the SCHÜLKE collection, belong to the new species *Q. jaangoides*, described below, and become members of the original series of that species. The original paratype labels were turned upside down on the pins and the new paratype labels were added.

Three additional specimens of *Q. jaang* were discovered recently:

*New records.* [Yunnan]: Yunnan [Ch 07–22] Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 21 km W Gongshan, 3,320 m 27°47'08" N 98°27'39" E, moss, alder, bamboo, Rhodod. Sifted, 6.VI.2007, M. SCHÜLKE, 1 ♂, 1 ♀ (ASCC, MSC); N-YUNNAN [C 2005–16] Nujiang Lisu. Aut. Pref., Gongshan Co., Gaoligong Shan, sidevalley, 3,000–3,050 m 27°47'90" N 98°30'19" E/conif. Forest with Rhododendron, broad leaved bushes, litter, moss, dead wood sifted along creek and snowfields, 21.VI.2005, M. SCHÜLKE [C2005–16], 1 ♀ (MSC).

*Quedius (Microsaurus) jaangoides* sp. nov.

(Figs. 31–36)

*Description.* In all characters very similar to *Q. jaang* SMETANA, 2006 and different only by the male and female sexual characters.

*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 three or four long setae on each side, similar to that of *Q. jaang*, with moderately wide and deep, subarcuate medioapical emargination (Fig. 31). Genital segment with tergite 10 similar to that of *Q. jaang* in shape and setation (Fig. 32); sternite 9 markedly larger and longer than that of *Q. jaang*, setose as in Fig. 33. Aedoeagus (Figs. 34, 35) similar to that of *Q. jaang* (Figs. 28, 29), but more robust; median lobe somewhat wider, with differently shaped, slightly asymmetrical, apical portion; paramere larger and more robust, of different shape (Figs. 29, 34, 35); apical setae and sensory peg setae on underside of paramere similar to those of *Q. jaang* (Figs. 29, 35); internal sac without larger sclerotized structures.

*Female.* First four segments of front tarsus similar to those of male, but markedly less dilated, segment 2 slightly narrower than apex of tibia. Tergite 10 of genital segment entirely different from that of *Q. jaang*, both in shape and pigmentation (Figs. 30, 36).

Length 6.0–6.5 mm.

*Type material.* Holotype (male): China: “CHINA: N-Yunnan Nujiang Lisu Aut. Pr. Gongshan Co. Gaoligong Shan, valley at 3,000–3,050 m 27°47.90' N 98°30.19' E 21.VI.2005 A. Smetana [C 169]”. In the SMETANA collection, Ottawa, Canada. Allotype (female): China: “CHINA: Yunnan [Ch 07–22] Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 21 km W Gongshan, 3,320 m 27°47'08" N 98°27'39" E, moss, alder, bamboo, Rhodod. sifted, 6.VI.2007, M. Schülke”. In the SCHÜLKE collection, Berlin, Germany.

*Paratypes:* [Yunnan]: same data as holotype, 2 ♂♂, in the SMETANA collection; same data as allotype, 2 ♂♂, 3 ♀♀, in the SCHÜLKE and SMETANA collections; N-Yunnan [C2005–16] Nujiang Lisu Aut. Pref., Gongshan Co., Gaoligong Shan, sidevalley, 3,000–3,050 m 27°47.90' N, 98°30.19' E/conif. forest with *Rhododendron*, broad



leaved bushes, litter, moss, dead wood sifted along creek and snowfields, 21.VI.2005, M. SCHÜLKE [C2005–16], 1 ♂, 1 ♀, in the SCHÜLKE collection.

*Geographical distribution.* *Quedius jaangoides* is at present known only from the type locality in the Gaoligong Shan, a mountain range west of the Salween river near the Myanmar border.

*Bionomics.* The specimens of the original series were taken in a large clearing in a coniferous forest by sifting leaf litter, various debris, moss and dead wood under rhododendron and broadleaved bushes along creeks and snowfields. Specimens of *Q. goong* SMETANA, 2006, *Q. jaang*, *Q. kwang* SMETANA, 2006, *Q. pyn* SMETANA, 2006 and *Q. lanugo* were collected in the same habitats.

*Recognition and comments.* *Quedius jaangoides* is in all external characters very similar to *Q. jaang* and the sympatric species mentioned above; it can be positively distinguished from them only by the male and female sexual characters.

*Etymology.* The specific epithet is a noun in apposition, expressing the similarity of the new species to *Q. jaang*.

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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. 33. ツヤムネハネカクシ属 *Microsaurus* 亜属の 18. — *Microsaurus* 亜属のツヤムネハネカクシの 6 新種を中国甘肅省, 四川省および雲南省から記載し, 他の 1 種の雌を初めて記録した.

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