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

Part 31. Genus *Quedius* STEPHENS, 1829. Subgenus *Microsaurus* DEJEAN, 1833. Section 17

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Abstract Taxonomic and faunistic data on the species of the genus *Quedius* subgenus *Microsaurus*, from the People's Republic of China are provided. Four species are described as new: *Q. orestes* (Sichuan), *Q. hanno* (Sichuan), *Q. tyrrhus* (Sichuan), and *Q. zenon* (Sichuan). Male sexual characters, including the aedoeagus, are described and illustrated for the first time for *Quedius vafer* SMETANA, 1997 b. *Quedius tangi* ZHU, LI et HAYASHI, 2006 is transferred from the subgenus *Raphirus* STEPHENS, 1829 to the subgenus *Microsaurus* DEJEAN, 1833 of the genus *Quedius* STEPHENS, 1829, and it is suggested that the name *Q. tangi* may be a junior synonym of *Q. cingulatus* SMETANA, 2004. *Quedius ephialtes mianningius* ZHENG F. et ZHENG X., 2006 is placed in synonymy with *Q. ephialtes* SMETANA, 1997 a.

This is the thirty-first of a series of papers dealing with the Quediina of the People's Republic of China. Four new species are described: *Q. orestes* (Sichuan), *Q. hanno* (Sichuan), *Q. tyrrhus* (Sichuan), and *Q. zenon* (Sichuan). The previously unknown male sexual characters of *Quedius vafer* SMETANA, 1997 b are described and illustrated. *Quedius ephialtes mianningius* ZHENG F. et ZHENG X., 2006 is placed in synonymy with *Q. ephialtes* SMETANA, 1997 a. Many new records of already described species are presented. *Quedius antoni* SMETANA, 1995 b is recorded for the first time from Gansu.

The symbols used in the text, when referring to the depositions of specimens, are as follows:

ASC Collection of Aleš SMETANA, Ottawa, Canada
MSC Collection of Michael SCHÜLKE, Berlin, Germany
NMW Naturhistorisches Museum, Wien, Austria

Quedius (*Microsaurus*) *przewalskii* REITTER

Quedius przewalskii REITTER, 1887, 211.

New record. [Sichuan]: Xuecheng Sammo, 3500 m, 31°46.29′N 103°07.15′E, 1.

VII.2004, M. Janata, 1 ♂ (ASC).

Comments. This is the second record of this species from Sichuan.

Quedius (*Microsaurus*) *petilius* SMETANA

Quedius petilius SMETANA, 1995 a, 242.

New records. [Sichuan]: Minshan Mts. Baima pass, 3000 m, 5.–20.VII.2005, 1 ♀ (MSC); Zheduo Shankou W Kangding, 4200 m, 29.6. 1998, M. Janata leg., 1 ♀ (ASC).

Comments. These are the first records of this species since it was described from one female specimen taken near Zhangla. The species is known at present only from Sichuan and the male sex of the species is still unknown.

Quedius (*Microsaurus*) *moeris* SMETANA

Quedius moeris SMETANA, 1995 a, 241.

New records. [Sichuan]: Str. v. Zhangla n. Huanglong Westseite, 3450–3850 m I. A. Puchner 1.–7.VI.2006, 1 ♂ (NMW). [Qinghai]: Yunning SI (lamasery) 2890 m 36° 45.6′N 102° 10.6′E 16.VII.2005, J. Hájek, D. Král & J. Růžička leg., 1♂ (ASC).

Comments. The species is at present known from Qinghai and Sichuan.

Quedius (*Microsaurus*) *bito* SMETANA

Quedius bito SMETANA, 1996 a, 7.

New record. [Sichuan]: Xuecheng Sammo, 3500 m, 31° 46.29′N 103° 07.15′E, 1. VII.2004, M. Janata, 2 ♂♂, 2 ♀♀ (ASC); Jiajin Shan, 3400 m, 30° 22.45′N 102° 16.644′ E, 15.VI.2002, M. Janata, 1 ♂ (ASC).

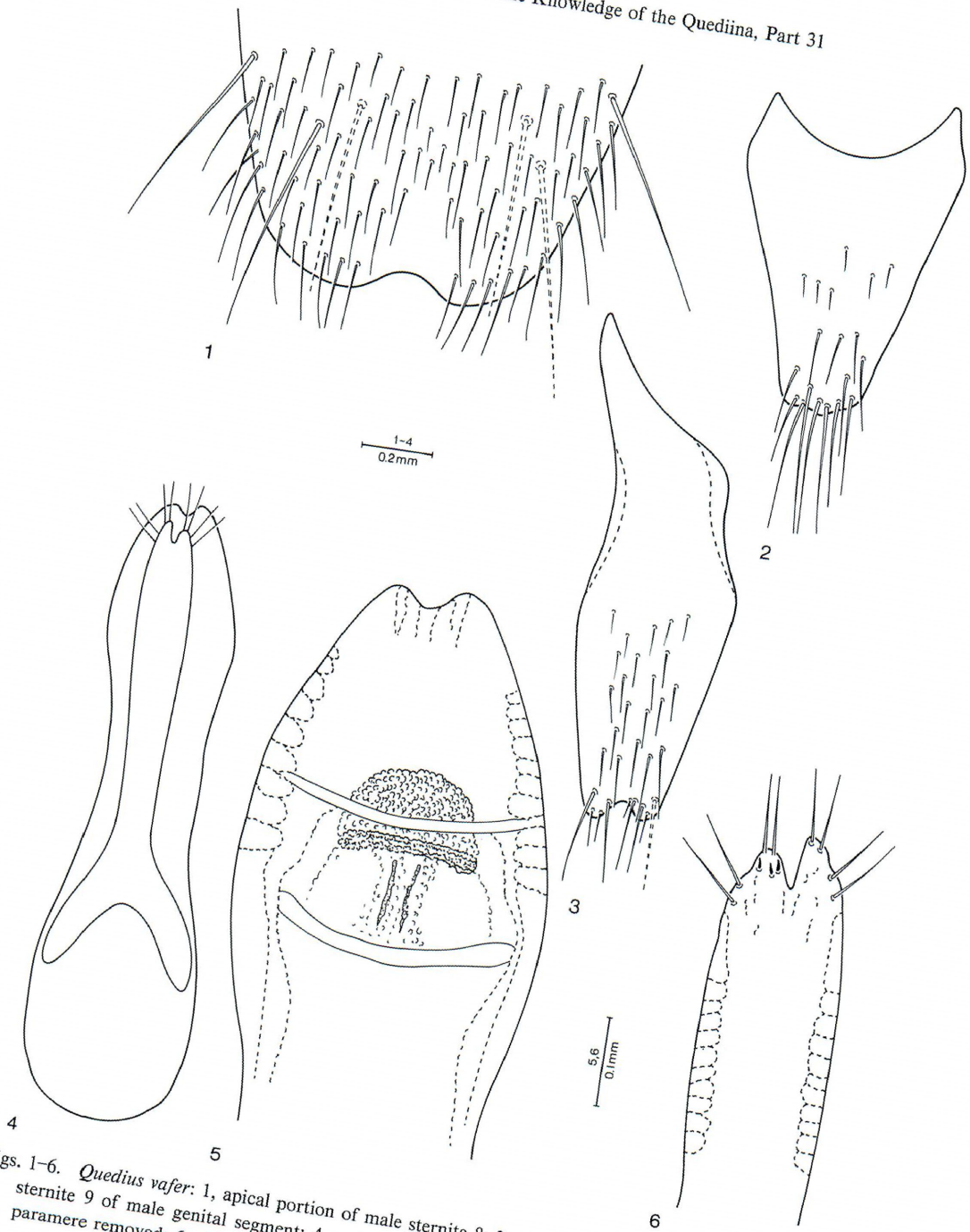
Comments. The species is at present known from Gansu, Sichuan, Yunnan, and Tibet.

Quedius (*Microsaurus*) *acco* SMETANA

Quedius acco SMETANA, 1996 a, 4.

New records. [Sichuan]: Str. zw. Danba u. Bamei, 40 km W Danba, 2460–2530 m, 27.VII.–6.VIII.2006 (No. 31–32), leg. A. Puchner, 2 ♂♂, 1 ♀ (ASC, NMW); W Zhier (Zi'er), 2.–3. VI.2006, 2866 m, 28° 22.29′N 101° 32.70′E, R. Sehnal & M. Tryzna, 1 ♂ (MSC); Ya'an Prefecture, Tianquan Co., W Erlang Shan Pass, 2780 m, 29° 51.27′N 102° 15.47′E, 29.VI.1999, leg. A. Pütz, 1 ♂ (APC).

Comments. The species is at present known from Gansu, Sichuan and Yunnan.



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

Quedius (*Microsaurus*) *chremes* SMETANA

Quedius chremes SMETANA, 1996 a, 10.

New records. [Hubei]: Dashennongjia mts., 31.5N 110.3E, 2500–3000 m, 21.–24. VI.2001, J. Turna leg., 1 ♀ (ASC). [Sichuan]: Str. v. Zhangla nach Pingwu, Umg. Huanglong National Park, 3100–3400 m, 2.–8.VI.2006, A. Puchner, 2 ♂♂, 4 ♀♀ (ASC, NMW); Minshan Mts. Mts. Baima pass, 3000 m, 5.–20.VII.2005, 1 ♀ (MSC); Ganzi Tibetian Auton. Pref. Yajiang Co., Shaluli Shan 32 km WNW Yajiang, 4300 m, 30°08.07′N 100°42.36′E, 4.VII.1999, leg. A. Pütz, 1 ♀ (APC).

Comments. The species is at present known from Gansu, Shaanxi and Sichuan.

Quedius (*Microsaurus*) *vafer* SMETANA

Quedius vafer SMETANA, 1997 b, 130.

New record. [Yunnan]: Dai Bali Auton. Pref., Diancang Shan W Dali 25°41′20″N 100°06′12″E 3160 m (small creek valley, litter and debris sifted) 27.V.2007, D. W. Wrase [02], 1 ♂ (MSC).

Comments. Only three females of the original series of this species were known until now. The description of the male follows:

M a l e. First four segments of front tarsus considerably dilated, each densely covered with modified pale setae ventrally, segment 2 markedly wider than apex of tibia (ratio 1.35); segment 4 narrower than preceding segments. Sternite 8 with three long setae on each side, with moderately wide and deep obtuse medioapical emargination, small triangular area before emargination flattened and smooth (Fig. 1). Genital segment with tergite 10 bearing several long setae at apical margin, otherwise sparsely setose (Fig. 2); sternite 9 with robust basal portion, broadly emarginate apically, with two differentiated long setae at each side of apical emargination (Fig. 3). Aedoeagus (Figs. 4–6) similar to that of *Q. bohemorum* SMETANA, 1997 c, but different in several details: paramere of different shape, more distinctly, deeply emarginate medioapically, apex of median lobe more distinctly emarginate medioapically, internal sac different (see figs. 23–25 in SMETANA, 1997 c).

Quedius (*Microsaurus*) *cavazzutii* SMETANA

Quedius cavazzutii SMETANA, 2004, 87.

New records. [Sichuan]: Str. v. Pingwu nach Nanping, Maoniu Shan, Nordseite, 3400–3450 m, 29.V.–5.VI.2006, I. A. Puchner, 5 ♂♂ (ASC, NMW); Minshan Mts. Mts. Baima pass, 3000 m, 5.–20.VII.2005, 3 ♂♂, 1 ♀ (ASC, MSC); Str. v. Pingwu nach Nanping, Umg. Beima Fenxigya, 1770 m, 29.V.–5.VI.2006, I. A. Puchner, 1 ♀ (NMW); betw Pingwu and Nanping, 2000 m, 10.VII.2004, V. Patrikeev, 1 ♀ (MSC).

Comments. The species was until now known only from the specimens of the

original series, taken in the pass between Pingwu and Nanping.

Quedius (*Microsaurus*) *kucerai* SMETANA

Quedius kucerai SMETANA, 1996 b, 126.

New record. [Yunnan]: NW Yunnan mts. E Zhongdian, 3400–3700 m, 5.–14.VI. 2006, S. Murzin & I. Shokhin, 1 ♂ (MSC).

Comments. This is the second record of this species since it was described. It is still known only from the mountains around Zhongdian in northern Yunnan.

Quedius (*Microsaurus*) *guey* SMETANA

Quedius guey SMETANA, 2001, 188.

New record. [Hubei]: Dashennongjia mts. 31.4N 110.3E, 2700 m, 20.V.–7.VI. 2005, J. Turna leg., 1 ♂ (ASC).

Comments. This is the second record of this species from Hubei. It is at present known from Hubei and Shaanxi.

Quedius (*Microsaurus*) *shuang* SMETANA

Quedius shuang SMETANA, 2004, 91.

New record. [Sichuan]: Str. v. Pingwu nach Nanping, Maoniu Shan, Nordseite, 3400–3450 m, 29. V.–5.VI.2006, I. A. Puchner, 1 ♂, 1 ♀ (ASC, NMW); Minshan Mts. Mts. Baima pass, 3000 m, 5.–20.VII.2005, 5 ♂♂ (ASC, MSC).

Comments. These are the first records of the species since it was described. It occurs in the Baima pass in the Minshan Mts. together with *Q. cavazzutii*, *Q. songpan* SMETANA, 1999 b, *Q. petilius*, and *Q. chremes*.

Quedius (*Microsaurus*) *euanderoides* SMETANA

Quedius euanderoides SMETANA, 2004, 101.

New record. [Yunnan]: Hengduan Shan-Yanmen, 3300 m, 28°00.484′N 90°50.201′ E, 15.6. 2005, M. Janata, 1 ♂ (ASC).

Comments. This is the second record of this species from an area close to the type locality.

Quedius (*Microsaurus*) *biann* SMETANA

Quedius biann SMETANA, 2006, 78.

New record. [Sichuan]: Ganzi Tibetian Autonon. Pref. Daxue Shan, Mugecuo,

upper lake, 3700 m, 30.09.18N 101.51.18E, 5.VII.1999, animal excrement sift, leg. A. Pütz, 1 ♂ (APC); same, 30.09.18N 101.51.16E, 27.VI.1999, 2 ♀♀ (APC, ASC).

Comments. The species was until now known only from the pass Zheduo Shankou west of Kangding. It seems that it may be more widely distributed at high elevations of Daxue Shan.

Quedius (*Microsaurus*) *goong* SMETANA

Quedius goong SMETANA, 2006, 79.

New records. [Yunnan]: Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 18 km W Gongshan, 3020 m, 27°47′54″N 98°30′13″E, 7.VI.2007, mixed forest, litter, moss, wood sifted [CH07–24], M. Schülke, 5 ♂♂, 4 ♀♀ (ASC, MSC); same, but D. W. Wrase [24], 1 ♂, 2 ♀♀ (ASC, MSC); Nujiang Lisu Aut. Pref., Gaoligong Shan, creek valley 20 km NW Liuku, 3000 m, 25°58′49″N 98°41′48″E, bamboo, shrubs, litter sifted, 9. VI.2007, M. Schülke [CH07–27], 1 ♂ (ASC).

Comments. Additional specimens from areas near the type locality of the species.

Quedius (*Microsaurus*) *jaang* SMETANA

Quedius jaang SMETANA, 2006, 83.

New record. [Yunnan]: Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 21 km W Gongshan, 3320 m, 27°47′03″N 98°27′39″E, moss, alder, bamboo Rhodod., sifted, 6. VI.2007 [CH 07–22], M. Schülke, 2 ♂♂ (ASDC, MSC); Nujiang Lisu Aut. Pref., Gaoligong Shan, valley 18 km W Gongshan, 3020 m, 27°47′54″N 98°30′13″E mixed forest, litter, moss, wood sifted, 7. VI. 2007 [CH07–24], M. Schülke, 1 ♀ (MSC); same, but D. W. Wrase [24], 1 ♂ (MSC).

Comments. Additional specimens from areas close to the type locality.

Quedius (*Microsaurus*) *yaoqi* SMETANA

Quedius yaoqi SMETANA, 1999 c, 542.

New record. [Sichuan]: 50 km W Dayi, Xiling Mts., 1400 m, 8.–11.V.2006, S. Murzin & I. Shokhin, 1 ♂ (MSC).

Comments. This is the second record of this species from Sichuan.

Quedius (*Microsaurus*) *songpan* SMETANA

Quedius songpan SMETANA, 1999 c, 547.

New record. [Sichuan]: Minshan mts., Baima pass, 3000 m, 5.–20.VII.2005, 1 ♂ (MSC); Str. v. Zhangla nach Pingwu, Umg. Huanglong National Park, 3100–3400 m, 2.–8.VI.2006, I. A. Puchner, 1 ♂, 2 ♀♀ (ASC, NMW).

Comments. Two additional localities of this species from northern Sichuan.

Quedius (*Microsaurus*) *echion* SMETANA

Quedius echion SMETANA, 1997 a, 65.

New records. [Gansu]: Gansu province. Dagcanglhamo (=Langmusi) env. 34°04.6–05.1N 102°37.7–38.1E (GPS) 3464–3644 m [Ch 5]/25.VI.2005, J. Hájek, D. Král & J. Růžička leg.; wet coniferous forest (Picea, Abies, Rhododendron) on N slope, 4 ♂♂, 5 ♀♀ (ASC, MSC). [Sichuan]: Li Xian, Miyaluo Nat. Res., Danzhamu valley, 3250 m, 31°23.902′N 103°14.827′E, 18.–22.V.2005, leg. R. Sehnal & M. Tryzna, 1 ♂ (MSC); Str. v. Zhangla nach Pingwu Umg. Huanglong National Park, 3100–3400 m, 2.–8.VI.2006, I. A. Puchner, 1 ♂ (NMW); Str. v. Jiuzhaigou n. Songpan, Gongangling-Pass, Nordseite, 2850–3480 m, 31.V.–7.VI.2006, I. A. Puchner, 2 ♂♂ (ASC, NMW).

Comments. The specimens from Dagcanglhamo come from near the type locality (SMETANA, 1997 a, 65) that was believed to be in Sichuan. Therefore, *Q. echion* is at present known from Gansu and from northern Sichuan.

Quedius (*Microsaurus*) *ephialtes mianningius* ZHENG F. et ZHENG X.

Quedius ephialtes mianningius ZHENG Fa-ke & ZHENG Xiao-Jiang, 2006, 20.

Comments. *Quedius ephialtes mianningius* was described based on 4 males bearing the following data: Sichuan: limekiln, Yele Nature Reserve, Mianning County, 101°59′–102°16′E–28°50′–29°00′N, 2900–3100 m, May 8–20, 1995, collected by Guo Jian".

I have not seen any specimens of the original series but, earlier, I received from Mr. ZHENG Fa-ke one male specimen with several labels in Chinese, one of them with the date "1995.V.20", one additional label "Mianning 7", and the determination label "*Q. ephialtes* SMETANA ZHENG". There is little doubt that the specimen comes from the same locality and was likely collected together with the specimens of the original series. *Quedius ephialtes* SMETANA, 1997 a is one of the commoner species widely distributed in Sichuan. It is therefore quite unlikely that the population in Yele Nature Reserve would be subspecifically different from specimens of other Sichuan provenience. And indeed, the above male specimen I was able to study, does not differ in any way from males of *Quedius ephialtes* of other provenience. Therefore, *Quedius mianningius* ZHENG Fa-ke & ZHENG Xiao-Jiang, 2006 becomes a junior objective synonym of *Quedius ephialtes* SMETANA, 1997 (**syn. nov.**).

It should be perhaps mentioned here that the character states of the aedoeagus may show some slight variability, just like most other character states. Therefore it is unrealistic to expect that the aedoeagus of every male specimen of certain species will match absolutely the published illustration. Similarly, every small difference in the setation of the sclerites of the male/female genital segments does not necessarily support establishment of a new taxon. A careful, complex evaluation of sets of characters, based

on experience, is needed for establishment of a new taxon.

Quedius (*Microsaurus*) *tangi* ZHU, LI et HAYASHI

Quedius tangi ZHU, LI & HAYASHI, 2006, 42.

Comments. *Quedius tangi* was described based on two males labeled: "Mt. Sejila, Xizang A. R., alt. 3,700 m, 5.VIII.2005, Liang Tang leg." The specimens are deposited in the Department of Biology, Shanghai Normal University, Shanghai.

The species was assigned by the authors to the subgenus *Raphirus* and compared to *Quedius* (*Raphirus*) *taruni* SMETANA, 1988 from the Nepal Himalaya. I have not seen the two specimens of the original series, but the description and the illustrations allow certain conclusions. Firstly, *Q. tangi* is not even remotely similar or related to *Q. taruni*, which is a single member of the distinctive *taruni* species-group characterized by several synapomorphies in the chaetotaxy of the head and pronotum (see SMETANA, 1988). Secondly, based mainly on the chaetotaxy of the head, *Q. tangi* is undoubtedly a member of the subgenus *Microsaurus* and belongs to the *euryalus*-group of species of that subgenus.

Within that group, it is likely identical with *Q. cingulatus* SMETANA, 2004, a species that is widely distributed from central Sichuan to northwestern Yunnan, including localities that are not far from Tibetan border (see SMETANA, 2006, 69). The occurrence of *Q. cingulatus* in Tibet is very likely.

ZHU, LI & HAYASHI (2006, 39) record three species of *Quedius* as occurring in Xizang (Tibet): *Quedius* (*Raphirus*) *kozlovi* BOHÁČ 1988, *Q.* (*Raphirus*) *tibetanus* BOHÁČ, 1988 and *Q.* (*Microsaurus*) *turnai* SMETANA, 1999 a, and add the new species *Q. grandipenis*. However, from the species listed, only *Q. turnai* and *Q. grandipenis* occur in Xizang. The remaining two species were 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 in "bassein Goluboy reki", i.e. in northern Sichuan. The same applies to the localities listed under the type material of *Q. tibetanus*, except for "Orin-Nur" (lake Ngoring-Hu), which is in Qinghai. *Quedius kozlovi* is therefore known at present only from northern Sichuan, and *Q. tibetanus* from northern Sichuan and Qinghai. ZHU, LI & HAYASHI (2006, 39) entirely missed several additional species recorded from Tibet: *Q. antoni* (SMETANA, 2006, 68), *Q. bito* (SMETANA, 1999 a, 215), *Q. ennius* SMETANA, 1996 (SMETANA, 2006, 65), *Q. farkaci* SMETANA 1997 c (SMETANA, 2001, 182), and *Q. przewalskii* REITTER, 1887 (SMETANA, 1999 b, 522).

Quedius (*Microsaurus*) *antoni* SMETANA

Quedius antoni SMETANA, 1995 b, 233.

New records. [Gansu]: Gansu province, Xiahe (=Labrang) env. 35°11.3′N 102°30.6′E 3043 m (GPS), 19.–22.VI.2005, J. Hájek, D, Král & J. Růžička leg. [Ch 2], 1 ♂ (MSC). [Sichuan]: Xuecheng Sammo, 3500 m, 31°46.29′N 103°07.15′E, 1.VII. 2004, M. Janata, 1 ♂, 1 ♀ (ASC).

Comments. This is the first record of this species from Gansu. The species is at present known from Gansu, Sichuan, Tibet and Yunnan.

Quedius (*Microsaurus*) *fonteius* SMETANA

Quedius fonteius SMETANA, 1995 b, 247.

New records. [Qinghai]: Yunning Si [lamasery] 2890 m 36°45.6′N 102°10.6′E 1.–2.VII.2005, J. Hájek, D. Král & J. Růžička leg., 4 ♂♂, 1 ♀ (ASC); same, but 1.–16.VII. 2005, 4 ♂♂, 5 ♀♀ (ASC, MSC).

Comments. Specimens collected 1.–2.VII.2005 bear the following collection data: "individually under stones, in excrements and on vegetation on the pasture, coniferous forest, and along the path to a village". Those collected 1.–16.VII.2005 bear the following collection data: "baited pitfall traps (fish meat) with ethylene glycol: wet coniferous forest, close valley above the village". Specimens from the pitfall traps are in bad shape, with appendages to various extent missing, etc., obviously due to the extended exposure to the ethylene glycol in the traps.

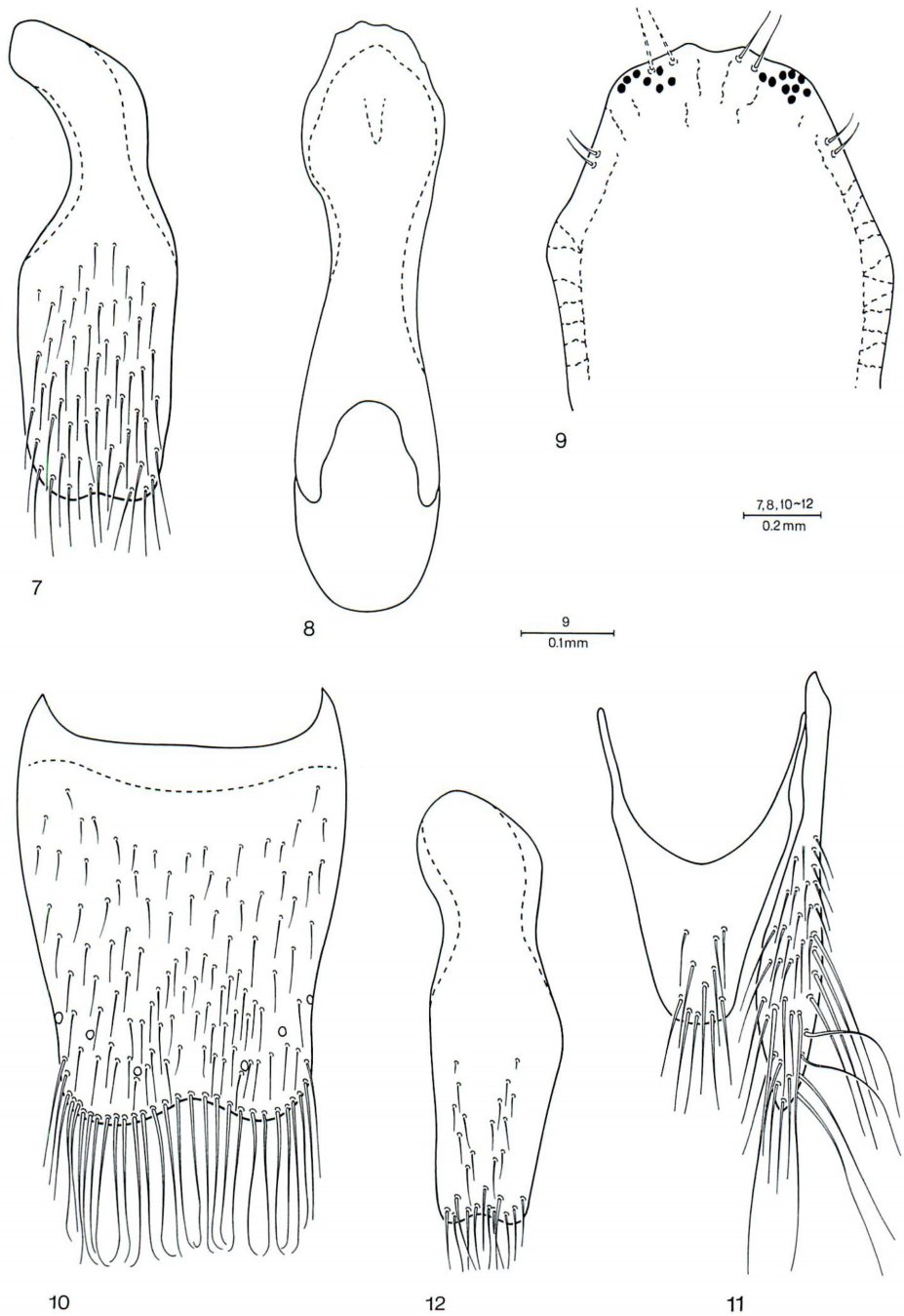
The additional puncture on the head between the posterior frontal puncture and the posterio-medial margin of the eye is present in all specimens but it is very small in some specimens, rarely there is another additional puncture present. The size of the specimens studied fluctuates between 6.8 mm and 8.5 mm.

Quedius (*Microsaurus*) *orestes* sp. nov.

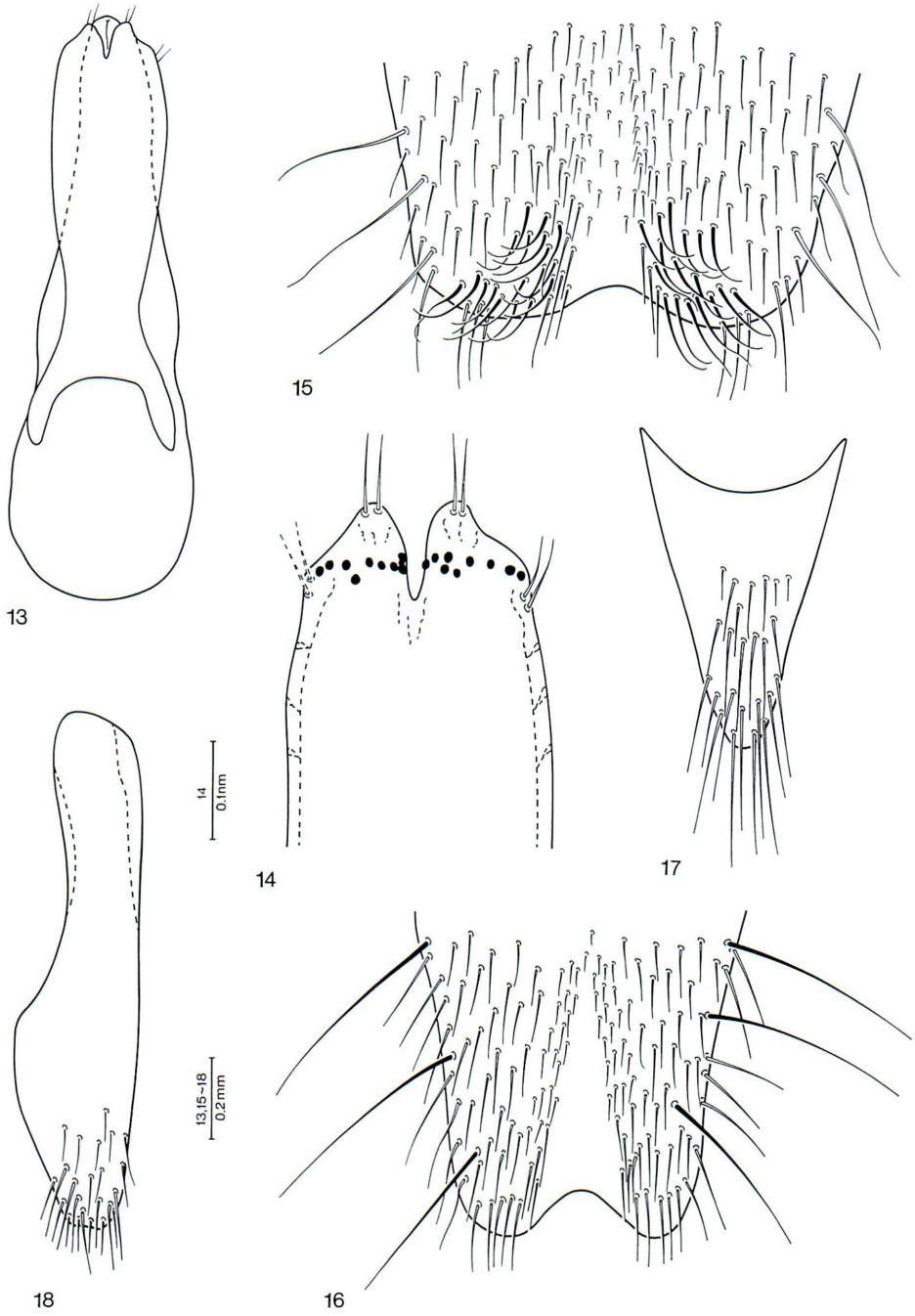
(Figs. 7–9)

Description. In all external characters similar to *Q. moeris* and different mainly by male sexual characters. Eyes smaller (ratio length of tempora/length of eyes=2.71, corresponding ratio in *Q. moeris*=2.11); antenna slightly longer, segments 4–6 somewhat longer than wide, outer segments about as long as wide (in *Q. moeris* segments 4–6 as long as wide, and outer segments mostly slightly wider than long).

M a l e. First four segments of front tarsus markedly dilated, slightly more so than those of *Q. moeris*, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 slightly wider than apex of tibia (ratio 1.16); segment 4 narrower than preceding segments. Sternite 8 probably with three large setae on each side (see Comments), apical margin with shallow and narrow, inconspicuous arcuate medioapical



Figs. 7–12. —— 7–9. *Quedius orestes*. 7, sternite 9 of male genital segment; 8, aedoeagus, ventral view; 9, apical portion of underside of paramere. —— 10–12. *Quedius hanno*: 10, apical portion of male sternite 8; 11, tergite 10 of male genital segment with stylus of tergite 9; 12, sternite 9 of male genital segment.



Figs. 13–18. —— 13, 14. *Quedius hanno*: 13, aedoeagus, ventral view; 14, apical portion of underside of paramere. —— 15–18. *Quedius tyrrhus*: 15, apical portion of male sternite 7; 16, apical portion of male sternite 8; 17, tergite 10 of male genital segment; 18, sternite 9 of male genital segment.

emargination, small triangular area before emargination somewhat flattened and smooth. Genital segment with sternite 9 with apical portion wide, almost parallel-sided, subtruncate apically (Fig. 7) (see Comments). Aedoeagus (Figs. 8, 9) large and robust, of quite characteristic shape; median lobe attenuate in middle portion, anteriorly markedly dilated into slightly asymmetrical, spoon-like apical portion, on face adjacent to paramere with acute medial carina far below apex of median lobe. Paramere large, covering almost entirely median lobe, widely attenuate at middle portion, anteriorly dilated into slightly asymmetrical apical portion of characteristic shape, with slightly trisinuate apex exceeding apex of median lobe; sensory peg setae on underside of paramere small, forming irregular group under each lateral angle of apical margin of paramere; two pairs of apical setae at apical margin and two slightly finer setae at each lateral margin below apex of paramere; internal sac simple, without larger sclerotized structures.

F e m a l e unknown.

Length 11.0 mm.

Type material. Holotype (male): CHINA: "CHINA. Prov. SICHUAN Str. v. Pingwu nach NANPING MAONIU SHAN, Nordseite 3400–3450 m I. A. PUCHNER 29.V.–5.VI. 2006". In the Naturhistorisches Museum, Wien, Austria.

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

Bionomics. Nothing is known about the collection circumstances of the specimen. It is assumed that it was taken from a pitfall trap but nothing is known about the habitat the trap was set in.

Recognition and comments. *Quedius orestes* differs from any other species of the *przewalskii*-group by the unique shape of the aedoeagus.

Abdominal sternite 8 is somewhat damaged lateroapically, and the setation is to great extent missing, but basal portions of three large setae are present on one side. Tergite 10 of the genital segment is damaged apically, due to the presence of *Laboulbeniomycetes* that are abundant also on apical portions of the styli of tergite 9. Sternite 9 of the genital segments is also bearing *Laboulbeniomycetes* at apical margin, but the shape of the apical margin is not affected.

It is assumed that damages to the setation of some body parts were caused by the rather prolonged exposure to the fluids of the pitfall trap.

Etymology. The specific epithet is the name of *Orestes, -is*, m, the son of *Agamemnon* and *Clytaemnestra*, in apposition.

Quedius (*Microsaurus*) *hanno* sp. nov.

(Figs. 10–14)

Description. Piceous-black with black head, elytral suture and apical margins of elytra narrowly paler, abdomen slightly iridescent; maxillary and labial palpi testaceous, antennae testaceobrunneous, first three segments partially slightly darkened, legs pi-

ceous-black with distinctly paler tarsi (but see Comments). Head of rounded quadrangular shape, wider than long (ratio 1.25), posterior angles entirely rounded, indistinct; eyes very large, moderately convex, tempora considerably shorter than eyes from above (ratio 0.42); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to posteriomedial margin of eye, separated from it by distance about equal to diameter of puncture, two punctures between it and posterior margin of head; temporal puncture touching posterior margin of eye, small additional puncture at posterior margin of eye between it and posterior frontal puncture; tempora with a few fine setiferous punctures; surface of head with very fine and dense microsculpture of transverse and oblique waves. Antenna moderately long, segment 3 somewhat longer than segment 2 (ratio 1.19), segments 4–7 longer than wide, gradually becoming shorter, outer segments about as long as wide, last segment about as long as two preceding segments combined. Pronotum as long as wide, widest at about posterior fourth, distinctly narrowed anteriad, with lateral margins continuously arcuate with broadly rounded base, transversely convex, lateral portions not explanate; dorsal rows each with three fine punctures; sublateral rows each with three punctures, posterior puncture situated behind level of large lateral puncture; microsculpture similar to that on head but slightly finer and denser. Scutellum impunctate, with dense, extremely fine microsculpture of transverse waves. Elytra relatively long, at base markedly narrower than pronotum at widest point, scarcely widened posteriad, at suture vaguely shorter (ratio 0.90), at sides somewhat longer (ratio 1.10) than pronotum at midline; punctation fine, slightly asperate, moderately dense, transverse interspaces between punctures mostly 2–3 times larger than diameters of punctures; pubescence piceous; surface between punctures without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) with fine whitish apical seam of palisade fringe; second tergite (in front of first visible tergite) with very fine punctures along posterior margin; punctation of tergites similar to that on elytra, but slightly finer, evenly covering each tergite; pubescence piceous; surface between punctures with excessively fine and dense microsculpture of transverse striae.

M a l e (see Comments). Sternite 8 apparently with three long setae on each side (only insertion points apparent, see Fig. 10), with moderately wide and deep obtuse medioapical emargination, small triangular area before emargination flattened and smooth; entire apical margin of sternite, including medioapical emargination, bearing densely set, extremely long setae (Fig. 10). Genital segment with tergite 10 of characteristic shape, sparsely setose (Fig. 11); styli of tergite 9 robust, copiously setose (Fig. 11); sternite 9 short and wide, with very large basal portion, broadly emarginate apically (Fig. 12) (see Comments). Aedoeagus (Figs. 13, 14) relatively short and wide; median lobe shaped as in Fig. 13, apex broadly arcuate, with distinct medioapical longitudinal carina on face adjacent to paramere. Paramere markedly constricted in basal third, then widened into large and wide anterior portion entirely covering median lobe, with apex bilobed, lobes separated medially by deep and narrow emargination accommodating medioapical longitudinal carina of median lobe; apex of paramere not

quite reaching apex of median lobe; sensory peg setae on underside of paramere forming transverse row on each side of medioapical emargination; two fine setae on top of each apical lobe and two similar setae on each lateral margin just below apex of paramere. Internal sac simple, without larger sclerotized structures.

F e m a l e. Not known.

Length 7.5 mm.

Type material. Holotype: China: "**CHINA**, Prov. SICHUAN Str. v. PINGWU nach NANPING MAONIU SHAN, Nordseite 2900–3000 m I. A. PUCHNER 29.V.–5. VI. 2006". In the Naturhistorisches Museum, Wien, Austria.

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

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

Recognition and comments. The holotype is seriously damaged by entirely missing both front legs, left middle leg and last two segments of left hind tarsus. Also, the pubescence of various body parts, including sternite 8, and sternite 9 of the genital segment, is to various extent damaged (Fig. 12 of the latter shows only the present setae, undisturbed setation is possibly more copious). The damages were undoubtedly caused by the prolonged exposure to the fluids of the pitfall trap.

To make the highly differentiated secondary male characters of this species available, I decided to describe it despite the severe damages to the holotype described above. The character state of the presence of the densely set, extremely long setae on apical margin of male sternite 8 is unique in that the setae are present also in the medioapical emargination of the sternite. The males of *Q. echion* and *Q. guey* bear similar, although not equally long, setae at apical margin of sternite 8, but the setae are missing in the medioapical emargination. The robust, copiously setose styli of tergite 9 of the male of *Q. hanno* are also unique.

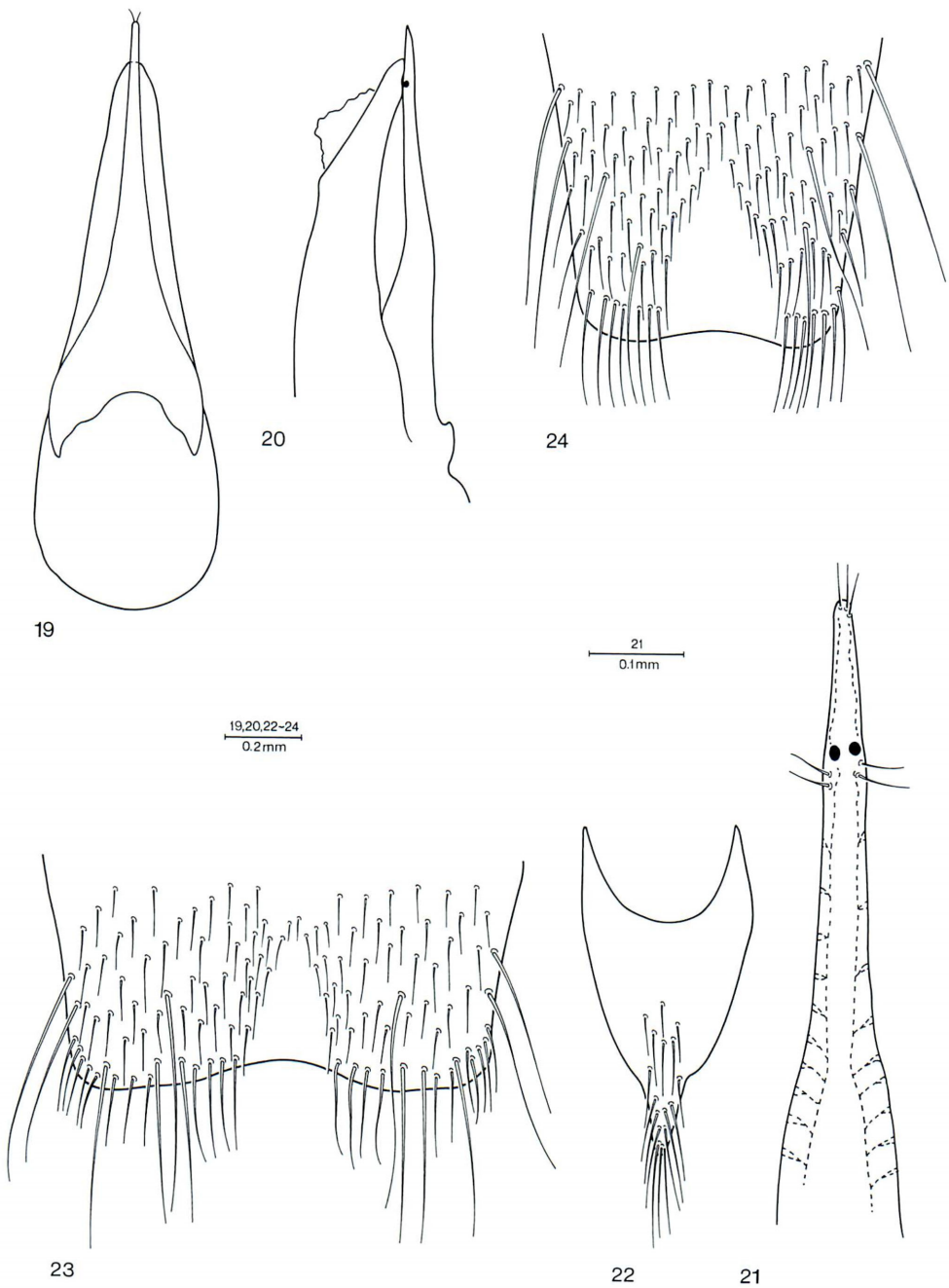
Etymology. The specific epithet is the name of *Hanno*, *-onis*, m, the general of the Carthaginians, who about the year 500 B. C. navigated the western coast of Africa, in apposition.

Quedius (*Microsaurus*) *tyrrhus* sp. nov.

(Figs. 15–22)

Description. In all characters, including chaetotaxy of head and pronotum, very similar to *Q. zheduo*, but different as follows: head somewhat larger, slightly more distinctly wider than long (ratio 1.22), eyes larger, tempora more conspicuously shorter than eyes from above (ratio 0.35). Antenna longer, segments 4–7 longer than wide, gradually becoming shorter, outer segments as long as wide.

M a l e. First four segments of front tarsus considerably dilated, slightly more so than those of *Q. zheduo*, each densely covered with modified pale setae ventrally; segment 2 markedly wider than apex of tibia (ratio 1.35); segment 4 narrower than



Figs. 19–24. —— 19–22. *Quedius tyrrhus*: 19, aedoeagus, ventral view; 20, apical portion of aedoeagus, lateral view; 21, apical portion of underside of paramere; 22, tergite 10 of female genital segment. —— 23, 24. *Quedius zenon*: 23, apical portion of male sternite 7; 24, apical portion of male sternite 8.

preceding segments. Sternite 6 with inconspicuous, wide medioapical emargination, with several long, black setae in and in front of emargination; sternite 7 with moderately wide and shallow, arcuate medioapical emargination, rather large area before emargination depressed and smooth, bordered on each side by numerous, very long black setae (Fig. 15); sternite 8 with three very long black setae on each side, with wide and deep, obtusely triangular medioapical emargination, large, elongate triangular area before emargination flattened and smooth (Fig. 16). Genital segment with tergite 10 narrow, elongate, with narrowly arcuate apex, setose as in Fig. 17; sternite 9 of characteristic shape, sparingly setose (Fig. 18). Aedoeagus (Figs. 19–21) rather large, with voluminous basal bulbus; median lobe evenly narrowed into subacute apex. Paramere of quite characteristic shape, with middle and apical portions conspicuously narrow, rod-like, with apex considerably exceeding apex of median lobe; three minute setae at apex and two setae at each lateral margin just below sensory peg setae; underside of paramere with two peg setae, situated quite a distance below apex of paramere. Internal sac without larger sclerotized structures.

F e m a l e. First four segments of front tarsus similar to those of male, but considerably less dilated; segment 2 about as wide as apex of tibia. Genital segment with tergite 10 relatively narrow, considerably narrowed into slightly differentiated apical portion with acute apex, sparingly setose, as in Fig. 22.

Length 5.8–6.5 mm.

Type material. Holotype (male) and allotype (female): China: "**CHINA**, Prov. SICHUAN Str. v. ZHANGLA nach PINGWU Umg. HUANGLONG National Park, 3100–3400 m I. A. PUCHNER 2.–8.VI.2006". Holotype in the Naturhistorisches Museum, Wien, Austria; allotype in the SMETANA collection, Ottawa, Canada.

Paratypes: China: [Sichuan]: same data as holotype, 7 ♂♂, 3 ♀♀ (ASC, NMW).

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

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

Recognition and comments. *Quedius tyrrhus* belongs to a lineage within the *euryalus* species-group, containing *Q. fabrii* SMETANA, 2006, *Q. janatai* SMETANA, 2004, *Q. terng* SMETANA, 2006, *Q. tronqueti* SMETANA, 1999 a and *Q. zheduo*. All above species, except *Q. zheduo*, differ from *Q. tyrrhus,* in addition to the differently shaped aedoeagus, by the simple, not modified male sternite 7. *Quedius zheduo* differs by the different modification of the male sternite 7 (see fig. 43 in SMETANA, 1999 a), and by the differently shaped tergite 10 of the female genital segment (see fig. 51 in SMETANA, 1999 a). See also Comments under the following species *Q. zenon.*

The allotype is missing right hind leg. Most paratypes are missing various appendages, particularly the antennae (entirely or partially).

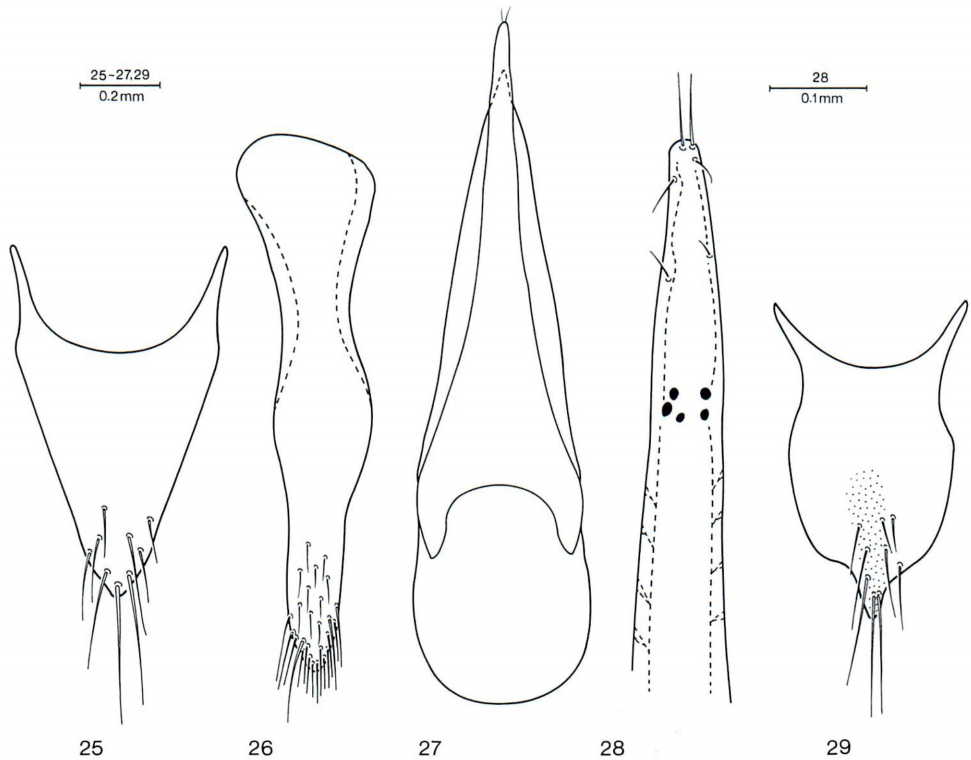
Etymology. The specific epithet is the name of *Tyrrhus*, *-i*, m, the shepherd of King *Latinus*, in apposition.

Quedius (*Microsaurus*) *zenon* sp. nov.

(Figs. 23–29)

Description. In all characters very similar to *Q. tyrrhus* and different only by both male and female sexual characters.

M a l e. First four segments of front tarsus markedly dilated, slightly less so than those of *Q. tyrrhus*, 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 6 not modified; sternite 7 with moderately wide, shallow, rounded medioapical emargination, small area before emargination flattened and smooth, conspicuous black setae at each side of flattened area absent (Fig. 23); sternite 8 with four long setae on each side, with inconspicuous arcuate medioapical emargination, large triangular area before emargination flattened and smooth (Fig. 24). Genital segment with tergite 10 similar to that of *Q. tyrrhus*, but shorter and distinctly less setose (Fig. 25); sternite 9 elongate, of characteristic shape, sparingly setose (Fig. 26). Aedoeagus (Figs. 27, 28) similar to that of *Q. tyrrhus*, but median lobe anteriorly rather abruptly narrowed into



Figs. 25–29. *Quedius zenon*: 25, tergite 10 of male genital segment; 26, sternite 9 of male genital segment; 27, aedoeagus, ventral view; 28, apical portion of underside of paramere; 29, tergite 10 of female genital segment.

acute apex. Paramere similar to that of *Q. tyrrhus*, but wider; two fine setae at apex, two minute setae at each lateral margin below apex; underside of paramere with five to seven peg setae of different size, situated quite a distance below apex of paramere. Internal sac without larger sclerotized structures.

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 of characteristic shape, with differentiated apical portion, pigmented medioapically, sparingly setose, as in Fig. 29.

Length 6.0–6.5 mm.

Type material. Holotype (male): China: "CHINA Sichuan Xuecheng Sammo 3500 m 31°46.29′N 103°07.15′E 1.VII.2004 M. Janata". In the SMETANA collection, Ottawa, Canada. Allotype (female): China: "CHINA: N-Sichuan Pass betw. Songpan & Nanping, E side, 3450–3500 m, 21.VI.2002, leg. S. Murzin & I. Shokhin". In the SCHÜLKE collection, Berlin.

Paratype: China: [Sichuan]: same data as allotype, 1 ♂ (ASC).

Geographical distribution. Quedius zenon is at present known from two localities in northern Sichuan.

Bionomics. Nothing is known about the collecting circumstances of the specimens of the original series.

Recognition and comments. Quedius zenon belongs to the same lineage of species mentioned under *Q. tyrrhus*. It is closest to the two species with modified male sternite 7 (*Q. zheduo* and *Q. tyrrhus*), but differs from both by both the male and female sexual characters.

The holotype is missing the right hind leg and the last two segments of the middle left tarsus.

Etymology. The specific epithet is the name of *Zenon*, *-onis*, m, the Epicurean philosopher, the teacher of *Cicero* and *Atticus*, in apposition.

要　　約

A. SMETANA: 中国産ツヤムネハネカクシ亜属に関する知見. 31. ツヤムネハネカクシ属 *Microsaurus* 亜属の 17. —— *Microsaurus* 亜属のツヤムネハネカクシの 4 新種を中国四川省の北東部から記載し，1 種の所属亜属を変更し，また，雌のみが知られていた 1 種の雄を初めて記載し，ほかの多くの種について新しい産地を記録した.

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——— 1997 a. Ditto. Part 6. *Microsaurus* DEJEAN, 1833. Section 5. *Ibid.*, (A), **23**: 51–68.

——— 1997 b. Ditto. Part 8. Quediini collected by S. UÉNO and Y. WATANABE in Yunnan. *Elytra, Tokyo*, **25**: 129–134.

——— 1997 c. Ditto. Part 9. *Microsaurus* DEJEAN, 1833. Section 7. *Ibid.*, **25**: 451–473.

——— 1999 a. Ditto. Part 13. *Microsaurus* DEJEAN, 1833. Section 8. *Ibid.*, **27**: 213–240.

——— 1999 b. Ditto. Part 15. *Microsaurus* DEJEAN, 1833. Section 9. *Ibid.*, **27**: 519–534.

——— 1999 c. Ditto. Part 16. *Microsaurus* DEJEAN, 1833. Section 10. *Ibid.*, **27**: 535–551.

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Correction

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In my paper, published recently in this journal (SMETANA, 2008), an inadvertent error happened when citing the type material of *Quedius bann* by not providing the depository of the holotype, which technically makes this name unavailable according to the current Code (Art. 16.4.2). To remedy this shortcoming, the proper version of the listing of the holotype of *Quedius* (*Raphirus*) *bann* is presented below:

Type material. Holotype (male): China: "CHINA: W Sichuan, Pass Zheduo Shankou W Kangding, W slope, 4000 m, 29°58′N101°47′E, 17.VII.1998, A. Smetana [C84]" / "1998 China Expedition J. Farkač, D. Král, J. Schneider & A. Smetana". In the SMETANA collection, Ottawa, Canada.

Reference

SMETANA, A., 2008. Contributions to the knowledge of the Quediina (Coleoptera, Staphylinidae, Staphylinini) of China. Part 29. Genus *Quedius* STEPHENS, 1829. Subgenus *Raphirus* STEPHENS, 1829. Section 6. *Elytra*, *Tokyo*, **36**: 181–198.