

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

Part 1. Some Species of the Genus *Quedius*  
STEPHENS, 1829, Subgenus *Microsaurus*  
DEJEAN, 1833

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**Abstract** Taxonomic, faunistic and bionomic data on the species of the genus *Quedius*, subgenus *Microsaurus*, from the People's Republic of China are provided. Several species are described as new: *Q. lamus* (Sichuan), *Q. moeris* (Quinhai), *Q. petilius* (Sichuan). *Quedius kiangsiensis* BERNHAUER, 1916 is redescribed and illustrated and some sexual characters of *Q. inquietus* (CHAMPION, 1925) are described and illustrated. *Quedius inquietus* is for the first time recorded from China (Sichuan).

### Introduction

Some time ago, when I published the revision of the Quediina and Atanygnathina of the Himalayan region (SMETANA, 1988), I pointed out that many of the Himalayan species show distinct relationships to the species known from the mountainous areas of western China, particularly of Sichuan and northern Yunnan. I also commented that our knowledge of the presumably rich fauna of these areas is unfortunately only fragmentary.

Thanks to the frequent collecting in recent years, quite interesting material became available for study from these areas. Needless to say that this material finally gave us the opportunity to confirm the richness of the fauna and its importance for our understanding of the origins of the fauna of eastern Asia.

It is my intention to publish the results of the study of this material, and of some older material, such as that collected by KLAPPERICH just after the Second World War, in an open series of papers, to make the names of the numerous species available for further studies; a key to their identification will eventually be made available. This paper is the first one of the series.

### *Quedius (Microsaurus) inquietus* (CHAMPION)

(Figs. 1–3)

*Velleius inquietus* CHAMPION, 1925, 107; CAMERON, 1932, 279.

*Quedius leptocephalus* COIFFAIT, 1982, 276.

*Quedius inquietus*: SMETANA, 1988, 189.

*New record.* China: W Sichuan, Gonggashan–Hailuogou, 2,900–3,200 m, 3~6-VII–94, D. KRÁL & J. FARKAC (ASCC) 1.

*Comments.* New record for China. The species was until recently known only from the Himalaya (from Uttar Pradesh eastward through Nepal to West Bengal, see SMETANA, 1988, 190).

The Sichuan male specimen agrees in most external characters with those from the Himalaya, but it differs in some characters on the paramere of the aedoeagus. The apical portion of the paramere is more symmetrical, more pointed apically, with three (instead of two) sensory peg setae at each lateral margin of the underside (see Fig. 1 and Figs. 2 and 5 in SMETANA, 1988, 391). Since only very few specimens (particularly males) of this species are known at present, it is impossible to evaluate the taxonomic significance of the differences in the development of the paramere. It is therefore assumed that the differences fall within the intraspecific variability of the species. Male genital segment (not yet described) with tergite 10 fairly wide, broadly rounded apically, with numerous unequally long setae at and near apical margin (Fig. 2); sternite 9 subarcuately emarginate apically, with numerous long and short setae at apical margin (Fig. 3).

### *Quedius (Microsaurus) kiangsiensis* BERNHAUER

(Figs. 4–10)

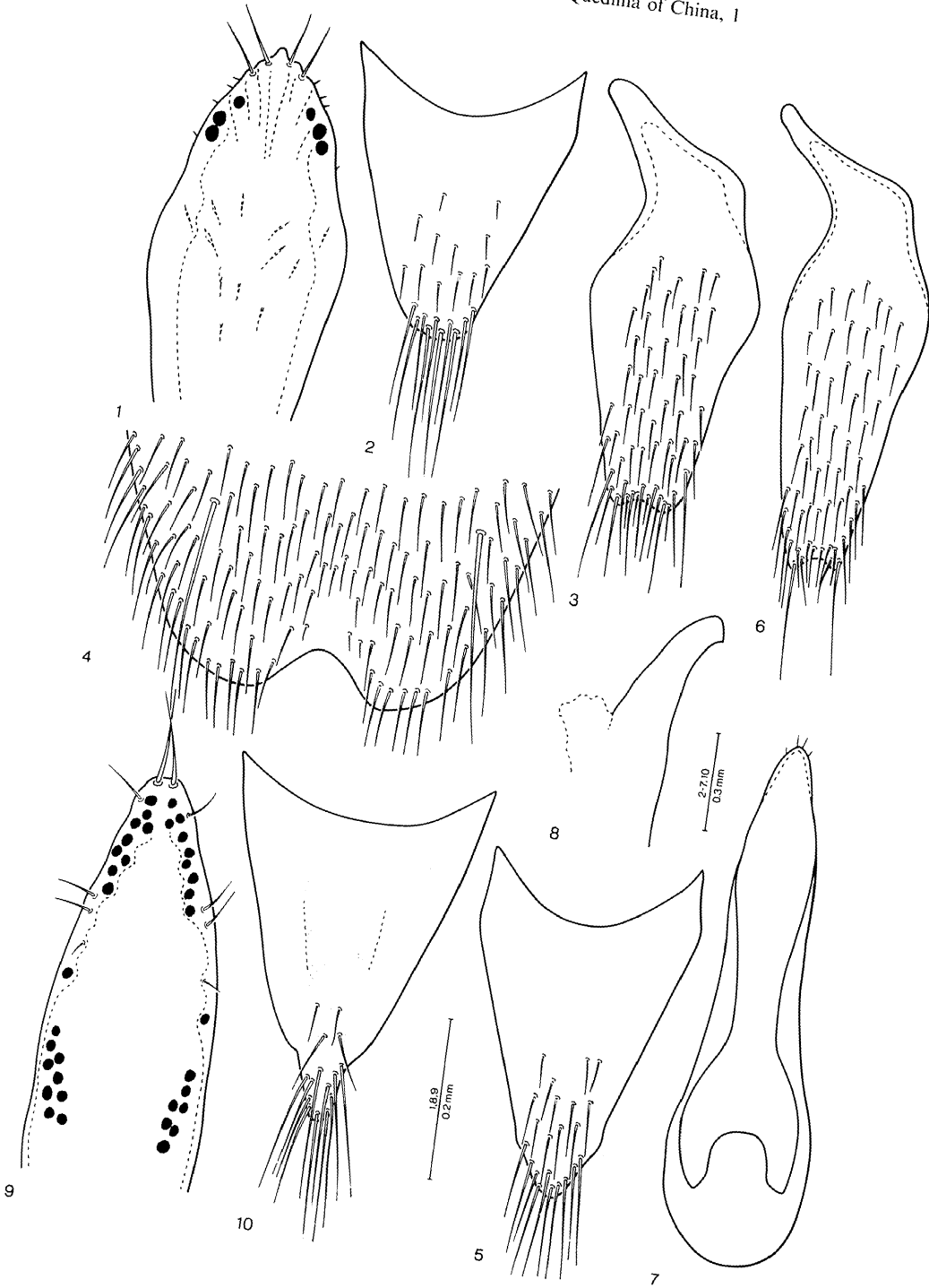
*Quedius simulans* v. *kiangsiensis* BERNHAUER, 1916, 32.

*Quedius kiangsiensis*: GRIDELLI, 1924, 28.

*Description.* Piceous-black to black, elytra occasionally somewhat paler with narrowly, vaguely paler suture; head and pronotum feebly, abdomen more distinctly iridescent; maxillary, labial palpi and antennae piceous to dark brunneous, legs piceo-brunneous, medial faces of front tibiae slightly, those of middle and hind tibiae extensively blackened. Head of rounded quadrangular shape, slightly wider than long (ratio 1.13), almost parallel-sided behind eyes, posterior angles rounded, indistinct; eyes moderately large and convex; tempora slightly longer than eyes seen from above (ratio 1.15); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated distinctly closer to postero-medial margin of eye than to posterior margin of head; two punctures between it and posterior margin of head; temporal puncture situated distinctly closer to posterior margin of head than to posterior margin of eye; tempora with some fine punctures; surface of head with

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Figs. 1–10. — 1–3. *Quedius inquietus*: 1, apical portion of underside of paramere with sensory peg setae; 2, tergite 10 of male genital segment; 3, sternite 9 of male genital segment. — 4–10. *Q. kiangsiensis*: 4, apical portion of male sternite 8; 5, tergite 10 of male genital segment; 6, sternite 9 of male genital segment; 7, aedoeagus, ventral view; 8, apical portion of median lobe, lateral view; 9, apical portion of underside of paramere; 10, tergite 10 of female genital segment.



extremely dense and fine microsculpture of transverse waves, with scattered, inconspicuous micropunctulation. Antenna short and robust, distinctly incrassate toward apex; segment 3 longer than segment 2, segments 4–10 distinctly transverse, gradually becoming slightly asymmetrical, with medial portion more extended, last segment slightly shorter than two preceding segments combined. Pronotum wider than long (ratio 1.19), widest at about basal fourth, broadly rounded basally, distinctly narrowed anteriorly, transversely convex, lateral portions slightly explanate, particularly posteriorly; dorsal rows each with three fine punctures, sublateral rows each with two punctures, posterior puncture situated before level of large lateral puncture; microsculpture on pronotum similar to that on head, but still somewhat finer and denser. Scutellum punctate and pubescent on apical half, with extremely fine microsculpture of rudimentary striae. Elytra moderately long, at base narrower than pronotum at widest point, only vaguely widened posteriorly, at suture vaguely longer (ratio 1.06), at sides distinctly longer (ratio 1.28) than pronotum at midline; punctation and pubescence dense and fine, transverse interspaces between punctures mostly about 1.5 as large as diameters of punctures; pubescence piceous; surface between punctures 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 similar to those on elytra, but somewhat less dense, almost evenly covering surface of tergites, in general becoming slightly sparser toward apex of abdomen; pubescence piceous; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

**Male.** First four segments of front tarsus markedly dilated, sub-bilobed, each covered with modified pale setae ventrally; segment two about as wide as apex of tibia; segment four narrower than preceding segments. Sternite 8 with one large seta at each side; with moderately wide, fairly deep, subarcuate medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 4). Genital segment with tergite 10 narrow, markedly narrowed toward subacute apex, with numerous unequally long setae at apical margin and with numerous, shorter setae on apical portion (Fig. 5); sternite 9 with narrow basal portion, apical portion rather elongate, narrowed toward distinctly emarginate apex, with one strong apical seta at each side of apical emargination (Fig. 6). Aedoeagus (Figs. 7–9) elongate and narrow; median lobe with apical portion evenly narrowed into acute apex, with rudimentary apical tooth on face adjacent to paramere. Paramere elongate, apical portion lanzet-shaped, almost entirely covering apical portion of median lobe, with subacute apex reaching apex of median lobe; two moderately long setae at apex, one smaller seta just below apex and two similar setae considerably below apex at each side; sensory peg setae on underside of paramere situated quite characteristically, forming two latero-apical groups connected below apex and two latero-basal groups, with one peg seta at each side between them; internal sac without larger sclerotized structures.

**Female.** First four segments of front tarsus not appreciably different from

those of male. Genital segment with tergite 10 of characteristic shape, abruptly narrowed into stylus-like, obtuse apical portion, with medial portion distinctly pigmented, pigmented portion delimited at each side by longitudinal carina, stylus-like apical portion with numerous long setae (Fig. 10).

Length 8.5–9.0 mm.

*Type material.* BERNHAUER (1916, 32) described this species from one male specimen from Kiangsi. The holotype, deposited now at the Field Museum of Natural History, Chicago, Illinois, was studied by GRIDELLI (1924, 29).

*Geographical distribution.* *Quedius kiangsiensis* is at present known from the province of Fujian.

*New records.* China: Fujian: "Kuatun (2300 m) 27,40 n.Br. 117,40 ö.L. J. Klapperich 31.5.1938 (Fukien)" (NHMW) 3; "KUATUN FUKIEN China 21.5.46 (TSCHUNG SEN.)" (ASCC) 1.

*Bionomics.* Nothing is known about the habitat requirements of this species.

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

(Figs. 11–15)

*Description.* Dark brownish with piceous head, elytra and apical margins of abdominal tergites somewhat paler; lateral portions of pronotum and abdominal tergites markedly iridescent, dorsal side of all tarsal segments and all tibiae slightly iridescent; maxillary and labial palpi testaceous, antennae and legs brown, medial faces of hind tibiae darkened. Head of rounded quadrangular shape, about as long as wide, slightly rounded behind eyes, posterior angles entirely obsolete, indistinct; eyes small and flat, not protruding from lateral contours of head; tempora considerably longer than eyes seen from above (ratio 2.40); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture and temporal puncture both situated about midway between posterior margin of eye and posterior margin of head, two fine punctures between posterior frontal puncture and posterior margin of head; tempora with numerous very fine punctures; surface of head with very fine and dense microsculpture of transverse striae, with intermixed micropunctulation. Antenna moderately long, segment 3 distinctly longer than segment 2, segments 4–7 about as long as wide, segments 8–10 slightly transverse, last segment about as long as two preceding segments combined. Pronotum vaguely wider than long (ratio 1.09), basal margin continuously rounded with lateral margins, lateral portions vaguely explanate posteriorly, lateral margins distinctly, evenly arcuately narrowed anteriorly; left dorsal row with three fine punctures with first two punctures close together near anterior margin of pronotum, right dorsal row with only one puncture; sublateral rows each with just one puncture situated close to anterior margin of pronotum; surface of pronotum with microsculpture similar to that of head but striae oriented obliquely anteriorly and becoming distinctly finer toward lateral margins, micropunctulation less noticeable. Scutellum impunctate, surface with extremely fine and dense

microsculpture of transverse striae. Elytra rather short, at base markedly narrower than pronotum at widest point, hardly widened posteriad, at suture distinctly (ratio 0.75), at sides somewhat (ratio 0.87) shorter than pronotum at midline; punctation very fine and dense, slightly asperate, transverse interspaces between punctures mostly as large as diameters of punctures, some punctures actually almost touching; pubescence fine, brownish, decumbent; surface between punctures without microsculpture. Wings reduced to small, non-functional stumps. Abdomen with tergite 7 (fifth visible) lacking whitish apical seam of palisade setae; punctation and pubescence similar to that of elytra, but punctation finer and appreciably sparser, becoming slightly sparser toward apex of each tergite and in general toward apex of abdomen.

**Male.** First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment two about as wide as apex of tibia; segment four narrower than preceding segments. Sternite 8 with two large setae on each side, apical margin with shallow and narrow, inconspicuous medio-apical emargination, small triangular area before emargination slightly flattened and smooth (Fig. 11). Genital segment with tergite 10 broadly triangular, markedly narrowed toward subtruncate apex, with numerous variably long setae at apical margin and on apical portion (Fig. 12); sternite 9 fairly wide and short, without larger setae, with apical margin arcuately emarginate (Fig. 13). Aedoeagus (Figs. 14, 15) rather narrow, elongate, with median lobe slightly asymmetrical; median lobe narrowed into subacute apex, with face adjacent to paramere distinctly impressed before apex and with distinct apical tooth. Paramere elongate, narrow, in general evenly narrowed toward narrowly subtruncate apex, not quite reaching apex of median lobe; sensory peg setae on underside of paramere arranged into two apico-lateral, irregular groups of six or seven setae; four apical setae and two similar setae at each lateral margin below apex; internal sac simple, without larger sclerotized structures.

Female unknown.

Length 9.7 mm.

**Type material.** Holotype (male): CHINA: "China, N Sichuan prov. 60 km S of HONGYUAN 27.–29.6.1991, ca 4200 m J. Kaláb leg.". In the collection A. SMETANA, Ottawa, Canada.

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

**Bionomics.** Nothing is known about the collection circumstances of this specimen.

**Recognition and comparisons.** *Quedius lamus* may be fairly easily recognized, in addition to the sexual characters, by the combination of the following characters: the coloration, including the markedly iridescent lateral portions of the pronotum and the abdominal tergites, the very small eyes, the position of the posterior frontal and temporal punctures on the head, the short and densely punctuate elytra, and the absence of the whitish apical fringe of palisade setae at the apex of the abdominal tergite 7 (fifth visible). It only can be confused with *Q. moeris*; see under the latter

species for the distinguishing characters.

*Etymology.* The specific name is that of *Lamus*, -i, m., the founder of Formiae.

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

(Figs. 16–20)

*Description.* In all characters very similar to *Q. lamus*, but different as follows: form more robust, size slightly larger. Head less broadly rounded behind eyes, larger and slightly wider than long (ratio 1.10); posterior frontal puncture situated slightly closer to postero-medial margin of eye than to posterior margin of head, temporal puncture situated slightly closer to posterior margin of head than to posterior margin of eye. Antenna more robust, outer segments as long as wide. Pronotum more voluminous, vaguely wider than long (ratio 1.10); lateral portions more distinctly explanate posteriorly, lateral margins somewhat flattened in front of basal margin; left dorsal row with three, right dorsal row with two fine punctures; microsculpture somewhat finer and denser. Elytra both at suture and at sides somewhat more distinctly shorter than pronotum at midline (corresponding ratios 0.71 and 0.83); punctation somewhat less dense, surface between punctures with micropunctulation. Punctation and pubescence of abdominal tergites somewhat denser.

*Male.* First four segments of front tarsus similar to those of *Q. lamus* but more robust. Sternite 8 with two large setae on each side, apical margin with moderately wide and deep, obtusely triangular medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 16). Genital segment with tergite 10 similar, but slightly wider and less markedly narrowed toward apex (Fig. 17); sternite 9 similar, basal portion narrower, apical portion distinctly wider (Fig. 18). Aedoeagus (Figs. 19, 20) similar to that of *Q. lamus*, but median lobe somewhat wider; paramere with apex slightly emarginate; only three setae at apex, both apical and subapical setae shorter and finer; sensory peg setae on underside of paramere arranged into two shorter, more crowded latero-apical groups.

*Female unknown.*

Length 10.4 mm.

*Type material.* Holotype (male): CHINA: "China (Quinhai) Lajishan-Pass s. Xining 3700–3900 m 13.–15.VII. 1993 W. Heinz leg.". In the collection A. SMETANA, Ottawa, Canada.

*Geographical distribution.* *Quedius moeris* is at present known only from the type locality in eastern Quinhai.

*Bionomics.* Nothing is known about the habitat requirements of this species. The holotype was presumably found in a pitfall trap.

*Recognition and comments.* *Quedius moeris* can be confused only with *Q. lamus*, but it may be fairly easily distinguished by the characters mentioned above, particularly by the wider and deeper medio-apical emargination of male sternite 8 (Figs. 11, 16) and by the differences on the aedoeagus (Figs. 14, 15, 19, 20).

*Etymology.* The specific name is that of *Moeris*, -is, m., a king of Egypt in the 15th century B.C.

*Quedius (Microsaurus) petilius* sp. nov.

(Fig. 21)

*Description.* In all characters very similar to *Q. lamus*, but different as follows: form more robust, size slightly larger. Head with eyes slightly larger and consequently with tempora somewhat less markedly longer than eyes seen from above (ratio 2.30); posterior frontal puncture situated somewhat closer to posterior margin of head than to postero-medial margin of eye, temporal puncture situated distinctly closer to posterior margin of head than to posterior margin of eye. Antenna slightly more robust. Pronotum vaguely wider than long (ratio 1.12), lateral margins slightly flattened in front of basal margin; left dorsal row with three very fine punctures, right dorsal row with two similar punctures. Elytra with punctation denser, more distinctly asperate, interspaces with very fine microscopical irregularities, resulting in surface of elytra appearing appreciably dull. Punctation of abdominal tergites similar, but distinctly denser.

Female. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; second segment vaguely narrower than apex of tibia (ratio 0.90); fourth segment narrower than preceding segments. Genital segment with tergite 10 markedly narrowed toward narrowly arcuate apex, with medio-apical portion pigmented, with two long and numerous shorter setae at apical margin and numerous short setae on medio-apical portion (Fig. 21).

Length 10.3 mm.

*Type material.* Holotype (female): CHINA: "China, N Sichuan prov. ZHANGLA env., 4200–4700 m 25.–29.7.1991 J. Kaláb leg.". In the collection A. SMETANA, Ottawa, Canada.

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

*Geographical distribution.* *Quedius petilius* is at present known only from the type locality in northern Sichuan, located north of Songpan.

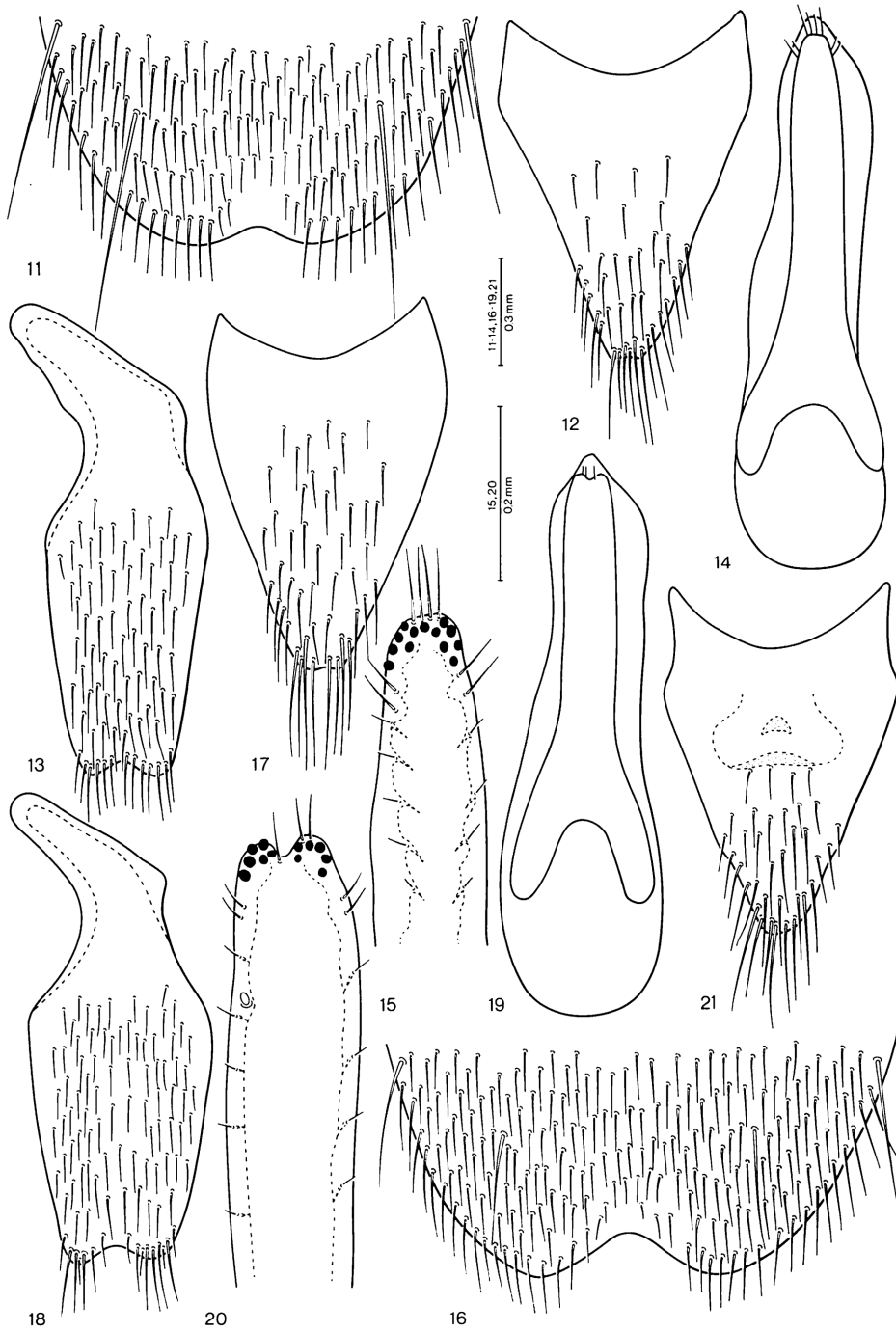
*Recognition and comments.* *Quedius petilius* is similar to both *Q. lama* and *Q. moeris*, but it differs from both by the position of the posterior frontal and temporal punctures, in combination with the different elytral punctation and the presence of the microsculpture on the interspaces between the punctation on the elytra, which consequently appear dull, and with the denser punctation of the abdominal tergites.

*Quedius lamus*, *Q. moeris* and *Q. petilius* are three obviously closely related species

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Figs. 11–21. — 11–15. *Quedius lamus*: 11, apical portion of male sternite 8; 12, tergite 10 of male genital segment; 13, sternite 9 of male genital segment; 14, aedoeagus, ventral view; 15, apical portion of underside of paramere. — 16–20. *Q. moeris*: 16, apical portion of male sternite 8; 17, tergite 10 of male genital segment; 18, sternite 9 of male genital segment; 19, aedoeagus, ventral view; 20, apical portion of underside of paramere. — 21. *Q. petilius*: tergite 10 of female genital segment.





belonging to one lineage. There is a remote possibility that *Q. petilius* is actually a female of *Q. moeris* with somewhat abnormal sculpture of the elytra, but the somewhat different positions of both the posterior frontal and temporal punctures in *Q. petilius* do not support this possibility.

*Etymology.* The specific name is that of *Petilius*, a name of Roman gens.

### Acknowledgements

I thank Dr. D. E. BRIGHT and A. DAVIES from the Biological Resources Division, CLBRR, Ottawa, for their criticisms of the manuscript, and Mr. Go SATO for finishing all drawings.

### 要 約

A. SMETANA : 中国産ツヤムネハネカクシ亜族に関する知見. 1. ツヤムネハネカクシ属 *Microsaurus* 亜属の数種. — 中国産ツヤムネハネカクシ属の数種について, 分類, 分布, 生態等に関する知見を報告し, 4新種を記載するとともに, 他の2種について知見を補足し, そのうちの1種は再記載した.

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