

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

Part 10. Genus *Quedius* STEPHENS, 1829.

Subgenus *Raphirus* STEPHENS, 1829. Section 3

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**Abstract** Taxonomic data on the species of the genus *Quedius*, subgenus *Raphirus*, from the People's Republic of China are provided. Several species are described as new: *Q. pluvialis* (Sichuan), *Q. wassu* (Sichuan), *Q. puetzi* (Shaanxi), *Q. freyi* (Sichuan) and *Q. jindrai* (Sichuan). A key to all known species of the *multipunctatus* group of *Raphirus* is given.

This is the tenth of the series of papers dealing with the *Quediina* of the People's Republic of China. It includes the descriptions of five new species of the subgenus *Raphirus*. One of them (*Q. pluvialis*) is a rather isolated, conspicuous species, resembling by its habitus the species of the genus *Quetarsius* SMETANA, 1966 from Taiwan. The following three species belong to the *multipunctatus* group of species, and the last species, *Q. jindrai*, is a member of the *intricatus* group. A key to all known species of the *multipunctatus* group is given.

*Quedius (Raphirus) pluvialis* sp. nov.

(Figs. 1, 2)

**Description.** Piceous-black, dull; maxillary and labial palpi testaceo-brunneous, antennae brunneo-piceous with three basal segments paler, legs brunneo-piceous with somewhat paler tarsi, medial faces of middle and particularly hind tibiae blackened. Head of rounded quadrangular shape, wider than long (ratio 1.19), posterior angles entirely rounded, obsolete. Eyes large and convex, tempora considerably shorter than eyes seen from above (ratio 0.34); no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture situated close to postero-medial margin of eye, separated from it by distance about as large as diameter of puncture, one puncture between it and posterior margin of head (one additional puncture on left side); temporal puncture touching posterior margin of eye; tempora without punctures; sur-

face of head with dense, rather coarse microsculpture of small isodiametric meshes. Antenna long, segment 3 inconspicuously longer than segment 2 (ratio 1.11), following segments longer than wide, gradually becoming shorter, last segment almost as long as two preceding segments combined. Pronotum vaguely wider than long (ratio 1.09), widest at about middle with lateral margins somewhat flattened and subparallel-sided posteriorly, anteriorly distinctly narrowed toward anterior margin, broadly rounded basally, transversely convex, lateral portions not explanate; dorsal rows with two (left) or three (right) punctures; sublateral rows each with three punctures, posterior puncture situated at about level of large lateral puncture; microsculpture similar to that on head. Scutellum short, with several punctures on apical portion, surface with fine microsculpture of transverse waves. Elytra very short with apical margins markedly oblique toward suture, at base markedly narrower than pronotum at widest point, moderately widened posteriad, at suture considerably (ratio 0.52), at sides distinctly (ratio 0.75) shorter than pronotum at midline; punctuation and pubescence fine and dense, punctures slightly asperate, transverse interspaces between punctures mostly about as large as diameters of punctures; pubescence piceous; surface between punctures with appreciable microscopical irregularities. Wings reduced to minute, non-functional stumps. Abdomen with tergite 7 (fifth visible) without whitish apical seam of palisade fringe; punctuation of abdominal tergites finer than that on elytra, becoming somewhat sparser toward apex of each tergite and in general toward apex of abdomen; pubescence piceous; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

**Female.** First four segments of front tarsus slightly dilated, slightly subbilobed, each with modified pale setae ventrally; segment two narrower than apex of tibia (ratio 0.75); segment four narrower than preceding segments. Sternite 8 with one (medial) long seta on each side. Genital segment with second gonocoxites long and narrow, slightly curved, each with minute stylus bearing long seta (Fig. 1); tergite 10 narrowly pigmented medio-apically, apically rather abruptly narrowed into long, narrow, rod-like apical portion (Fig. 2).

Male unknown.

Length 8.8 mm.

**Type material.** Holotype (female): China: "CHINA Sichuan Emei Shan, Leidongping 2500 m, 16. VII. 1996 29°32'N 103°21'E C65"/"collected by A. Smetana, J. Farkač and P. Kabátek". In the SMETANA collection, Ottawa, Canada.

**Geographical distribution.** *Quedius pluvialis* is at present known only from Emei Shan in western Sichuan.

**Bionomics.** The holotype was taken in a mixed broadleaved/coniferous forest by sifting the mouldy debris and needles under a few piled branches of a relatively freshly felled *Abies* tree.

**Recognition.** *Quedius pluvialis* is a rather conspicuous species, due to the general habitus, with rather dull head and pronotum, the punctate scutellum, and the very short elytra with markedly oblique apical margins. It cannot be confused with any

other Chinese species of the genus.

*Quedius pluvialis* resembles, in general habitus, the two species of the genus *Quetarsius* SMETANA, 1996 from Taiwan. However, both species of *Quetarsius* differ easily by the pubescent last segment of both maxillary and labial palpus, and by the unique development of the patellate front tarsus in both sexes (see SMETANA, 1996, 26) for details.

*Etymology.* The specific epithet is the Latin adjective *pluvialis*, *-e* (rainy). It refers to the fact that the holotype was collected during the extended, incessant rain.

***Quedius (Raphirus) wassu* sp. nov.**

(Figs. 3–9)

*Description.* Piceous-black, apex of abdomen inconspicuously paler; head, pronotum and elytra with greenish-bronze metallic lustre; abdomen distinctly iridescent; appendages testaceous. Head rounded, somewhat wider than long (ratio 1.18, markedly narrowed behind eyes, posterior angles entirely obsolete, indistinct; eyes very large and convex, tempora considerably shorter than eyes seen from above (ratio 0.22); clypeus with two shallow, inconspicuous impressions, surface of frons slightly uneven; seven to eight additional punctures between anterior frontal punctures, three additional punctures antero-mediad and two to three postero-mediad from posterior frontal puncture, all additional punctures fine; surface of head with fine and dense microsculpture of transverse and oblique waves with frequent longitudinal junctions, gradually changing to almost submeshed microsculpture on clypeus. Antenna moderately long, segments 2 and 3 subequal in length, segments 4–6 longer than wide, gradually becoming shorter, segments 7–10 about as long as wide, last segment as long as two preceding segments combined. Pronotum about as long as wide, widest at about posterior third, markedly narrowed anteriorly, with lateral margins continuously arcuate with broadly rounded base; transversely convex, lateral portions not explanate; dorsal rows irregular, each with six punctures; sublateral rows each expanded into irregular, elongate group of seven or eight punctures; entire surface of pronotum with microsculpture of transverse and oblique waves, waves somewhat finer than those on head, gradually becoming even finer toward posterior and postero-lateral margins. Scutellum impunctate, with fine microsculpture of transverse and oblique waves. Elytra moderately long, each with very narrow, smooth, slightly elevated strip along suture, at base slightly narrower than pronotum (ratio 0.90), at suture about as long as, at sides appreciably longer than pronotum at midline (ratio 1.25); punctation moderately coarse and dense, transverse interspaces between punctures mostly about as large as diameters of punctures; pubescence piceous; surface between punctures without microsculpture. Wings fully developed. Abdomen with tergite 7 (fifth visible) bearing fine whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites denser and markedly finer than that on elytra, almost evenly covering surface of each tergite, in general becoming somewhat sparser toward apex of abdomen; pu-

bescence piceous; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

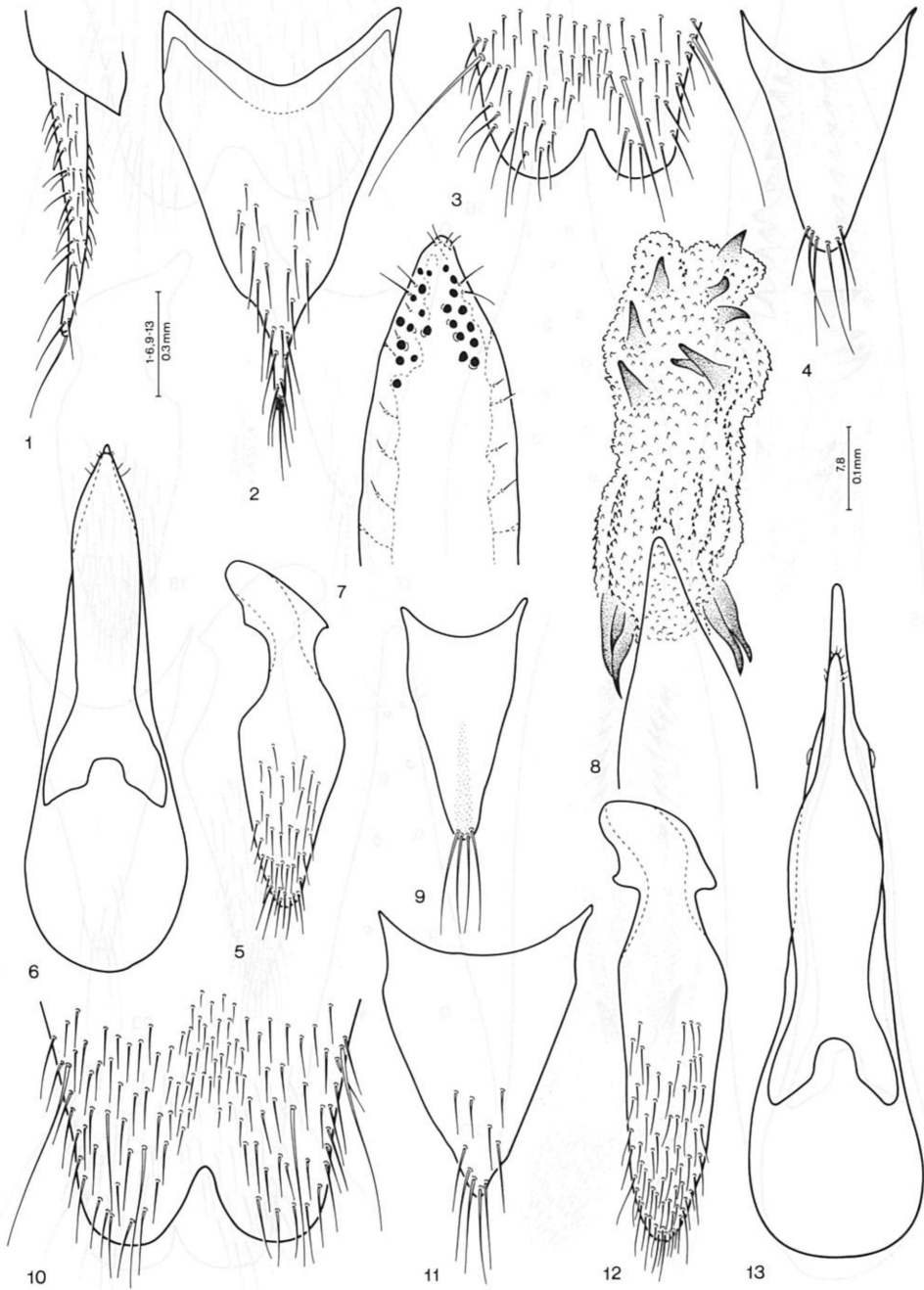
**Male.** First four segments of front tarsus markedly dilated, each densely covered with long, modified pale setae ventrally; segment two about as wide as apex of tibia; segment four narrower than preceding segments. Sternite 8 with two long setae on each side, with narrow and deep, triangular medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 3). Genital segment with tergite 10 markedly narrowed toward subarcuate apex, with four strong apical setae and with one finer seta at each lateral margin in front of them (Fig. 4); sternite 9 with markedly differentiated basal portion, broadly arcuate apically, without differentiated apical or subapical setae (Fig. 5). Aedoeagus (Figs. 6–8) fairly large, elongate; median lobe evenly narrowed anteriorly, anteriorly slightly more abruptly attenuated into sharp apex. Paramere large, robust, fusiform, with subacute apex not quite reaching apex of median lobe; four minute setae at apex and two longer setae at each lateral margin below apex; underside of paramere with numerous sensory peg setae, forming two irregular, elongate lateral groups below apex. Internal sac with spine-like structures, as in Fig. 8.

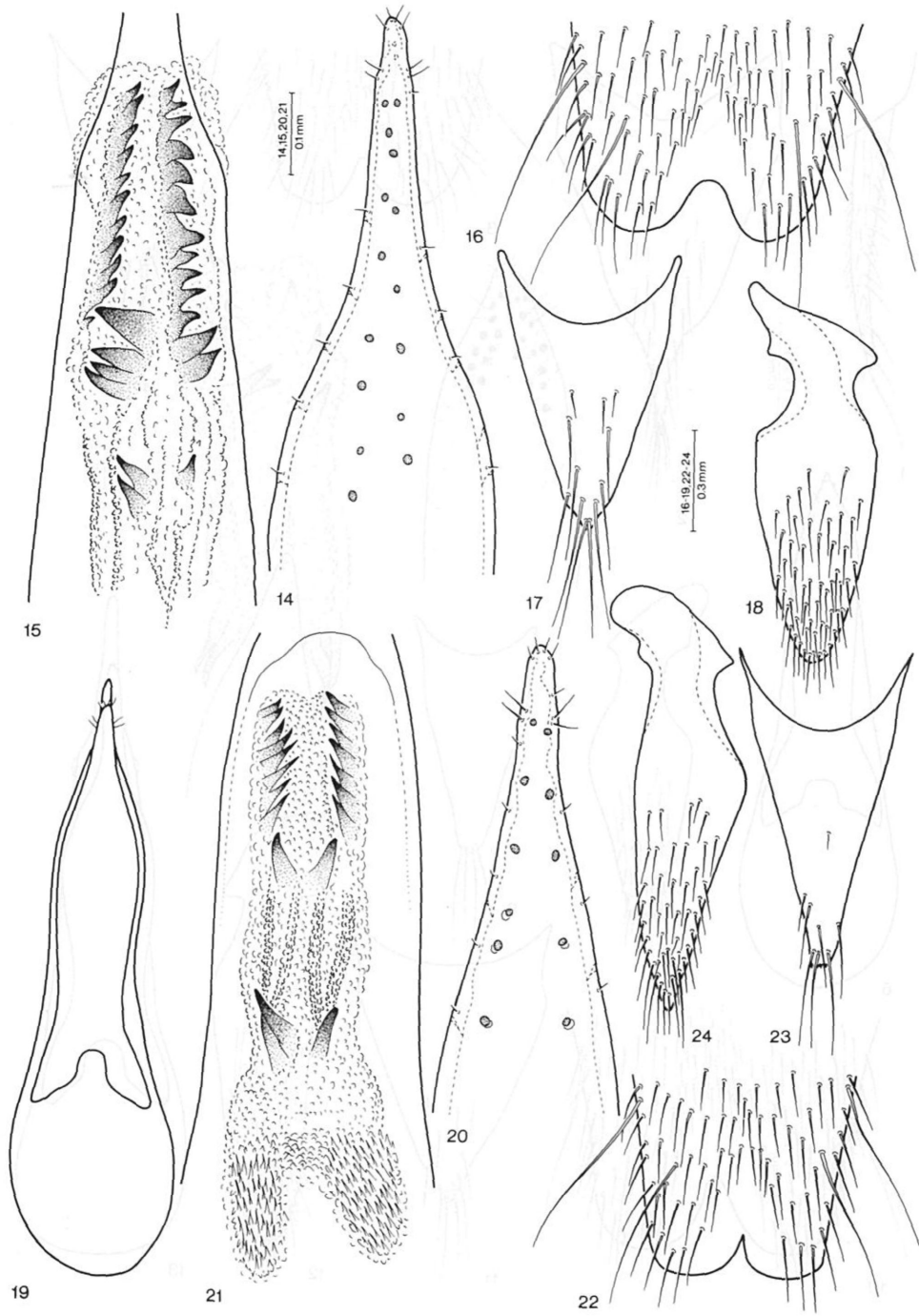
**Female.** First four segments of front tarsus considerably less dilated than those of male, vaguely sub-bilobed, each with less numerous modified pale setae ventrally; segment four only slightly narrower than preceding segments. Genital segment with second gonocoxites long and narrow, each with extremely minute stylus bearing one long, strong seta; tergite 10 narrow, narrowly pigmented medio-apically, markedly narrowed toward narrowly arcuate apex with four apical setae (Fig. 9).

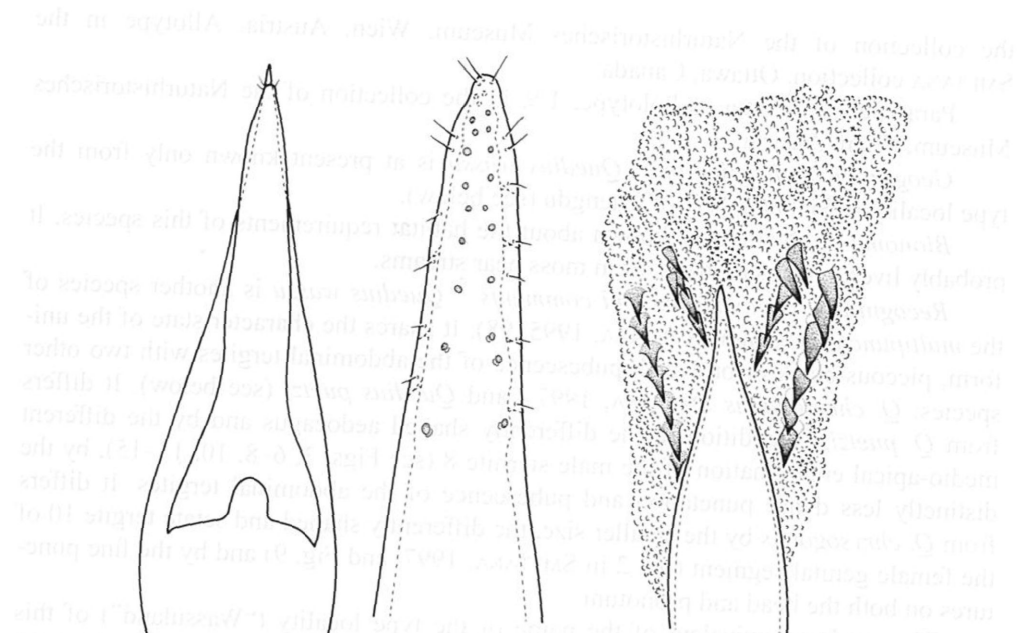
Length 5.9–6.2 mm.

**Type material.** Holotype (male) and allotype (female): China: "Lungai 7.1934 2000 m Wassuland"/"W. Szechuan, China Sankiangkou leg. Friedrich". Holotype in

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- Figs. 1–13 (on p. 103). — 1–2. *Quedius pluvialis*: 1, second gonocoxite of female genital segment; 2, tergite 10 of female genital segment. — 3–9. *Quedius wassu*: 3, apical portion of male sternite 8; 4, tergite 10 of male genital segment; 5, sternite 9 of male genital segment; 6, aedoeagus, ventral view; 7, apical portion of underside of paramere; 8, evaginated internal sac of aedoeagus; 9, tergite 10 of female genital segment. — 10–13. *Quedius puetzi*: 10, apical portion of male sternite 8; 11, tergite 10 of male genital segment; 12, sternite 9 of male genital segment; 13, aedoeagus, ventral view.
- Figs. 14–24 (on p. 104). — 14–15. *Quedius puetzi*: 14, apical portion of underside of paramere; 15: internal sac of aedoeagus. — 16–21. *Quedius multipunctatus*: 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, internal sac of aedoeagus. — 22–25. *Quedius freyi*: 22, apical portion of male sternite 8; 23, tergite 10 of male genital segment; 24, sternite 9 of male genital segment.
- Figs. 25–33 (on p. 105). — 25–27. *Quedius freyi*: 25, aedoeagus, ventral view; 26, apical portion of underside of paramere; 27, evaginated internal sac of aedoeagus. — 28–33. *Quedius jindrai*: 28, apical portion of male sternite 8; 29, tergite 10 of male genital segment; 30, sternite 9 of male genital segment; 31, aedoeagus, ventral view; 32, apical portion of underside of paramere; 33, internal sac of aedoeagus.



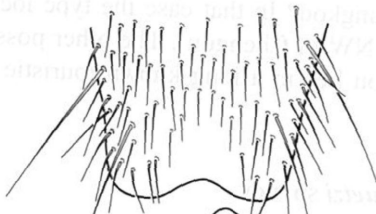




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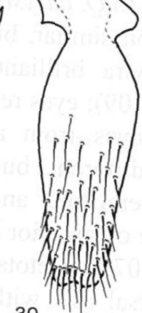
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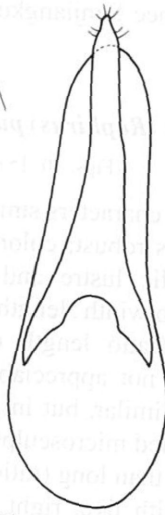


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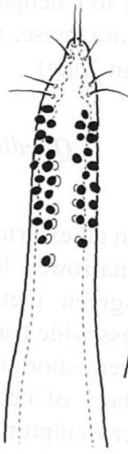
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26.27.32  
0.1mm

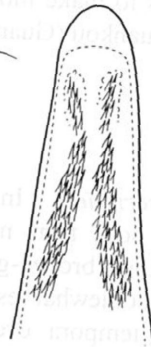


31

25.28-31.33  
0.3mm



32



33

the collection of the Naturhistorisches Museum, Wien, Austria. Allotype in the SMETANA collection, Ottawa, Canada.

Paratype: same data as holotype, 1 ♀, in the collection of the Naturhistorisches Museum, Wien, Austria.

*Geographical distribution.* *Quedius wassu* is at present known only from the type locality in Sichuan, NW of Chengdu (see below).

*Bionomics.* Nothing is known about the habitat requirements of this species. It probably lives in moss on trees, or in moss near streams.

*Recognition, comparisons and comments.* *Quedius wassu* is another species of the *multipunctatus* group (SMETANA, 1995, 98). It shares the character state of the uniform, piceous-black or brownish pubescence of the abdominal tergites with two other species: *Q. chrysogonus* SMETANA, 1997a and *Quedius puetzi* (see below). It differs from *Q. puetzi*, in addition to the differently shaped aedoeagus and by the different medio-apical emargination of the male sternite 8 (see Figs. 3, 6–8, 10, 13–15), by the distinctly less dense punctation and pubescence of the abdominal tergites. It differs from *Q. chrysogonus* by the smaller size, the differently shaped and setate tergite 10 of the female genital segment (fig. 2 in SMETANA, 1997, and Fig. 9) and by the fine punctures on both the head and pronotum.

The modern equivalent of the name of the type locality (“Wassuland”) of this species is Yin Xiu Wan, or Yingxiuwan, with coordinates about 31°20′N, 103°20′E (ZHAO & ADLER, 1993, 447). This would put the locality about 270 km NW of Chengdu in a straight line. Or is it possible that the other name on the locality label (“Sankiangkou”) equals the modern name Sanjiangkou? In that case the type locality would be much closer to Chengdu (about 75 km NW of Chengdu). The other possibility seems to make more sense, since Sanjiangkou lies in a long known touristic area SW of Guankou (Guan Xian).

### *Quedius (Raphirus) puetzi* sp. nov.

(Figs. 10–15)

*Description.* In all external characters similar to *Q. chrysogonus*, but different as follows: body form narrower, less robust; coloration similar, but head and pronotum with rather bronze-green metallic lustre and elytra brilliant bronze-green. Head smaller, somewhat less wide (ratio width : length = 1.09); eyes relatively larger, but less convex, tempora even shorter (ratio length of eyes from above : length of tempora = 0.16); chaetotaxy of head not appreciably different, but punctures in general somewhat finer; microsculpture similar, but in general finer and, unlike in *Q. chrysogonus*, hardly changing into meshed microsculpture on anterior half of head. Pronotum somewhat shorter, vaguely wider than long (ratio 1.07); chaetotaxy not appreciably different, except left dorsal row with five, right dorsal row with six punctures. Elytra shorter, scarcely widened posteriad, at suture as long as, at sides slightly longer than pronotum at midline (ratio 1.12); punctation of similar type, but in general somewhat



denser. Abdomen with punctation of tergites finer and distinctly denser; pubescence fine, uniform, dark brownish; microsculpture of transverse striae on surface between punctures exceedingly fine and dense as usual, though appreciably coarser than that of *Q. chrysogonus*.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment two slightly wider than apex of tibia (ratio 1.14); segment four narrower than preceding segments. Sternite 8 with three (right side) or two (left side) large setae; with wide, deep, narrowly triangular medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 10). Genital segment with tergite 10 rather narrowly triangular, markedly narrowed toward acute apex, with several setae at and near apex (Fig. 11); sternite 9 with basal portion of characteristic shape, apical portion gradually narrowed toward narrowly arcuate apex, with numerous setae on apical half, without differentiated apical or subapical setae (Fig. 12). Aedoeagus (Figs. 13–15) elongate and narrow; median lobe with lateral margins at about apical third slightly, but distinctly, expanded and from there attenuate into very long and slender, rod-like apical portion. Paramere elongate, arcuately widened in middle portion, anteriorly gradually narrowed into slender, rod-like apical portion, far short of reaching apex of median lobe; four minute setae at apex, two somewhat longer setae at each lateral margin below apex; sensory peg setae on underside of paramere not numerous (15), not entirely pigmented, located on apical portion of paramere more or less medially, as shown in Fig. 14. Internal sac with sclerites as in Fig. 15.

Female unknown.

Length 7.6 mm.

*Type material.* Holotype (male): China: "China: Shaanxi, Qin Ling Shan 110.06 E, 34.25 N Hua Shan Mt., S.-top, 1950–2000 m Forrest, sifted 19. 08. 1995, leg. A. Pütz". In the A. PÜTZ collection, Eisenhüttenstadt, Germany (to be eventually incorporated into the collection of the Deutsches Entomologisches Institut, Eberswalde).

*Geographical distribution.* *Quedius puetzi* is at present known only from the type locality in the east-central portion of Shaanxi province.

*Bionomics.* The holotype was apparently sifted from forest floor debris, but no details are known.

*Recognition, comparisons and comments.* *Quedius puetzi* is another member of the *multipunctatus* group. In addition to the characters on the aedoeagus, it differs from all of them, except *Q. chrysogonus*, by the fine and uniformly dark brownish pubescence of the abdominal tergites (see SMETANA, 1997 a, 133 for details); the differences from *Q. chrysogonus* are given above.

The male sexual characters of *Q. puetzi* are similar to those of *Q. multipunctatus*, but in the latter species the medio-apical emargination of male sternite 8 is wider and more rounded, tergite 10 and sternite 9 of the male genital segment are differently shaped, the paramere of the aedoeagus reaches closer to the apex of median lobe, the sensory setae on underside of paramere are less numerous (9–11) and are located

closer to the lateral margins of the paramere, and the internal sac is different (Figs. 10–15, 16–21).

*Quedius (Raphirus) freyi* sp. nov.

(Figs. 22–27)

*Description.* In all characters very similar to *Q. bih* SMETANA, 1995, but different as follows: head and pronotum metallic bluish-green, elytra dark metallic green. Head slightly wider (ratio width : length = 1.18), punctures on head finer and more numerous, particularly on posterior half; dorsal surface with microsculpture finer and more superficial, almost meshed on anterior half. Pronotum with punctures in general finer, dorsal rows irregular, with seven (left) or six (right) punctures; sublateral rows each expanded into a group of 9–11 punctures; microsculpture appreciably finer and denser than that on head, distinctly finer than that of *Q. bih*. Punctuation of elytra similar to that of *Q. bih*, but somewhat rougher. Punctuation and pubescence of abdominal tergites finer, becoming more distinctly sparser toward apex of abdomen, pubescence rather reddish-brown, not appearing golden.

*Male.* First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment two slightly wider than apex of tibia (ratio 1.13); segment four narrower than preceding segments. Sternite 8 with two long setae on each side, with very narrow and rather deep, acute medio-apical emargination, minute triangular area before emargination flattened and smooth (Fig. 22). Genital segment with tergite 10 rather narrow, tapered into narrow, fimbriate apex, with three setae at and near apex, and with a few finer setae in front of them (Fig. 23); sternite 9 fairly wide, markedly narrowed toward subacute apex (Fig. 24); styli of tergite 10 with numerous strong, long setae. Aedoeagus (Figs. 25–27) similar to that of *Q. bih*, but median lobe more conspicuously, almost conically narrowed anteriorly, its very acute apex only slightly exceeding apex of paramere; paramere of slightly different shape, anteriorly not markedly narrowed, covering most of apical portion of median lobe; three minute setae at apex, two similar setae at each lateral margin below apex; sensory peg setae on underside of paramere arranged in way similar to those of *Q. bih*, but more numerous and somewhat finer; internal sac with two pairs of sclerites similar to those of *Q. bih*.

*Female* unknown.

Length 6.1 mm.

*Type material.* Holotype (male): China: “Lungai 7.1937 2000 m Wassu-land”/“W. Szechuan, China Sankiangkou leg. Friedrich”. In the collection of the Naturhistorisches Museum, Wien, Austria.

*Geographical distribution.* *Quedius freyi* is at present known only from the type locality in Sichuan NW of Chengdu (see comments under *Q. wassu*).

*Bionomics.* Nothing is known about the habitat requirements of this species, but it may live in moss on fallen trees, just like *Q. bih*.

*Recognition and comments.* *Quedius freyi* may be readily distinguished from *Q. bih* by the characters given above, particularly by the different medio-apical emargination of the male sternite 8, and by the differently shaped aedoeagus. In addition, both species are widely separated geographically, since *Q. bih* is known only from northern and central Taiwan (see SMETANA, 1995, 102).

For the modern equivalent and further discussion of the type locality of this species, see the corresponding paragraph under *Q. wassu*.

*Etymology.* Patronymic, the species was named in memory of the late consul Georg FREY, Tutzing bei München, Germany, in recognition of his outstanding support of the taxonomy of Coleoptera.

Since the *multipunctatus* group now contains ten species, all occurring in eastern and southeastern Asia, it seems to be practical to present a key for their identification:

1. Pubescence of abdominal tergites uniform, dark brownish or piceous-black. . . . 2
- Pubescence of abdominal tergites not quite uniform, bearing some golden, golden-yellowish, brownish-golden or brownish-red hairs, intermixed or forming definite patches. . . . . 4
2. Punctuation and pubescence of abdominal tergites moderately dense and fine. Elytra fairly long, at suture no more than as long as, at sides about 1.25 as long as pronotum at midline. . . . . 3
- Punctuation and pubescence of abdominal tergites very dense and fine. Elytra short, at suture as long as, at sides slightly longer than pronotum at midline (ratio 1.12). Dorsal rows on pronotum each with five or six punctures. Aedoeagus as in Figs. 13–15. Length 7.6 mm. China: Shaanxi province. . . . *Q. puetzi* sp. nov.
3. Punctures on head and pronotum coarse. Dorsal rows on pronotum each with seven punctures. Elytra brilliant metallic dark green. Tergite 10 of female genital segment with six rather long setae at and near apical margin, and with some additional setae on medio-apical portion (fig. 2 in SMETANA, 1997). Size larger: 8 mm. Male unknown. China: southern Yunnan province. . . . .  
 . . . . . *Q. chrysogonus* SMETANA, 1997 a
- Punctures on head and pronotum fine. Dorsal rows on pronotum each with six punctures. Elytra metallic greenish-bronze. Tergite 10 of female genital segment with four rather long apical setae, additional setae missing (Fig. 9). Length 5.9–6.2 mm. China: Sichuan province. . . . . *Q. wassu* sp. nov.
4. Clypeus of head distinctly, coarsely punctate. Dorsal surface of head postero-mediad of each eye with very coarse and deep, almost rugose punctuation. Length 6.6 mm. North Vietnam: Lai Chau province. . . . . *Q. xeno* SMETANA, 1997 b
- Clypeus of head impunctate, or with only very fine, inconspicuous, sparse punctures. Dorsal surface of head postero-mediad of each eye with variably developed punctures, never appearing as almost rugose punctuation. . . . . 5
5. Abdominal tergite 7 (fifth visible) with whitish apical seam of palisade fringe. . . . 6
- Abdominal tergite 7 (fifth visible) without whitish apical seam of palisade fringe.

- Aedeagus as in figs. 219–221 in SMETANA, 1995. Length 5.9–6.2 mm. Taiwan. . . . . *Q. yann* SMETANA, 1995
6. Middle portion of pronotum and entire scutellum without microsculpture. Head, pronotum and elytra dark metallic bluish-purple metallic. Aedeagus as in figs. 204–206 in SMETANA, 1995. Length 5.7–5.9 mm. . . . . *Q. huann* SMETANA, 1995
- Entire surface of head, pronotum and scutellum with microsculpture. Head, pronotum and elytra pale metallic bronze-green, or metallic dark green to green-blue. . . . . 7
7. Punctuation of abdominal tergites sparse on first two visible tergites and becoming even sparser toward apex of abdomen. Pubescence of abdominal tergites dark in middle but becoming golden-yellowish toward lateral portion of each tergite. Aedeagus as in figs. 225–227 in SMETANA, 1988. Length 6.8–7.5 mm. Himalaya (Nepal). . . . . *Q. hariyo* SMETANA, 1988
- Punctuation of abdominal tergites dense, entire pubescence variegate-golden or brownish-red. Aedeagi different (figs. 211, 212 in SMETANA, 1995, and Figs. 19–21, 25–27). . . . . 8
8. Elytra longer, at suture vaguely (ratio 1.05), at sides distinctly longer than pronotum at midline (ratio 1.20). Head, pronotum and elytra dark metallic greenish. Aedeagus as in Figs. 19–21. Length 6.2–7.0 mm. Japan. . . . . *Q. multipunctatus* SHARP, 1889
- Elytra shorter, at suture as long as, at sides slightly longer than pronotum at midline (ratios 1.10–1.12). Head, pronotum and elytra either pale metallic bronze-green, or head and pronotum metallic bluish-green and elytra dark metallic green. Aedeagi different (figs. 211, 212 in SMETANA, 1995, and Figs. 25–27). . . . . 9
9. Male sternite 8 with fairly narrow and deep, narrowly arcuate medio-apical emargination (fig. 208 in SMETANA, 1995). Apex of median lobe considerably exceeding apex of paramere (fig. 211 in SMETANA, 1995). Pubescence of abdominal tergites golden, with some tendency to form indefinite patch of denser hairs on each side of each tergite. Length 6.0–6.6 mm. Taiwan. . . . . *Q. bih* SMETANA, 1995
- Male sternite 8 with very narrow, rather deep and acute medio-apical emargination (Fig. 22). Apex of median lobe only slightly exceeding apex of paramere (Fig. 25). Pubescence of abdominal tergites rather reddish-brown, not appearing golden. Length 6.1 mm. . . . . *Q. freyi* sp. nov.

***Quedius (Raphirus) jindrai* sp. nov.**

(Figs. 28–33)

*Description.* In all characters very similar to *Q. rugosus* CAMERON, 1921, but different as follows: head, pronotum and elytra dark metallic bluish, abdomen black, slightly iridescent; palpi, antennae and legs rufo-testaceous, medial faces of middle

and hind tibiae darkened. Head more rounded and more distinctly narrowed behind eyes, less distinctly wider than long (ratio 1.15); eyes slightly more convex, tempora somewhat longer than in *Q. rugosus*, although still considerably shorter than eyes seen from above (ratio 0.24); punctuation of dorsal surface of head in general less dense, impunctate area on vertex larger than in most specimens of *Q. rugosus*, clypeus entirely impunctate. Pronotum vaguely wider than long (ratio 1.08), more distinctly narrowed anteriorly, with basal margin more, almost semicircularly, rounded, and with lateral portions somewhat explanate postero-medially; sculpture of pronotal surface similar, but punctures in general less numerous. Elytra somewhat longer, at suture slightly (ratio 1.13), at sides distinctly longer than pronotum at midline (ratio 1.32); sculpture of elytral surface similar to that of *Q. rugosus*, except rugae on middle portion of each elytron coarser than those of most specimens of *Q. rugosus*. Punctuation of abdominal tergites similar to that of *Q. rugosus*, but distinctly sparser, particularly on basal portions of tergites.

**Male.** First four segments of front tarsus distinctly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment two slightly narrower than apex of tibia (ratio 1.14); segment four narrower than preceding segments. Sternite 8 with two long setae on each side; with medio-apical emargination somewhat wider than that of *Q. rugosus*, small triangular area before emargination flattened and smooth (Fig. 28). Genital segment with tergite 10 strongly pigmented, narrowed toward broadly arcuate, fimbriate apex, with six strong setae before apex, and with two similar setae in front of them (Fig. 29); sternite 9 with markedly differentiated basal portion, apical portion with minutely notched apex, without any differentiated setae (Fig. 30). Aedoeagus (Figs. 31–33) similar to that of *Q. rugosus*, but median lobe shorter and stouter. Paramere somewhat longer, slenderer and more distinctly curved toward left side of median lobe, with apex distinctly exceeding apex of median lobe; with four minute setae at apex and two somewhat longer setae at each lateral margin below apex; underside of paramere with sensory peg setae forming two lateral, more elongate groups; internal sac with two conspicuous pairs of strongly sclerotized, spinose sclerites, distal pair considerably smaller and shorter than proximal pair (Fig. 33).

Female unknown.

Length 5.8–6.2 mm.

**Type material.** Holotype (male): China: "CHINA-SICHUAN 22. 6. 93 DAYI ENV. 110 km W CHENGDU Z. JINDRA LGT." In the SMETANA collection, Ottawa, Canada.

Paratype (male): "Lungai 7. 1934 2000 m Wassuland"/"W. Szechuan, China, Sankiangkou leg. Friedrich". In the collection of the Naturhistorisches Museum, Wien, Austria.

**Geographical distribution.** *Quedius jindraei* is at present known from two localities in western Sichuan, separated by only about 40 linear km in a north-south direction.

**Bionomics.** Nothing is known about the collection circumstances of the speci-

mens of the original series; however, they were very likely collected from wet moss on large rocks or fallen trees in or near creeks, a typical habitat of the species of the *intricatus* group of species.

*Recognition and comparisons.* *Quedius jindraei* belongs to the *intricatus* group (see SMETANA, 1995, 103). It differs from *Q. rugosus* (Himalaya, northern Burma) by the characters given above. *Q. intricatus* FAUVEL, 1895 (Burma) differs by the punctate middle portion of the neck and by the scutellum bearing punctures situated in coarse transverse depressions. The two Taiwanese species of the group, *Q. kurosawai* SHIBATA, 1986 and *Q. taiwanensis* SHIBATA, 1986, differ, in addition to the sexual characters, particularly the different shape of the median lobe and the paramere, and by the distinctly denser punctation on the head and particularly on the pronotum. *Quedius taiwanensis* differs also by the predominantly dark appendages.

*Etymology.* Patronymic, the species was named for the collector of the holotype, Mr. Z. JINDRA, Prague, Czech Republic.

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The holotype of *Q. jindraei* was submitted for study by Mr. M. KOCIAN, Prague, Czech Republic, who kindly allowed me to keep it in my collection. His consideration is gratefully acknowledged.

### 要 約

A. SMETANA: 中国産ツヤムネハネカクシ亜族に関する知見. 10. ツヤムネハネカクシ属 *Raphirus* 亜属の3. — 中国の四川省と陝西省から, *Raphirus* 亜属のツヤムネハネカクシ5新種を記載し, それぞれ *Q. pluvialis*, *Q. wassu*, *Q. puetzi*, *Q. freyi* および *Q. jindraei* と命名した. また, この亜属の *multipunctatus* 種群に属する種のすべてを, 検索表に示した.

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## A New *Titanocarabus* (Coleoptera, Carabidae) Discovered from Beijing, China

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In the summer of 1997, a short series of *Carabus* specimens were collected by Mr. H.-S. ZHOU (Chinese Academy of Sciences) from the western part of Beijing City, and were submitted to us for study. The collection contained a large species with the facies very similar to that of *C. titanus*. However, the two species cannot be identical with each other because of strikingly different aedeagal features. The Beijing one must be new to science as described below.