

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

Part 11. Genus *Quedius* STEPHENS, 1829.  
Subgenus *Distichalius* CASEY, 1915. Section 1

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**Abstract** Taxonomic and faunistic data on the species of the genus *Quedius*, subgenus *Distichalius*, from the People's Republic of China are provided. Four species are described as new: *Quedius rabirius* (Zhejiang), *Q. quinctius* (Beijing, Shaanxi, Sichuan), *Q. rhinton* (Sichuan) and *Q. quiris* (Gansu). *Quedius regularis* BERNHAUER et SCHUBERT, 1916 and *Q. pretiosus* SHARP, 1874 are redescribed; lectotype is designated for *Q. pretiosus*, which is recorded from China for the first time.

### Introduction

The following paper deals with the first set of species of the subgenus *Distichalius* CASEY, 1915. *Quedius regularis* BERNHAUER et SCHUBERT, 1916 is redescribed, in the absence of the type of EPPELSHEIM's *Q. seriatus* (see below), based on a specimen from the SCHEERPELTZ collection that agrees reasonably well with EPPELSHEIM's original description. *Quedius pretiosus* SHARP, 1874, a member of the *Chaterjeei* Group, is redescribed and a lectotype is designated. The species is recorded from China for the first time. Four species, all members of the *Annectens* Group (SMETANA, 1995, 57), are described as new: *Q. rabirius* (Zhejiang), *Q. quinctius* (Beijing, Shaanxi, Sichuan), *Q. rhinton* (Sichuan) and *Q. quiris* (Gansu).

### *Quedius (Distichalius) regularis* BERNHAUER et SCHUBERT

(Figs. 1–5)

*Quedius seriatus* EPPELSHEIM, 1889, 169 (nec HORN, 1878).

*Quedius regularis* BERNHAUER et SCHUBERT, 1916, 432 (nom. nov); GRIDELLI, 1924, 77.

**Description.** Piceo-brunneous, elytra, apical margins of abdominal tergites and apex of abdomen paler, rather testaceo-brunneous; abdomen vaguely iridescent; maxillary and labial palpi testaceous, antennae testaceous, gradually, indefinitely infusate toward apex, legs rufo-testaceous, medial faces of tibiae distinctly darkened. Head

rounded, vaguely wider than long (ratio 1.06), markedly narrowed posteriad behind eyes, posterior angles entirely obsolete; eyes fairly large and convex, tempora markedly shorter than eyes seen from above; two additional punctures between anterior frontal punctures; posterior frontal puncture situated close to postero-medial margin of eye, separated from it by distance about equal to diameter of puncture, one puncture between it and posterior margin of head; temporal puncture almost touching posterior margin of eye; tempora with numerous, very fine punctures; surface of head with extremely fine, sparse microsculpture of quite rudimentary, incomplete waves. Antenna rather short, segments 2 and 3 subequal in length, segments 4 and 5 slightly longer than wide, segment 6 about as long as wide, segments 8–10 slightly wider than long, last segment vaguely shorter than two preceding segments combined. Pronotum slightly wider than long (ratio 1.12), widest at about posterior third, moderately narrowed anteriorly, 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 at about level of large lateral puncture; microsculpture similar to that on head, but perhaps even more rudimentary. Scutellum impunctate, with extremely fine and sparse microsculpture of a few entirely rudimentary waves. Elytra moderately long, at base distinctly narrower than pronotum at widest point, hardly widened posteriad, at suture feebly shorter (ratio 0.95), at sides slightly longer than pronotum at midline (ratio 1.16); each elytron with three irregular longitudinal rows of moderately coarse punctures, one along suture and two on disc, all punctures bearing stiff setae; epipleuron rather sparsely and finely punctate, with irregular longitudinal row of coarser punctures; surface between elytral punctures appreciably uneven, but without microsculpture. Wings markedly reduced, non-functional. Abdomen with tergite 7 (fifth visible) bearing very fine, whitish apical seam of palisade fringe; punctation of abdominal tergites fine and dense, becoming distinctly 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.

Male. First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.22); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side (one additional long seta on one side), and with four slightly shorter setae at apical margin on each side of wide and moderately deep medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 1). Genital segment with tergite 10 moderately narrowed toward subarcuate apex, with four subapical setae and a few smaller setae in front of them (Fig. 2); sternite 9 with basal portion rather narrow, apical portion rather wide, with arcuate apex, without differentiated apical or subapical setae (Fig. 3). Aedoeagus (Figs. 4, 5) small, short and relatively wide; median lobe constricted in middle portion, slightly dilated anteriorly toward widely arcuate apex, bearing two short apical lobes. Paramere large and wide, covering most of median lobe, slightly dilated anteriorly, with broadly arcuate, medially flattened,



apex; four minute setae at apex (medial pair longer) and one similar seta at each lateral margin just below apex; sensory peg setae not strongly pigmented, forming two irregular, longitudinal groups, each with 16 or 17 peg setae; internal sac without larger sclerotized structures.

Female. Not available for study.

Length 5.0 mm.

*Type material.* EPELSHEIM (1889, 169) described the species from one male, collected by G. N. POTANIN at Amdo, China. I was not able to locate the holotype (it is not in the EPELSHEIM collection in the Naturhistorisches Museum, Wien, Austria).

*Material studied.* 1 ♂ from the SCHEERPELTZ collection (Naturhistorisches Museum, Wien), bearing the following labels: "Tibet Exped. Dr. Schäfer Eidmann don."/"*Quedius regularis*".

*Geographical distribution.* *Quedius regularis* is at present known from the Xizang (Tibet) Autonomous Region and possibly also from Qinghai Province (see the discussion below).

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

*Recognition and comments.* *Quedius regularis* is well characterized by the shape of the aedeagus, in combination with the small size, the chaetotaxy of the head and pronotum, and the sculpture of the elytra. It is at present a rather isolated species and its relationships have yet to be determined.

The above description is based on the single male from the SCHEERPELTZ collection (see above). This specimen agrees reasonably well with EPELSHEIM's original description, including the coloration, but the specimen is obviously somewhat faded. The concept of this species, presented here, should be confirmed by the study of the holotype, if it becomes available for study.

"Amdo", the type locality of this species, may be Amdo in Xizang (Tibet), about 600 linear km north of Lhasa. However, in the past the name "Amdo" was also applied to an area in the present Qinghai Province, between the Tao Ho river and the upper portion of the Huang He river (Yellow River). This would put the type locality some 900 linear km to the northeast from the Tibetan Amdo. Since the holotype of *Q. regularis* comes from the collections made by G. N. POTANIN, and it is known that POTANIN collected in the latter area (see SCHUTZE & KLEINFELD, 1995, 69, 96), it is more likely that the type locality lies in the Qinghai Province.

### *Quedius (Distichalius) pretiosus* SHARP

(Figs. 6-13)

*Quedius pretiosus* SHARP, 1874, 26.

*Description.* Piceous to piceous-black, pronotum sometimes somewhat paler, or with indefinitely paler lateral margins, elytra metallic olive green, apical margins of abdominal tergites and apex of abdomen variably and to various extent paler, first visi-

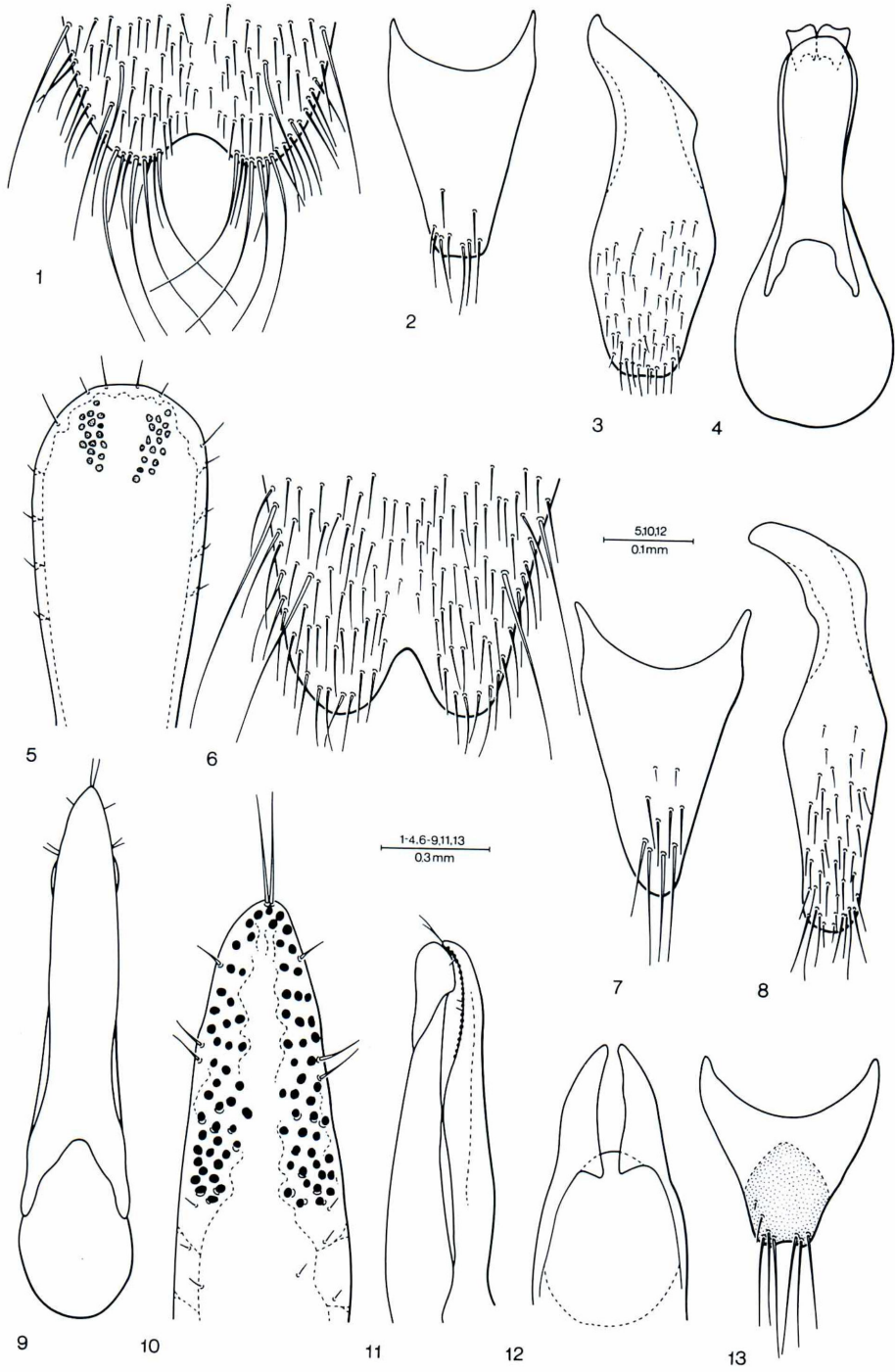
ble tergites usually variably, partially paler, almost rufous in some specimens; head and pronotum appreciably, abdomen distinctly iridescent; maxillary and labial palpi dark rufo-brunneous to dark brownish-piceous or piceous, antennae piceous, segment 1 rufo-brunneous except for piceous apex, legs rufo-testaceous to rufo-brunneous with tarsi usually feebly darker, medial faces of all tibiae distinctly darkened, darkening sometimes reduced on front tibiae. Head of rounded shape, wider than long (ratio 1.21), posterior angles entirely rounded, obsolete; eyes large and convex, tempora considerably shorter than eyes seen from above (ratio 0.31); two additional setiferous punctures between anterior frontal punctures; both posterior frontal and temporal punctures situated quite close to posterior margin of eye, mostly touching it; two punctures behind posterior frontal puncture at posterior margin of head; surface of head with dense and fine microsculpture of transverse and oblique waves. Antenna moderately long, segment 3 longer than segment 2 (ratio 1.36), segments 4 and 5 slightly longer than wide, segment 6 vaguely longer than at apex wide, following segments about as long as wide, last segment somewhat shorter than two preceding segments combined. Pronotum about as long as wide, widest at about posterior third, distinctly narrowed anteriorly, broadly rounded basally, transversely convex, lateral portions not explanate; dorsal rows each with three punctures; sublateral rows each with three punctures, posterior puncture situated distinctly behind level of large lateral puncture; microsculpture similar to that on head, but slightly denser. Scutellum impunctate, surface with very fine and dense microsculpture of transverse waves becoming sparser toward apex of scutellum. Elytra moderately long, at base slightly narrower than pronotum at widest point (ratio 0.93), vaguely widened posteriorly, at suture about as long as, at sides moderately longer than pronotum at midline (ratio 1.17); each elytron extremely finely, sparingly punctate (micropunctures becoming somewhat denser toward lateral margin) and with three irregular, longitudinal rows of more or less coarse punctures, some coarser punctures also present at postero-lateral angles, all bearing stiff short setae; epipleuron moderately densely punctate and pubescent; surface of elytra without appreciable microsculpture, but with some microscopical irregularities near posterior margin. Wings fully developed. Abdomen with tergite 7 (fifth visible) bearing fine whitish apical seam of palisade fringe; punctation of abdominal tergites fine and dense, becoming distinctly 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.

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

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Figs. 1–13 (on p. 319). — 1–5. *Quedius regularis*: 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 underside of paramere. — 6–13. *Quedius pretiosus*: 6, apical portion of male sternite 8; 7, tergite 10 of male genital segment; 8, sternite 9 of male genital segment; 9, aedoeagus, ventral view; 10, apical portion of underside of paramere; 11, apical portion of aedoeagus, lateral view; 12, apical portion of median lobe, paramere removed; 13, tergite 10 of female genital segment.





of tibia (ratio 1.12); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side; with rather wide, deep, subacute triangular medio-apical emargination, triangular area before emargination flattened and smooth (Fig. 6). Genital segment with tergite 10 rather wide, markedly narrowed toward arcuate apex, with transverse row of four or five subapical setae and with several finer setae in front of them (Fig. 7); sternite 9 with rather narrow and long basal portion, apical portion with apex arcuate, with two slightly differentiated apical and subapical setae (Fig. 8). Aedoeagus (Figs. 9–12) elongate and rather narrow; median lobe narrow, anteriorly with characteristic, split apical portion as in Fig. 12. Paramere long, almost entirely covering median lobe, anteriorly narrowed into narrowly arcuate apex, apical portion in lateral view markedly curved toward median lobe; two fine setae at apex, one minute seta at each lateral margin below apex, and two somewhat stronger setae at each lateral margin well below apex; underside of paramere with quite numerous sensory peg setae forming a long and wide group at each lateral margin, both connected at apex; internal sac without larger sclerotized structures.

**Female.** First four segments of front tarsus similar to those of male, but less dilated; segment 2 vaguely narrower than apex of tibia (ratio 0.88). Genital segment with tergite 10 short and wide, with medio-apical portion extensively pigmented, slightly narrowed toward subtruncate, medially slightly, arcuately emarginate apex; with two apical and one subapical, long setae at each side of emargination (Fig. 13).

Length 6.0–7.6 mm.

**Type material.** SHARP (1874, 26) described the species from three specimens taken at Nagasaki, Japan. I was able to study the only male of the series from the SHARP collection at the Natural History Museum (former British Museum, Natural History), London. It is labelled as follows: “Type” (round label with red margin)/“Japan. G. Lewis.”/“*Quedius pretiosus* type D.S.”/“Japan” (yellow oval label). The specimen was received dissected, with the aedoeagus (paramere separated) and the genital segment glued to the plate with the beetle. The dissected parts were mounted into Canada balsam on a transparent plate attached to the pin with the beetle. The specimen is slightly teneral; three outer segments of the left antenna, and the tibia and tarsus of the middle left leg are missing. The specimen is hereby designated as the lectotype of *Quedius pretiosus*; the label: “Lectotype *Quedius pretiosus* Sharp A. Smetana des. 1997” has been attached to it.

**Geographical distribution.** *Quedius pretiosus* occurs in Japan: Kyushu (SHIBATA, 1984, 138) and in mainland China, where it seems to be widely distributed at lower elevations; it is at present known from the following provinces: Fujian, Guizhou, Sichuan and Zhejiang.

**Material studied.** [Fujian]: Kuantun, 117.40 E, 27.40 N, 2,300 m, 3–IV–1938, J. KLAPPERICH, 1 ♂ (Naturhistorisches Museum, Wien, Austria). [Guizhou]: Huaxi, X–1986, G. DE ROUGEMONT, 1 ♂, 3 ♀♀ (ROUGEMONT [London] and SMETANA [Ottawa] collections). [Sichuan]: Leshan, X–1986, G. DE ROUGEMONT, 2 ♂♂, 2 ♀♀ and SMETANA [Ottawa] collections). [Zhejiang]: Hangzhou, 22–IV–1993, G. DE ROUGEMONT, 2 ♂♂



(ROUGEMONT [London] and SMETANA [Ottawa] collections; Tianmushan (about 80 km NW Hangzhou), 29-IV-1993, G. DE ROUGEMONT, 1 ♀ (ROUGEMONT collection, London).

*Bionomics.* The specimens from Tianmushan were taken at the edge of a mixed subtropical forest from under heaps of cut vegetation. The species occurs apparently at lower elevations, so far up to 2,300 m in Fujian (see above).

*Recognition, comparison and comments.* *Quedius pretiosus* is a member of the *Chatterjeei* Group (SMETANA, 1988, 29). It is in all external characters quite similar to the Himalayan *Q. chatterjeei* CAMERON, 1926, but the latter differs by the distinctly different shape of the aedoeagus (see figs. 83-86 in SMETANA, 1988, 407).

SHIBATA (1984, 138) lists *Q. pretiosus* as a species of unknown subgenus. However, there is no doubt that *Q. pretiosus* is a member of the subgenus *Distichalius*.

The locality "Kuatun" is the village Guadun in Wuyi Shan, Chongan Xian.

### *Quedius (Distichalius) rabirius* sp. nov.

(Figs. 14-20)

*Description.* Piceous-black with black head, elytra pale yellow, with common, black longitudinal sutural stripe, extending along sides of scutellum to elytral base and almost reaching elytral apical margin; in addition, each elytron with lateral, black longitudinal stripe, starting at about basal third of elytral length and distinctly not reaching apical margin; abdominal tergites each with apical margin narrowly paler; head and pronotum vaguely, abdomen distinctly iridescent; maxillary and labial palpi brownish, antennae brunneous to rufo-brunneous, with slightly, partially darkened first three segments; legs yellowish, medial faces of all tibiae distinctly darkened. Head of rounded shape, slightly wider than long (ratio 1.15), distinctly narrowed behind eyes, posterior angles entirely obsolete, indistinct; eyes large and convex, tempora considerably shorter than eyes seen from above (ratio 0.36); two additional setiferous punctures between anterior frontal punctures; both posterior frontal and temporal punctures situated quite close to posterior margin of eye, almost touching it, two punctures behind posterior frontal puncture at posterior margin of head; surface of head with very fine and dense microsculpture of transverse waves. Antenna rather short, only vaguely widened toward apex, segment 3 longer than segment 2 (ratio 1.31), segments 4-6 longer than wide, gradually becoming shorter (segments in general shorter in female), outer segments slightly wider than long, more distinctly so in female, last segment as long as two preceding segments combined. Pronotum about as long as wide, widest at about posterior third, markedly narrowed anteriorly, with broad rounded base; transversely convex, lateral portions not explanate; dorsal rows each with three punctures, sublateral rows each with two punctures, posterior puncture situated behind level of large lateral puncture; microsculpture similar to that on head, but appreciably denser and somewhat finer. Scutellum impunctate, with very fine microsculpture of transverse waves. Elytra moderately long, at base somewhat narrower than pronotum at widest

point (ratio 0.91), only vaguely widened posteriad; at suture about as long as, at sides longer than pronotum at midline (ratio 1.21); each elytron extremely finely, sparingly punctate, (micropunctures becoming somewhat denser toward lateral margin) and with three irregular, longitudinal rows of more or less coarse punctures, some coarser punctures also present at postero-lateral angles, all bearing short stiff setae; epipleuron finely, moderately densely punctate and pubescent; surface between punctures without appreciable microsculpture, but with some microscopical irregularities near apical margin. Wings fully developed. Abdomen with tergite 7 (fifth visible) bearing fine, whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites fine and dense, becoming vaguely sparser toward apex of each tergite and in general toward apex of abdomen; pubescence piceous-black; surface between punctures with exceedingly dense and fine microsculpture of transverse striae.

**Male.** First four segments of front tarsus markedly dilated, sub-bilobed, each densely covered with modified pale setae ventrally; segment 2 about as wide as apex of front tibia; segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side; with wide and moderately deep, obtusely triangular medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 14). Genital segment with tergite 10 markedly narrowed toward arcuate apex, with five subapical setae and with several finer setae in front of them (Fig. 15); sternite 9 with narrow basal portion, apical portion broadly arcuate apically, with two vaguely differentiated subapical setae (Fig. 16). Aedeagus (Figs. 17–19) elongate; median lobe parallel-sided in middle portion, anteriorly with two characteristic, short, laterally slightly toothed apical lobes (Fig. 19). Paramere large, fusiform, almost entirely covering median lobe, distinctly exceeding apex of median lobe; two fine setae at apex, one minute seta at each lateral margin below apex, two similar setae at each lateral margin well below apex; underside of paramere with very numerous sensory peg setae, densely covering almost entire apical portion of paramere; internal sac without larger sclerotized structures.

**Female.** First four segments of front tarsus similar to those of male, but less dilated; segment 2 slightly narrower than apex of tibia (ratio 0.90). Genital segment with tergite 10 short and wide, extensively pigmented medially with markedly darker, basal narrow transverse band, with rather wide and moderately deep, rounded medio-apical emargination with a small notch at each lateral edge; with one long, strong seta at lateral edge of emargination, and with several finer setae around it (Fig. 20).

Length 7.4–7.6 mm.

**Type material.** Holotype (male) and allotype (female): China: “CHINA Zhejiang Tienmushan 29. IV. 1993 G. de Rougemont”. The holotype bears an additional label “*Quedius* cf. *annectens* Shp. det 198 G. de Rougemont” and the allotype a label “*Distichalius*”. The holotype is deposited in the ROUGEMONT collection, London, England, the allotype in the SMETANA collection, Ottawa, Canada.

**Geographical distribution.** *Quedius rabirius* is at present known only from the type locality in Zhejiang Province, located about 80 km NW of Hangzhou.



*Bionomics.* The specimens were taken from under heaps of cut vegetation at the edge a "fine subtropical northern fringe mixed forest".

*Recognition, comparisons and comments.* *Quedius rabirius* is well characterized by the shape of the aedoeagus, particularly of the paramere, and by the shape of tergite 10 of the female genital segment. In other characters, it is quite similar to the Japanese *Q. annectens* SHARP, 1874; the latter species differs mainly by the quite different aedoeagus (Figs. 17–19 and figs. 11–13 in SMETANA, 1998).

Two female specimens, collected in Fujian at Kuantun by J. KLAPPERICH on March 18 and April 27, 1938 (Naturhistorisches Museum, Wien, Austria) with slightly differently shaped tergite 10 of the genital segment, and with sparser punctuation of the abdominal tergites were only tentatively associated with *Q. rabirius*, since they may represent a different species.

*Etymology.* The specific epithet is the name of *Rabirius*, *-i, m*, the name of a Roman gens.

### *Quedius (Distichalius) quinctius* sp. nov.

(Figs. 21–28)

*Description.* In all characters similar to *Q. rabirius*, but different as follows: average size slightly smaller, body slightly narrower. Head black, pronotum dark piceous to piceous-black, lateral margins rather widely and somewhat irregularly yellowish- to reddish-testaceous, sometimes front and/or basal margins narrowly paler like lateral margins; elytra pale yellow with common, black longitudinal stripe of various size, extended along sides of scutellum toward elytral base but only rarely reaching it, distally not reaching apical margin of elytra; abdomen with apical margins of tergites, paratergites and apex more distinctly paler than in *Q. rabirius*. Head in general more rounded, with more convex eyes and with tempora somewhat longer (ratio length of tempora: length of eyes from above=0.33); microsculpture on surface of head denser. Antenna somewhat longer and slenderer, with middle segments in general slightly longer. Pronotum less voluminous, less transversely convex, microsculpture on surface denser.

*Male.* First four segments of front tarsus markedly dilated, each densely covered with modified pale setae ventrally; segment 2 about as wide as apex of tibia; segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side; with medio-apical emargination somewhat narrower and less deep than that of *Q. rabirius* (Fig. 21). Genital segment with tergite 10 markedly narrowed toward narrowly arcuate apex, with three apical setae and with a few much finer and shorter setae in front of them (Fig. 22); sternite 9 somewhat smaller and shorter than that of *Q. rabirius*, in general with less numerous setae (Fig. 23). Aedoeagus (Figs. 24–27) small, narrow and elongate; median lobe slightly dilated before split apical portion, developed as in Fig. 27. Paramere very narrow and elongate, subparallel-sided in middle portion, anteriorly gradually tapered into narrowly arcuate apex, slightly exceeding apex of median lobe; four minute setae at apex and two similar setae at each lateral

margin well below apex; sensory peg setae on underside of paramere forming longitudinal row along each lateral margin, each row with six to nine peg setae; internal sac without larger sclerotized structures.

**Female.** First four segments of front tarsus similar to those of male, but less dilated; segment 2 somewhat narrower than apex of tibia (ratio 0.92). Genital segment with tergite 10 slightly, narrowly pigmented medio-apically, markedly narrowed toward slightly differentiated narrow apex, with two long apical setae and with long, longitudinal row of finer setae in front of each apical seta (Fig. 28).

Length 6.5–7.5 mm.

**Type material.** Holotype (male) and allotype (female): China: “CHINA Beijing Xiaolongmen 28–29.VI.1993 G. de Rougemont”. Holotype in the ROUGEMONT collection, London, allotype in the SMETANA collection, Ottawa.

**Paratypes:** China: [Beijing]: same data as holotype, 2 ♂♂, 1 ♀ in the ROUGEMONT and SMETANA collections; “CHINA Shaanxi Wutaishan 4–5.VI.1993 G. de Rougemont”, 1 ♂, 3 ♀♀, in the ROUGEMONT and SMETANA collections; “China: Shaanxi, Qin Ling Shan 107 56 E, 33.45 N, Autoroute km 93 S of Zhouzhi, 108 km SW Xian Mountain Forest, sifted, 1650 m 1.–2.09.1995, leg. A. Pütz,” 1 ♀ in the PÜTZ collection, Eisenhüttenstadt, Germany; “CHINA X. 1986 Sichuan: Emei Shan G. de Rougemont,” 1 ♀, in the ROUGEMONT collection.

**Geographical distribution.** *Quedius quinctius* seems to be widely distributed, records are at present known from the broader vicinity of Beijing, and from the Shaanxi and Sichuan provinces.

**Bionomics.** Very little is known about the habitat requirements of *Quedius quinctius*. The specimens from Xiaolongmen [Beijing] were taken at an elevation of 1,200–1,600 m in a deciduous (mainly oak) forest by sifting forest floor litter, especially wet leaf litter by a stream. The species likely occurs at lower elevations, at present up to 1,650 m.

**Recognition, comparisons and comments.** *Quedius quinctius* resembles the Taiwanese species *Q. shiow* SMETANA, 1995 in the coloration of the pronotum and of the elytra, but the latter species differs, in addition to the male sexual characters, by the more differentiated and more extensive pale lateral margins of the pronotum, and by the extensively pale abdomen.

**Etymology.** The specific epithet is the Latin adjective *quinctius*, -a, -um (belonging to a *Quinctius*).

### *Quedius (Distichalius) rhinton* sp. nov.

(Figs. 29–36)

**Description.** Piceous-black to black, elytra pale yellowish, usually with extensive dark, not sharply delimited common spot around suture (suture usually remaining pale), not reaching basal and apical margins of elytra and posteriorly usually extended laterad, posterior portion of elytra therefore appearing to variable extent indefinitely



darkened; head and pronotum vaguely, abdomen markedly iridescent; maxillary and labial palpi brownish to piceous-brown; antennae dark brownish to piceous, bases of segments 2 and 3 rufous; legs brownish with somewhat paler tarsi, medial faces of all tibiae markedly darkened. Head of rounded shape, wider than long (ratio 1.20), markedly narrowed behind eyes, posterior angles entirely obsolete, indistinct; eyes large and convex, tempora considerably shorter than eyes seen from above (ratio 0.41); two additional setiferous punctures between anterior frontal punctures; posterior frontal puncture and temporal puncture both situated very close to posterior margin of eye, separated from it by distance smaller than diameter of puncture, two punctures behind posterior frontal puncture at posterior margin of head; surface of head with moderately dense, very fine, superficial microsculpture of transverse waves. Antenna short, segments 2 and 3 subequal in length, segments 4 and 5 slightly longer than wide, segment 6 as long as wide, outer segments wider than long, last segment as long as two preceding segments combined. Pronotum slightly wider than long (ratio 1.10), widest at about posterior third, moderately narrowed anteriorly, broadly rounded basally, transversely convex, lateral portions not explanate; dorsal rows each with three punctures, sublateral rows each with three punctures (rarely with two unilaterally), posterior puncture situated distinctly behind level of large lateral puncture; microsculpture similar to that on head, but somewhat denser. Scutellum impunctate, with very fine microsculpture of transverse waves. Elytra moderately long, at base narrower than pronotum at widest point (ratio 0.88), scarcely widened posteriorly; at suture as long as, at sides somewhat longer than pronotum at midline (ratio 1.19); each elytron very finely, irregularly, sparingly punctate, and with three irregular rows of coarse punctures, all bearing short stiff setae; epipleuron finely and rather densely punctate and pubescent; surface between punctures with microscopical irregularities, appearing therefore somewhat finely rugulose. Wings not fully developed and likely not functional, each folded once under elytron. Abdomen with tergite 7 (fifth visible) bearing fine whitish apical seam of palisade fringe; punctuation and pubescence of abdominal tergites fine and moderately dense, almost evenly covering each tergite, in general becoming vaguely sparser toward apex of abdomen; pubescence piceous-black; 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 modified pale setae ventrally; segment 2 wider than apex of tibia (ratio 1.18); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side; with moderately wide and deep, obtusely triangular medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 29). Genital segment with tergite 10 markedly narrowed toward arcuate apex, with four or five apical setae and with several shorter setae in front of them (Fig. 30); sternite 9 with short basal portion, apical portion broadly rounded apically, with two fine, slightly differentiated apical setae (Fig. 31). Aedoeagus (Figs. 32–35) narrow and elongate; median lobe slightly, gradually attenuate at about apical third, split apical portion fairly long, as in Fig. 35. Paramere fusiform, slightly exceeding apex of median lobe, covering almost

entire apical portion of median lobe; two fine setae at apex and three finer setae at each lateral margin below apex; sensory peg setae on underside of paramere forming two irregular longitudinal rows, each with seven to ten peg setae; internal sac without larger sclerotized structures.

Female. First four segments of front tarsus similar to those of male, but distinctly less dilated, segment 2 slightly narrower than apex of tibia (ratio 0.81). Genital segment with tergite 10 rather wide, with medio-apical portion narrowly pigmented; markedly narrowed and just before apex abruptly attenuate into short apical portion; with five long setae on apical portion and with some finer setae in front of them (Fig. 36).

Length 4.6–5.1 mm.

*Type material.* Holotype (male) and allotype (female): China: “CHINA, Sichuan Langmusi, 3500–3600m, 13. VII. 94 A. Smetana [C14]”. Both holotype and allotype in the SMETANA collection, Ottawa, Canada.

Paratypes: same data as holotype, 3 ♂♂, 2 ♀♀, in the SMETANA collection and in the National Science Museum (Natural History), Tokyo, Japan.

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

*Bionomics.* The specimens of the original series were taken in a coniferous forest (mostly *Abies* sp.) by sifting fallen leaves and other debris under rhododendron bushes, and by sifting forest floor litter.

*Recognition and comparisons.* *Quedius rhinton* is at present the smallest species of the *Annectens* Group. It is well characterized, in addition to the sexual characters, by the small size, the transverse outer segments of the antenna, the coloration, particularly that of the elytra, and by the somewhat rough sculpture of the elytra. It may only be confused with *Q. quiris* (see under the latter species for the distinguishing characters). All other remaining Chinese species of the *Annectens* Group differ, in addition to the sexual characters, mainly by the larger size, the longer antennae with outer segments not transverse, and by the different coloration, particularly that of the elytra.

*Quedius rhinton* resembles by the small size and to some extent also by the coloration of the elytra, the Japanese species *Q. japonicus*. However, the latter species differs, in addition to the anteriorly distinctly dilated median lobe of the aedeagus, by the longer antennae with outer segments about as long as wide, and by the longer elytra not appearing finely rugulose.

*Etymology.* The specific epithet is the name of *Rhinton*, *-onis m*, the originator of travestied tragedy, a native of Tarentum.

### *Quedius (Distichalius) quiris* sp. nov.

(Figs. 37–44)

*Description.* Piceous-black to black, pronotum with lateral portions paler, paler coloration most apparent on anterior angles; elytra pale yellowish, almost transparent

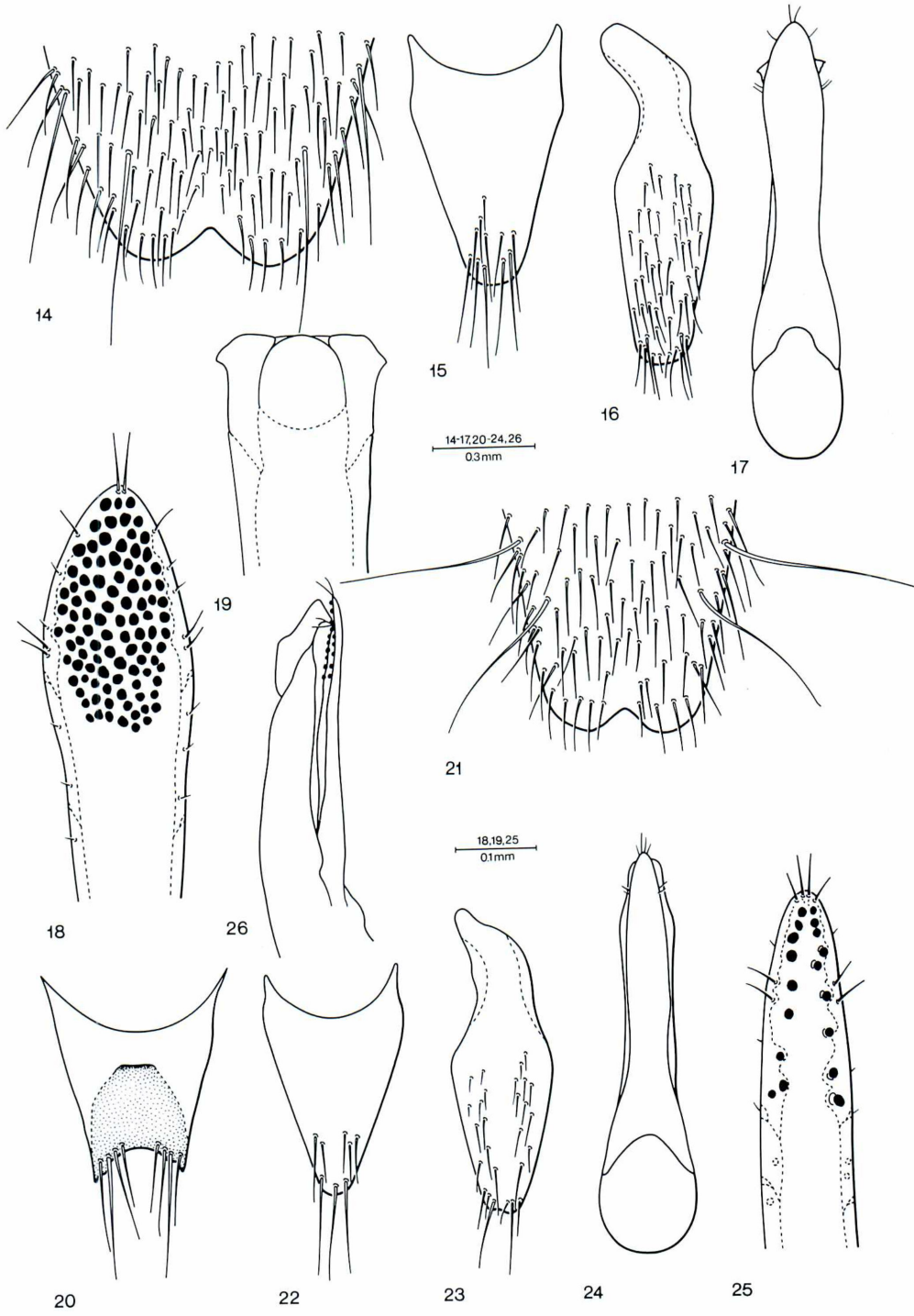


in some specimens; with moderately large, dark, not sharply delimited common spot around suture (suture remaining narrowly pale in some specimens), dark spot extending from base to about posterior fourth of elytra; head and pronotum vaguely, abdomen markedly iridescent; maxillary and labial palpi piceous-brown; antennae dark brownish to piceous, bases of segments 1–3 rufous; legs brownish with paler tarsi, medial faces of all tibiae distinctly darkened. Head of rounded shape, vaguely wider than long (ratio 0.90), strongly narrowed behind eyes, posterior angles entirely obsolete, indistinct; eyes large and convex, tempora considerably shorter than eyes seen from above (ratio 0.40); two additional setiferous punctures between anterior frontal punctures; posterior frontal puncture and temporal puncture both situated close to posterior margin of eye, separated from it by distance about equal to diameter of puncture, two punctures behind posterior frontal puncture at posterior margin of head; surface of head with very dense and very fine, superficial microsculpture of transverse waves. Antenna moderately long, segment 3 vaguely longer than segment 2, segments 4 and 5 longer than wide, segment 6 as long as at apex wide, outer segments as long as wide, last segment as long as two preceding segments combined. Pronotum vaguely wider than long (ratio 1.09), widest at about posterior third, markedly narrowed anteriorly, broadly rounded basally, transversely convex, lateral portions not explanate; dorsal rows each with three punctures; sublateral rows each with three or four punctures, posterior puncture situated distinctly behind level of large lateral puncture; microsculpture similar to that on head, but somewhat denser. Scutellum impunctate, with very fine microsculpture of transverse waves. Elytra moderately long, at base narrower than pronotum at widest point (ratio 0.87), scarcely widened posteriorly; at suture slightly (ratio 1.14), at sides distinctly longer than pronotum at midline (ratio 1.23); each elytron very finely, irregularly, sparingly punctate, and with three irregular rows of coarse punctures, all bearing short stiff setae; surface between punctures with microscopical irregularities, appearing therefore somewhat finely rugulose. Wings not fully developed and likely not functional, each folded once under elytron. Abdomen with tergite 7

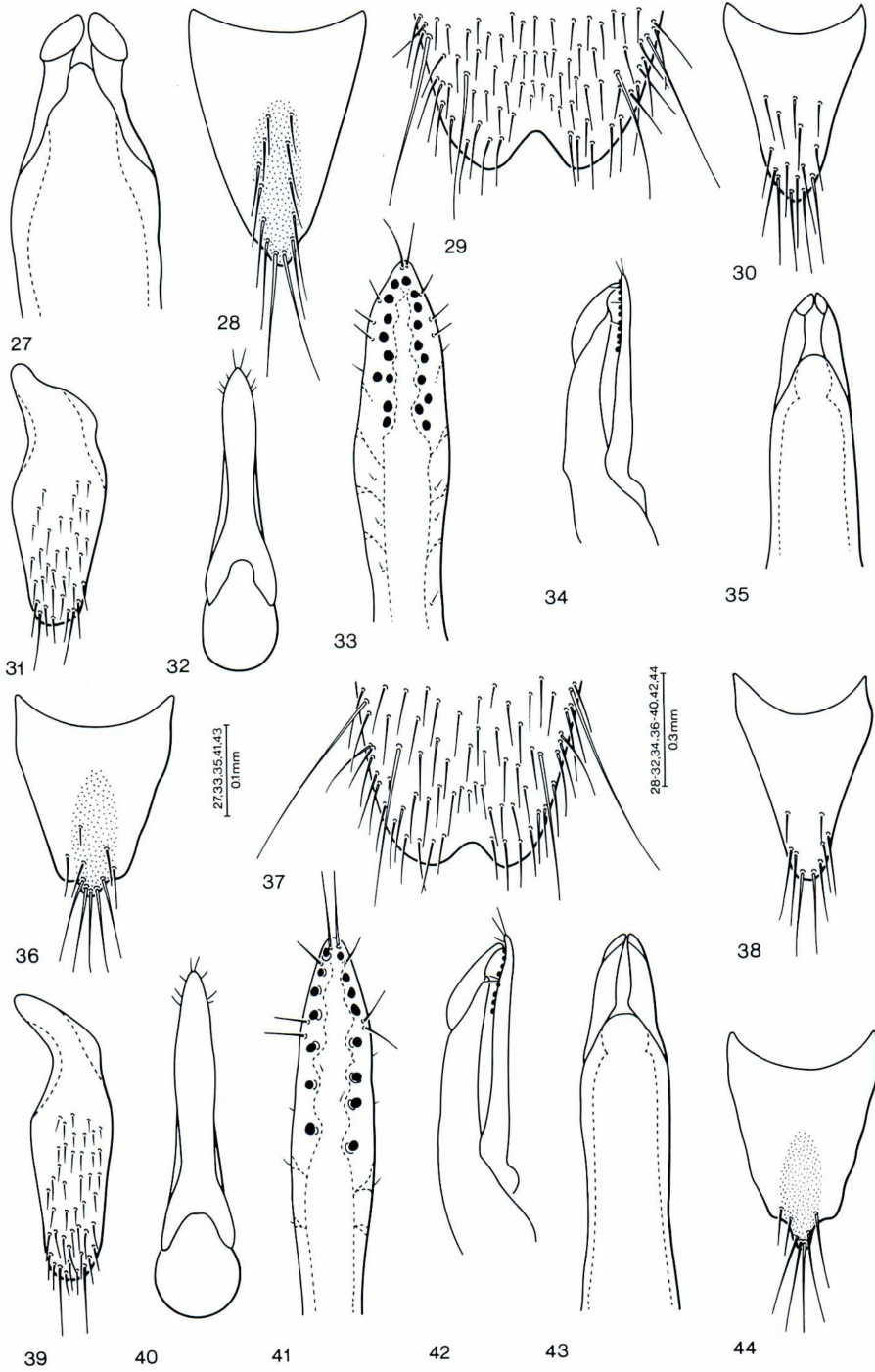
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Figs. 14–26 (on p. 328). — 14–20. *Quedius rabirius*: 14, apical portion of male sternite 8; 15, tergite 10 of male genital segment; 16, sternite 9 of male genital segment; 17, aedoeagus, ventral view; 18, apical portion of underside of paramere; 19, apical portion of median lobe, paramere removed; 20, tergite 10 of female genital segment. — 21–26. *Quedius quinctius*: 21, apical portion of male sternite 8; 22, tergite 10 of male genital segment; 23, sternite 9 of male genital segment; 24, aedoeagus, ventral view; 25, apical portion of underside of paramere; 26, apical portion of aedoeagus, lateral view.

Figs. 27–44 (on p. 329). — 27–28. *Quedius quinctius*: 27, apical portion of median lobe, paramere removed; 28, tergite 10 of female genital segment. — 29–36. *Quedius rhinton*: 29, apical portion of male sternite 8; 30, tergite 10 of male genital segment; 31, sternite 9 of male genital segment; 32, aedoeagus, ventral view; 33, apical portion of underside of paramere; 34, apical portion of aedoeagus, lateral view; 35, apical portion of median lobe, paramere removed; 36, tergite 10 of female genital segment. — 37–44. *Quedius quiris*: 37, apical portion of male sternite 8; 38, tergite 10 of male genital segment; 39, sternite 9 of male genital segment; 40, aedoeagus, ventral view; 41, apical portion of underside of paramere; 42, apical portion of aedoeagus, lateral view; 43, apical portion of median lobe, paramere removed; 44, tergite 10 of female genital segment.







(fifth visible) bearing whitish apical seam of palisade fringe; punctation and pubescence of abdominal tergites fine and moderately dense, becoming somewhat sparser toward apex of each tergite, in general becoming vaguely sparser toward apex of abdomen; pubescence piceous-black; 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 modified pale setae ventrally; segment 2 vaguely wider than apex of tibia (ratio 1.10); segment 4 narrower than preceding segments. Sternite 8 with two long setae on each side; with moderately wide and deep, obtusely triangular medio-apical emargination, small triangular area before emargination flattened and smooth (Fig. 37). Genital segment with tergite 10 rather narrow, markedly narrowed toward narrowly arcuate apex, with two apical setae and with several shorter setae in front of them (Fig. 38); sternite 9 narrow, with narrow, triangular basal portion, apical portion rounded apically, with two distinctly differentiated apical setae (Fig. 39). Aedoeagus (Figs. 40–43) narrow and elongate; median lobe subparallel-sided, split apical portion rather long, as in Fig. 43. Paramere elongate, narrowly fusiform, slightly exceeding apex of median lobe, covering almost entire apical portion of median lobe; two fine setae at apex and three finer setae at each lateral margin below apex; sensory peg setae on underside of paramere forming two long, rather regular, lateral longitudinal rows, each with seven or eight peg setae; internal sac without larger sclerotized structures.

**Female.** First four segments of front tarsus similar to those of male, but less dilated, segment 2 slightly narrower than apex of tibia (ratio 0.87). Genital segment with tergite 10 wide, pigmented medio-apically; markedly narrowed and before apex abruptly attenuate into short apical portion, with four long setae on apical portion and with a few finer setae in front of them (Fig. 44).

Length 4.7–5.2 mm.

*Type material.* Holotype (male) and allotype (female): China: “CHINA Gansu, Dallijia Shan, 48 km W Linxia 2980 m, 10.VII.1994 A. Smetana [C5]”. Both holotype and allotype in the SMETANA collection, Ottawa, Canada.

Paratypes: same data as holotype, 2 males, in the SMETANA collection.

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

*Bionomics.* The specimens of the original series were taken by sifting various debris and moss among lush vegetation on moist areas along a river.

*Recognition and comparisons.* *Quedius quiris* is in all external characters, including the small size, very similar to *Q. rhinton*, but it differs by the longer outer antennal segments (these are transverse in *Q. rhinton*), by the somewhat different coloration of the elytra, and by the longer aedoeagus, with the median lobe longer, subparallel-sided, and the paramere narrower and longer, with the rows of the sensory peg setae on the underside longer and more regular (Figs. 32–35, 40–43).

*Quedius quiris* resembles, by the small size and the coloration of the elytra, the Japanese species *Quedius japonicus*. However, the latter species differs, in addition to



the anteriorly dilated median lobe of the aedeagus, by the longer elytra and by the entirely piceous-black pronotum.

One female specimen of *Q. quiris*, missing the entire head, with the same labels as the holotype, was not included in the original series of *Q. quiris*.

One male and two female specimens with labels: "CHINA Gansu, Xinlong Shan, ca 70 km S Lanzhou, 2225–2380 m, 7.VIII.1994 A. Smetana [C32]" were only tentatively associated with *Q. quiris*, since they may represent a different taxon. They agree externally, including the coloration of the elytra, with the specimens of the original series of *Q. quiris*, but there are slight differences on the aedeagus, and the female tergite 10 is not as distinctly attenuate apically, as is the case in the female allotype of *Q. quiris*.

*Etymology.* The specific epithet is the name of *Quiris*, *-itis*, the inhabitant of the Sabine town Cures.

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The original draft of this paper was reviewed by two of my colleagues, Dr. Y. BOUSQUET and Mr. A. DAVIES. Their comments eventually led to the improvement of the paper. Mr. M. BRENDELL, British Museum (Natural History), London, kindly made available to me the type of *Q. pretiosus*, and Mr. H. SCHILLHAMMER, Naturhistorisches Museum, Wien, Austria, provided the specimen of *Q. regularis* from the SCHEERPELTZ collection. Mr. Go SATO carefully finished all line drawings. Their help 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. 11. ツヤムネハネカクシ属 *Distichalius* 亜属の1. — 中国から *Distichalius* 亜属ツヤムネハネカクシ類の4新種を記載し, それぞれ *Quedius rabirius* (浙江省), *Q. quinctus* (北京, 陝西省, 四川省), *Q. rhinton* (四川省), および *Q. quiris* (甘肅省) と命名した. また, *Q. regularis* BERNHAUER et SCHUBERT とニジツヤムネハネカクシ *Q. pretiosus* SHARP を再記載し, 中国から初めて記録される後者には後基準標本を指定した.

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