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Contributions to the knowledge of the Quediina (Coleoptera: Staphylinidae: Staphylinini) of China. Part 54 . Genus *Quemetopon* gen. nov.

Aleš SMETANA

Agriculture and Agri-Food Canada, Biodiversity, Central Experimental Farm,
K. W. Neatby Bldg., Ottawa, Ontario K1A 0C6, Canada
e-mail: ales.smetana@agr.gc.ca

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Abstract. *Quemetopon* gen. nov. is established for the species now assigned to the subgenus *Raphirus* Stephens, 1829 of the genus *Quedius* Stephens, 1829: *Quedius grandipennis* Zhu, Li & Hayashi, 2006, the type species of the genus. The main characters distinguishing the genus from the genus *Quedius* are presented.

INTRODUCTION

This is the fifty-fourth of a series of papers dealing with the Quediina of the People's Republic of China. It deals with *Quedius grandipennis* Zhu, Li et Hayashi, 2006, assigned at present to the subgenus *Raphirus* Stephens, 1829 of the genus *Quedius* Stephens, 1829. A new genus *Quemetopon* is established for it and taxonomical, bionomical and distributional aspects of the new genus level taxon and of the included species are presented.

MATERIAL AND METHODS

The acronyms used in text when referring to the deposition of the specimens are as follows:

ASC Collection of Aleš Smetana, deposited at The National Museum of Nature and Science, Toshiba, Japan;
CNC Canadian National Collection of Insects and Nematodes, Ottawa, Canada;
SNUC Collection of the Department of Biology, Shanghai Normal University, Shanghai, People's Republic of China.

The measurement ratios given in the descriptions are average values.

The photographs were taken using the following equipment: CANON EOS 60D camera with CANON EF 100mm f/2.8 lens, attached to a KAISER RS1 stand with camera arm RA1, COGNISYS STKS-C StackShot macro rail automated system (rail + controller). CANON Speedlite 6000EX-RT electronic flash. The raw photograph files have been adjusted in ADOBE Bridge, then converted into TIFF files in ADOBE Photoshop CS6 and then combined in ZERENE Stacker 1.04, with final adjustment in ADOBE Photoshop CS6.

TAXONOMIC PART

Quemetopon gen. nov.
(Figs. 1-11)

Type species. *Quedius grandipenis* Zhu, Li et Hayashi, 2006, by original designation and monotypy.

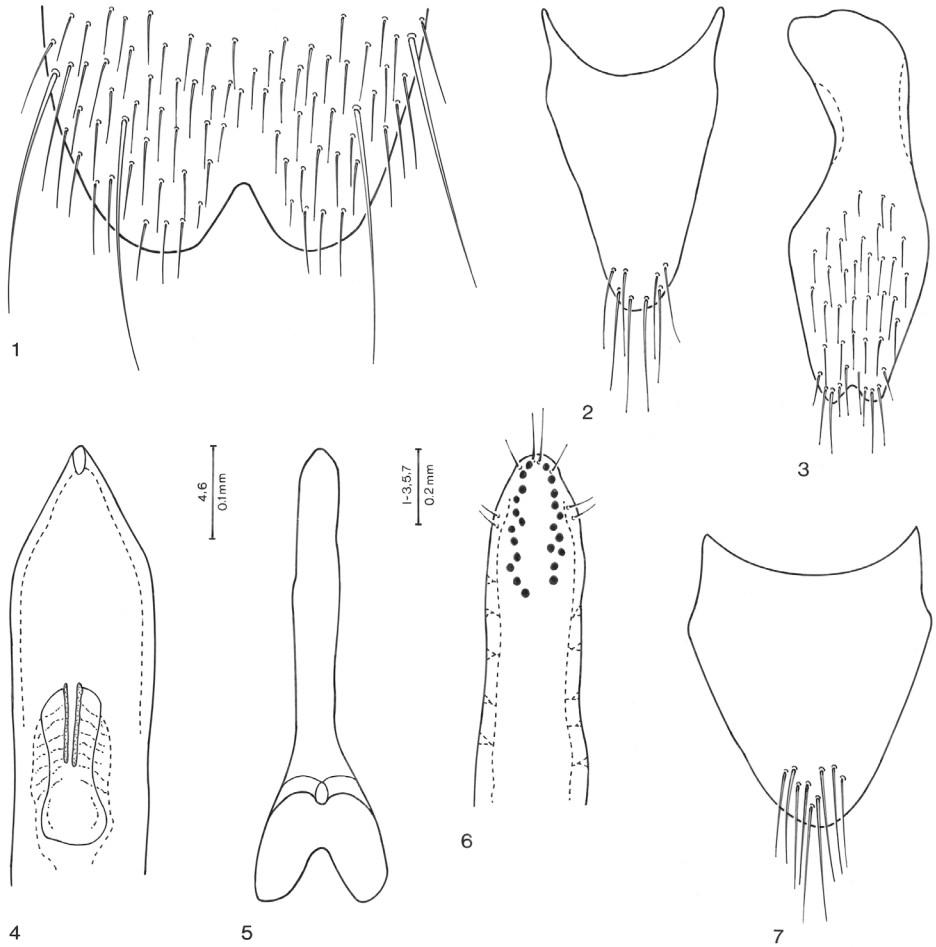
Description. In most characters similar to *Quedius*, but different mainly by the differently developed antennae and by the characteristic, unique chaetotaxy on the head and by a few additional supporting characters.

Characteristic general habitus, determined by the moderately large body with very long, thin antennae, large convex eyes, pronotum with almost semicircular posterior margin merging continuously into lateral margins that are markedly narrowed anteriad, by the elytra with characteristic microsculpture, and by the thin, long legs.

Chaetotaxy of head: two additional setiferous punctures between anterior frontal punctures characteristically shifted posteriad, i.e. not aligned with anterior frontal punctures and therefore not forming with them a transverse row of four punctures; posterior frontal puncture almost or entirely touching posteromedial margin of eye, one additional setiferous puncture in front of it touching medial margin of eye; temporal puncture touching posterior margin of eye; one setiferous puncture on each side near posterior margin of head (Fig. 9). Tempora distinctly setose. Antenna quite long and slender with all segments markedly longer than wide, third segment distinctly longer than second segment (ratio 1.33) in addition to usual long setae, with numerous short setae and with surface among setae slightly granulose, not shiny, therefore visually not obviously contrasting with dull granulose surface of following segments bearing dense appressed pubescence Figs. 10,11). Scutellum impunctate. Surface of elytra with characteristic semigranulose microsculpture giving it sort of fat-glance appearance. Abdomen markedly narrowed toward apex, distinctly iridescent.

Etymology. The generic epithet is a combination of the part of the existing name *Quedius* and the Greek noun μετοπον, τό (the space between the eyes). It is a noun of neuter gender, referring to the chaetotaxy of the head of the species, particularly to the presence of the additional setiferous punctures between the anterior setiferous punctures.

Discussion. The genus *Quemetopon* is a member of the subtribe *Quediina* in restricted sense (Brunke et al. 2015). It is well defined by the characters mentioned in the description, and particularly by the unique chaetotaxy on the head and by the development of the antennae. The dense setation of the third antennal segment is a character state that was never before observed and therefore not utilized for taxonomic purposes. Its presence is not surprising, since the setation of up to five basal antennal segments has been used in distinguishing the genera of Quediina *sensu lato* (Smetana 1988, 1995). However, this characters state is not restricted to *Quemetopon*. There is another new genus sharing this character state that differs from *Quemetopon* and contains several species. It will be described shortly pending the study of the type material of one of the included species.



Figs. 1-7. *Quemetopon grandipenis*: 1- apical portion of male sternite 8; 2- tergite 10 of male genital segment; 3 sternite 9 of male genital segment; 4- apical portion of median lobe, ventral view, paramere removed, with main part of internal sac of aedoeagus; 5- paramere, dorsal view; 6- apical portion of underside of paramere with sensory peg setae; 7- tergite 10 of female genital segment.

In addition, the species of the genus *Korgella* Özdikmen, 2005 share the characters of the long and slender antenna, and the densely setose third antennal segment, but they differ in an entire set of characters, involving the chaetotaxy of both the head (absence of the additional setiferous punctures between anterior frontal punctures and absence of the additional setiferous puncture in front of posterior frontal puncture) and pronotum, the shape of pronotum, the punctate scutellum, etc. Some species of the subgenus *Raphirus* of the genus *Quedius*, e.g., *Quedius nilo* Smetana, 1988 and *Quedius kuiro* Smetana, 1988 from the *himalayicus*-species group (Smetana, 1988) have almost equally long, slender antennae,

but they lack the densely setose third antennal segment that bears only the long sparse setae and again they differ by a similar set of characters outlined for *Korgella*.
The original description of the type species of the genus, *Quedius grandipenis*, contains several misleading inaccuracies and omissions and it should be disregarded. A proper, complete description is presented here.

Quemetopon grandipenis (Zhu, Li et Hayashi, 2006) comb. nov.
(Figs. 1-11)

grandipenis Zhu, Li et Hayashi, 2006: 39 (*Quedius:* subgenus *Raphirus*; description; habitat).

Type locality. CHINA: Xizang Autonomous Region, Motuo County, 2200 m.

Type material. Holotype (♂): CHINA: "Hanmi Motuo Coun. Xizang A. R. alt. 2200 m, 19-VIII-2005, TANG Liang. leg. / HOLOTYPE Quedius (Raphirus) grandipenis ZHU, LI et al., 2006 SNHU Collections" [holotype label handwritten on red paper]. In SNUC. Secondary: 3 paratypes (ASC, SNUC).

Redescription. Entirely black (slightly teneral specimens dark piceous with black head); maxillary and labial palpi piceous-black with last segments partially paler; antennae with first three segments black, following segments piceous, last two segments testaceous; legs piceous-black with paler tarsi. Head rounded, wider than long (ratio 1.21), markedly narrowed posteriad, postrerior angles entirely obsolete; eyes large and convex, tempora considerably shorter than eyes seen from above (ratio 0.24); chaetotaxy of head see generic description; surface of head with very dense and very fine microsculpture of mostly transverse waves, with some dispersed micropunctulation. Antenna see generic description. Pronotum wider than long (ratio 1.16), widest at posterior fourth, for shape and chaetotaxy see generic description; surface of pronotum with extremely fine and dense, superficial microsculpture of transverse striae making the surface distinctly iridescent. Scutellum impunctate, with very fine, dense microsculpture of oblique waves. Elytra moderately long, at base somewhat narrower than pronotum at widest point, slightly widened posteriad; at suture about as long as, at sides slightly longer (ratio 1.15) than pronotum at midline; punctuation fine and relatively sparse, each puncture bearing stiff black seta, transverse interspaces between punctures several times larger than diameters of punctures; surface between punctures with microsculpture characterized in generic description. Wing fully developed. Abdomen iridescent, tergite 7 (fifth visible) bearing distinct whitish apical seam of palisade fringe; tergite two (in front of first fully visible tergite) impunctate, but with some micropunctulae; punctuation of abdominal tergites similar to that on elytra, in general becoming slightly sparser toward apex of abdomen; surface between punctures with exceedingly fine and dense microsculpture.

Male. First four segments of front tarsus distinctly dilated, each densely covered by tenent setae ventrally; segment two about as wide as apex of tibia, segment four narrower than preceding segments. Sternite 7 with slight medioapical sinuation, with three long strong setae on each side of sinuation. Sternite 8 with two long setae on each side, with deep and wide, acutely triangular medioapical emargination, with narrow, flat impunctate area in front of it (Fig. 1). Genital segment with tergite 10 narrow, markedly narrowed (Fig. 2); sternite 9 with large bulbous basal portion, apical portion emarginated apically, setose as in Fig.

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Fig. 8. *Quemetopon grandipenis*: habitus. Actual size 7.5 mm.

3. Aedoeagus (Figs. 4-6) large, elongate; median lobe narrow, elongate, subparallel-sided, anteriorly narrowed into short triangular apical portion with subacute apex. Paramere narrow, elongate, covering most of median lobe, with narrowly arcuate apex slightly exceeding apex of median lobe, four apical setae, medial pair longer than lateral pair, two minute setae at each lateral margin below apex; sensory peg setae on underside arranged into two somewhat irregular longitudinal rows, as in Fig. 6. Distinctive portion of internal sac as in Fig. 4.

Female. First four segments of front tarsus similar to those of male, but markedly less dilated, only slightly bilobed, segment two distinctly narrower than apex of tibia. (ratio 0.58). Genital segment with tergite 10 short, wide, shaped as in Fig. 7, with several setae at and near apex, otherwise asetose.

Length 6.8-8.00 mm.

Figs. 9-11. *Quemetopon grandipenis*: 9- head with chaetotaxy; 10- five basal antennal segments; *Quedius* (*Microsaurus*) spec.: 11- five basal antennal segments.

Geographical distribution. *Quemetopon grandipenis* is at present known from Xizang (original series) and from Yunnan: Dali County, Cangshan mt., 10.VII.2010, Liang Tang leg., 1 ♂, 2 ♀ (ASC, SNUC); W slope N Gaoligong Shan, 27° 53.626'N 98° 24.168'E, 8.VI.2009, 2500 m, sifting 01, 1 ♂, V. Grebennikov (ASC); E slope N Gaoligong Shan, 27° 45.446'N 98° 35.359'E, 15.VI.2009, 2944 m, sifting 06, 1 ♀, V. Grebennikov (CNC).
These are the first records of *Quemetopon grandipenis* from Yunnan.

Bionomics. Little is known about the habitat requirements of the species. Specimens of the original series were taken at lower mountain elevations "in forest by sifting layers of fallen

leaves", the specimens from Yunnan were collected by sifting forest floor litter, but no details are known. Altitude range: 2200- 2944 m.

Comments. The holotype is broken into two pieces glued to a triangular paper plate. Left antenna is missing except fort two first segments, three terminal segments of right antenna are missing, right middle tarsus and both hind tarsi are also missing. Tergites and sternites of last two abdominal segments, as well as sclerites of the male genital segment and the aedoeagus are mounted in a clear medium on a plastic plate attached to the pin with the beetle.
The specific epithet *grandipenis* (of large penis) is a noun in apposition, therefore it does not change after being transferred to a genus of neuter gender.

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