

**Contributions to the knowledge of the Quediina
(Coleoptera: Staphylinidae: Staphylinini) of China.
Part 40. Genus *Quedius* Stephens, 1829.
Subgenus *Quedionuchus* Sharp, 1884. Section 1.**

Aleš SMETANA

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

Taxonomy, redescription, geographical distribution, Coleoptera, Staphylinidae, Staphylinini, Quediina, *Quedius*, China

Abstract. The paper is dealing with *Quedius* (*Quedionuchus*) *reitterianus* Bernhauer, 1934. The type material of the species was studied, the species is redescribed and illustrated, and its geographical distribution, as it is known now, is presented.

INTRODUCTION

In the year 1933 Bernhauer described two *Quedius* species under the name *reitteri* (Bernhauer 1933a, b), both from China (Sichuan). I dealt in a recent paper (Smetana, 2010) with one of them, that was subsequently provided by a replacement name *bernhauerianus* by Korge (1971). The present paper deals with the other *reitteri* species, for which Bernhauer (1934, 12) suggested the replacement name *reitterianus*. Unlike the first species, that was assigned by Bernhauer wrongly to the subgenus *Sauridus* Mulsant & Rey, 1876 (synonym of *Raphirus* Stephens, 1829) and reassigned to the subgenus *Microsaurus* Dejean, 1833 by Smetana (2010), the second species was assigned by Bernhauer correctly to the subgenus *Quedionuchus* Sharp, 1884.

This paper is the fortieth of a series of papers dealing with the Quediina of the People's Republic of China. It presents the full redescription and illustrations of *Q. reitterianus* Bernhauer, 1934, as well as the detailed information on the type material, bionomics and the geographical distribution of the species.

ACRONYMS

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

APC Andreas Pütz, private collection, Eisenhüttenstadt, Germany;
ASC author's collection;
MHNG Muséum d'histoire naturelle, Genève, Switzerland;

MSC Michael Schülke, private collection, Berlin, Germany;
NHMB Natural History Museum, Basel, Switzerland;
NMW Naturhistorisches Museum, Wien, Austria;
NSMT National Science Museum, Tokyo, Japan.

RESULT

Quedius (Quedionuchus) reitterianus Bernhauer, 1934

(Figs 1- 7)

reitterianus Bernhauer, 1934: 12 (*Quedius*; replacement name for *reitteri*)

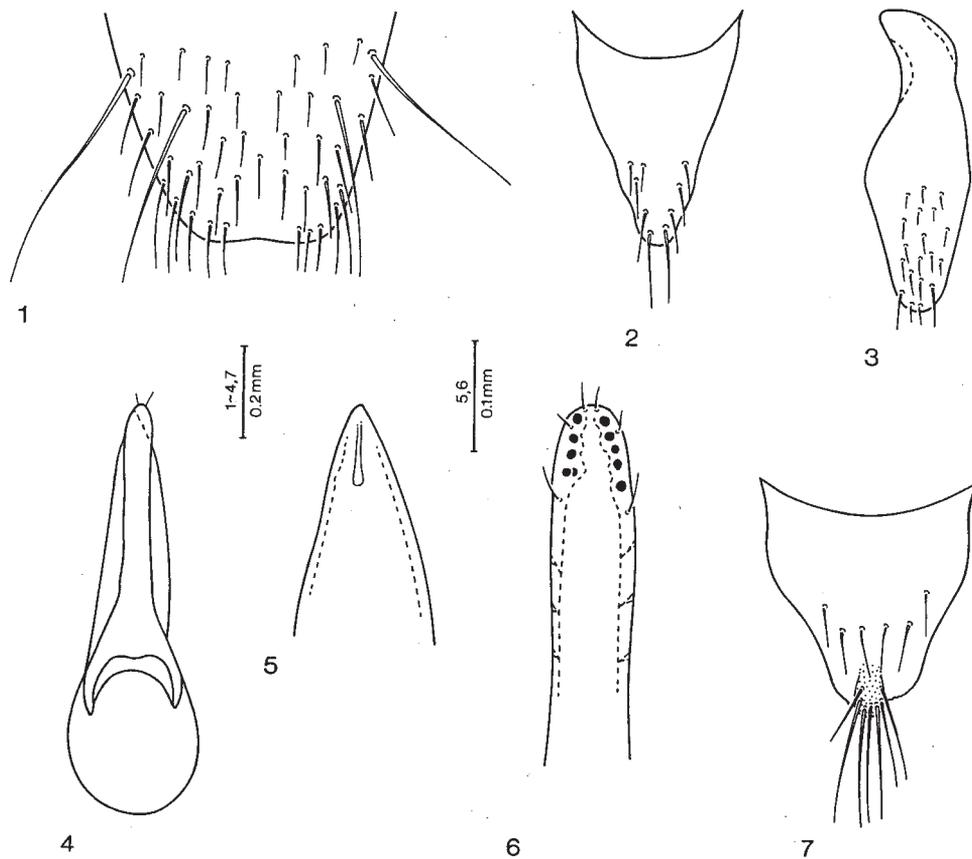
reitteri Bernhauer, 1933a: 39 (*Quedius*; subgenus *Quedionuchus*; homonym; nec *reitteri* Gridelli, 1925); Bernhauer, 1934: 12 (*Quedius*; synonym of *reitterianus*)

Type locality. People's Republic of China, Sichuan: "Szechuan China Tatsienlu-Tjiji Urwald Rodungen" on lectotype locality label [as "Szetschwan: Tatsienlu Tjiji (Urwald - Rodungen) in original description].

Type material. The species was described from an unknown number of specimens taken at "Tatsienlu-Tjiji Urwald Rodungen" in Sichuan. The Bernhauer collection housed at The Field Museum of Natural History, Chicago, Illinois, contains two male specimens under the name *Q. reitteri*. They are labelled as follows: No 1: "Szechuan China Em. Reitter"/"Tatsienlu-Tjiji Urwald Rodungen"/"Reitteri Brnh. Typus." [handwritten]/"Reitteri Brnh. Typus." [handwritten]/"Reitterianus Bernh-emend." [hand written]/"Chicago NHMus M. Bernhauer Collection". The second specimen bears exactly the same labels, except the third one reads: "Reitteri Brnh. Cotypus" [handwritten]. The first specimens was dissected, the abdominal segment eight, the genital segment and the aedoeagus were glued to the plate with the beetle. The second specimen was received with segment eight (including genital segment) missing. In order to preserve the stability of the nomenclature the first, dissected, specimen is hereby designated as the lectotype of *Quedius reitterianus* Bernhauer, 1934; the label "LECTOTYPE *Quedius reitterianus* Bedrnhauer, 1934, A. Smetana des. 2010" has been attached to the specimen.

Additional material studied: CHINA: Hunan: NW-Hunan Zhang Jia Jie NP, 1400-1600 m, 15.-17.vii. 1992, leg. Holzschuh (2003), 1 ex., (NMW). Shaanxi: Qinling Shan pass rd. Zhouzhi-Foping, 105 km SW X'ian/ N-slope, 1990 m, 33°44'N 107°59'E, 2.vii.2001, A. Smetana [C89], 1 ex., (ASC); Qin Ling Shan, Autoroute km 93 S of Zhouzhi, 108 km SW X'ian, 107°56'E 33°45'N, 1.-2.ix.1995, mountain forest, sifted, leg. M. Schülke, 1 ex., (MSC). Sichuan: Gongga Shan, above Camp 2 2850 m, 26.vii.1994 A. Smetana [C24], 2 exx., (ASC); Gongga Shan, Hailuogou, above Camp 3, 3200 m, 7.vii.1996, 29°35'N 102°00'E C54/collected by A. Smetana, J. Farkač and P. Kabátek, 8 exx., (ASC); Gongga Shan, Hailuogou, above Camp 3, 3050 m, 8.vii.1996, 29°35'N 102°00'E, C55/ collected by A. Smetana, J. Farkač and P. Kabátek, 10 exx., (ASC); Gongga Shan, Hailuogou, in front of Glacier 1, 2800 m, 9.vii.1996, 29°35'N 102°00'E, C58/ collected by A. Smetana, J. Farkač and P. Kabátek, 1 ex., (ASC); Daxue Shan Gongga Shan Mt. Hailuogou glacier park above camp III, 3000 m, 30.v.1997, leg. A. Pütz, 1 ex., (APC); pr. Sichuan EMEI Mt., 500 m, 4.-20.v.1989, Vít Kubáň leg., 1 ex., (NHMB); Baoxing Xian, Yaoqi, Baiyu- shan (2290 m), 1.x.1997, Y. Nishikawa leg., 1 ex., (NSMT); Xiling Mt. 1600-2400 m, 30.vii.-4.viii.1996, leg. S. Kurbatov, 3 exx., (ASC, MHNG). Yunnan: N-Yunnan, Zhongdian Co., 36 km ESE Zhongdian, 27°40.9'N 100°015'E, 35090-3550 m, A. Smetana [C133], 1 ex., (ASC); (N-Yunnan) Diqing Tibet, Aut.Pref, Zhongdian Co., Bitai Hai Lake area 29 km ESE Zhongdian, 3540 m, 27°43.65N 99°58.97'E (creek vall. devast. mixed forest, bamboo) 1.vi.2005, D.W. Wrase [01], 3 exx., (ASC, MSC).

Redescription. Head black, pronotum dark brown, surface of head and pronotum with slight metallic hue; elytra piceous to piceous-black, each with testaceous to testaceo-brunneous macula, extending for variable length from humerus obliquely toward suture and reaching in extreme cases posterior margin of elytron; posterior margin of each elytron narrowly testaceous, testaceous colour extending for variable distance antieriad along suture; abdomen



Figs 1-7. *Quedius reitterianus* Bernhauer, 1934: 1- apical portion of male sternite 8; 2- tergite 10 of male genital segment; 3- sternite 9 of male genital segment; 4- aedeagus, ventral view; 5- apical portion of median lobe of aedeagus, paramere removed; 6- apical portion of underside of paramere with sensory peg setae; 7- tergite 10 of female genital segment.

iridescent, piceous, posterior margins of tergites variably paler; maxillary and labial palpi testaceous, antennae dark brunneous to brunneo-piceous, first segment and bases of segments 2 and 3 more or less testaceous; legs rufotestaceous, medial faces of middle and hind tibiae markedly darkened. Head rounded, variably wider than long (ratios from 1.33 to 1.42), with entirely obsolete posterior angles; eyes large, markedly convex, tempora short, markedly shorter than length of eyes seen from above (ratio 0.41), with a few fine setiferous punctures; no additional setiferous punctures between anterior frontal punctures; posterior frontal puncture close to posteriomedian margin of eye, separated from it by distance slightly shorter than diameter of puncture, one puncture between it and posterior margin of head; temporal puncture almost touching posterior margin of eye; frontal part of head with variably shaped and deep impressions, varying from single one to several; surface

of head with fine, dense microsculpture of mostly transverse meshes. Antenna moderately long, segments 2 and 3 subequal in length, segment 4 slightly longer than wide, segment 5 as long as wide, following segments wider than long, gradually becoming more transverse, last segment about as long as two preceding segments combined. Pronotum vaguely wider than long (ratio 1.09) to as long as wide, obtusely rounded basally, slightly more narrowed posteriad than anteriorly, slightly, evenly transversely convex; dorsal rows each with three rather coarse punctures; sublateral rows each with two punctures, posterior puncture situated slightly before or at level of large lateral puncture; surface of pronotum with microsculpture similar to that on head but slightly finer. Scutellum impunctate, surface with fine, dense microsculpture of transverse waves, with interspersed micropunctulae. Elytra relatively long, both at suture and at sides markedly longer than pronotum at midline (ratios 1.30, 1.39); surface slightly leather-like wrinkled, punctation of each elytron reduced to several randomly situated punctures on posterior half of elytron, with a tendency to form an irregular lateral row; surface with moderately fine and dense microsculpture of transverse and oblique waves, forming incomplete meshes here and there. Wings fully developed. Femora of hind legs in both sexes with a row of fine spines at posterior margin. Abdomen with tergite 7 (fifth visible) with distinct, whitish apical seam of palisade setae; tergite 2 (in front of first fully visible tergite) with scattered, extremely fine punctures on microsculptured ground; punctation and pubescence of tergites fine, moderately dense, gradually becoming sparser toward apex of abdomen, to variable extent missing on middle portion of first visible tergite; surface between punctures with exceedingly fine and dense microsculpture of transverse striae.

Male. First four segments of front tarsus about equally dilated, narrower than apex of tibia (ratio 0.83), subbilobed, each covered with tenent setae ventrally, segment 4 only vaguely narrower than preceding segments. Sternite 8 sparsely, minutely setose on apical half, with two long setae on each side, apical margin with inconspicuous, obtuse medioapical emargination (Fig. 1). Genital segment with tergite 10 narrow, markedly narrowed toward narrowly arcuate apex, with two apical setae and two finer setae behind them (latter pair often missing), otherwise with only sparsely set setae (Fig. 2); sternite 9 with relatively short basal portion, apical portion with arcuate apex, with two fine apical setae, otherwise with only sparsely set, minute setae (Fig. 3). Aedoeagus (Figs 4-6) small, narrow, median lobe subparallelsided in middle portion, anteriorly narrowed into acute apex, on face adjacent to paramere, when paramere removed, with median carina, appearing as a distinct hook in lateral view. Paramere markedly narrow and elongate, with arcuate apex about reaching apex of median lobe, apical setae minute, situated as in Fig. 6; sensory peg setae on underside of paramere forming two short lateral rows, each of four to six fine setae below apex of paramere (Fig. 6).

Female. First four segments of front tarsus similar to those of male, but markedly less dilated, more distinctly narrower than apex of tibia (ratio 0.75). Tergite 10 of genital segment of quite characteristic shape, narrowly pigmented medioapically, with about seven long setae at and near apex, otherwise very sparsely setose, as in Fig. 7.

Length 4.8- 5.8 mm.

Geographical distribution. *Quedius reitterianus* is at present known from the following provinces: Hunan, Shaanxi, Sichuan and Yunnan, but it is expected to be widely distributed in mainland China.

Bionomics. *Quedius reitterianus* occurs typically under the bark of dead fallen coniferous trees. The long series of specimens from Gongga Shan, Hailuogou, above Camp 3, was taken from under the bark of large fallen *Abies* trees at elevations from 3050 m to 3200 m. Two specimens at the same location, but at lower elevation (2800-2850 m), were taken from under the bark of large fallen birch (*Betula* sp.), and by sifting mushrooms and moss on a dead standing birch (*Betula* sp.).

Recognition and comments. *Quedius reitterianus* is at present the smallest species of the subgenus *Quedionuchus*. It may be easily recognized by its small size, rather flat body shape, very large and convex eyes, by the body coloration, and by the surface of elytra slightly leather-like wrinkled, with reduced punctation (see the description).

REFERENCES

- BERNHAEUER M. 1933a: Neues aus der Staphylinidenfauna China's. *Entomologisches Nachrichtenblatt*, (Troppau) 7: 39- 54.
- BERNHAEUER M. 1933b: Neuheiten der chinesischen Staphylinidenfauna. *Wiener Entomologische Zeitung* 50: 25-48.
- BERNHAEUER M. 1934: Siebenter Beitrag zur Staphylinidenfauna Chinas. *Entomologisches Nachrichtenblatt*, (Troppau) 8: 1- 20.
- DEJEAN P. F. M. A. 1833: *Catalogue des Coléoptères de la collection de M. Le Baron Dejean*. Ed. 2, fasc.1-2, pp. 1- 176. Paris: Méquignon-Marvis.
- GRIDELLI E. 1925: Studi sul genere *Quedius* Steph. (Col. Staph.). Secondo contributo. Specie della regione paleartica. *Memorie della Società Entomologica Italiana* 3: 113- 180.
- KORGE H. 1971: Beiträge zur Kenntnis der Koleopterenfauna Kleinasiens. *Annotationes Zoologicae et Botanicae* 67: 1- 68.
- MULSANT E. & REY C. 1876: Tribu des brevipennes. [Staphyliniens]. *Annales de la Société d'Agriculture Histoire Naturelle et Arts Utiles de Lyon* (4) 8 [1875]: 145- 856.
- SHARP D. 1884: Staphylinidae. Pp. 313- 392. In: *Biologia Centrali-Americana. Insecta. Coleoptera. 1* (2). London: Taylor & Francis, xvi + 824 pp., 19 pls. [1882- 1887].
- SMETANA A. 2010: Contributions to the knowledge of the Quediina (Coleoptera, Staphylinidae, Staphylinini) of China. Part 37. Genus *Quedius* Stephens, 1829. Subgenus *Microsaurus* Dejean, 1833. Section 17. *Studies and Reports, Taxonomical Series* 5: 247- 251.
- STEPHENS J. F. 1829: *The Nomenclature of British Insects; being a compendious list of such species as are contained in the Systematic Catalogue of British Insects, and forming a guide to their classification*. London: Baldwin & Cradock, 68 columns.

Received: 25.11.2010

Accepted: 10.12.2010

