

Revision of the subtribes *Quediina* and *Tanygnathinina*, Part III, Taiwan. Supplement III (Coleoptera: Staphylinidae)

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Abstract. *Anchocerus brevipennis* sp. nov. and *Quedius (Distichalius) crus* sp. nov. are described as new. Each species is described, illustrated and all available distributional and bionomic data are given. New records of already described species are presented. *Indoquedius arcus* Smetana, 2014 is recorded from Taiwan for the first time.

INTRODUCTION

The paper contains additional taxonomic, bionomic and faunistic data for Taiwanese members of the groups that used to be tribes *Quediini* and *Tanygnathinini* of *Staphylininae* but were eventually reclassified as subtribes *Quediina* and *Tanygnathinina* of *Staphylinini* (e.g., Schülke & Smetana, 2015). Two new species, *Anchocerus brevipennis* sp. nov. and *Quedius (Distichalius) crus* sp. nov. are described and new records of numerous species are given.

ACRONYMS

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

- ASC collection of Aleš Smetana, deposited at The Museum of Nature and Science, Toshiba, Japan;
CNC Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa, Canada.

RESULTS

***Quedius (Microsaurus) miwai* Bernhauer, 1943**

miwai Bernhauer, 1943: 181 (*Quedius*; subgenus *Ediquus*; description); Smetana, 1995: 50 (*Quedius*; subgenus *Microsaurus*; characters; lectotype designation; bionomics); Smetana, 2001: 56 (*Quedius*; subgenus *Microsaurus*; additional records; bionomics); Herman, 2001: 3208 (*Quedius*; catalogue); Smetana, 2004: 660 (*Quedius*; subgenus *Microsaurus*; catalogue); Schülke & Smetana, 2015: 1064 (*Quedius*; subgenus *Microsaurus*; catalogue).

New record. TAIWAN: Nantou Hsien, Meifeng, 2100 m, 6.V.2001, Hiroshi Sugaya leg., 4 spec., (ASC, CNC).

Comment. Additional record from Nantou Hsien of this species which is widely distributed in Taiwan.

***Quedius (Distichalius) shiow* Smetana, 1995**

(Fig. 5)

shiow Smetana, 1995: 58 (*Quedius*; subgenus *Distichalius*; description; bionomics; distribution); Herman, 2001: 3270 (*Quedius*; catalogue); Smetana, 2004: 657 (*Quedius*; subgenus *Distichalius*; catalogue); Schülke & Smetana, 2015: 1064 (*Quedius*; subgenus *Distichalius*; catalogue).

New record. TAIWAN: Taoyuan Hsien, Lalashan, 1800 m, 18.XI.2000, Hiroshi Sugaya leg., 2 spec. (CNC).

Comment. This is the first record of this species from the Taoyuan Hsien. It was previously known from Kaohsiung, Nantou and Taichung Hsiens.

***Quedius (Distichalius) crus* sp. nov.**

(Figs. 1-4)

Type locality. Taiwan, Chiai Hsien, Fengchifu, 1950 m.

Type material. Holotype (♂) and allotype (♀): “TAIWAN Fengchifu Chiai, 1950 m, 12-13.xi.2000, Hiroshi Sugaya leg.” Holotype in CNC, allotype in ASC. Paratypes (1 ♂, 1 ♀): “TAIWAN Taichung Anmashan 2600 m (litter) 6.iv.2002, Hiroshi Sugaya leg.”, (ASC, CNC).

Description and differential diagnosis. In all external characters quite similar to *Q. shiow* and different by differently shaped aedoeagus, particularly the paramere.

Male. Front tarsus similar to that of *Q. shiow*. Sternite 7 with slight medioapical sinuation; sternite 8 with two long setae on each side, with medioapical emargination similar to that of *Q. shiow*. Tergite 10 as in Fig. 4 and sternite 9 of the genital segment not appreciably different from those of *shiow*. Aedoeagus (Figs. 1-3) similar to that of *Q. shiow*, but slightly larger and narrower; paramere markedly longer and narrower, with apex more distinctly exceeding apex of median lobe; all setae, except for the apical pair, markedly longer than those in *Q. shiow* (Figs. 3, 5); sensory peg setae on underside arranged in a similar way as those of *Q. shiow*, but more numerous (20-26, compared to 14-17 in *Q. shiow*, Figs. 3, 5).

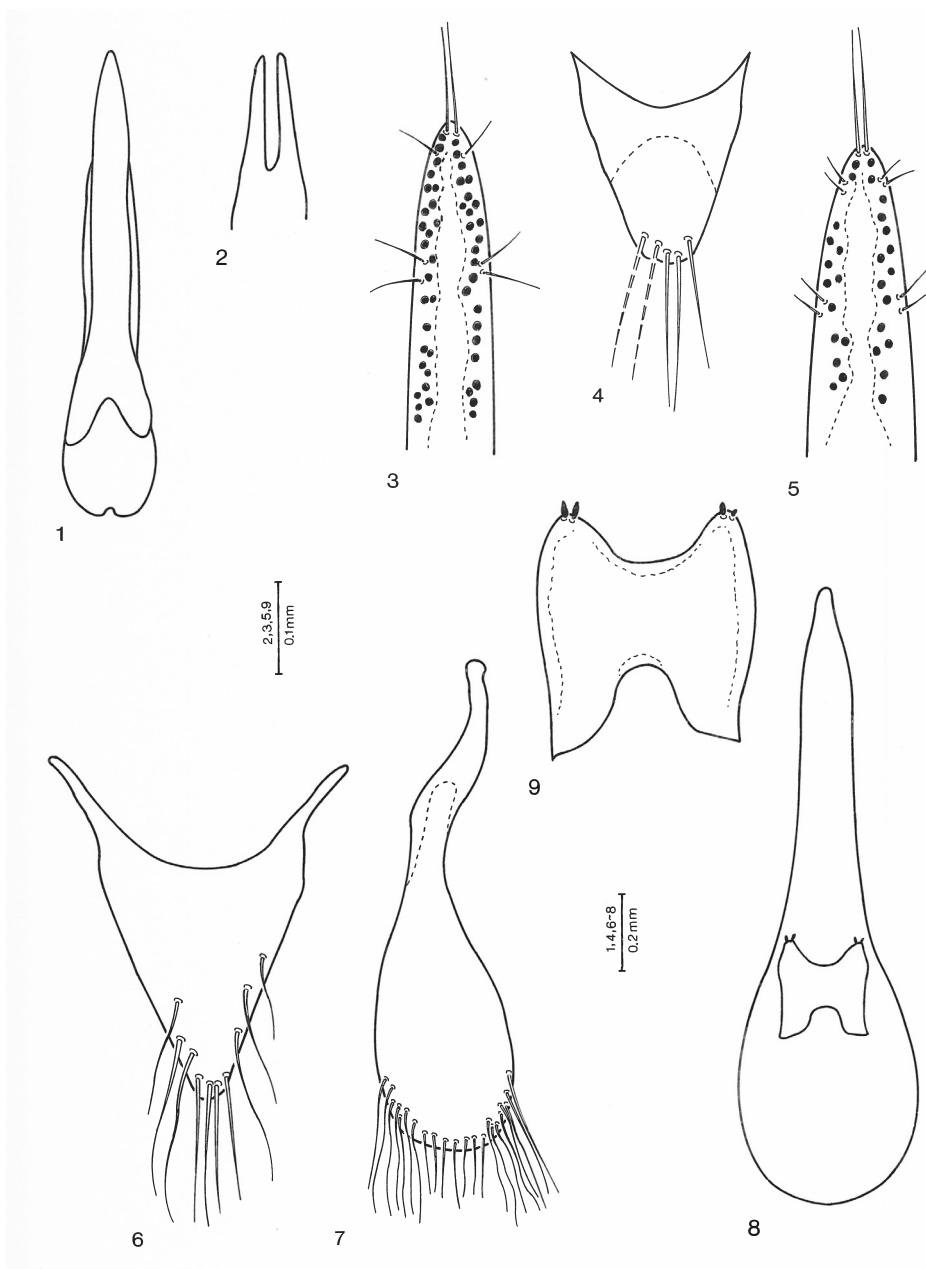
Female. Front tarsus similar to that of *Q. shiow*. Genital segment with tergite 10 similar to that of *shiow*, but wider and differently setose, with setae distinctly longer (Fig.4).

Length 5.0-6.0 mm.

Geographical distribution. The species is at present known from one locality in each Chiai and Taichung Hsiens.

Bionomics. Little is known about collecting circumstance of the specimens, except that those from Anmashan were taken from “litter” at the elevation of 2600 m.

Etymology. The specific epithet is the Latin noun *crus*, *-uris*, n. (leg, shank, shin) in apposition.



Figs. 1-9. *Quedius crus*: 1- aedeagus, parameral view; 2- apex of median lobe; 3- apical half of underside of paramere with sensory peg setae. *Quedius shiow*: 5- apical half of underside of paramere with sensory peg setae. *Anchocerus brevipennis*: 6- tergite 10 of male genital segment; 7- sternite 9 of male genital segment; 8- aedeagus, parameral view; 9- paramere.

***Quedius (Raphirus) perng* Smetana, 1995**

perng Smetana, 1995:71 (*Quedius*; subgenus *Raphirus*; description; bionomics; distribution); Herman, 2001: 3235 (*Quedius*; catalogue); Smetana, 2004: 668 (*Quedius*; subgenus *Raphirus*; catalogue); Schülke & Smetana, 2015: 1076 (*Quedius*; subgenus *Raphirus*; catalogue).

New record. TAIWAN: Taichung Hsien, Anmashan, 2600 m, 8.IV.2002, Hiroshi Sugaya leg., 1 spec., (CNC).

Comment. This is first record from the Taichung Hsien of this species which is widely distributed in Taiwan.

***Quedius (Raphirus) chang* Smetana, 1995**

chang Smetana, 1995: 83 (*Quedius*, subgenus *Raphirus*; description; bionomics; distribution); Herman, 2001: 3121 (*Quedius*; catalogue); Smetana, 2004: 664 (*Quedius*; subgenus *Raphirus*; catalogue); Schülke & Smetana, 2015: 1070 (*Quedius*; subgenus *Raphirus*; catalogue).

New records. TAIWAN : Kaohsiung Hsien, Tengchih, 2100 m, 19-23.IV.2001, Hiroshi Sugaya leg., 4 spec. (ASC,CNC). Taoyuan Hsien, Lalashan, 1800 m, 18.XI.2000, Hiroshi Sugaya leg. 3 spec., (ASC, CNC).

Comments. These are the first records of this species from Taoyuan Hsien. It seems to be widely distributed, being at present known from Taoyuan Hsien (north), Taichung Hsien (central) and Chiai and Kaohsiung Hsiens (south).

***Quedius (Raphirus) rou* Smetana, 1995**

rou Smetana, 1995:92 (*Quedius*, subgenus *Raphirus*; description; bionomics; distribution); Herman, 2001: 3256 (*Quedius*; catalogue); Smetana, 2004: 668 (*Quedius*; subgenus *Raphirus*; catalogue); Schülke & Smetana, 2015: 1077 (*Quedius*; subgenus *Raphirus*; catalogue).

New record. TAIWAN : Taichung Hsien, Anmashan, 2600 m (litter), 8.IV.2002, Hiroshi Sugaya leg., 7 spec., (ASC, CNC).

Comments. The species is at present known only from Anmashan, and only the holotype was known until now.

***Quwatanabius flavicornis* Sharp, 1889**

flavicornis Sharp, 1889: 30 (*Quedius*; description); Smetana, 1995 : 55 (*Quedius*; subgenus *Microsaurus*; characters; bionomics); Herman, 2001: 3148 (*Quedius*; catalogue); Smetana, 2002: 273 (*Quatanabius*; characters, illustrations); Smetana, 2004: 658 (*Quedius*; subgenus *Microsaurus*; catalogue); Schülke & Smetana, 2015: 1081 (*Quatanabius*; catalogue).

New record. TAIWAN: Chiai Hsien, Fengchifu, 1950 m, 12-13.XUI.2000, Hiroshi Sugaya leg., 1 spec., (CNC).

Comment. This is the first record from the Chiai Hsien.

Quwatanabius spec.

New record. Taiwan: Taoyuan Hsien, Lalashan, 2000 m, 17.-18.XI.2000, Hiroshi Sugaya leg., 1 ♀, (CNC).

Comment. This is a female of a species different from *flavicornis*. It may be a new species, but males are needed for establishing a new species in this genus.

Quetarsius neu Smetana, 1995

neu Smetana, 1995:93 (*Quedius*; subgenus *Raphirus*; description; distribution; bionomics); Smetana, 1996:26 (*Quetarsius*); Herman, 2001: 3299 (*Quetarsius*; catalogue); Smetana, 2004: 670 (*Quetarsius*; catalogue); Schülke & Smetana, 2015: 1080 (*Quetarsius*; catalogue).

New record. Taiwan, Taichung Hsien, Anmashan, 2600 m (litter), 8.IV.2002, Hiroshi Sugaya leg., 2 spec., (ASC, CNC).

Comments. Additional record of this species from Anmashan.

Indoquedius arcus Smetana, 2014

arcus Smetana, 2014: 181 (*Indoquedius*; description; distribution); Schülke & Smetana, 2015: 1055 (*Indoquedius*; catalogue)

New records. Taiwan: Kaohsiung Hsien, Chuyunshan-Lintao, 1100 m, 22.IV.2001, Hiroshi Sugaya leg., 2 ♂♂, 1 ♀ (ASC, CNC).

Comment. This is the first record of this species from Taiwan. It was previously known only from the type locality in southern Yunnan (Smetana, 2014).

Indoquedius shibatai Smetana, 1995

shibatai Smetana, 1995: 115 (*Indoquedius*; description; distribution); Herman, 2001: 3081 (*Indoquedius*; catalogue); Smetana, 2001:60 (*Indoquedius*; distribution); Smetana, 2004: 656 (*Indoquedius*; catalogue); Schülke & Smetana, 2015: 1056 (*Indoquedius*; catalogue).

New records. Taiwan : Kaohsiung Hsien, Tengchih, 1400 m, 29.-30.IV.2001, Hiroshi Sugaya leg., 1 spec., (CNC); same, 1.XI.2000, Hiroshi Sugaya leg., 2 spec., (ASC, CNC); Chuyunshan-Lintao, 1100 m, litter, 30.IV.2001, Hiroshi Sugaya leg., 1 spec., (CNC); Nantou Hsien, Tehuashe, 900 m, 4.-5.V.2001, Hiroshi Sugaya leg., 14 spec., (ASC, CNC); same, 25.X.2001, Hiroshi Sugaya leg., 5 spec., (ASC, CNC).

Comment. This is the first record of this species from Kaohsiung Hsien. It seems to be widely distributed in Taiwan; it is at present known from Chiai, Kaohsiung, Nantou and Pingtung Hsiens.

***Bolitogyrus rufomaculatus* (Shibata, 1979)**

rufomaculatus Shibata, 1979: 26 (*Cyrtothorax*; description); Smetana, 1995: 118 (*Bolitogyrus*; characters; distribution); Smetana, 2001: 61 (*Bolitogyrus*; distribution); Herman, 2001: 3046 (*Bolitogyrus*; catalogue); Smetana, 2004: 654 (*Bolitogyrus*; catalogue); Schülke & Smetana, 2015: 1109 (*Bolitogyrus*; catalogue).

New records. Taiwan: Kaohsiung Hsien, Chyunshan-Lintao, 1100 m, 22.IV.2001, under bark, Hiroshi Sugaya leg., 1 spec., (ASC); Nantou Hsien, Awowanta, 7.IV.1998, Hiroshi Sugaya leg., 2 spec., (ASC, CNC); Wenchuan, 2.IV.1998, Hiroshi Sugaya leg., 1 spec., (CNC).

Comment. Additional records of this species which is widely distributed in Taiwan.

***Acylophorus furcatus* Motschulsky, 1858**

furcatus Motschulsky, 1858: 657 (*Acylophorus*; description); Smetana, 1988: 345 (*Acylophorus*; characters; lectotype designation; distribution); Smetana, 1995:125 (characters; bionomics); Smetana, 2001:61 (*Acylophorus*; distribution); Herman, 2001: 3029(*Acylophorus*; catalogue); Smetana, 2004: 653 (*Acylophorus*; catalogue); Schülke & Smetana, 2015: 1054 (*Acylophorus*; catalogue).

New records. Taiwan: Nantou Hsien, Tehuashe, 900 m, 4.-5.V.2001, Hiroshi Sugaya leg., 21 spec., (ASC,CNC); same, 25.X.2001, Hiroshi Sugaya leg., 1 spec., (CNC).

Comments. The species is widely distributed at low elevations in Taiwan.

***Anchocerus brevipennis* sp. nov.**

(Figs. 6-9)

Type locality. Taiwan, Kaohsiung Hsien, Tengchih, 1400 m.

Type material. Holotype (♂): “Tengchih (14000 m) Kaohsiung Taiwan 2.XI.2000 Maruyama M. leg.”, (CNC).

Description. Black, apex of abdomen paler; labrum, maxillary and labial palpi pale testaceous; first segment of antenna brunneous, following segments increasingly piceous, but three outer segments becoming paler; legs dark brunneous with paler tarsi. Head vaguely wider than long (ratio 1.09), slightly dilated behind eyes and then narrowed toward wide neck; eyes quite small, flat, tempora considerably longer than length of eyes seen from above (ratio 2.86), without finely punctate and pubescent area posteriorly in front of neck; anterior frontal punctures situated quite close to each other on medial portion of frons, distance between them considerably shorter than distance separating either puncture from medial margin of eye (ratio 0.45); posterior frontal puncture situated considerably closer to posterior margin of head than to postero-medial margin of eye, one puncture postero-mediad of it; temporal puncture situated considerably closer to posterior margin of head than to posterior margin of eye, one additional setiferous puncture situated close to posterior margin of eye; surface of head without microsculpture, highly polished, with sparse, very fine punctures. Antenna with segment 1 about as long as three following segments combined, segment 2 markedly longer than segment 3, segments 4-7 longer than wide, markedly decreasing in length, segment 8 about as long as wide, segments 9 and 10 slightly wider than long, last

segment short, about as long as wide. Pronotum slightly wider than long (ratio 1.13), broadly rounded basally, slightly narrowed anteriorly; dorsal rows each with one puncture situated just before middle of pronotum; no sublateral rows; large lateral puncture separated from lateral margin by distance larger than two diameters of puncture; surface and punctation similar to that on head. Scutellum punctate and setose on apical portion. Elytra at base slightly narrower than pronotum, short, at suture (see Comments) markedly shorter (ratio 0.72), at sides shorter (ratio 0.85) than pronotum at midline; punctation moderately coarse, dense, transverse interspaces between punctures distinctly smaller than diameters of punctures; pubescence piceous; surface between punctures without appreciable microsculpture. Wings ? Abdomen with tergite 7 (fifth visible) with fine apical seam of palisade fringe; tergite 2 (in front of first fully visible tergite) impunctate; punctation on base of first visible tergite fine and dense, punctures becoming gradually sparser toward apex of each tergite and in general more elongate toward apex of abdomen; pubescence long and stiff, piceous, surface between punctures without appreciable microsculpture, except for tergite 8 with extremely fine microsculpture of transverse striae.

Male. Genital segment with tergite 10 rather short, markedly narrowed toward widely rounded apex, setose as in Fig. 6; sternite 9 with strongly asymmetrical, narrow basal portion, setose as in Fig. 7. Aedeagus (Figs. 8, 9) with median lobe narrow, elongate, anteriorly narrowed into narrowly arcuate apex; paramere short, of quite characteristic shape (Figs. 8, 9). Length 9.0 mm (abdomen slightly extended).

Female. Unknown.

Geographical distribution. The species is at present known only from the type locality in Kaohsiung Hsien in Taiwan.

Bionomics. Nothing is known about the collecting circumstances of the holotype.

Recognition and comments. The species differs from all congeners, except for *A. apterus* Schillhammer, 2018, by the quite short elytra in combination with the shape of the aedeagus. It differs from *A. apterus* mainly by the narrow, elongate styli of male tergite 9 and by the differently shaped aedeagus, particularly the paramere (compare Fig. 9 and Fig. 8a in Schillhammer, 2018).

Since in my descriptions I give the sutural length of elytra that includes the scutellum, and the basal portion of the scutellum is obscured by pronotum in the holotype, I had to estimate the length of the scutellum, but I am sure that the estimate comes close to the actual length.

Etymology. The specific epithet is a combination of the Latin adjective *brevis*, *-e* (short) and the noun *penna*, *-ae*, f. (wing, elytron in beetles). It refers to the short elytra of the species.

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