

Linzer biol. Beitr.	46/1	481-498	31.7.2014
---------------------	------	---------	-----------

Seven new species and additional records of *Stilicoderus* and *Stiliderus* (Coleoptera: Staphylinidae: Paederinae)

V. ASSING

Abstract: Five species of *Stilicoderus* SHARP 1889 and two of *Stiliderus* MOTSCHULSKY 1858 are described and illustrated: *Stilicoderus dilatatus* nov.sp. (Taiwan) of the *S. japonicus* group; *Stilicoderus seticollis* nov.sp. (Indonesia: Maluku: Morotai), *S. sociabilis* nov.sp. (Maluku: Morotai), *S. brevisetosus* nov.sp. (Maluku: Morotai), and *S. transversus* nov.sp. (Maluku: Halmahera) of the *S. hieroglyphicus* group; *Stiliderus aviformis* nov.sp. (NW-Thailand) of the *S. cicatricosus* group; *S. tridentatus* nov.sp. (Indonesia: Sulawesi Utara) of the *S. brendelli* group. Additional records of ten described species of *Stilicoderus* and of four species of *Stiliderus* are reported.

Key words: Coleoptera, Staphylinidae, Paederinae, *Stilicoderus*, *Stiliderus*, Palaearctic region, Oriental region, taxonomy, new species, new records

Introduction

The stilicine genera *Stilicoderus* SHARP 1889 and *Stiliderus* MOTSCHULSKY 1858, which are distributed in the south of the East Palaearctic, in the Oriental, and in the Australian regions, previously included 83 and 43 species, respectively (ASSING 2013b). There is little doubt that the known species inventories of both genera are far from complete and that numerous additional species remain to be discovered in the future, particularly so in the Oriental and Australian regions. Firstly, new species were discovered in practically every larger sample that was examined in this and the two previous contributions. Secondly, numerous species are currently known only from their type localities. Thirdly, on several occasions, up to four or five species were found in the same locality. Finally, much of the Oriental and Australian regions has been studied only sporadically and poorly, or not at all.

Many species groups of both genera contain clades of species that are virtually indistinguishable based on external characters and that even share highly similar male secondary sexual characters. A reliable identification is often possible only based on the male primary sexual characters. What makes matters even worse is that *Stilicoderus* and *Stiliderus* species are - at least partly - enormously widespread and may have largely sympatric distributions. Against this background, it seems most unfortunate that the male

sexual characters of quite a few species are unknown, mainly because they were described exclusively from females, even in more recent years. At present, it is uncertain if it will ever be possible to unambiguously interpret the identity of such doubtful species.

Since the latest contributions (ASSING 2013a, b) to the taxonomy and zoogeography of *Stilicoderus* and *Stiliderus*, substantial material has become available primarily from the collections of the Staatliches Museum für Naturkunde, Stuttgart. Some additional specimens were forwarded to me by Aleš Smetana, Ottawa. An examination of this material yielded as many as seven new species (not counting some species represented only by females) and several records of zoogeographic interest.

The species group concept used in the present paper is based on ROUGEMONT (1996).

Material and methods

The material treated in this study is deposited in the following public institutions and private collections:

CAS Chinese Academy of Sciences, Beijing

SMNS Staatliches Museum für Naturkunde, Stuttgart (W. Schawaller)

cAss..... author's private collection

cSme..... private collection Aleš Smetana, Ottawa

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.

Body length was measured from the anterior margin of the labrum to the abdominal apex, the length of the forebody from the anterior margin of the labrum to the posterior margin of the elytra, head length from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra (at the suture), and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

Species descriptions and additional records

Genus *Stilicoderus* SHARP 1889

The *Stilicoderus japonicus* group

Stilicoderus formosanus ROUGEMONT 1996 (Figs 50-52)

Material examined: Taiwan: 6 exs., Nantou Hsien, Shanlinchi, 1650 m, 19.V.1991, leg. Smetana [T87] (cSme, cAss); 1 ex., Nantou Hsien, Meifeng, 2130 m, 2.V.1998, leg. Smetana [T196] (cSme); 1 ex., Pingtung Hsien, Peitawushan, trail at 1500 m, 1.V.1992, leg. Smetana [T110] (cSme); 1 ex., Kaohsiung Hsien, Peinantashan trail, 2000 m, 7.VII.1993, leg. Smetana [T144] (cAss).

Comment: This species was originally described from Taiwan and subsequently recorded also from Fujian province, southern mainland China (ASSING 2013a). The above specimens were sifted from leaf litter in primary broad-leaved forests, in a subtropical/tropical evergreen broad-leaved forest, and in a primary mixed forest (SMETANA pers. comm.) at altitudes of 1500-2130 m. The male sexual characters are illustrated in Figs 50-52.

***Stilicoderus dilatatus* nov.sp.** (Figs 45-49)

Type material: Holotype ♂: "TAIWAN: Anmashan, Taichung Hsien, 2100 m, Route second. km 34, L. LeSage LL90-36 / Holotypus ♂ *Stilicoderus dilatatus* sp. n. det. V. Assing 2013" (cAss).

Etymology: The specific epithet is the past participle of the Latin verb *dilatare* (to broaden) and refers to the broad ventral process of the aedeagus, the character best distinguishing this species from the similar and closely related *S. formosanus*.

Description: Body length 6.8 mm; length of forebody 4.2 mm. Habitus as in Fig. 45. Coloration: body black; legs dark-reddish; antennae reddish.

Head (Fig. 46) 1.07 times as long as broad, broadest behind eyes; lateral margins smoothly curved towards posterior constriction, posterior angles obsolete; punctation fine and dense, somewhat sparser in median dorsal portion; interstices without microsculpture. Eyes weakly convex and of moderate size, approximately one-third as long as distance from posterior margin of eye to posterior constriction in dorsal view. Antenna 2.4 mm long

Pronotum (Fig. 46) 1.1 times as long as broad and 0.86 times as broad as head, strongly convex in cross-section; punctation dense and granulose, distinctly less fine than that of head; interstices without microsculpture; midline rather broadly impunctate.

Elytra (Fig. 46) approximately as long as, and much broader than, pronotum; humeral angles marked; disc with double punctation, i.e., with rather coarse, dense, and somewhat irregular punctures and with granulose micropunctuation. Hind wings present.

Abdomen as broad as elytra; punctation very fine and dense; interstices with distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 47) with dense and fine pubescence and with nearly truncate posterior margin; sternite VIII (Fig. 48) noticeably transverse, with dense and fine pubescence, and with shallow median impression, posterior excision deep and narrow, nearly half as deep as length of sternite, apices on either side of posterior excision somewhat elongated; aedeagus (Fig. 49) 1.05 mm long and of distinctive shape.

Comparative notes: This species is distinguished from the externally highly similar *S. formosanus* by the posteriorly more strongly projecting apices and the deeper posterior excision of the male sternite VIII, as well as by the larger aedeagus with a distinctly broader ventral process (lateral view) of the aedeagus. For illustrations of the male sexual characters of *S. formosanus* see Figs 50-52.

Distribution and natural history: The holotype was collected in the Anma Shan, a mountain in Taichung Hsien, Taiwan, at an altitude of 2100 m.

The *Stilicoderus minor* group

Stilicoderus exiguitas SHIBATA 1974

Material examined: Taiwan: 13 exs., Taitung Hsien, Hsinkangshan above Chengkung, 800 m, 26.IV.1995, leg. Smetana [T167] (cSme, cAss); 1 ex., Kaohsiung Hsien, Tengchih, 1565 m, 24.IV.1999, leg. Smetana [T22] (cSme).

Comment: This species is probably endemic to Taiwan (ASSING 2013a). For previous records see SHIBATA (1974, 2002). The above specimens were sifted from leaf litter and debris in an old subtropical forest with tree ferns and from refuse at a camp site (SMETANA pers. comm.) at altitudes of 800 and 1565 m.

Stilicoderus psittacus ASSING 2013

Material examined: China: 1 ex., Yunnan, North Gaoligong Shan, E-slope, 27°48'N, 98°35'E, 2100 m, sifted, 1.VI.2010, leg. Grebennikov (cSme); 1 ex., Yunnan, Diqing Tibet. Aut. Pref., Deqin Co., gully W Jinsha Jiang river, 33 km WNW Zhongdian, 27°57'N, 99°24'E, 2300 m, 4.VI.2005, leg. Smetana [C151] (cAss).

Comment: At present, *S. psittacus* is known from the Chinese provinces Sichuan, Shaanxi, Hubei, Chongqing, and Yunnan (ASSING 2013a, b). One of the above specimens was sifted from various debris along a creek in a devastated creek cleft valley (SMETANA pers. comm.).

The *Stilicoderus variolosus* group

Stilicoderus barbulator ASSING 2013

Material examined: China: 2 exs., Yunnan, North Gaoligong Shan, E-slope, 27°45'N, 98°36'E, 2600 m, sifted, 2.VI.2010, leg. Grebennikov (cSme, cAss).

Comment: The distribution of this recently described species is confined to several localities in the northern Gaoligong Shan (ASSING 2013a, b).

The *Stilicoderus feae* group

Stilicoderus feae FAUVEL 1895

Material examined: Thailand: 1 ♀, Soppong, 19°29'N, 98°18'E, 750 m, 13.V.1993, leg. Bocák (SMNS).

Comment: The vast distribution of *S. feae* ranges from the West Himalaya to Vietnam (ASSING 2013b).

Stilicoderus kuani SHIBATA 1974

Material examined: Taiwan: 2♂♂, 1♀, Taitung Hsien, Hsinkangshan foothills, near Chengkung, 350-400 m, 19.VII.1993, leg. Smetana [T155] (cSme, cAss).

Comment: For previous records of this endemic of Taiwan see SHIBATA (1974, 2002). The above specimens were sifted from various debris on and along gravel banks of a small creek in an old subtropical forest with tree ferns (SMETANA pers. comm.).

The *Stilicoderus signatus* group

Stilicoderus lomholdti (ROUGEMONT 1986)

Material examined: Thailand: 3 exs., Chiang Mai, Doi Inthanon, 1800 m, 14.V.2006, leg. Grimm (SMNS, cAss).

Comment: The known distribution of this species is confined to Thailand and the Chinese province Yunnan (ASSING 2013a).

Stilicoderus kasaharai SHIBATA 2002

Material examined: Taiwan: 1 ♀, Pingtung Hsien, Peitawushan trail, 2000 m, 23.V.1991, leg. Smetana [T1] (Ass).

Comment: This species has been recorded only from Taiwan. The identification of the above female is based on the key provided by SHIBATA (2002), who assigned the species to the *S. signatus* group. The specimen was sifted from bamboo and tree leaf litter in a secondary forest with evergreen broad-leaved trees and shrubs and with bamboo (SMETANA pers. comm.).

The *Stilicoderus discalis* group

Stilicoderus discalis FAUVEL 1895

Material examined: Thailand: 2 ♀ ♀, Amphoe Chiang Dao, Doi Chiang Dao, 1700 m, 9.I.1989, leg. Trautner & Geigenmüller (SMNS, cAss); 1 ♀, road 30 km NE Mae Hong Son, 21.-23.IV.2004, leg. Schawaller (SMNS); 1 ♀, Mae Hong Son, 32 km NNE Mae Hong Son, 5.V.2004, leg. Grimm (SMNS); 1 ♀, W Pai, above waterfall, 800 m, 25.IV.2004, leg. Schawaller (cAss).

Comment: *Stilicoderus discalis* is rather widespread, its distribution ranging from Myanmar to Thailand, Laos, and Vietnam (ASSING 2013a, b).

Stilicoderus bacchusi (ROUGEMONT 1986) (Figs 7, 15-16)

Material examined: Malaysia: 2 ♂ ♂, 1 ♀, 50 km SW Kuala Terengganu, Lake Kenyir, 5 km SW dam, 350 m, 7.-12.VII.2001, leg. Schulz & Vock (SMNS, cAss).

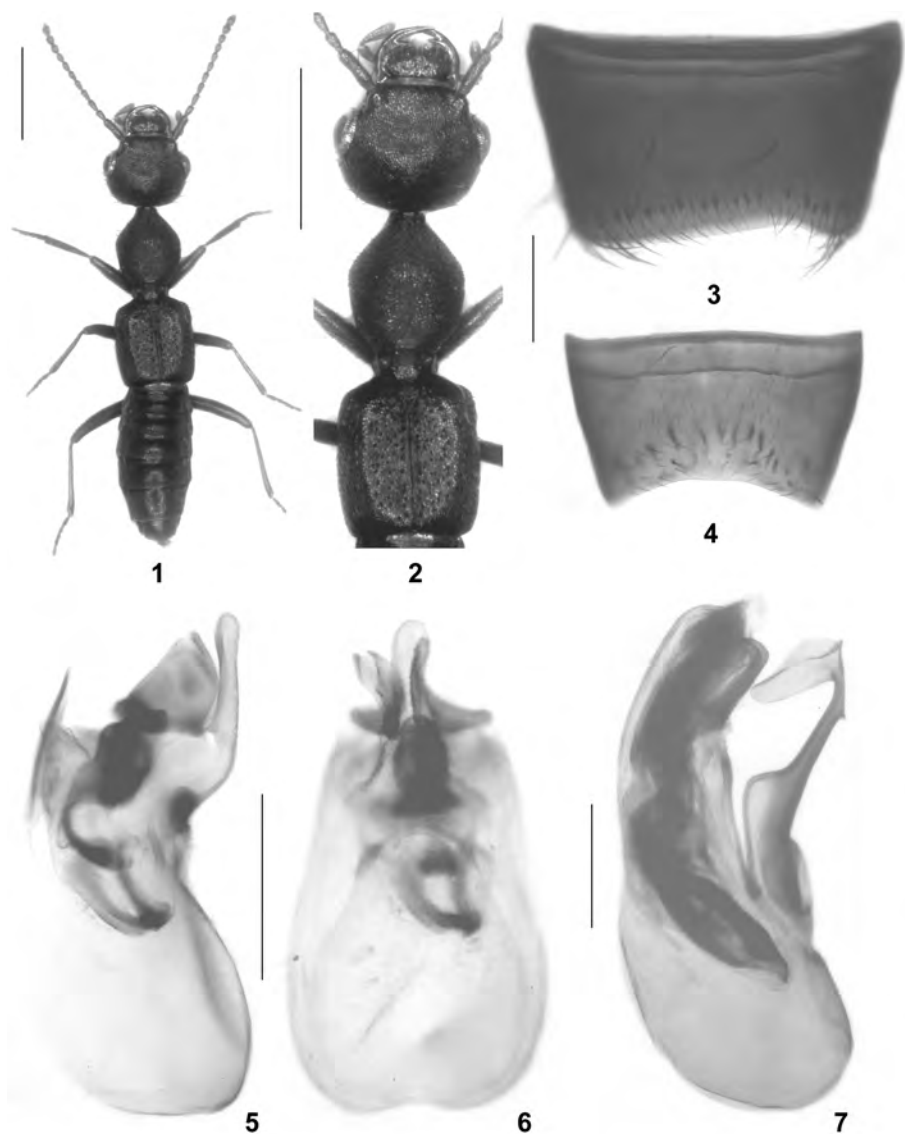
Comment: This species was previously known only from Borneo (ROUGEMONT 1996). The aedeagus and the male secondary sexual characters of one of the above males are illustrated in Figs 7, 15-16.

The *Stilicoderus hieroglyphicus* group

Comment: The characters separating the *hieroglyphicus* and *aerosus* groups (ROUGEMONT 1986a) probably do not reflect phylogenetically distinct lineages. Based on the male sexual characters, the species previously assigned to these groups (ROUGEMONT 1996) belong to one clade (i.e., one group). All of them are distributed in New Guinea, Australia, and the Kai Islands.

Stilicoderus seticollis nov.sp. (Figs 1-6)

Type material: Holotype ♂: "MALUKU: Is. Morotai, W Daruba, Raja, 16.XI.1999, ca. 250 m, leg. A. Riedel / Holotypus ♂ *Stilicoderus seticollis* sp. n. det. V. Assing 2013" (SMNS). Paratypes: 2 ♂ ♂, 8 ♀ ♀: same data as holotype (SMNS, cAss).



Figs 1-7: *Stilicoderus seticollis* nov.sp. (1-6) and *S. bacchusi* (ROUGEMONT) (7): (1) habitus; (2) forebody; (3) male sternite VII; (4) male sternite VIII; (5-7) aedeagus in lateral and in ventral view. Scale bars: 1-2: 1.0 mm; 3-7: 0.2 mm.

E t y m o l o g y : The specific epithet (Latin, adjective) refers to the presence of numerous long setae on the pronotum.

D e s c r i p t i o n : Body length 4.3-4.8 mm; length of forebody 2.8-3.1 mm. Habitus as in Fig. 1. Coloration: body black; legs with dark-brown to blackish-brown femora and with reddish to reddish-brown tibiae and tarsi; antennae reddish.

Head (Fig. 2) distinctly transverse, approximately 1.25 times as broad as long, somewhat depressed, posteriorly of trapezoid shape, posterior angles moderately marked; punctation very dense, fine, and not umbilicate, interstices very narrow; dorsal surface with very weak shine; postero-lateral and dorsal surfaces with rather numerous very long dark setae. Eyes large and strongly bulging, approximately 0.7 times as long as distance from posterior margin of eye to posterior constriction in dorsal view. Antenna 1.5-1.6 mm long

Pronotum (Fig. 2) weakly oblong, approximately 1.1 times as long as broad and 0.70-0.75 times as broad as head, distinctly convex in cross-section; punctation very dense and distinctly granulose; interstices barely noticeable; surface practically matt; lateral margins each with numerous (approximately 7-10) very long black setae (often broken off); midline without impunctate band.

Elytra (Fig. 2) approximately 0.95 times as long and 1.20-1.25 times as broad as pronotum; humeral angles marked; punctation dense and granulose, slightly finer and less dense than that of pronotum, and with numerous additional coarser, non-setiferous puncture-like impressions; interstices without microreticulation; surface less matt than that of pronotum. Hind wings not examined, but probably present.

Abdomen noticeably narrower than elytra; punctation very fine and dense; pubescence fine, short, and inconspicuous; anterior portions of tergites with distinct transverse microsculpture, posterior portions of tergites with shallower microreticulation; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 3) strongly transverse, posterior margin asymmetrically, broadly concave, laterally with a cluster of approximately 5-6 long and stout black setae on either side; sternite VIII (Fig. 4) strongly transverse and with sparse pubescence, posterior margin broadly concave; aedeagus (Figs 5-6) 0.55-0.57 mm long and of distinctive shape.

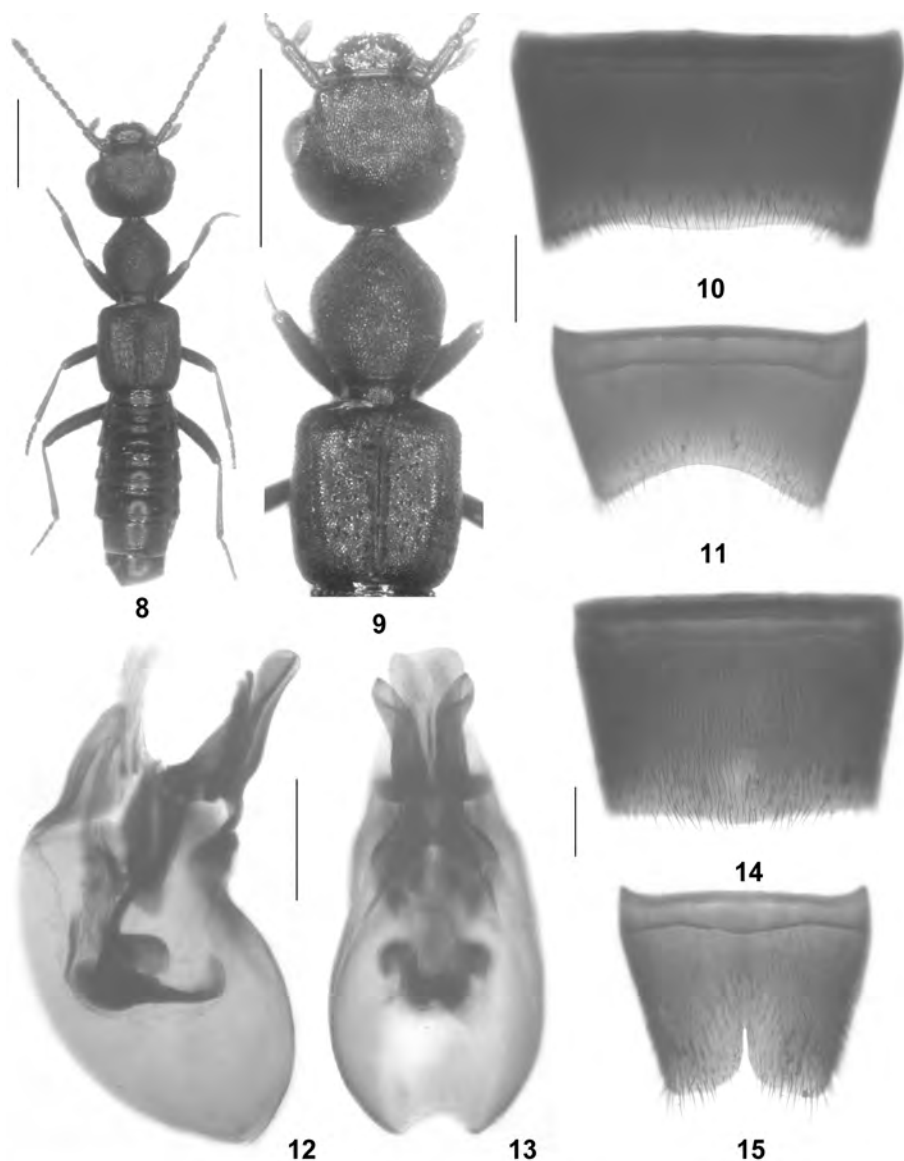
Comparative notes: Without reference specimens for comparison, this species is reliably identified only based on the distinctive shapes and chaetotaxy of the male sternite VII and VIII, as well as on the morphology of the aedeagus. From the extremely similar following species from Maluku, *S. seticollis* additionally differs by slightly smaller body size, the more slender abdomen, and the more numerous long setae on the pronotum.

Distribution and natural history: The type locality is situated in Orotai, the northernmost island of Maluku. The specimens were collected at an altitude of approximately 250 m, together with the two following and one probably undescribed species (represented only by one female).

***Stilicoderus sociabilis* nov.sp.** (Figs 8-13)

Type material: Holotype ♂: "MALUKU: Is. Morotai, W Daruba, Raja, 16.XI.1999, ca. 250 m, leg. A. Riedel / Holotypus ♂ *Stilicoderus sociabilis* sp. n. det. V. Assing 2013" (SMNS). Paratypes: 1 ♂, 4 ♀: same data as holotype (SMNS, cAss).

Etymology: The specific epithet (Latin, adjective) alludes to the fact that this species apparently shares its habitat with the syntopic *S. seticollis*.



Figs 8-15: *Stilicoderus sociabilis* nov.sp. (8-13) and *S. bacchusi* (ROUGEMONT) (14-15): (8) habitus; (9) forebody; (10, 14) male sternite VII; (11, 15) male sternite VIII; (12-13) aedeagus in lateral and in ventral view. Scale bars: 8-9: 1.0 mm; 10-15: 0.2 mm.

Description: Body length 4.8-5.5 mm; length of forebody 3.1-3.2 mm. Length of antenna 1.6-1.7 mm. Habitus as in Fig. 8. Lateral margins of pronotum with few (< 5) setae. Other external characters (Fig. 9) highly similar to those *S. seticollis*.

♂: sternite VII (Fig. 10) strongly transverse, posterior margin symmetrically bisinuate

(i.e., general outline concave, in the middle broadly convex), laterally with dense moderately long black setae; sternite VIII (Fig. 11) strongly transverse and with dense pubescence, posterior margin broadly concave; aedeagus (Figs 12-13) approximately 0.8 mm long and of distinctive shape.

Comparative notes: Aside from its slightly larger size and the presence of fewer long setae on the pronotum, *S. sociabilis* is distinguished from the syntopic *S. seticollis* by the different shape and chaetotaxy of the male sternite VII, the broader, more transverse, and posteriorly more strongly concave male sternite VIII, and by the much larger and differently shaped aedeagus.

Distribution and natural history: The type locality is identical to that of *S. seticollis*.

***Stilicoderus brevisetosus* nov.sp.** (Figs 16-21)

Type material: Holotype ♂: "MALUKU: Is. Morotai, W Daruba, Raja, 16.XI.1999, ca. 250 m, leg. A. Riedel / Holotypus ♂ *Stilicoderus brevisetosus* sp. n. det. V. Assing 2013" (SMNS).

Etymology: The specific epithet (Latin, adjective) refers to the short setae on the head and pronotum.

Description: Body length 5.7 mm; length of forebody 3.5 mm. Habitus as in Fig. 16. Coloration: body black; legs with dark-brown femora (except for the reddish apices) and with reddish tibiae and tarsi; antennae reddish.

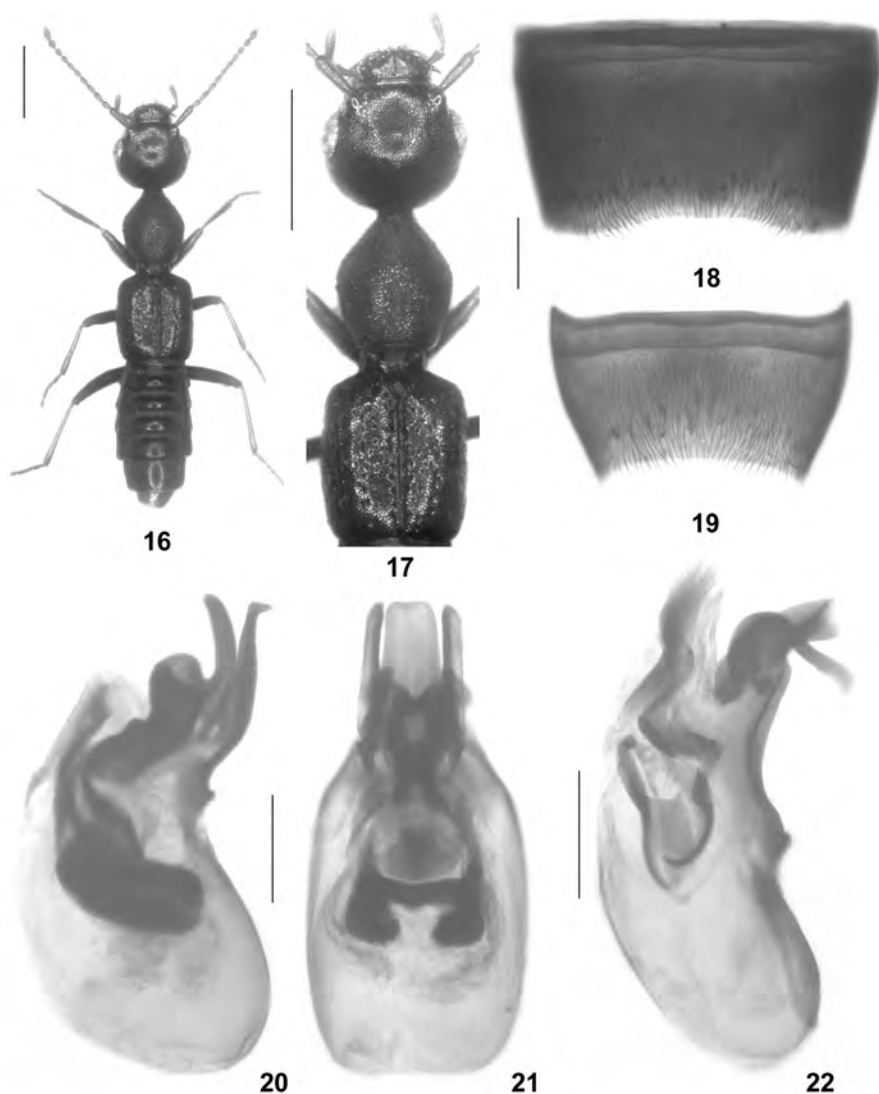
Head (Fig. 17) 1.25 times as broad as long, lateral margins behind eyes smoothly curving towards posterior constriction, posterior angles not marked; punctation dense, rather fine, and not umbilicate; interstices narrow, but noticeable, glossy; dorsal surface with some shine; postero-lateral and dorsal surfaces with relatively short setae. Eyes large and strongly bulging, approximately 0.8 times as long as distance from posterior margin of eye to posterior constriction in dorsal view. Antenna 1.8 mm long

Pronotum (Fig. 17) weakly oblong, 1.15 times as long as broad and 0.78 times as broad as head, distinctly convex in cross-section; punctation very dense and distinctly granulose; interstices barely noticeable; surface practically matt; lateral margins with few thin and not conspicuously long dark setae; midline without impunctate band.

Elytra (Fig. 17) 1.02 times as long and 1.25 times as broad as pronotum; humeral angles marked; punctation dense and granulate, similar to that of pronotum, but less dense, with numerous additional coarser, non-setiferous puncture-like impressions; interstices without microreticulation; surface with some shine. Hind wings not examined, but probably present.

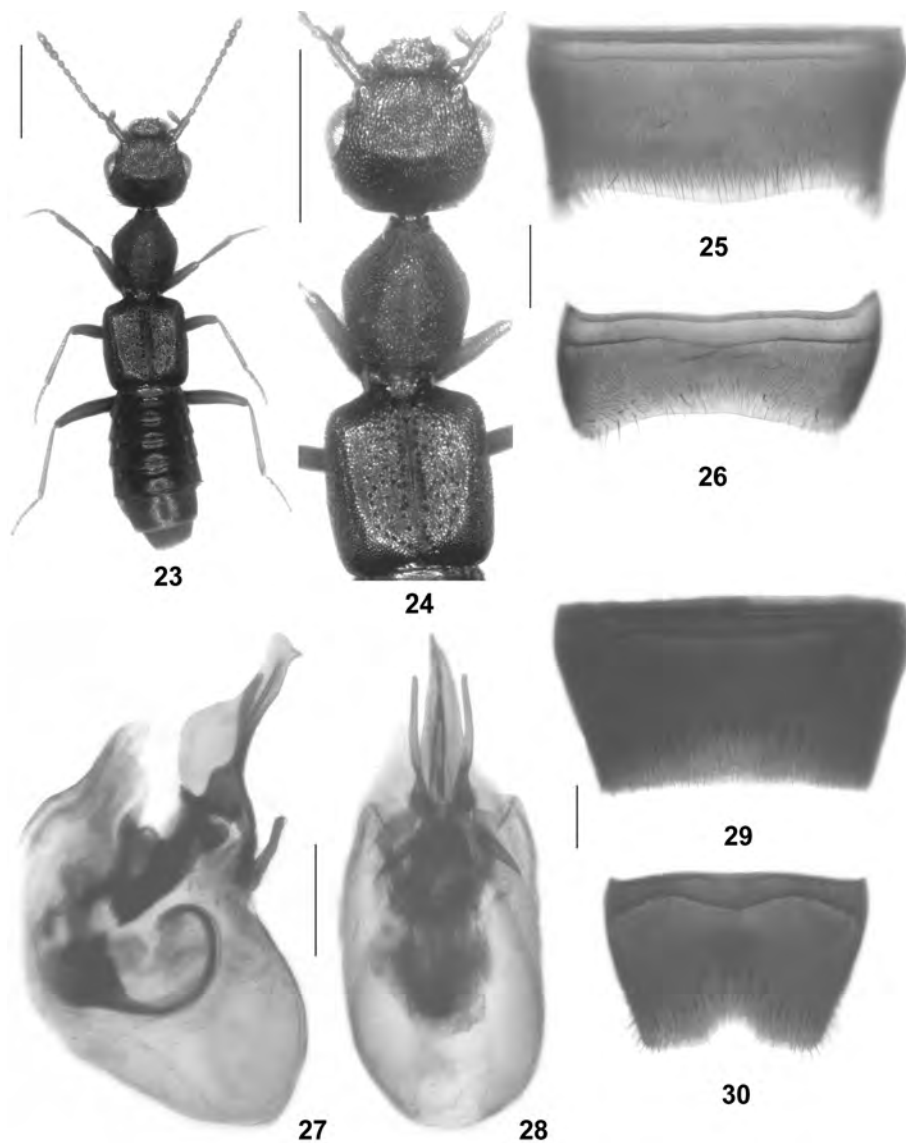
Abdomen approximately as broad as elytra; punctation very fine and dense; pubescence fine, short, and inconspicuous; anterior impressions of tergites III-VI with pronounced microsculpture, posterior portions of tergites with shallow microreticulation; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 18) strongly transverse, posterior margin symmetrically, weakly concave in the middle; sternite VIII (Fig. 19) strongly transverse and with dense pubescence, very weakly concave; aedeagus (Figs 20-21) 0.86 mm long and of distinctive shape both in lateral and in ventral view.



Figs 16-22: *Stilicoderus brevisetosus* nov.sp. (16-21) and *Stiliderus depressus* ROUGEMONT (22): (16) habitus; (17) forebody; (18) male sternite VII; (19) male sternite VIII; (20-22) aedeagus in lateral and in ventral view. Scale bars: 16-17: 1.0 mm; 18-22: 0.2 mm.

Comparative notes: From the similar and syntopic *S. seticollis* and *S. sociabilis*, *S. brevisetosus* is distinguished by slightly larger body size, slightly different head shape, the slightly less dense punctation of the head, the distinctly shorter setae on the head and pronotum, the different shape and chaetotaxy of the male sternite VII, the different shape and chaetotaxy of the male sternite VIII (pubescence much denser; posterior margin less distinctly concave), as well as by the larger and differently shaped aedeagus.



Figs 23-30: *Stilicoderus transversus* nov.sp. (23-28) and *Stiliderus depressus* ROUGEMONT (29-30): (23) habitus; (24) forebody; (25, 29) male sternite VII; (26, 30) male sternite VIII; (27-28) aedeagus in lateral and in ventral view. Scale bars: 23-24: 1.0 mm; 25-30: 0.2 mm.

Distribution and natural history: The type locality is identical to that of *S. seticollis* and *S. sociabilis*.

***Stilicoderus* sp.**

Material examined: 1♀: "MALUKU: Is. Morotai, W Daruba, Raja, 16.XI.1999, ca. 250 m, leg. A. Riedel" (SMNS).

Comment: The above female probably represents an undescribed species. It is highly similar to the three preceding species, together with which it was collected. It differs from all of them by the presence of conspicuously numerous long black setae on the postero-lateral surfaces of the head and by the uneven dorsal surface of the head. From the similarly sized *S. sociabilis*, it is additionally distinguished by the less dense punctuation of the head.

***Stilicoderus transversus* nov.sp.** (Figs 23-28)

Type material: Holotype ♂: "MALUKU: Is. Halmahera, Sidangoli, Batu putih, 23.XI.1999, 100 m, leg. A. Riedel / Holotypus ♂ *Stilicoderus transversus* sp. n. det. V. Assing 2013" (SMNS).

Etymology: The specific epithet (Latin, adjective) alludes to the extremely transverse male sternite VIII.

Description: Body length 5.0 mm; length of forebody 3.0 mm. Length of antenna 1.6 mm. Habitus as in Fig. 23. Lateral margins of pronotum with few (< 5) setae. Legs uniformly reddish. Other external characters (Fig. 24), except for the somewhat broader abdomen, as in *S. seticollis*.

♂: sternite VII (Fig. 25) conspicuously transverse, posterior margin weakly concave laterally and weakly convex in the middle, laterally with dense pubescence; sternite VIII (Fig. 26) extremely transverse, more than three times as broad as long, posterior margin broadly and weakly concave; aedeagus (Figs 27-28) 0.86 mm long and of distinctive shape, characterized also by a distinctly projecting process (lateral view) at the base of the ventral process.

Comparative notes: This species differs from the other species described from Maluku particularly by the uniformly reddish legs, the conspicuously transverse male sternites VII and VIII, as well as by the distinctive morphology of the aedeagus.

Distribution and natural history: The type locality is situated in Halmahera island (Indonesia: Maluku) at an altitude of 100 m.

Genus *Stiliderus* MOTSCHULSKY 1858**The *Stiliderus duplicatus* group*****Stiliderus depressus* ROUGEMONT 1996** (Figs 22, 29-30)

Material examined: Thailand: 1♂, Amphoe Chiang Dao, Doi Chiang Dao, 1700 m, 9.I.1989, leg. Trautner & Geigenmüller (SMNS).

Comment: *Stiliderus depressus* was originally described from Thailand and recently recorded also from Laos (ASSING 2013b). The primary and secondary sexual characters of the above male are illustrated in Figs 22, 29-30.

The *Stiliderus cicatricosus* group

Stiliderus cicatricosus MOTSCHULSKY 1858 (Figs 36-38)

Material examined: Thailand: 1♂, Mae Hong Son, 33 km NE Mae Hong Son, 17.V.2006, leg. Grimm (SMNS); 1♂, Mae Hong Son, Soppong (Pangmapa), 5.V.2004, leg. Grimm (cAss); 5♀, Ko Chang, west side, 1999, leg. Schulz & Vock (SMNS, cAss); 1♀, Khao Lak N.P., Thone Chong Fa Fall, 100-300 m, 6.-15.I.1998, leg. Schulz & Vock (SMNS). Malaysia: 1♂, 1♀, 50 km SW Kuala Terengganu, Lake Kenyir, 5 km SW dam, 350 m, 7.-12.VII.2001, leg. Schulz & Vock (SMNS, cAss).

Comment: According to ROUGEMONT (1996), the distribution of *S. cicatricosus* ranges from Myanmar to Malaysia. The sexual characters of a male from Malaysia are illustrated in Figs 36-38.

Stiliderus crassus (KRAATZ 1859)

Material examined: Thailand: 1♂, road 30 km NE Mae Hong Son, 500 m, 21.-23.IV.2004, leg. Schawaller (SMNS).

Comment: This species is widespread in the Oriental region, from India to Sulawesi (ROUGEMONT 1996).

Stiliderus aviformis nov.sp. (Figs 31-35)

Type material: Holotype ♂: "NW THAILAND, road 30 km NE Mae Hong Song [sic], 500 m, 21.-23.IV.2004, leg. W. Schawaller / Holotypus ♂ *Stiliderus aviformis* sp. n. det. V. Assing 2013" (SMNS). Paratypes: 3♂♂, 7♀♀: same data as holotype (SMNS, cAss).

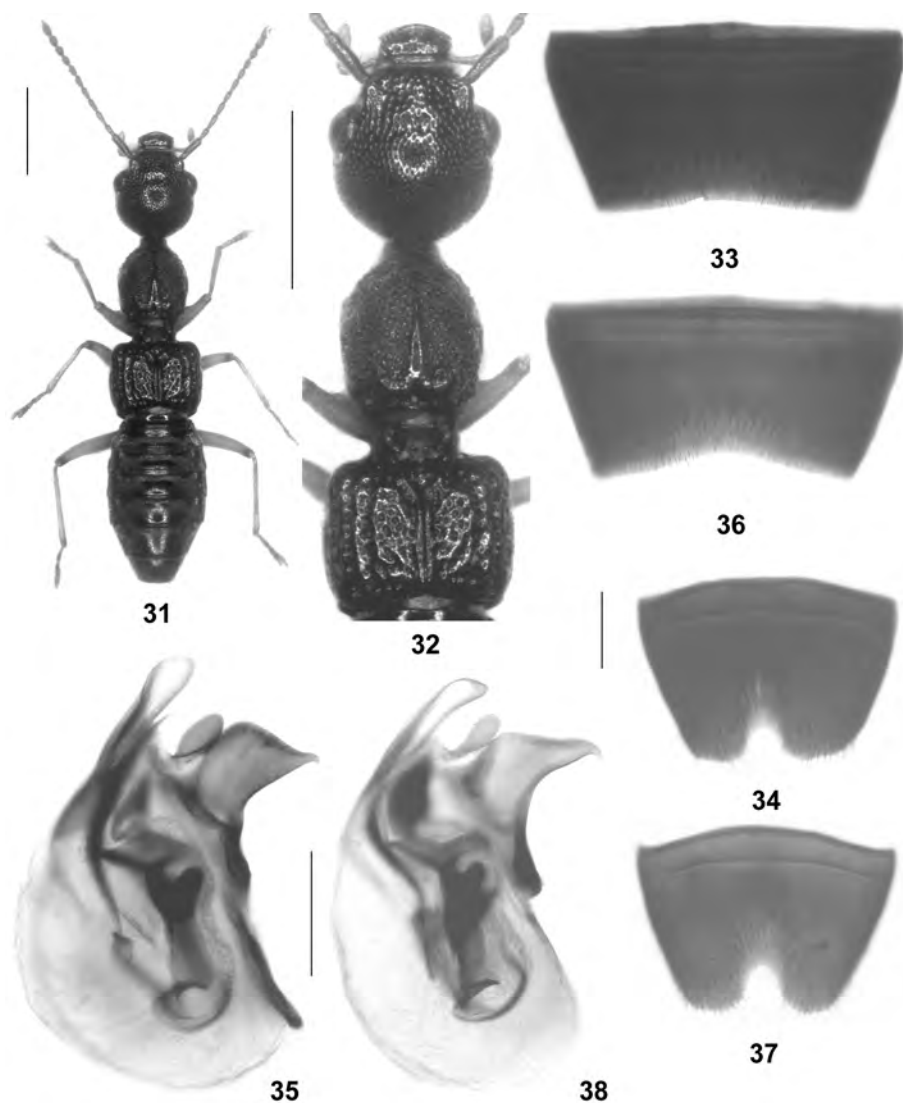
Etyymology: The specific epithet (Latin, adjective: shaped like a bird) alludes to the shape of the ventral process of the aedeagus (lateral view), which somewhat resembles the contours of a bird's head.

Description: Body length 5.0-5.7 mm; length of forebody 3.1-3.4 mm. Habitus as in Fig. 31. Coloration: body black; legs yellowish with the apices of the profemora weakly and those of the meso- and metafemora more distinctly narrowly infuscate; antennae reddish to brown, with antennomere I blackish.

Head (Fig. 32) very weakly oblong, approximately 1.01-1.05 times as long as broad; lateral margins behind eyes smoothly rounded towards posterior constriction, posterior angles obsolete; punctures moderately coarse, dense, somewhat oval, and not umbilicate; interstices without microsculpture, on average slightly narrower than diameter of punctures. Eyes strongly bulging, approximately half as long as distance from posterior margin of eye to posterior constriction in dorsal view, or slightly longer. Antenna 1.9-2.0 mm long.

Pronotum (Fig. 32) approximately 1.1 times as long as broad and 0.85 times as broad as head, strongly convex in cross-section; punctuation coarse, very dense, and umbilicate; at posterior margin with transverse row of very coarse punctures; midline with complete impunctate band, this band broad and elevated posteriorly, narrow in the middle, and triangularly widened anteriorly; near posterior margin with transverse impunctate band.

Elytra (Fig. 32) short and strongly transverse, approximately 0.6 times as long and 1.3 times as broad as pronotum; punctuation very coarse, somewhat irregular in sutural half and indistinctly seriate in lateral half; interstices without microsculpture. Hind wings present.



Figs 31-38: *Stiliderus aviformis* nov.sp. (31-35) and *S. cicatricosus* MOTSCHULSKY (Malaysia) (36-38): (31) habitus; (32) forebody; (33, 36) male sternite VII; (34, 37) male sternite VIII; (35, 38) aedeagus in lateral view. Scale bars: 31-32: 1.0 mm; 33-38: 0.2 mm.

Abdomen short and broad, approximately 1.1 times as broad as elytra, widest at segments V and VI; punctation extremely fine and dense; pubescence very fine, short, depressed and silvery to greyish, condensed in antero-lateral portions of tergites III-V; anterior portions of tergites with distinct transverse microsculpture, posterior portions of tergites with very indistinct microsculpture at most; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 33) strongly transverse, posterior margin broadly concave; sternite VIII (Fig. 34) transverse, posterior excision U-shaped; aedeagus (Fig. 35) 0.55-0.60 mm long, of similar general morphology as in *S. cicatricosus*, but with ventral process of different shape.

Comparative notes: Many species of the *S. cicatricosus* group are highly similar not only in external, but also regarding their male secondary sexual characters. In external appearance, *S. aviformis* is highly similar to the sympatric *S. cicatricosus*, from which it differs by the less transverse male sternite VII, the less deep posterior excision of the male sternite VIII, and particularly by the shape of the ventral process of the aedeagus. Regarding the latter, *S. aviformis* is somewhat similar to *S. capitalis* (BERNHAEUER 1928) and *S. nitidipennis* (BERNHAEUER 1928), both from the Philippines, but the dorsal portion of the aedeagus is of different shape in these species. The male sexual characters of *S. cicatricosus* are illustrated in Figs 36-38; for sketches of the aedeagi of other species of the *S. cicatricosus* group see ROUGEMONT (1986b, 1996).

Distribution and natural history: The type locality is situated in northwestern Thailand at an altitude of 500 m. The specimens were collected together with *S. crassus*.

The *Stiliderus brendelli* group

***Stiliderus* cf. *conicollis* ROUGEMONT 1996**

Material examined: Indonesia: 1♀, Sulawesi, Kotamobagu, Modinding, Gn. Ambang, 6.XII.1999, 1100-1450 m, leg. Riedel (SMNS).

Comment: Since the original description of *S. conicollis* is based only on females (ROUGEMONT 1996), the identity of this species is doubtful. The above female was identified using the key in ROUGEMONT (1996). Thus, the identification must be considered tentative at best.

***Stiliderus tridentatus* nov.sp. (Figs 39-44)**

Type material: Holotype ♂: "SULAWESI: Kotamobagu, Modinding, Gn. Ambang, 6.XII.1999, 1450 m, leg. A. Riedel / Holotypus ♂ *Stiliderus tridentatus* sp. n. det. V. Assing 2013" (SMNS). Paratypes: 6♂♂, 12♀♀ [partly somewhat teneral]: same data as holotype (SMNS, cAss).

Etymology: The specific epithet (Latin, adjective) alludes to the three dorsal teeth on the dorsal side of the apex of the ventral process of the aedeagus.

Description: Body length 5.4-6.6 mm; length of forebody 3.5-3.8 mm. Habitus as in Fig. 39. Coloration: body black; legs with dark-brown femora and yellowish-brown tibiae and tarsi; antennae reddish.

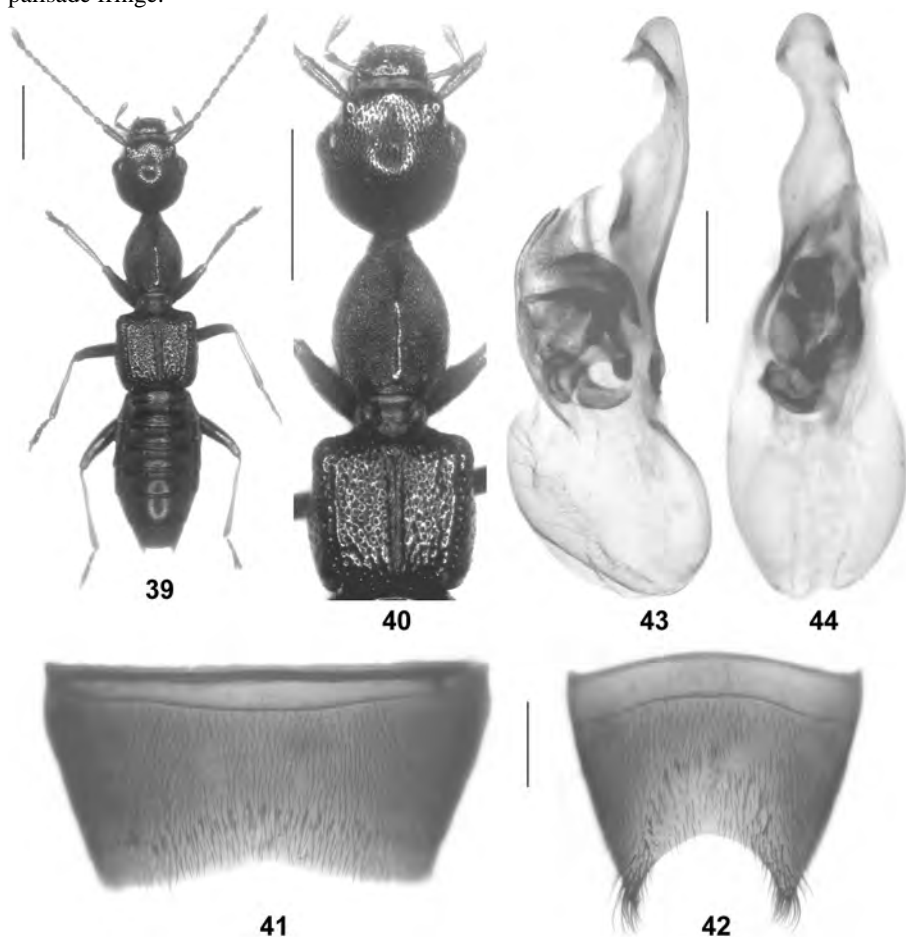
Head (Fig. 40) very weakly transverse, approximately 1.02 times as broad as long; lateral margins behind eyes smoothly rounded towards posterior constriction, posterior angles obsolete; punctures moderately coarse, very dense, somewhat oval, and not umbilicate; interstices without microsculpture, distinctly narrower than diameter of punctures. Eyes strongly bulging, approximately 0.4 times as long as distance from posterior margin of eye to posterior constriction in dorsal view. Antenna approximately 2.2 mm long

Pronotum (Fig. 40) slender, approximately 1.3 times as long as broad and 0.75 times as broad as head, strongly convex in cross-section; punctuation moderately coarse, extremely

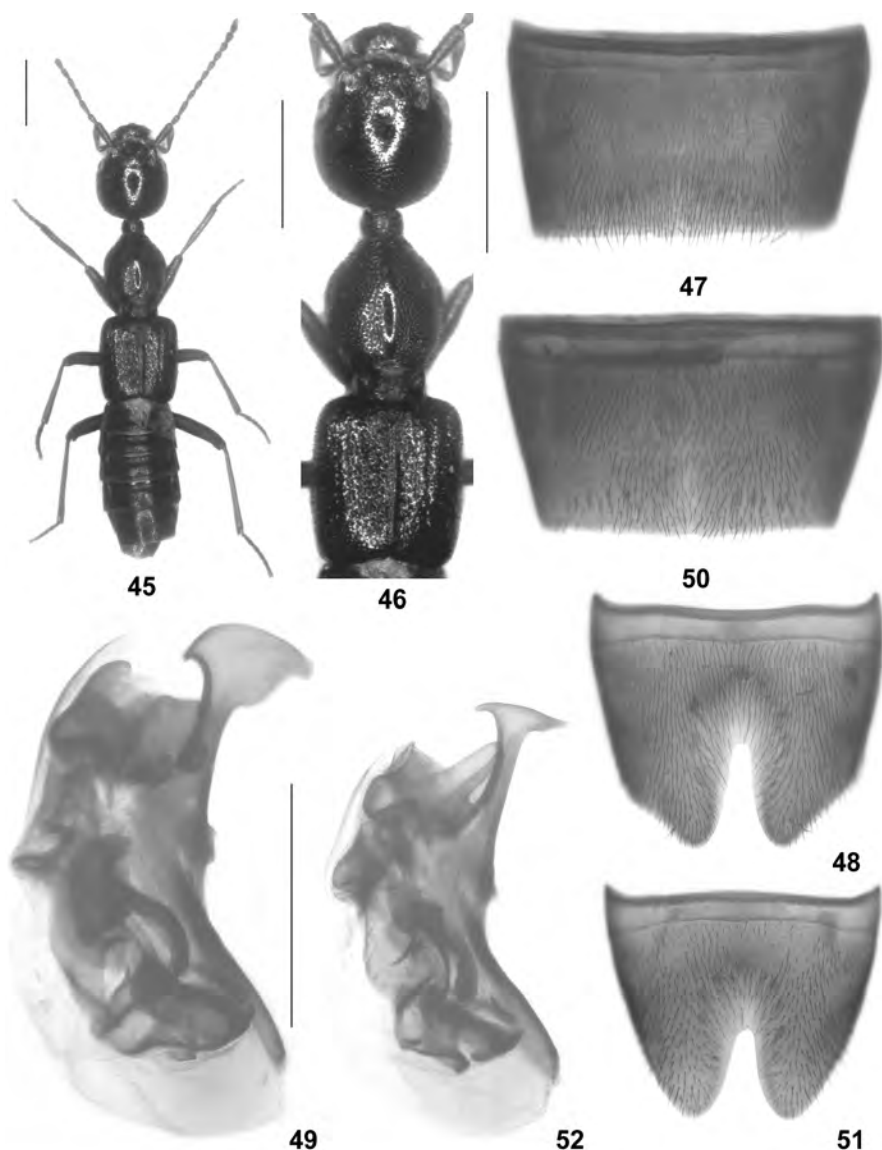
dense, largely diagonally confluent (directed postero-laterad) on either side of midline; middle with narrow impunctate band without microsculpture.

Elytra (Fig. 40) 0.80-0.85 times as long and approximately 1.45 times as broad as pronotum; humeral angles pronounced; punctation much coarser than that of head and pronotum and rather dense; interstices without microreticulation; laterally with an indistinct and somewhat irregular, narrow, slightly elevated, longitudinal glossy band. Hind wings present.

Abdomen as broad as, or slightly narrower than elytra, widest at segments V and VI; punctation extremely fine and extremely dense; pubescence very fine and indistinct; anterior portions of tergites III-VI with distinct transverse microsculpture, posterior portions of tergites with shallow microsculpture; posterior margin of tergite VII with palisade fringe.



Figs 39-44: *Stiliderus tridentatus* nov.sp.: (39) habitus; (40) forebody; (41) male sternite VII; (42) male sternite VIII; (43-44) aedeagus in lateral and in ventral view. Scale bars: 39-40: 1.0 mm; 41-44: 0.2 mm.



Figs 45-52: *Stillicoderus dilatatus* nov.sp. and *S. formosanus* ROUGEMONT: (45) habitus; (46) forebody; (47, 50) male sternite VII; (48, 51) male sternite VIII; (49, 52) aedeagus in lateral view. Scale bars: 45-46: 1.0 mm; 47-52: 0.5 mm.

♂: sternite VII (Fig. 41) strongly transverse, posterior margin broadly concave; sternite VIII (Fig. 42) transverse, posterior excision large and of semi-circular shape, apices on either side of this excision each with a tuft of dense and long black setae; aedeagus (Figs 43-44) slender, approximately 1.05 mm long; ventral process distinctly asymmetric, apex with one left and two right dorsal teeth (ventral view).

Comparative notes: Based on the similar modifications of the male sternite VIII and of the aedeagus, *S. tridentatus* is closely allied to *S. kakimerah* ROUGEMONT 1996 and *S. kakihitam* ROUGEMONT 1996, both described from Sulawesi, too. It is best distinguished from them by the shape of the aedeagus. For sketches of the aedeagi of *S. kakimerah* and *S. kakihitam* see ROUGEMONT (1996).

Distribution and natural history: The type locality is situated near Kotamobagu in Sulawesi Utara, Celebes, Indonesia. The specimens were collected together with an unidentified *Stiliderus* species.

Acknowledgements

I am indebted to the colleagues indicated in the material section for the loan of the material which this study is based on. In particular, I am grateful to Aleš Smetana for the generous gift of the holotype of *Stilicoderus dilatatus*. Benedikt Feldmann (Münster) proof-read the manuscript.

Zusammenfassung

Fünf Arten der Gattung *Stilicoderus* SHARP 1889 und zwei der Gattung *Stiliderus* MOTSCHULSKY 1858 werden beschrieben und abgebildet: *Stilicoderus dilatatus* nov.sp. (Taiwan) aus der *S. japonicus*-Gruppe; *Stilicoderus seticollis* nov.sp. (Indonesien: Maluku: Morotai), *S. sociabilis* nov.sp. (Maluku: Morotai), *S. brevisetosus* nov.sp. (Maluku: Morotai) und *S. transversus* nov.sp. (Maluku: Halmahera) aus der *S. hieroglyphicus*-Gruppe; *Stiliderus aviformis* nov.sp. (NW-Thailand) aus der *S. cicatricosus*-Gruppe; *S. tridentatus* nov.sp. (Indonesien: Sulawesi Utara) aus der *S. brendelli*-Gruppe. Weitere Nachweise von zehn beschriebenen *Stilicoderus*- und vier *Stiliderus*-Arten werden gemeldet.

References

- ASSING V. (2013a): New species and records of *Stilicoderus* and *Stiliderus*, primarily from the southern East Palaearctic region (Coleoptera: Staphylinidae: Paederinae). — Stuttgarter Beiträge zur Naturkunde A, Neue Serie **6**: 57-82.
- ASSING V. (2013b): Three new species and new records of *Stilicoderus* and *Stiliderus* (Coleoptera: Staphylinidae: Paederinae). — Linzer Biologische Beiträge **45** (2): 1571-1585.
- ROUGEMONT G. DE (1986a): Revision of the genus *Stiliderus* MOTSCHULSKY, 1858, Part I: (= *Stilicoderus* SHARP, 1889) (Coleoptera, Staphylinidae, Paederinae). — Entomologische Abhandlungen **49**: 139-187.
- ROUGEMONT G. DE (1986b): Revision of the genus *Stiliderus* MOTSCHULSKY, 1858. Part II: the species with bilobed IVth tarsomeres (Coleoptera, Staphylinidae, Paederinae). — Entomologische Abhandlungen Staatliches Museum, für Tierkunde Dresden **50** (2): 33-58.
- ROUGEMONT G. DE (1996): *Stiliderus* and *Stilicoderus*: New data and new species (Coleoptera, Staphylinidae, Paederinae). — Revue Suisse de Zoologie **103** (3): 713-736.
- SHIBATA Y. (1974): Two new species of *Stilicoderus* SHARP from Taiwan (Coleoptera, Staphylinidae). — Bulletin of the Japan Entomological Academy **8**: 8-13.
- SHIBATA Y. (2002): Notes on the Taiwanese species of the genus *Stilicoderus* (Coleoptera, Staphylinidae). — Elytra **30** (2): 307-313.

Author's address: Dr. Volker ASSING
Gabelsbergerstr. 2, D-30163 Hannover, Germany
E-mail: vassing.hann@t-online.de

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Linzer biologische Beiträge](#)

Jahr/Year: 2014

Band/Volume: [0046_1](#)

Autor(en)/Author(s): Assing Volker

Artikel/Article: [Seven new species and additional records of Stilicoderus and Stiliderus \(Coleoptera: Staphylinidae: Paederinae\) 481-498](#)