

| | | | |
|---------------------|------|-------|-----------|
| Linzer biol. Beitr. | 47/1 | 83-96 | 31.7.2015 |
|---------------------|------|-------|-----------|

On *Orsunius* III. Four new species from China and Thailand, and additional records (Coleoptera: Staphylinidae: Paederinae: Medonina)

Volker ASSING

A b s t r a c t : Four species of *Orsunius* ASSING, 2011 are described and illustrated: *O. affimbriatus* nov.sp. (China: Guangdong); *O. incurvatus* nov.sp. (Thailand); *O. granulosisissimus* nov.sp. (China: Yunnan); *O. confluens* nov.sp. (China: Yunnan). Additional records of four previously described species are reported, among them the first record of *O. cuneatus* ASSING, 2014 from Thailand. A new key to species and an updated catalogue are provided. The genus currently comprises 21 named species.

K e y w o r d s : Coleoptera, Staphylinidae, Paederinae, Medonina, *Orsunius*, Oriental region, China, Thailand, taxonomy, new species, additional records, key to species, catalogue.

Introduction

The medonine genus *Orsunius* ASSING, 2011 was previously represented by seventeen named species distributed in the Oriental and southern East Palaearctic region sensu SMETANA (2004) (ASSING 2011, 2014). Two of these species were omitted in the key to species and in the catalogue in ASSING (2014).

Since the latest contribution (ASSING 2014), additional material of *Orsunius* has become available. An examination of this material yielded four additional species and records of two previously described species. In order to account for the omissions in ASSING (2014), recent taxonomic changes (see above), and the four additional species described in the present paper, a new key to species and an updated catalogue are provided.

Material and methods

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

MNHUB.....Museum für Naturkunde der Humboldt-Universität Berlin (J. Frisch)

NMP.....National Museum of Natural History, Praha (J. Hájek)

cAss.....author's private collection

cSch..... private collection Michael Schülke, Berlin

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

cWun..... private collection Paul Wunderle, Mönchengladbach

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). The images of external characters, except for the close-ups of the punctation on the head and pronotum, were created using a photographing device constructed by Arved Lompe (Nienburg) and CombineZ software. A digital camera (Nikon Coolpix 995) was used for the remaining photographs.

Body length was measured from the anterior margin of the mandibles (in resting position) to the abdominal apex, the length of the forebody from the anterior margin of the mandibles 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, 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

Orsunius wunderlei ASSING, 2011

M a t e r i a l e x a m i n e d : Thailand: 49 exs., Chiang Mai, Doi Suthep, 1580 m, leaf litter, 13.XI.1995, leg. Wunderle (cWun, cAss).

C o m m e n t : This species was previously known only from the type locality (Doi Inthanon, Doi Pui) (ASSING 2011).

Orsunius yunnanus ASSING, 2011

M a t e r i a l e x a m i n e d : China: 1♂, Yunnan, Nujiang Lisu Aut. Pref., Gongshan Co., Gaoligong Shan, 17 km N Gongshan, 27°55'N, 98°40'E, 1525-1600 m, creek valley, 20.VI.2005, leg. Smetana (cSme).

C o m m e n t : The above male was collected at the type locality.

Orsunius granulatus ASSING, 2014

M a t e r i a l e x a m i n e d : Thailand: 1♀, Chiang Mai University, 25.XI.2004, leg. Rossi (cAss).

C o m m e n t : This species has been recorded from Laos, Thailand, and North Vietnam (ASSING 2014). The identification of the above female is based on external characters alone and consequently not absolutely reliable.

Orsunius cuneatus ASSING, 2014

M a t e r i a l e x a m i n e d : Thailand: 3♂♂, 4♀♀, Chiang Mai, Doi Suthep, Nature Trail Phalad, 29.XI.2004, leg. Rossi (cAss, MNHUB); 12♂♂, 23♀♀, Chiang Mai, Doi Suthep, artificial lake, 29.XI.2004, leg. Rossi (cAss, MNHUB).

Comment: The original description is based on 19 specimens from a locality in Central Laos (ASSING 2014). The above specimens represent the first records from Thailand.

***Orsunius affimbriatus* nov.sp.** (Figs 1-5)

Type material: Holotype ♂: "CHINA: Guangdong prov. [MF 16], W of Qixing, 1-3.v.2011, Heishiding nature reserve, 23°27.9'N, 111°54.3'E, 190-260 m, Fikáček & Hájek / sifting of moist leaf litter in the dried-up streambeds and along the streams in the primary lowland forest / Holotypus ♂ *Orsunius affimbriatus* sp.n. det. V. Assing 2015" (NMP). Paratypes: 2 ♀♀: same data as holotype (NMP, cAss).

Etymology: The specific epithet (Latin, adjective) alludes to the absence of a palisade fringe at the posterior margin of the abdominal tergite VII.

Description: Body length 3.7-4.3 mm; length of forebody 1.9-2.0 mm. Coloration: body, including antennae and mouthparts, more or less uniformly reddish; legs slightly paler, yellowish-red.

Head (Fig. 1) weakly transverse, approximately 1.13 times as broad as long; lateral margins behind eyes subparallel in dorsal view; frons (between eyes) transversely impressed; posterior angles moderately marked; posterior margin distinctly concave in the middle; punctation non-umbilicate, dense and moderately coarse, sparse in median dorsal portion; interstices without microsculpture. Eyes relatively small, approximately 0.6 times as long as postocular portion in dorsal view. Antennae approximately 1.1 mm long; preapical antennomeres weakly transverse. Anterior margin of labrum with U-shaped excision in the middle. Right mandible with three molar teeth.

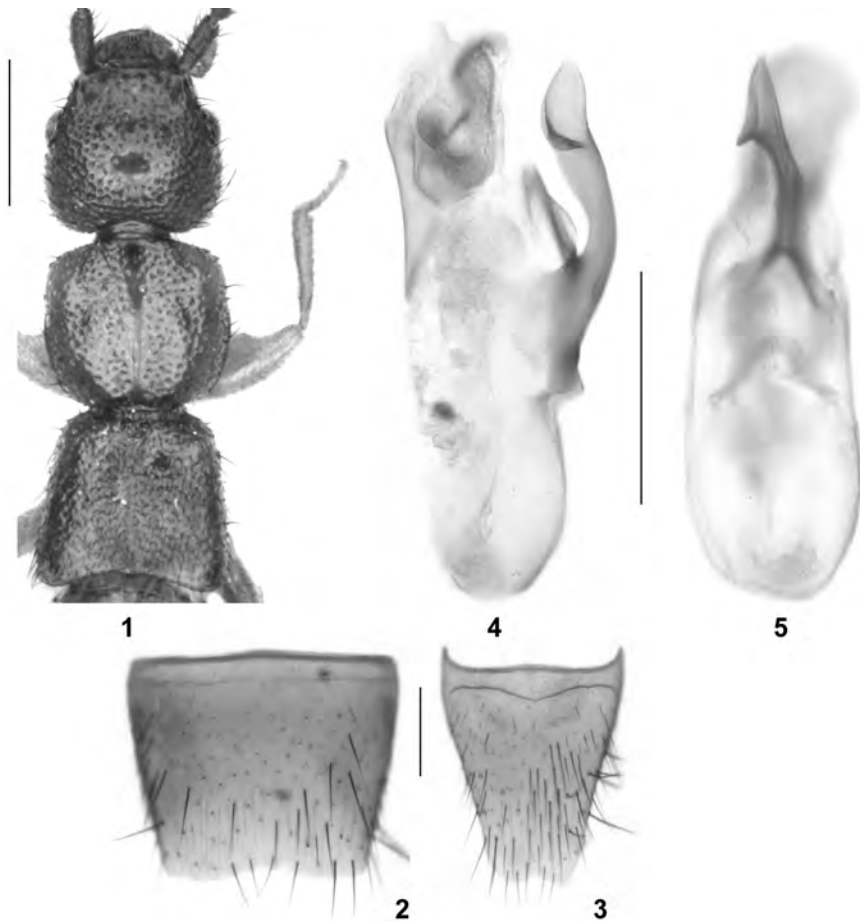
Pronotum (Fig. 1) weakly transverse, approximately 1.05 times as wide as long and about as broad as head; posterior angles rounded, weakly marked; punctation moderately coarse and dense, similar to that of head; midline with rather narrow impunctate band; interstices without microsculpture.

Elytra (Fig. 1) short, approximately 0.75 times as long as pronotum, noticeably dilated laterad; punctation fine and dense; interstices without microsculpture. Hind wings completely reduced. Protarsomeres I-IV not distinctly dilated. Metatarsomere I longer than II, but shorter than the combined length of II and III.

Abdomen slightly broader than elytra; punctation fine and dense on tergites III-IV, gradually sparser from tergite V to tergite VIII; interstices without microreticulation and glossy; posterior margin of tergite VII without palisade fringe.

♂: sternite VII (Fig. 2) nearly 1.2 times as broad as long and with distinctly concave posterior margin; sternite VIII (Fig. 3) distinctly oblong and with shallow posterior excision; aedeagus (Figs 4-5) 0.48 mm long, ventral process distinctly separated from median lobe in apical portion and somewhat asymmetric in ventral view.

Comparative notes: Based on external and particularly the male sexual characters, *O. affimbriatus* is closely related to *O. wunderlei* and allied species. It is easily distinguished from all other species of the genus by the shorter elytra, the completely reduced hind wings, the absence of a palisade fringe at the posterior margin of tergite VII, the distinctly concave posterior margin of the male sternite VII, the shape of the male sternite VIII, and by the shape of the aedeagus. For illustrations of other *Orsunius* species see ASSING (2011, 2014).



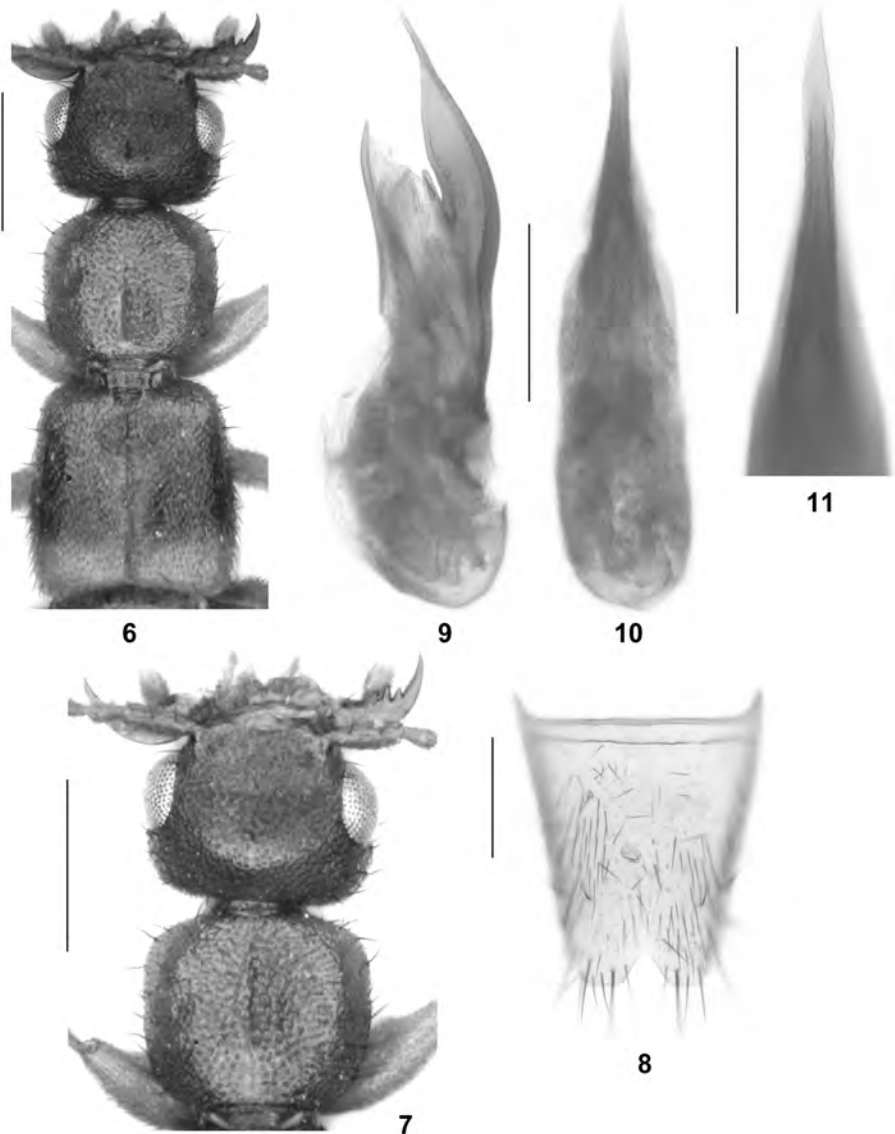
Figs 1-5: *Orsunius affimbriatus* nov.sp.: (1) forebody; (2) male sternite VII; (3) male sternite VIII; (4-5) aedeagus in lateral and in ventral view. Scale bars: 1: 0.5 mm; 2-5: 0.2 mm.

Distribution and natural history: The type locality is situated in the northwest of Guangdong province, not far from the border with Guangxi, South China. As can be inferred from the adaptive reductions of the elytra, the hind wings, and the palisade fringe at the posterior margin of tergite VII, *O. affimbriatus* probably has a restricted distribution. The type specimens were sifted from moist leaf litter in and along dry streams beds in a lowland forest at an altitude of 190-260 m.

***Orsunius incurvatus* nov.sp.** (Figs 6-11)

Type material: Holotype ♂: "THAILAND - Khao Yai N.P., nr. Haew Narok Falls, 19.XI.2004, leg. W. Rossi / Holotypus ♂ *Orsunius incurvatus* sp.n. det. V. Assing 2015" (cAss). Paratype ♂ [slightly teneral]: same data as holotype (cAss).

Etymology: The specific epithet is the past participle of the Latin verb incurvare (to bend) and alludes to the curved ventral process of the aedeagus in lateral view.



Figs 6-11: *Orsunius incurvatus* nov.sp.: (6) forebody; (7) head and pronotum; (8) male sternite VIII; (9-10) aedeagus in lateral and in ventral view; (11) ventral process of aedeagus in ventral view. Scale bars: 6-7: 0.5 mm; 8-11: 0.2 mm.

Description: Body length 4.0-4.3 mm; length of forebody 2.0-2.2 mm. Coloration: head blackish-brown, diffusely reddish anteriorly; pronotum reddish; elytra dark-yellowish, each with a large infuscate spot reaching lateral margins, but not suture; abdomen reddish, with the middle of tergites VI and VII indistinctly darker; legs reddish-yellow; antennae reddish.

Head (Fig. 7) strongly transverse, approximately 1.25 times as broad as long; lateral margins behind eyes weakly converging in dorsal view; posterior angles marked; posterior margin only indistinctly concave, nearly straight; punctuation umbilicate, dense and rather fine, slightly sparser in median dorsal portion; interstices without microsculpture. Eyes large and bulging, nearly twice as long as postocular portion in dorsal view. Antennae approximately 1.2 mm long; preapical antennomeres very weakly transverse or as long as broad. Anterior margin of labrum with U-shaped excision in the middle. Right mandible with three molar teeth.

Pronotum (Fig. 7) transverse, approximately 1.2 times as wide as long and about as broad as head; posterior angles rounded, weakly marked; punctuation non-umbilicate, fine and dense; midline with more or less pronounced narrow impunctate band; interstices without microsculpture.

Elytra (Fig. 6) approximately 1.15 times as long as pronotum; punctuation fine and dense, finer than that of pronotum; interstices without microsculpture. Hind wings present. Protarsomeres I-IV dilated. Metatarsomere I much longer than II, nearly as long as the combined length of II and III.

Abdomen narrower than elytra; punctuation fine and dense; interstices without distinct microreticulation; posterior margin of tergite VII with palisade fringe.

♂: sternite VII unmodified; sternite VIII (Fig. 8) distinctly oblong and with small, but distinct posterior excision; aedeagus (Figs 9-11) 0.68 mm long, ventral process of distinctive shape, apically very acute, subapically curved in lateral view, and very slender in ventral view.

Comparative notes: *Orsunius incurvatus* is similar to *O. stimulans* ASSING, 2014 from Thailand in body shape, coloration, and particularly in the shape of the aedeagus, but distinguished by distinctly larger and more bulging eyes, distinctly less densely punctate and more glossy head and pronotum, the differently shaped posterior excision of the male sternite VIII, and by the distinctly curved ventral process of the aedeagus in lateral view. For illustrations of *O. stimulans* see ASSING (2014).

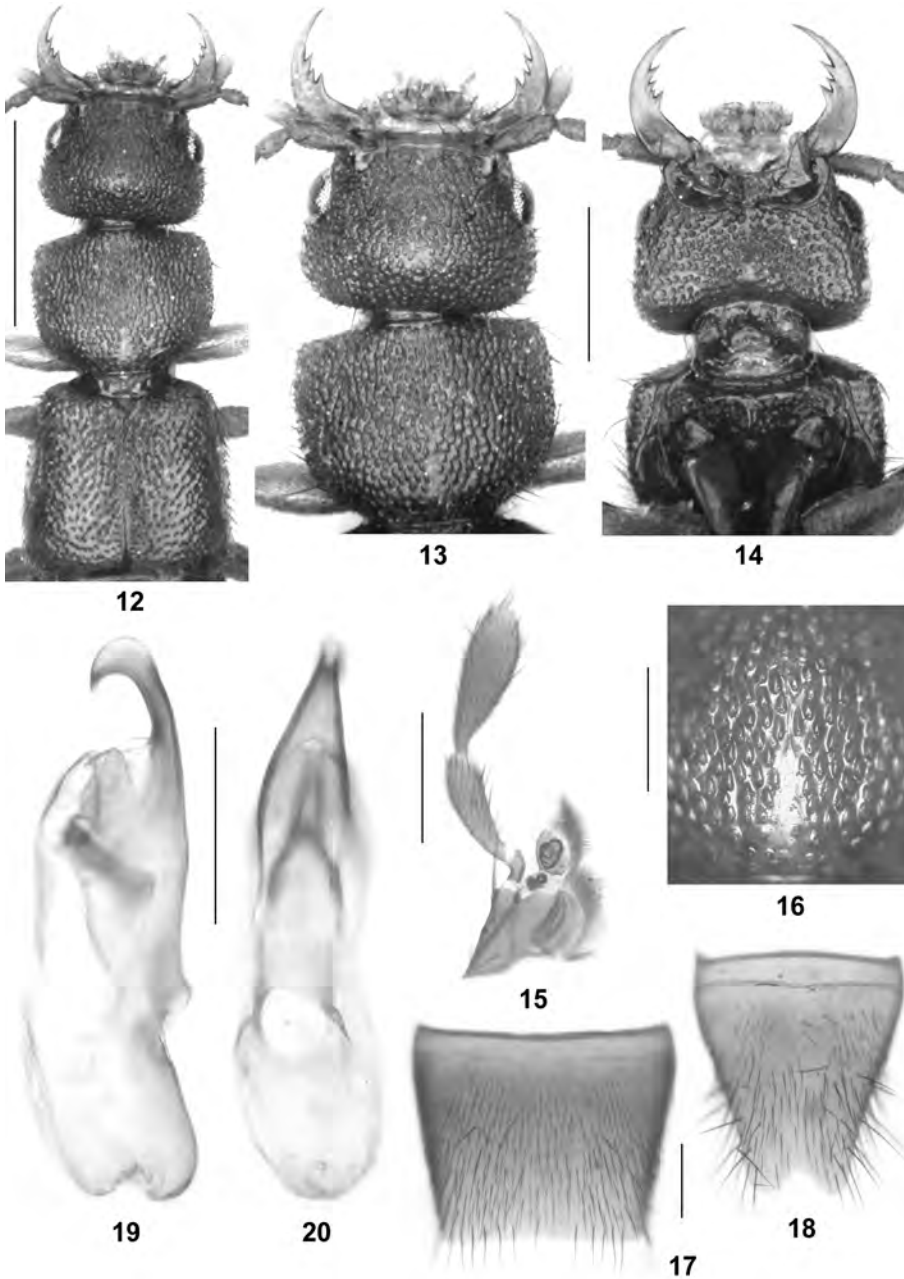
Distribution and natural history: The type locality is situated in Khao Yai National Park (approximately 14°17'N, 101°23'E) in Thailand. The specimens were collected by hand near water (ROSSI pers. comm.). The paratype is slightly teneral.

***Orsunius granulosissimus* nov.sp.** (Figs 12-21)

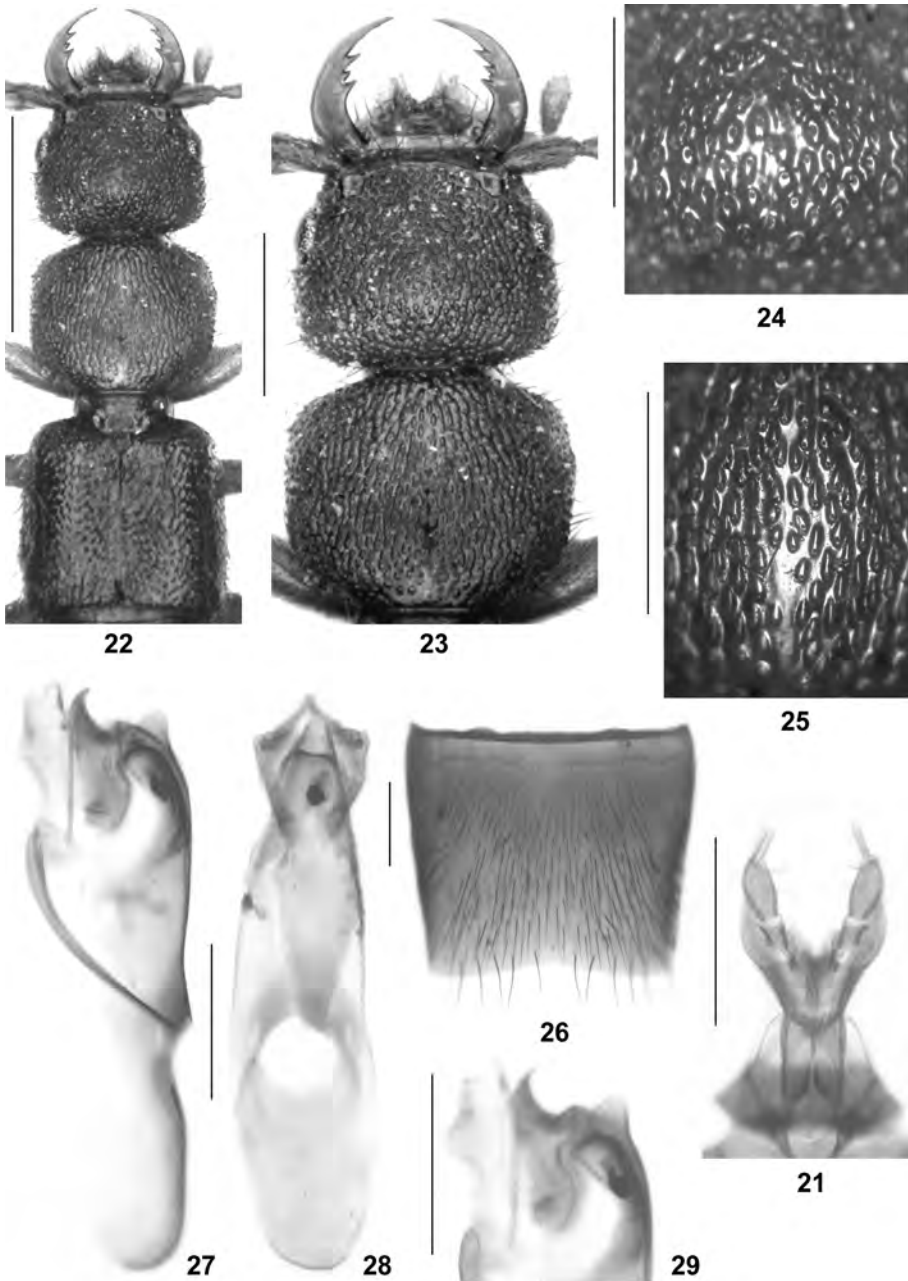
Type material: Holotype ♂: "CHINA [16] - Yunnan, valley S Gejiu, field margin, 23°08'53"N, 103°10'58"E, 1250 m, 21.VIII.2014, V. Assing / Holotypus ♂ *Orsunius granulosissimus* sp.n. det. V. Assing 2015" (cAss). Paratypes: 1 ♂, 4 ♀ ♀ [partly slightly teneral]: same data as holotype (cAss); 2 ♀ ♀: same data, but leg. Schülke (cSch); 1 ♀: "CHINA [15] - Yunnan, valley S Gejiu, road margin, 23°08'38"N, 103°11'42"E, 1010 m, 21.VIII.2014, V. Assing" (cAss).

Etymology: The specific epithet is the superlative of the Latin adjective *granulosus* and alludes to the strongly granulate punctuation of the head and pronotum.

Description: Body length 4.6-5.4 mm; length of forebody 2.5-2.7 mm. Coloration: body dark-brown to blackish-brown; legs brown; antennae brown with the apical antennomeres gradually paler.



Figs 12-20: *Orsunius granulosissimus* nov.sp.: (12) forebody; (13) head and pronotum; (14) head and prothorax in ventral view; (15) maxilla; (16) postero-median portion of pronotum; (17) male sternite VII; (18) male sternite VIII; (19-20) aedeagus in lateral and in ventral view. Scale bars: 12: 1.0 mm; 13-14: 0.5 mm; 15-20: 0.2 mm.



Figs 21-29: *Orsunius granulosissimus* nov.sp. (21) and *O. confluens* nov.sp. (22-29): (21) labium; (22) forebody; (23) head and pronotum; (24) median portion of head; (25) postero-medial portion of pronotum; (26) male sternite VII; (27-28) aedeagus in lateral and in ventral view; (29) apical portion of aedeagus in lateral view. Scale bars: 22: 1.0 mm; 23: 0.5 mm; 21, 24-29: 0.2 mm.

Head (Figs 12-13) more or less distinctly wedge-shaped (dilated posteriad) and strongly transverse, approximately 1.35 times as broad as long; posterior angles rather marked; posterior margin weakly concave, nearly straight; punctation strongly granulose. Ventral aspect with coarse non-granulose punctation and without gular sutures (Fig. 14). Eyes moderately large and moderately bulging, slightly shorter than postocular portion in dorsal view. Antennae 1.3-1.4 mm long; preapical antennomeres moderately transverse. Anterior margin of labrum (Fig. 14) with small concave excision of somewhat variable depth in the middle. Right mandible (Fig. 14) with three large molar teeth, and with or without an additional minute tooth; maxilla and labium as in Figs 15 and 21.

Pronotum (Figs 13, 16) distinctly transverse, 1.20-1.25 times as wide as long and approximately 1.1 times as broad as head; posterior angles rounded, weakly marked; punctation strongly granulose and not confluent, similar to that of head; midline with or without rudiment of a narrow impunctate band posteriorly; interstices without microsculpture. Prosternum obtusely keeled.

Elytra (Fig. 12) approximately as long as pronotum, with conspicuously long and rather erect dark pubescence; punctation moderately fine and very dense; interstices without microsculpture. Hind wings present. Protarsomeres I-IV not dilated in females, very weakly dilated in males. Metatarsomere I slender and elongated, approximately as long as the combined length of II and III.

Abdomen narrower than elytra; punctation fine and dense, slightly less dense on tergites VII and VIII; interstices without distinct microreticulation; posterior margin of tergite VII with palisade fringe.

♂: sternite VII (Fig. 17) with very weakly concave posterior margin, otherwise unmodified; sternite VIII (Fig. 18) distinctly oblong, posterior excision small, but distinct; aedeagus (Figs 19-20) 0.58 mm long, ventral process of distinctive shape, apically hook-shaped in lateral view; dorsal plate weakly sclerotized and small; internal sac with a pair of straight and moderately sclerotized internal structures.

Comparative notes: *Orsunius granulossimus* is readily distinguished from all previously described *Orsunius* species by the strongly granulose punctation of the head and pronotum, larger body size, the erect and long pubescence of the elytra, the absence of gular sutures on the ventral aspect of the head, and the distinctive shape of the aedeagus. For characters separating it from the highly similar and evidently closely related syntopic *O. confluens* see the comparative notes in the following section.

In view of the pronounced differences between this and other previously described *Orsunius* species, it is with some hesitation that this species is attributed to *Orsunius*. The possibility that *O. granulossimus* and *O. confluens* may eventually have to be moved to a separate genus cannot be ruled out. On the other hand, in view of the fact that most of the medonine genera and species of the Oriental region have not yet been subject to modern taxonomic studies, it seems appropriate to adopt a conservative approach and attribute these species to *Orsunius*, based on the similarities in the general morphology of the male primary and secondary sexual characters, the mouthparts, the habitus, and other external characters.

Distribution and natural history: The specimens were collected in two adjacent localities in the southeast of Yunnan province, Southwest China, by sifting litter and other debris at a field margin and at a road margin at altitudes of 1250

and 1010 m, respectively. In the type locality the species was found together with *O. confluens*. The paratypes are partly teneral.

***Orsunius confluens* nov.sp.** (Figs 22-29)

Type material: Holotype ♂ [slightly teneral]: "CHINA [16] - Yunnan, valley S Gejiu, field margin, 23°08'53"N, 103°10'58"E, 1250 m, 21.VIII.2014, V. Assing / Holotypus ♂ *Orsunius confluens* sp.n. det. V. Assing 2015" (cAss).

Etymology: The specific epithet (Latin, adjective) alludes to the partly confluent punctuation of the pronotum.

Description: Body length 4.8 mm; length of forebody 2.6 mm. In external characters highly similar to *O. granulosissimus*, but distinguished as follows:

Head (Figs 22-24) only indistinctly wedge-shaped, lateral margins behind eyes nearly parallel. Eyes distinctly shorter than postocular region in dorsal view. Punctuation of pronotum partly confluent, particularly in postero-median portion (Fig. 25).

♂: sternite VII (Fig. 26) with weakly concave posterior margin, otherwise unmodified; sternite VIII distinctly oblong, posterior excision small, of similar shape as in *O. granulosissimus*; aedeagus (Figs 27-29) 0.72 mm long, ventral process weakly curved, apically not hook-shaped in lateral view; dorsal plate conspicuously long; internal sac with a pair of moderately sclerotized internal structures.

Comparative notes: Based on the highly similar external and male secondary sexual characters, this species is undoubtedly very closely related to *O. granulosissimus*, from which it differs particularly by the distinctive shape of the aedeagus, as well as by the external characters indicated in the description above.

Distribution and natural history: The type locality and the circumstances of collection are identical to those of *O. granulosissimus*.

Updated key to species

- 1 Head and pronotum with coarse, dense, and distinctly granulate punctuation (Figs 12-13, 16, 22-25). Head without gular sutures (Fig. 14). Pubescence of elytra dense, dark, long, and rather erect (Figs 12, 22). Length of forebody 2.5-2.7 mm. The *O. granulosissimus* group.....2
 - Head and pronotum with finer, granulose or non-granulose punctuation. Head with gular sutures. Elytra with shorter pubescence and mostly less erect and less dense pubescence. Body slightly to distinctly smaller3
- 2 Head with lateral margins behind eyes nearly parallel in dorsal view (Figs 22-23). Punctuation of pronotum somewhat confluent in postero-median portion (Figs 23, 25). Aedeagus as in Figs 27-29; ventral process not hook-shaped in lateral view; dorsal plate long. China: Yunnan..... ***confluens* nov.sp.**
 - Head more or less distinctly wedge-shaped, lateral margins behind eyes diverging posteriad in dorsal view (Figs 12-13). Punctuation of pronotum not confluent (Fig. 16). Aedeagus as in Figs 19-20; with hook-shaped ventral process (lateral view) and with short dorsal plate. China: Yunnan..... ***granulosissimus* nov.sp.**
- 3 Pronotum with dense, finely granulate punctuation, matt (ASSING 2014: figures 27, 37, 41). Median excision of anterior margin of labrum broadly V-shaped. The *O. granulosus* group.....4
 - Punctuation of pronotum not granulate, less dense. Median excision of anterior margin of labrum in most species deeper, narrower, and U-shaped6

- 4 Aedeagus with apically very acute ventral process in ventral view; sclerotized internal structures not sickle-shaped in ventral view (ASSING 2014: figures 38-39). Posterior excision of male sternite VIII small and semi-circular (ASSING 2014: figures 45-46). Laos, Thailand..... *cuneatus* ASSING
- Apex of ventral process of aedeagus less acute in ventral view; sclerotized internal structures sickle-shaped in ventral view. Posterior excision of male sternite VIII larger, either of trapezoid shape or broadly semi-circular5
- 5 Sclerotized internal structures of the aedeagus broad-based and apically slender (ASSING 2014: figures 42-43). Posterior excision of male sternite VIII broadly semi-circular (ASSING 2014: figures 47-48). Malaysia: Kedah..... *heissi* ASSING
- Sclerotized internal structures of the aedeagus of different shape, not distinctly broad-based (ASSING 2014: figures 31-32). Posterior excision of male sternite VIII trapezoid (ASSING 2014: figures 29-30). Laos, Thailand, North Vietnam *granulosus* ASSING
- 6 Protarsomeres I-IV not, or only weakly, dilated7
- Protarsomeres I-IV distinctly dilated10
- 7 Micropterous species: elytra approximately 0.75 times as long as pronotum (Fig. 1); hind wings completely reduced; posterior margin of abdominal tergite VII without palisade fringe. Body of uniformly reddish coloration. Aedeagus as in Figs 4-5. China: Guangdong..... *affimbriatus* nov.sp.
- Macropterous species: elytra longer, at least nearly as long as pronotum; posterior margin of tergite VII with palisade fringe. Sexual characters different.8
- 8 Head with conspicuously coarse and dense punctation (ASSING 2014: figure 19). Male sternite VIII with broad and shallow posterior excision (ASSING 2014: figure 33). Aedeagus as in ASSING (2014: figures 20-21). Thailand..... *latexcisus* ASSING
- Head with finer punctation. Male sexual characters different.....9
- 9 Eyes shorter than postocular region in dorsal view; head with uniformly fine punctation (ASSING 2014: figure 2). Male sternite VIII with very shallow posterior excision (ASSING 2014: figures 3-4). Aedeagus as in ASSING (2014: figures 5-6). Philippines: Mindanao *spatulatus* ASSING
- Eyes approximately as long as postocular region in dorsal view (ASSING 2011: figure 41). Head with double punctation, i.e., with micropunctation and with interspersed somewhat larger punctures (ASSING 2011: figure 42). Male sternite VIII as in ASSING (2011: figure 45). Aedeagus as in ASSING (2011: figures 47-49). India, Nepal *parvexcisus* ASSING
- 10 Head with conspicuously dense umbilicate punctation everywhere, without shiny patch in median or posterior dorsal portion (Fig. 7; ASSING 2014: figure 11; ASSING 2011: figures 20-21). Elytra reddish-yellow to reddish, with more or less distinct, diffusely darker medio-lateral spot (indistinct in *O. excisus*).....11
- Head with sparse punctation, or densely punctate with a shiny (impunctate or sparsely punctate) patch in median or posterior dorsal portion13
- 11 Male sternite VIII approximately as broad as long and with rather large, broadly V-shaped posterior excision (ASSING 2011: figure 24). Aedeagus with moderately long, strongly asymmetric and apically not acute ventral process (ASSING 2011: figures 25-26). Taiwan *excisus* ASSING
- Male sternite VIII distinctly longer than broad and with small posterior excision (e.g., Fig. 8). Aedeagus with long, apically acute, and symmetric or weakly asymmetric (ventral view) ventral process. Unknown from Taiwan.12
- 12 Head and pronotum with extremely dense punctation, nearly matt (ASSING 2014: figures 10-11). Male sternite VIII more densely pubescent and with slightly deeper posterior excision (ASSING 2014: figure 1). Ventral process of aedeagus nearly straight in lateral and slightly asymmetric in ventral view (ASSING 2014: figures 12-13). North Vietnam, Thailand..... *stimulans* ASSING

- Head and pronotum with less dense punctation and glossy interstices (Figs 6-7). Male sternite VIII with less dense pubescence and with slightly less deep posterior excision (Fig. 8). Ventral process of aedeagus distinctly curved in lateral and symmetric in ventral view (Figs 9-11). Thailand *incurvatus* nov.sp.
- 13 Anterior and lateral dorsal portions of head with dense and relatively coarse punctation, with the interstices distinctly narrower than the diameter of the punctures.14
 - Lateral and anterior dorsal portion with sparser and/or finer punctation.....18
- 14 Species from China (Yunnan) and Thailand15
 - Species from Burma.....17
- 15 Punctation of head and pronotum slightly less dense (ASSING 2014: figure 15). Body slightly smaller and more slender (ASSING 2014: figure 14). Male sternite VIII with very broadly and shallowly concave posterior margin, without distinct posterior excision (ASSING 2014: figure 9). Aedeagus as in ASSING (2014: figures 16-17). Thailand *gladiator* ASSING
 - Punctation of head and pronotum somewhat denser (ASSING 2011: figures 2-3, 9, 16). Body somewhat larger and more robust (ASSING 2011: figures 1, 15). Male sexual characters different.....16
- 16 Head and pronotum reddish to dark-brown; elytra dark-brown, with the anterior margins, the suture, and the posterior margins reddish, rarely uniformly reddish; abdomen reddish to reddish-brown, with the middle of tergite VII infusate. Male sternite VIII as in ASSING (2011: figure 17). Aedeagus as in ASSING (2011: figures 18-19). China: Yunnan. *yunnanus* ASSING
 - Head and pronotum reddish; elytra reddish-yellow to reddish, with the anterior half often slightly and diffusely darker; abdomen reddish to dark-reddish, tergite VII not infusate. Male sternite VIII as in ASSING (2011: figure 14). Aedeagus as in ASSING (2011: figures 10-11). Thailand..... *wunderlei* ASSING
- 17 Body broader (ASSING 2011: figures 70-71). Coloration of head and pronotum dark-reddish. Male sternite VIII not distinctly oblong (ASSING 2011: figure 73). Aedeagus with ventral process of distinctive shape (ASSING 2011: figures 74-76) *discipennis* (FAUVEL)
 - Body more slender (ASSING 2011: figures 77-78). Coloration of head and pronotum bright reddish. Male sternite VIII distinctly oblong (ASSING 2011: figure 80). Ventral process of aedeagus conspicuously long and massive, its apex of distinctive shape (ASSING 2011: figures 81-83)..... *securifer* ASSING
- 18 Head, pronotum, and abdomen dark-brown; elytra distinctly bicoloured, with dark-brown middle and with yellowish anterior and posterior margins (ASSING 2014: figures 22-23). Male sternite VIII with small and shallow posterior excision (ASSING 2014: figures 34-35). Aedeagus as in ASSING (2014: figures 24-25). Thailand..... *flavovirgatus* ASSING
 - Body, except for the sometimes bicoloured elytra, reddish. Male sexual characters different.....19
- 19 Pronotum small in relation to head (ASSING 2011: figure 28), at most as broad as head. Punctation of head and pronotum very fine (ASSING 2011: figures 29, 35). Gular sutures very narrowly separated (ASSING 2011: figure 34). Male sternite VIII with very shallow posterior excision (ASSING 2011: figure 39). Aedeagus as in ASSING (2011: figures 36-37). North India, Malaysia, Thailand, Laos *immsi* (BERNHAEUER)
 - Pronotum larger in relation to head. Punctation of head and pronotum coarser. Gular sutures more broadly separated. Male primary and secondary sexual characters different.....20
- 20 Eyes larger, approximately as long as postocular region of head in dorsal view. Protarsomeres I-IV moderately dilated. Male sternite VIII less oblong and posteriorly with pubescence (ASSING 2011: figure 52). Aedeagus as in ASSING (2011: figures 55-56). Thailand *pravus* ASSING

- Eyes smaller, distinctly shorter than postocular region in dorsal view. Protarsomeres I-IV strongly dilated. Male sternite VIII more oblong and posteriorly without pubescence (ASSING 2011: figure 66). Ventral process of aedeagus of completely different shape, not distinctly asymmetric in dorsal view (ASSING 2011: figures 67-69); internal sac with distinctly sclerotized apical structures of characteristic shape. Indonesia: Bali *prolongatus* ASSING

Updated catalogue of the species of *Orsunius*

| Species | Distribution |
|--|---------------------------------------|
| <i>affimbriatus</i> nov.sp. | China: Guangdong |
| <i>confluens</i> nov.sp. | China: Yunnan |
| <i>cuneatus</i> ASSING, 2014 | Laos; Thailand |
| <i>discipennis</i> (FAUVEL, 1895) | Burma |
| <i>excisus</i> ASSING, 2011 | Southeast Taiwan |
| <i>flavovirgatus</i> ASSING, 2014 | South Thailand |
| <i>gladiator</i> ASSING, 2014 | Thailand |
| <i>granulosissimus</i> nov.sp. | China: Yunnan |
| <i>granulosus</i> ASSING, 2014 | Laos; Thailand; North Vietnam |
| <i>heissi</i> ASSING, 2014 | Malaysia: Kedah |
| <i>immsi</i> (BERNHAEUER, 1914) = <i>rubicundus</i> (CAMERON, 1918) | North India; Laos; Thailand; Malaysia |
| <i>incurvatus</i> nov.sp. | Thailand |
| <i>latexcisus</i> ASSING, 2014 | South Thailand |
| <i>parvexcisus</i> ASSING, 2011 | Southwest India; Nepal |
| <i>pravus</i> ASSING, 2011 | Thailand |
| <i>prolongatus</i> ASSING, 2011 | Indonesia: Bali |
| <i>securifer</i> ASSING, 2011 | Burma |
| <i>spathulatus</i> ASSING, 2014 | Philippines: Mindanao |
| <i>stimulans</i> ASSING, 2014 | North Vietnam; Thailand |
| <i>wunderlei</i> ASSING, 2011 | North Thailand |
| <i>yunnanus</i> ASSING, 2011 | China: Yunnan |

Acknowledgements

My thanks are extended to the colleagues listed in the material section for the loan of material. Lee H. Herman kindly made me aware of the omission of two species in the checklist in ASSING (2014). Benedikt Feldmann (Münster) proof-read the manuscript.

Zusammenfassung

Vier Arten der Gattung *Orsunius* ASSING, 2011 werden beschrieben: *O. affimbriatus* nov.sp. (China: Guangdong); *O. incurvatus* nov.sp. (Thailand); *O. granulosisimus* nov.sp. (China: Yunnan); *O. confluens* nov.sp. (China: Yunnan). Weitere Nachweise von vier zuvor beschriebenen Arten werden gemeldet, darunter der Erstdnachweis von *O. cuneatus* ASSING, 2014 für Thailand. Eine neue Bestimmungstabelle und ein aktualisierter Katalog werden erstellt. Die Gattung umfasst derzeit 21 Arten.

References

- ASSING V. (2011): *Orsunius* gen.nov. from the Oriental region (Coleoptera: Staphylinidae: Paederinae: Medonina). — Linzer Biologische Beiträge **43** (1): 221-244.
- ASSING V. (2014): On *Orsunius* II. Eight new species and additional records (Coleoptera: Staphylinidae: Paederinae: Medonina). — Linzer Biologische Beiträge **46** (1): 461-479.
- SMETANA A. (2004): Subfamily Paederinae FLEMING, 1821. — In: LÖBL I. & A. SMETANA (eds), Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea. — Apollo Books, Stenstrup: 579-624.

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: 2015

Band/Volume: [0047_1](#)

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

Artikel/Article: [On Orsunius III. Four new species from China and Thailand, and additional records \(Coleoptera: Staphylinidae: Paederinae: Medonina\) 83-96](#)