

Linzer biol. Beitr.	43/1	151-193	25.7.2011
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The *Sunius* species of the Palaearctic region (Coleoptera: Staphylinidae: Paederinae)

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A b s t r a c t : The Palaearctic species of the medonine genus *Sunius* STEPHENS 1829 had been revised in twelve contributions, except for eight species from the East Palaearctic region. Based on an examination of the type material, only two of these species – one of them doubtfully – are retained in the genus. The remaining six species are transferred to other genera. Eleven species are (re-)described and illustrated: *Sunius laevior* (CAMERON 1943); *S. bouddha* (COIFFAIT 1978); *S. baculatus* nov.sp. (Nepal); *S. cursor* nov.sp. (Nepal); *S. rubriceps* nov.sp. (Iran); *S. extensissimus* nov.sp. (Oman); *S. tectus* nov.sp. (Oman); *Medon gratus* CAMERON 1931; *M. punctatus* (COIFFAIT 1975), nov.comb.; "*Medon*" *fungi* CAMERON 1943; "*M.*" *ghumensis* CAMERON 1943. The previously unknown male sexual characters of *Sunius basalis* (REITTER 1899) and the mouthparts of representatives of several species groups of *Sunius* are described and illustrated. The following synonymy is proposed: *Medon gratus* CAMERON 1931 = *M. reuteri* FELDMANN 2007, nov.syn. A lectotype is designated for *Medon gratus*. Additional records are reported for seven species. A comprehensive key to the *Sunius* species of the Palaearctic region and a synonymic catalogue are provided. The genus now comprises 113 species in the whole of the Palaearctic region, with one species represented by three subspecies. The vast majority, 102 species, is distributed in the West Palaearctic including Middle Asia, with the trans-Palaearctic distribution of one species extending eastwards to the Russian Far East. The East Palaearctic *Sunius* fauna is far less diverse and composed of only eleven species in two species groups. The generic affiliations of one of the species from the East Palaearctic is uncertain; its male sexual characters are unknown.

K e y w o r d s : Coleoptera, Staphylinidae, Paederinae, Medonina, *Sunius*, *Medon*, Palaearctic region, taxonomy, new species, new synonymy, new combination, lectotype designation, species groups, key to species, catalogue, additional records.

1. Introduction

According to the latest contribution to the revision of *Sunius* STEPHENS 1829, the genus is represented in the Palaearctic region by as many as 111 species and two subspecies, the vast majority of which are confined to the West Palaearctic (ASSING 2010). The *Sunius* fauna of the East Palaearctic previously included merely fourteen species; however, the identity and generic status of eight of them had not been revised: *S. bouddha* (COIFFAIT 1978) (Bhutan), *S. fungi* (CAMERON 1943) (N-India), *S. ghumensis* (CAMERON 1943) (N-India), *S. gratus* (CAMERON 1931) (India: Uttaranchal), *S. inmsi* (BERNHAEUER 1914) (India: Uttaranchal; Malaysia), *S. laevior* (CAMERON 1943) (N-India), *S.*

monticola (CAMERON 1931) (India: Uttarranchal), *S. punctatus* (COIFFAIT 1975) (Nepal). Numerous species described from the Oriental and the Nearctic regions have been attributed to *Sunius*, but their generic affiliations have never been re-examined and should be considered doubtful. The species seen from these regions so far have proved to belong to other genera.

The primary objective of the present contribution is to clarify the status of the eight previously unrevised species recorded from the East Palaearctic. In addition, five new species from Iran, Oman, and Nepal are described and some additional records are reported.

2. Material and methods

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

- BMNH The Natural History Museum, London (R. G. Booth)
 MNHUB..... Museum für Naturkunde der Humboldt-Universität Berlin (J. Frisch, J. Willers)
 NHMB Naturhistorisches Museum Basel (M. Brancucci, I. Zürcher)
 NHMW Naturhistorisches Museum Wien (H. Schillhammer)
 SDEI Senckenberg Deutsches Entomologisches Institut, Müncheberg (L. Behne)
 SMNS..... Staatliches Museum für Naturkunde, Stuttgart (W. Schawaller, K. Wolf-Schwenninger)
 cAss..... author's private collection
 cPüt private collection Andreas Pütz, Eisenhüttenstadt
 cRen private collection Klaus Renner, Bielefeld
 cRou..... private collection Guillaume de Rougemont, London
 cSch..... private collection Michael Schülke, Berlin

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

Head length was measured 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. The length of the median lobe of the aedeagus was measured from the apex of the ventral process to the base of the capsule. The parameral side of the aedeagus (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

The limits of the zoogeographic regions are in accordance with those in LÖBL & SMETANA (2004).

3. New species and additional records of *Sunius* from the West Palaearctic

Including the new species described below, the *Sunius* fauna of the West Palaearctic region and Middle Asia now comprises 102 species, with one Canarian species represented by three subspecies and with the distribution of one species extending eastwards to the Russian Far East.

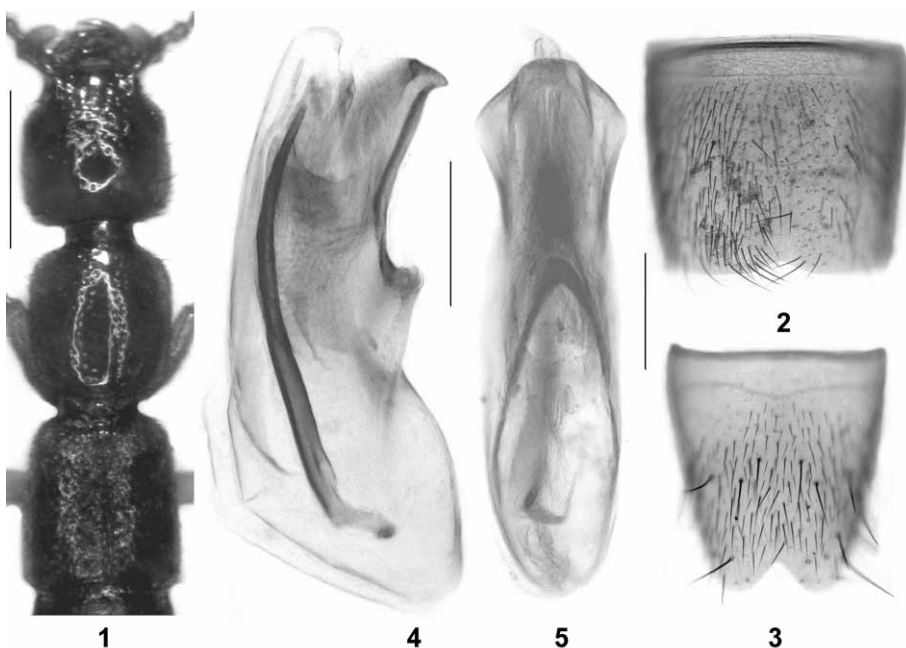
Below, only those additional records of described species are discussed that significantly expand the known distributions or that are remarkable for other reasons. For more details on the identification, zoogeography, and ecology of the species see ASSING (2008a).

***Sunius ovaliceps* (FAUVEL 1878)**

Material examined: Morocco: 3 exs., Rif., N Bab-Taza, Talembote, 35°15'N, 5°12'W, 360 m, *Pistacia*, 8.V.2009, leg. Behne (SDEI, cAss); 2 exs., Moyen Atlas, S Azrou, Aïn Leuh, 33°17'N, 5°20'W, 5.V.2009, leg. Behne (SDEI). France: 1 ex. Rhône-Alpes, Drôme, Villeperdrix, Leoux, 26.IX.2008, leg. Messutat (cRen).

***Sunius propinquus* (BRISOUT DE BARNEVILLE 1867)**

Material examined: Italy: 2 exs., Sardegna, Santa Margherita de Pula (CA), at light, 22.-26.VI.2007, leg. Heiss (cAss).



Figs 1-5: *Sunius rubriceps* 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; 2-3: 0.2 mm; 4-5: 0.1 mm.

***Sunius rubriceps* nov.sp. (Figs 1-5)**

Type material: Holotype ♂: "Iran, Kerman Province, Bardsir-Baft: 10 km SE Qal-eh Askar (Mt. Lalehzar), 3360 m, N 29°26'01"N E 056°44'31"E, 22.05.2010, lg. Frisch & Serri / Holotypus ♂ *Sunius rubriceps* sp. n. det. V. Assing 2010" (MNHUB). Paratypes: 1♂, 12♀♀: same data as holotype (MNHUB, cAss); 1♂: "Iran, Kerman Province, 23 km SE Saghdar: Banestan (Jebal Barez Mts) 1930 m, N 28°49'37" E 57°55'17", 27.05.2010, leg. Frisch" (MNHUB); 1♀: "Iran, Kerman Province, Baft - Jiroft: 9 km NE Hanza, 3120 m, N 29°21'42" E 057°13'00", 26.05.2010, lg. Frisch" (MNHUB).

Description: Body length 3.2-4.3 mm. Coloration: head and pronotum bright reddish; elytra reddish-yellow to reddish; abdomen reddish brown with the posterior margins of segments III-VII and the apex reddish, occasionally uniformly reddish; legs yellowish; antennae pale reddish.

Head (Fig. 1) weakly oblong, approximately 1.05 times as long as wide; punctation moderately coarse and moderately sparse; interstices without microsculpture, usually on average approximately as wide as diameter of punctures. Eyes usually at least slightly longer than half the length of postocular region, rarely only half as long as postocular region in dorsal view.

Pronotum approximately 1.1 times as long as wide and about 0.95 times as wide as head (Fig. 1); punctation slightly finer and somewhat denser than that of head; midline rather broadly impunctate.

Elytra moderately long, approximately 0.85-0.90 times as long as pronotum, not distinctly widened posteriorly; humeral angles marked (Fig. 1); punctation dense, shallow, fine, and rather ill-defined. Hind wings apparently of reduced length.

Abdomen slightly wider than elytra; punctation fine and dense; interstices with microsculpture; posterior margin of tergite VII with narrow palisade fringe.

♂: sternite VII with posterior margin weakly concave in the middle, on either side of middle with long setae directed diagonally postero-mediad (Fig. 2); sternite VIII weakly oblong, posterior excision not very deep and broadly V-shaped (Fig. 3); aedeagus approximately 0.38 mm long; ventral process apically obliquely hooked in lateral view and subapically distinctly dilated in ventral view; internal sac with long rod-like structure (Figs 4-5).

Etymology: The specific epithet refers to the reddish head, one of the characters distinguishing this species from its closest relatives.

Comparative notes: Based on the male sexual characters, particularly the morphology of the aedeagus (internal sac with rod-like structure; ventral process apically obliquely truncate in lateral view and subapically with lateral processes in ventral view) *S. rubriceps* undoubtedly belongs to the *S. adanensis* species group (see ASSING 2008a). It is distinguished from all the species of this group by the reddish head (in other species darker than pronotum) and the morphology of the aedeagus. Among the species of the *S. adanensis* group, the aedeagus most resembles that of the widespread *S. adanensis*, but differs by the smaller size, the more slender shape (particularly of the ventral process), and the basally differently shaped internal rod-like structure. For illustrations of the aedeagi of the species of the *S. adanensis* group (*S. adanensis* (LOKAY 1919), *S. akianus* ASSING 2005, *S. falsus* ASSING 2008, *S. khnzoriani* (COIFFAIT 1970), *S. nurdaghensis* ASSING 2001, *S. rastrifer* ASSING 2001) see ASSING (2001, 2005a, 2008a).

Distribution and natural history: The species is known from three localities in Kerman province, southern Iran, where the type material was collected at altitudes of 1930-3360 m.

***Sunius basalis* (REITTER 1899) (Figs 6-8, 15)**

Material examined: Iran: 1♂, 2♀♀, Kerman province, Bardsir-Baft, 10 km SE Qal-eh Askar, Mt. Lalehzar, 29°26'01"N, 56°44'31"E, 3360 m, 22.V.2010, leg. Frisch & Serri (MNHUB, cAss).

C o m m e n t : The original description is based on an unspecified number of syntypes, probably only a single female, from Azerbaijan (REITTER 1899). Additional material and the male sexual characters were previously unknown (ASSING 2008a). In external characters, the above specimens are in good agreement with the syntype in the Reitter collection. They represent the first record from Iran. The male sexual characters are as follows: Sternite VII with broadly concave posterior margin (Fig. 6); sternite VIII with broadly U-shaped posterior excision, its depth approximately 1/6 the length of sternite, pubescence unmodified (Fig. 15); aedeagus 0.63 mm long; ventral process long and acute in lateral view, apically abruptly narrowed and somewhat asymmetric in ventral view; internal sac with stout and strongly sclerotized structures (Figs 7-8).

***Sunius sinaicus* (COIFFAIT 1961)**

Hypomedon sinaicus COIFFAIT 1961: 29 ff.

Hypomedon punctatum COIFFAIT 1979: 169; primary homonym.

Hypomedon punctum COIFFAIT 1983: 346; replacement name; synonymy by ASSING (2008a).

Type material examined: Holotype ♀: "Al Hair, 27.4. / Saudi Arab. 1976, Wittmer, Büttiker / Type / *Hypomedon punctatus* H. Coiffait 1978 / *Sunius sinaicus* (Coiffait), det. V. Assing 2010" (NHMB).

C o m m e n t s : The original description of *S. sinaicus* is based on a holotype male from "Sinai, O. Taha" and an unspecified number of syntypes from "Sinai" in the Peyerimhoff and Fauvel collections at the MNHNP and the IRSNB, respectively (COIFFAIT 1961).

Hypomedon punctatus COIFFAIT 1979, a junior primary homonym of *H. punctatus* COIFFAIT 1975, was described from a single female from "El Hair", Saudi Arabia, deposited in the "Musée de Bâle" (COIFFAIT 1979), without any reference whatsoever to *S. sinaicus*, and later replaced with *H. punctus* (COIFFAIT 1983). Based on an examination of the above holotype, the previously established synonymy is confirmed.

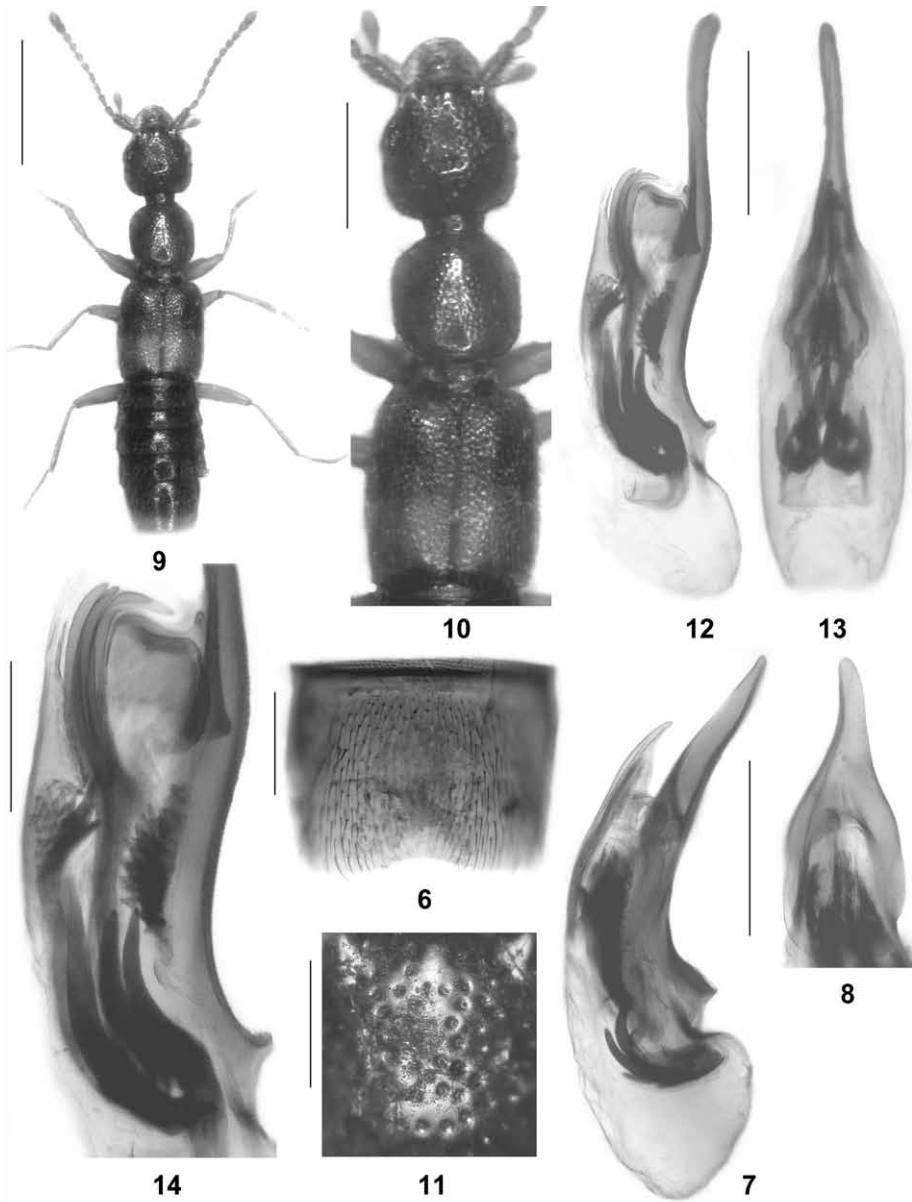
***Sunius extensissimus* nov.sp. (Figs 9-14, 16-17)**

Type material: Holotype ♂: "Oman bor., Prov. Batinah, Al-Jabal al-Ahdar mts., SE Ruataq, W Awabi, 430 m, Wadi Bani Awf, L.fang + L.falle, 23°20'0,13"N, 57°29'23,5"E, 19.-20.XII.2009, leg. Lehmann, Bittner & Stadie / Holotypus ♂ *Sunius extensissimus* sp.n. det. V. Assing 2010" (cAss).

Description: Body length 3.6 mm. Habitus as in Fig. 9. Coloration: head and pronotum dark-reddish; elytra bicoloured, with the anterior half infuscate and the posterior half reddish-yellow; abdomen blackish, with the posterior 1/3 of segments VII and VIII reddish; legs reddish-yellow; antennae reddish.

Head approximately as wide as long (Fig. 10); punctuation coarse and rather dense, somewhat sparser in median dorsal portion; interstices without microsculpture, narrower than diameter of punctures except in median dorsal portion (Fig. 11). Eyes distinctly projecting from lateral contours of head, approximately 0.8 times as long as postocular region in dorsal view. Labrum with long process on either side of median excision.

Pronotum approximately as long as wide and about 0.95 times as wide as head (Fig. 10); punctuation dense, somewhat less coarse than that of head; midline very narrowly impunctate.



Figs 6-14: *Sunius basalidis* (REITTER) (6-8) and *S. extensissimus* nov.sp. (9-14): (6) male sternite VII; (7, 12) aedeagus in lateral view; (8) ventral process of aedeagus in ventral view; (9) habitus; (10) forebody; (11) median dorsal portion of head; (13) aedeagus in ventral view; (14) internal structures of aedeagus in lateral view. Scale bars: 9: 1.0 mm; 10: 0.5 mm; 6-8, 11-13: 0.2 mm; 14: 0.1 mm.

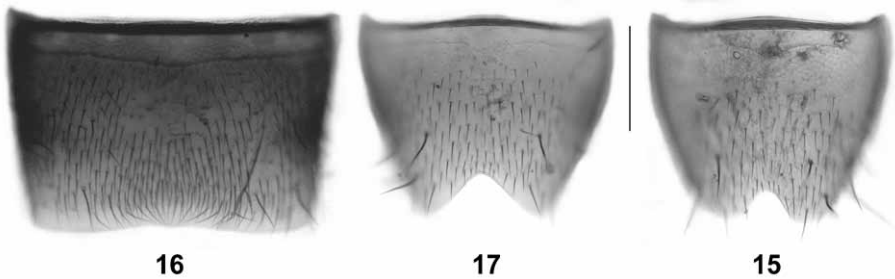
Elytra broad and very long, approximately 1.25 times as long as pronotum; humeral angles marked (Fig. 10); punctation very dense, finer than that of pronotum; interstices without microsculpture, narrower than diameter of punctures. Hind wings fully developed.

Abdomen slightly narrower than elytra; punctation very fine and moderately dense; interstices with microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII with dense pubescence, posterior margin very weakly concave (Fig. 16); sternite VIII transverse and with rather sparse pubescence, posterior excision relatively deep and of broadly triangular shape, its depth approximately 1/4 the length of sternite (Fig. 17); aedeagus 0.72 mm long, ventral process extremely long and slender (Figs 12-13); internal sac with very large basal and smaller apical sclerotized internal structures (Fig. 14). **E t y m o l o g y** : The specific epithet (superlative of the Latin adjective *extensus*: stretched) refers to the conspicuously long ventral process of the aedeagus.

C o m p a r a t i v e n o t e s : Based on the male sexual characters, particularly the morphology of the aedeagus (internal sac with large spines), and the habitus, *S. extensissimus* is closely related to *S. sinaicus* (COIFFAIT 1961), which was originally described from the Sinai peninsula and subsequently reported also from Saudi Arabia. The new species is readily distinguished from *S. sinaicus* by the bicoloured elytra (*S. sinaicus*: uniformly reddish-yellow), the much longer ventral process of the aedeagus, and by the shapes of the internal structures. For illustrations of the aedeagus of *S. sinaicus* see COIFFAIT (1984).

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The type locality is situated in Batnah province, northern Oman. The holotype was collected at a light source at an altitude of 430 m.



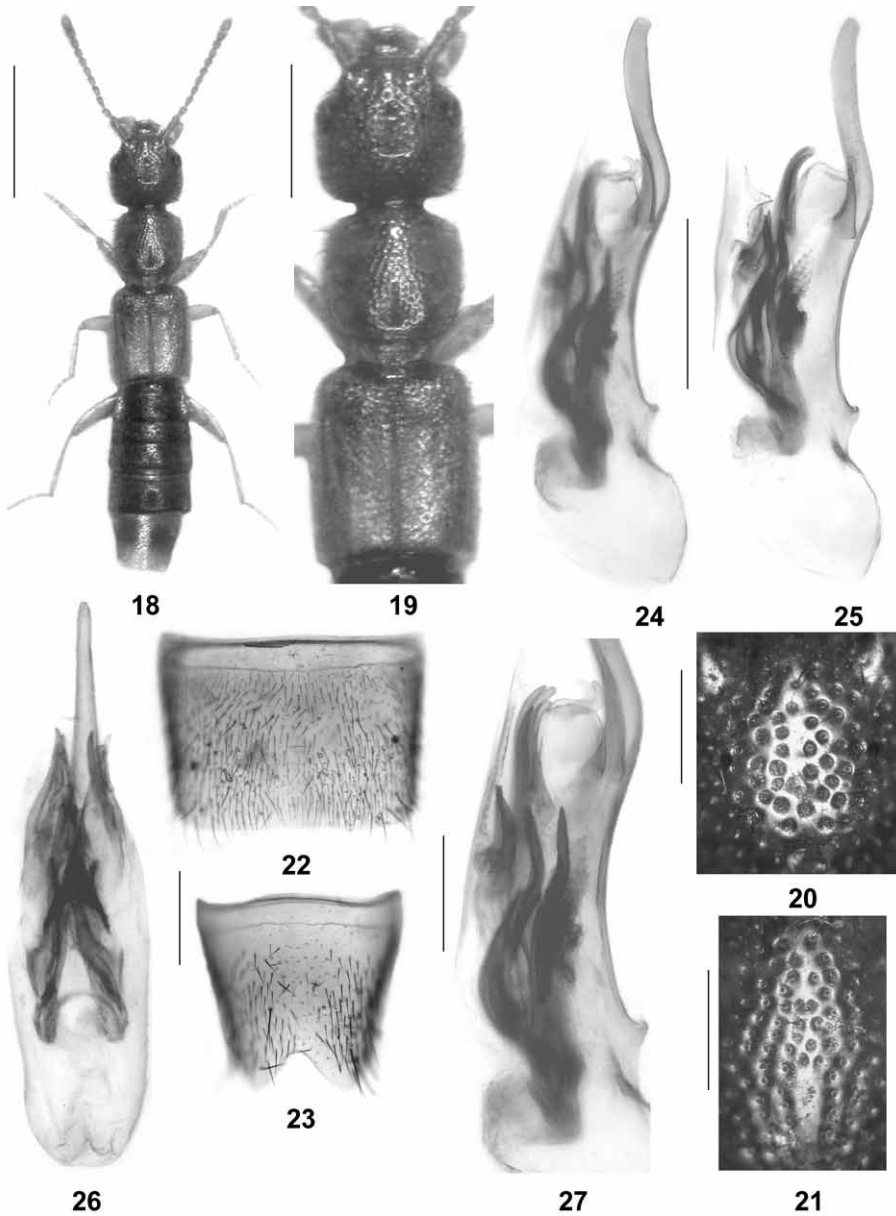
Figs 15-17: *Sunius basalisp* (REITTER) (15) and *S. extensissimus* nov.sp. (16-17): (15, 17) male sternite VIII; (16) male sternite VII. Scale bar: 0.2 mm.

***Sunius tectus* nov.sp.** (Figs 18-27)

Type material : Holotype ♂: "Oman, Dhofar - NV, 24.VIII.1994, leg. A. Rihane / Holotypus ♂ *Sunius tectus* sp. n. det. V. Assing 2010" (cAss). Paratype ♂ [slightly teneral]: "Oman, Dhofar - AL, 6.IX.1994, leg. A. Rihane" (cAss).

Description : Body length 3.4-3.6 mm. Habitus as in Fig. 18. Coloration: head and pronotum reddish; elytra dark-yellowish; abdomen blackish-brown, with the posterior 1/3 of segments VII and VIII reddish; legs reddish-yellow; antennae reddish.

Head approximately 1.05 times as wide as long (Fig. 19); punctation coarse and dense; interstices without microsculpture, distinctly narrower than diameter of punctures (Fig. 20).



Figs 18-27: *Sunius tectus* nov.sp.: (18) habitus; (19) forebody; (20) median dorsal portion of head; (21) median dorsal portion of pronotum; (22) male sternite VII; (23) male sternite VIII; (24-25) aedeagus in lateral view; (26) aedeagus in ventral view; (27) internal structures of aedeagus in lateral view. Scale bars: 18: 1.0 mm; 19: 0.5 mm; 20-26: 0.2 mm; 27: 0.1 mm.

Eyes distinctly projecting from lateral contours of head, approximately 0.8 times as long as postocular region in dorsal view. Labrum with long process on either side of median excision.

Pronotum approximately as long as wide and 0.90-0.95 times as wide as head (Fig. 19); punctuation dense, somewhat less coarse than that of head; midline impunctate only in posterior half (Fig. 21).

Elytra broad and long, approximately 1.2 times as long as pronotum; humeral angles marked (Fig. 19); punctuation very dense, finer than that of pronotum, more pronounced and more defined near scutellum than elsewhere; interstices without microsculpture, narrower than diameter of punctures. Hind wings fully developed.

Abdomen slightly narrower than elytra; punctuation fine and dense; interstices with microsculpture primarily composed of isodiametric meshes; posterior margin of tergite VII with palisade fringe.

♂: sternite VII with dense, but not distinctly modified pubescence, posterior margin not distinctly concave (Fig. 22); sternite VIII approximately as long as broad, with moderately sparse pubescence, posterior excision of broadly triangular shape, its depth approximately 1/5 the length of sternite (Fig. 23); aedeagus 0.68 mm long, ventral process extremely long and slender (Figs 24-26); internal sac with sclerotized spine-like internal structures of characteristic shapes and arrangement (Fig. 27).

E t y m o l o g y : The specific epithet (Latin, adjective: secret, hidden) refers to the fact that it was previously confounded with *S. sinaicus*.

C o m p a r a t i v e n o t e s : Based on the male sexual characters, as well as the external characters (habitus, punctuation, shape of labrum), this species undoubtedly belongs to the *S. sinaicus* group, which is characterized particularly by the morphology of the aedeagus (long ventral process, numerous sclerotized spines of various sizes in internal sac) and which comprises three species in the Middle East (*S. sinaicus*, *S. extensissimus*, *S. tectus*). *Sunius tectus* is reliably distinguished from the similarly coloured *S. sinaicus* only by the broader head, the much longer ventral process of the aedeagus, and the internal structures of the aedeagus. It is separated from *S. extensissimus* by the paler coloration of the head and pronotum, the uniformly reddish-yellow elytra, the shallower and less dense punctuation of the elytra, the shapes and chaetotaxy of the male sternites VII and VIII, as well as by the morphology of the aedeagus, particularly by the shape of the ventral process. For illustrations of the aedeagus of *S. sinaicus* see COIFFAIT (1984).

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The specimens were collected in two localities in Dhofar province, southern Oman, in August and September. The paratype is slightly teneral.

4. Eastern Palaearctic *Sunius* species

After a revision of the type material of the East Palaearctic species previously attributed to *Sunius* and including the new species described below, the *Sunius* fauna of the East Palaearctic is composed of only eleven described species – not counting one species of West Palaearctic affiliations with a trans-Palaearctic distribution – and much less diverse than that of the West Palaearctic region. An additional species from Nepal without

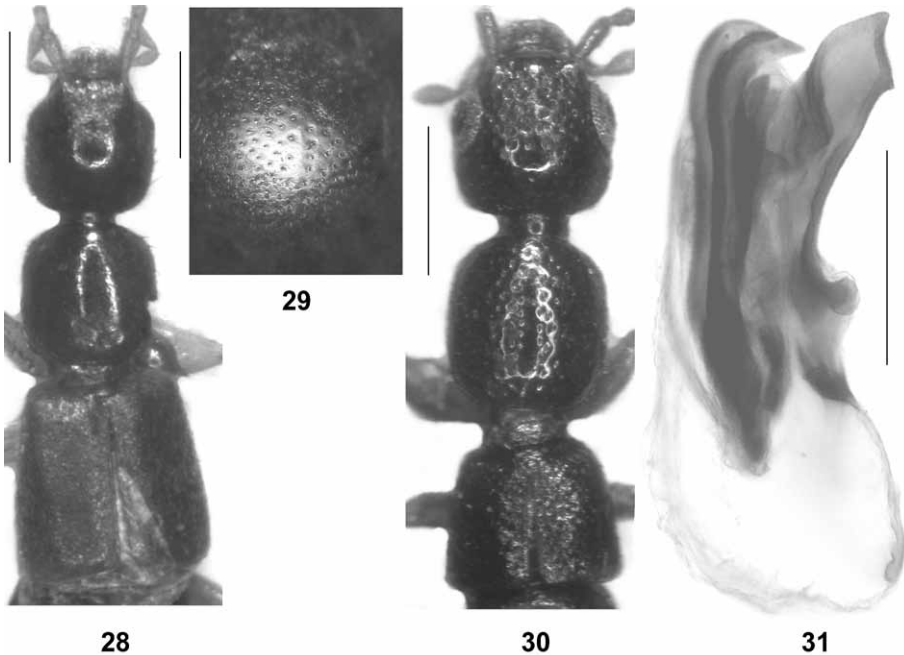
precise locality data is not described. The generic affiliations of one species, *S. laevior*, are uncertain; the male sexual characters are unknown.

Five of the ten species that undoubtedly belong to *Sunius* are distributed in China and the remainder in the Himalaya (Nepal, northern India, Bhutan). They can be subdivided into two species groups. One of them, the *S. manasluensis* species group, includes seven species (*S. manasluensis*, *S. turgescens*, *S. macrops*, *S. cursor*, *S. baculatus*, *S. cameroni*, *S. bouddha*) from the Himalaya and the Chinese province Yunnan characterized by conspicuously large eyes, short elytra, and hind wings of more or less reduced length. In addition, most species have an aedeagus with a subapically dentate ventral process and rather long sclerotized internal structures. The other species group, hereafter referred to as the *S. cordiformis* group, is composed of three species (*S. cordiformis*, *S. furcillatus*, *S. puetzi*) from China with eyes of moderate size, long elytra, fully developed hind wings, and an aedeagus without distinct sclerotized structures.

?*Sunius laevior* (CAMERON 1943) (Figs 28-29)

Medon (Hypomedon) laevior CAMERON 1943: 34 f.

Type material examined: Holotype ♀: "Ghum dist. Mangpo, M. laevior Cam. Type / M.Cameron Bequest B.M. 1955-147. / Holotype 7 Holotype *Medon laevior* Cameron 1943, det. R.G. Booth 2010 / *Sunius laevior* (Cameron), det. V. Assing 2010" (BMNH).



Figs 28-31: *Sunius laevior* (CAMERON), holotype (28-29) and *S. bouddha* (COIFFAIT), holotype (30-31): (28, 30) forebody; (29) median dorsal portion of head; (31) aedeagus in lateral view. Scale bars: 28, 30: 0.5 mm; 31: 0.2 mm; 29: 0.1 mm.

C o m m e n t : The original description is based on a single specimen ("Unique") from "Ghum district: Mangpu" (CAMERON 1943). The holotype was located in the collections of the BMNH and proved to be a female.

Redescription: Body length 4.1 mm. Coloration: head, pronotum, and abdomen blackish; elytra brown; legs and antennae dark-yellowish.

Head weakly oblong, approximately 1.05 times as long as wide (Fig. 28); punctuation very fine and dense, even in median dorsal portion; interstices without microsculpture, on average narrower than diameter of punctures (Fig. 29). Eyes rather large, but slightly shorter than postocular region in dorsal view.

Pronotum indistinctly oblong, 1.03 times as long as wide and about 1.05 times as wide as head (Fig. 28); punctuation slightly finer, shallower, and somewhat sparser than that of head; midline with similar punctuation as lateral portions.

Elytra conspicuously long, approximately 1.2 times as long and 1.4 times as broad as pronotum; humeral angles marked (Fig. 28); punctuation fine and extremely dense, surface practically matt. Hind wings fully developed.

Abdomen narrower than elytra; punctuation fine and dense; interstices with shallow microsculpture composed of more or less isodiametric meshes; posterior margin of tergite VII with palisade fringe.

♂: unknown.

Comparative notes: Based on the external appearance, *S. laevior* may belong to the *S. nigrinus* group (see ASSING 2008a). It is distinguished from other species of this group particularly by the denser punctuation of the head and by the longer and broader elytra. However, the possibility that *S. laevior* belongs to another genus of Medonina cannot be ruled out with certainty.

Distribution and natural history: The species is known only from the type locality in West Bengal, northern India. Bionomic data are not available.

***Sunius galiberti* (COIFFAIT 1987)**

Hypomedon apterus COIFFAIT 1975: 179; preoccupied.

Hypomedon galiberti COIFFAIT 1987: 497; replacement name.

Type material examined: Holotype ♂: "Phulchoki b. Kathmandu, Nepal, lg. Franz / Holotype / *Hypomedon apterus* H. Coiffait det. 1975 / *Sunius galiberti* (Coiffait), det. V. Assing 2010" (NHMW). Paratype ♀: same data as holotype (NHMW).

Additional material examined: 11 exs., same data as holotype (NHMW, cAss).

Comment: The original description of *Hypomedon apterus* is based on a male holotype and two female paratypes from "Phulchoki près Katmandou" (COIFFAIT 1975). The holotype, one paratype, and eleven additional specimens evidently collected together with the types were located in the Franz collection at the NHMW.

For a redescription and illustrations of this species see ASSING (2010).

***Sunius manasluensis* ASSING 2010**

Material examined: Nepal: 1♂, Manaslu, Dudh Pokhari Lekh, upper Phulinagiri Madi, 19.-21.IV.2003, leg. Schmidt (cRou).

Comment: The above specimen was collected together with the type specimens of this very recently described species (ASSING 2010).

***Sunius bouddha* (COIFFAIT 1978) (Figs 30-31)**

Hypomedon bouddha COIFFAIT, 1978: 121 f.

Type material examined: Holotype ♂ [abdominal segment VIII missing]: "20 km S. Thimphu, 2300 m, 18.5. / Nat.-Hist. Museum Basel - Bhutan Expedition 1972 / Holotype / *Hypomedon bouddha* H. Coiffait det. 1977 / *Sunius bouddha* (Coiffait), det. V. Assing 2010" (NHMB).

Comment: The original description is based on a single male from "20 km S. Thimphu, 2300 m" (COIFFAIT 1978). The holotype was located in the collections of the NHMB.

Redescription: Body length 3.4 mm. Coloration: body blackish-brown, with the humeral angles and the posterior margins of the elytra diffusely reddish-brown; legs yellowish; antennae reddish-yellow.

Head (Fig. 30) very weakly transverse; punctation coarse, very dense in anterior and very sparse in posterior portion of head; interstices without microsculpture, in anterior portion of dorsal surface much narrower than diameter of punctures. Eyes large and convex, much longer than postocular region in dorsal view.

Pronotum (Fig. 30) approximately 1.1 times as long as wide and slightly narrower than head; punctation dense, slightly less coarse than that of head; midline narrowly impunctate; interstices without microsculpture.

Elytra very short, little more than 0.6 times as long as pronotum, distinctly dilated posteriorly; humeral angles practically obsolete (Fig. 30); punctation dense, shallow, and ill-defined; interstices without microsculpture. Hind wings completely reduced.

Abdomen distinctly broader than elytra; punctation fine and rather dense; interstices with shallow transverse microsculpture; posterior margin of tergite VII without palisade fringe.

♂: aedeagus as in Fig. 31, 0.55 mm long, with pair of long and apically hooked sclerotized internal structures.

Comparative notes: Based on the external characters (conspicuously large eyes, coarse punctation of the head and pronotum, extremely short elytra) and the morphology of the aedeagus (presence of a pair of long sclerotized structures in the internal sac; short, stout, and apically acute ventral process), *S. bouddha* belongs to the *S. manasluensis* group, which previously included three species, *S. manasluensis*, *S. cameroni* ASSING in press, and *S. galiberti* COIFFAIT. The similarly derived shape of the ventral process of the aedeagus suggests a particularly close relationship to *S. manasluensis* and *S. cameroni*. From these species, *S. bouddha* is reliably distinguished only by the shape of the apex of the ventral process and by the shape of the sclerotized internal structures of the aedeagus. For illustrations of *S. manasluensis*, *S. galiberti*, and *S. cameroni* see ASSING (2010, in press).

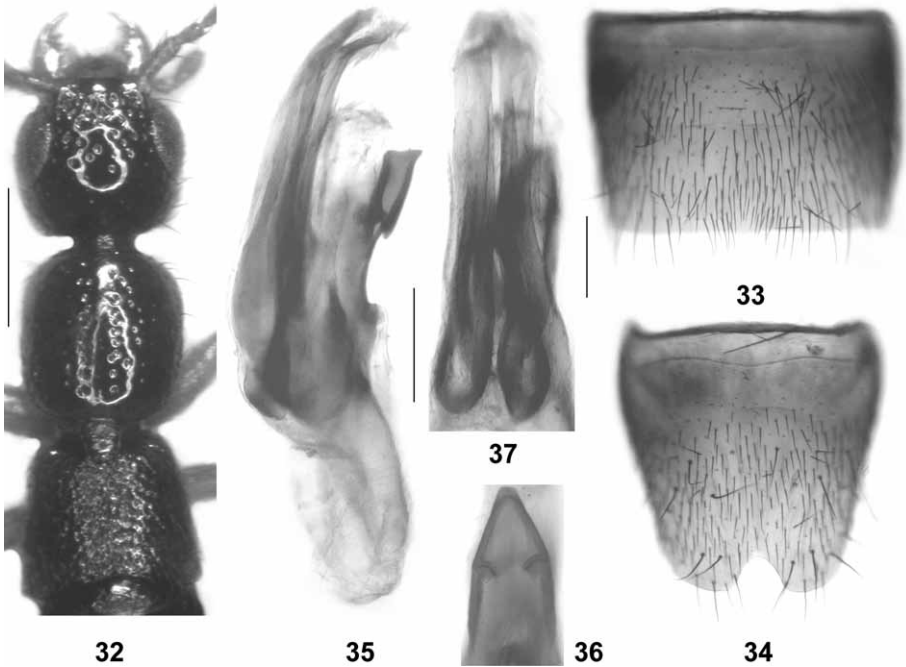
Distribution and natural history: The species has become known only from the type locality in Bhutan, where it was discovered at an altitude of 2300 m in May.

***Sunius baculatus* nov.sp.** (Figs 32-37)

Type material examined: Holotype ♂: "328 Panchthar Distr., Paniporua, 2300 m, mixed broadleaved forest, 16.-20. April 1988, J. Martens & W. Schawaller leg. / Nepal-Expeditionen Jochen Martens / Holotypus ♂ *Sunius baculatus* sp.n., det. V. Assing 2011" (SMNS). Paratypes: 1 ♀: same data as holotype (SMNS); 1 ♂: "E-Nepal" (cAss).

Description: Body length 3.9-4.7 mm. Coloration: head blackish-brown to blackish; pronotum and elytra reddish-brown to dark-brown; abdomen blackish-brown to blackish; legs yellowish to reddish; antennae reddish.

Head (Fig. 32) very weakly transverse, 1.05-1.10 times as broad as long; punctuation coarse and moderately dense in anterior half, very sparse and very fine in posterior half of dorsal surface; interstices without microsculpture. Eyes large and convex, much longer than postocular region in dorsal view.



Figs 32-37: *Sunius baculatus* nov.sp.: (32) forebody; (33) male sternite VII; (34) male sternite VIII; (35) aedeagus in lateral view; (36) ventral process of aedeagus in ventral view; (37) internal structures of aedeagus in dorsal view. Scale bars: 32: 0.5 mm; 33-37: 0.2 mm.

Pronotum (Fig. 32) 1.05-1.10 times as long as wide and approximately 0.95 times as wide as head; punctuation moderately dense, as coarse as that of anterior portion of head; midline rather broadly impunctate; interstices without microsculpture.

Elytra very short, approximately 0.55 times as long as pronotum, distinctly dilated posteriorly; humeral angles weakly pronounced (Fig. 32); punctuation dense, shallow, and not well defined; interstices without microsculpture. Hind wings completely reduced.

Abdomen distinctly broader than elytra; punctuation fine and moderately dense; interstices with shallow microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VII without appreciable modifications (Fig. 33); sternite VIII with rather small V-shaped posterior excision (Fig. 34); aedeagus as in Figs 35-37, approximately 0.8 mm long, with pair of conspicuously long and massive, apically hooked sclerotized internal structures.

E t y m o l o g y : The specific epithet is an adjective derived from the Latin noun *baculum* (stick) and refers to the long internal structures of the aedeagus.

C o m p a r a t i v e n o t e s : As can be inferred particularly from the similar shape of the ventral process of the aedeagus and from the pair of conspicuously long internal structures (clearly synapomorphies), but also from similar external characters such as the characteristic punctuation of the head, *S. baculatus* is closely allied to *S. bouddha*, from which it is distinguished by even shorter elytra, the larger aedeagus, and the different shape of the ventral process.

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The type locality is situated in eastern Nepal (27°10'N, 87°52'E), not far from the borders with Sikkim and West Bengal. The holotype and a paratype were collected in a broad-leaved forest at an altitude of 2300 m in April.

***Sunius cursor* nov.sp.** (Figs 38-42)

T y p e m a t e r i a l e x a m i n e d : Holotype ♂: "223 Gorkha/Dhading Dist., Buri Gandaki, Jagat bis gegenüber Pangshing, 1300-1650 m, 31 Juli 83 Kulturland, Martens & Schawaller leg. / Holotypus ♂ *Sunius cursor* sp.n., det. V. Assing 2011" (SMNS). Paratype ♂: "Nepal Ilam. Mai Pokhari 1800 m, V.1989, P. Morvan" (cAss).

D e s c r i p t i o n : Small species; body length 3.1-3.4 mm. Habitus as in Fig. 38. Coloration: head; pronotum and elytra dark-brown; abdomen dark-brown to blackish-brown; legs yellowish; antennae pale-reddish.

Head (Fig. 39) transverse, 1.10-1.15 times as broad as long; punctuation coarse and moderately sparse (interstices on average broader than diameter of punctures) in anterior half, very sparse and very fine in posterior half of dorsal surface; interstices without microsculpture. Eyes large and convex, much longer than postocular region in dorsal view.

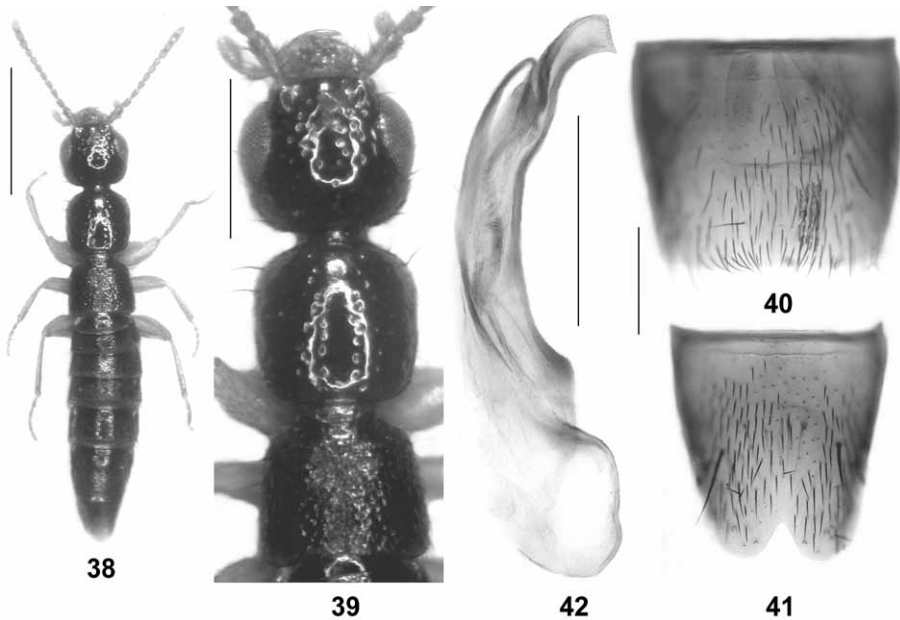
Pronotum (Fig. 39) approximately as long as wide and slightly narrower than head; punctuation similar to that of anterior portion of head; midline rather broadly impunctate; interstices without microsculpture.

Elytra very short, 0.55-0.60 times as long as pronotum, distinctly dilated posteriorly; humeral angles weakly pronounced (Fig. 39); punctuation dense, shallow, and not well defined; interstices without microsculpture. Hind wings completely reduced.

Abdomen distinctly broader than elytra; punctuation fine and moderately dense; interstices with shallow microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VII with slightly denser pubescence in posterior median portion and with weakly concave posterior margin, but otherwise without appreciable modifications (Fig. 40); sternite VIII with rather small V-shaped posterior excision (Fig. 41); aedeagus as in Fig. 42, approximately 0.55 mm long, with ventral process of distinctive shape, without distinctly sclerotized internal structures.

E t y m o l o g y : The specific epithet is a noun in apposition (Latin: runner) and refers to the remarkably extensive distribution of this micropterous species.



Figs 38-42: *Sunius cursor* nov.sp.: (38) habitus; (39) forebody; (40) male sternite VII; (41) male sternite VIII; (42) aedeagus in lateral view. Scale bars: 38: 1.0 mm; 39: 0.5 mm; 40-42: 0.2 mm.

Comparative notes: With the species of the *S. manashuensis* group, *S. cursor* shares external characters such as the large eyes, the similar punctuation of the head, and the extremely short elytra. It is distinguished from them by smaller size and particularly by the morphology of the aedeagus (slender shape; absence of distinctly sclerotized internal structures).

Distribution and natural history: The species was collected in two localities, one at the border of Dhading and Gorkha districts in central Nepal and the other in Ilam district in eastern Nepal. On the one hand, such an extensive distribution would seem surprising for a micropterous *Sunius* species. On the other hand, the localities are at relatively low altitudes (1300-1800 m) and the holotype was even collected in arable land, both of which would be rather unusual for a species with a restricted distribution.

Sunius cordiformis ASSING 2002

Material examined: China: 6 exs., Beijing, Badaling, 9.IX.1980, leg. Hammond (BMNH, cAss); 1♂, 2♀, Shaanxi, Qinling Shan, river valley 30 km SSW Xian, autoroute km 33, 34°00'N, 108°49'E, 600 m, sifted, 31.VIII.1995, leg. Pütz (cSch, cAss); 2♀, Shaanxi, Qinling Shan, river valley 40 km S Xian, autoroute km 50, 33°55'N, 108°49'E, 1200 m, river bank, 31.VIII.1995, leg. Pütz & Schülke (cPüt, cSch); 1♀, Shaanxi, Qinling Shan, 118 km E Xian, Hua Shan, 34°27'N, 110°06'E, 1200-1400 m, sifted, 18.-20.VIII.1995, leg. Pütz (cPüt); 1♀, Sichuan, Ya'an Prefecture, Tianquan County, Jiajin Shan, 54 km W Ya'an, valley below Labaha N. R. St., 30°03'N, 102°27'E, 1500 m, 12.VII.1999, leg. Schülke (cSch); 1♂, N-Yunnan, Dali Bai Nat. Aut. Pref., 4 km E Dali Old Town, shore of Er Hai lake, 25°42'N, 100°02'E, 2020 m, vegetable debris on lakeshore sifted, 27.VIII.2003, leg. Schülke (cSch); 17 exs., N-Yunnan, Diqing Tibet. Aut. Pref.,

Deqin County, 33 km WNW Zhongdian, small cleft W Yangtze river, 27°57'N, 99°25'N, 2220-2300 m, litter, moss, and dead wood near water sifted, 4.VI.2005, leg. Schülke (cSch, cAss).

C o m m e n t : This species is widespread in China, where it has been reported from Beijing, Shaanxi, Sichuan, and Yunnan (ASSING 2002, 2008b).

***Sunius furcillatus* ASSING 2002**

M a t e r i a l e x a m i n e d : China: 3 exs., Shaanxi, 20 miles S Xian, 19.IX.1980, leg. Hammond (BMNH); 2 exs. [1 teneral], Shaanxi, Qinling Shan, 118 km E Xian, Hua Shan, 34°27'N, 110°06'E, 1200-1400 m, sifted, 18.-20.VIII.1995, leg. Pütz (cPüt, cAss); 1 ex., Shaanxi, Qinling Shan, 31 km E Xian, Li Shan, near Lintong, 34°20'N, 109°16'E, 1000-1200 m, dry meadows and forest, 23.-25.VIII.1995, leg. Pütz (cPüt); 1 ex., Sichuan, 20 miles S Xian, Nan Wutai, 19.IX.1980, leg. Hammond (cAss).

C o m m e n t : *Sunius furcillatus* has become known from the Chinese provinces Hubei, Shaanxi, and Sichuan (ASSING 2002). One specimen collected in August is teneral.

***Sunius* sp.**

M a t e r i a l e x a m i n e d : Nepal: 1 ♂: "E-Nepal" (cRou).

C o m m e n t : The above male represents a new species. However, in view of the vague indication of the locality, a description does not seem advisable.

5. The mouthparts of *Sunius*

In order to clarify the generic affiliations of Eastern Palaearctic *Sunius*, various external and sexual characters were studied. Aside from the male primary and secondary sexual characters, the mouthparts provide additional evidence that has only partly been appreciated in previous works. As a basis for a future treatment of other genera of Medonina, the mouthparts are redescribed:

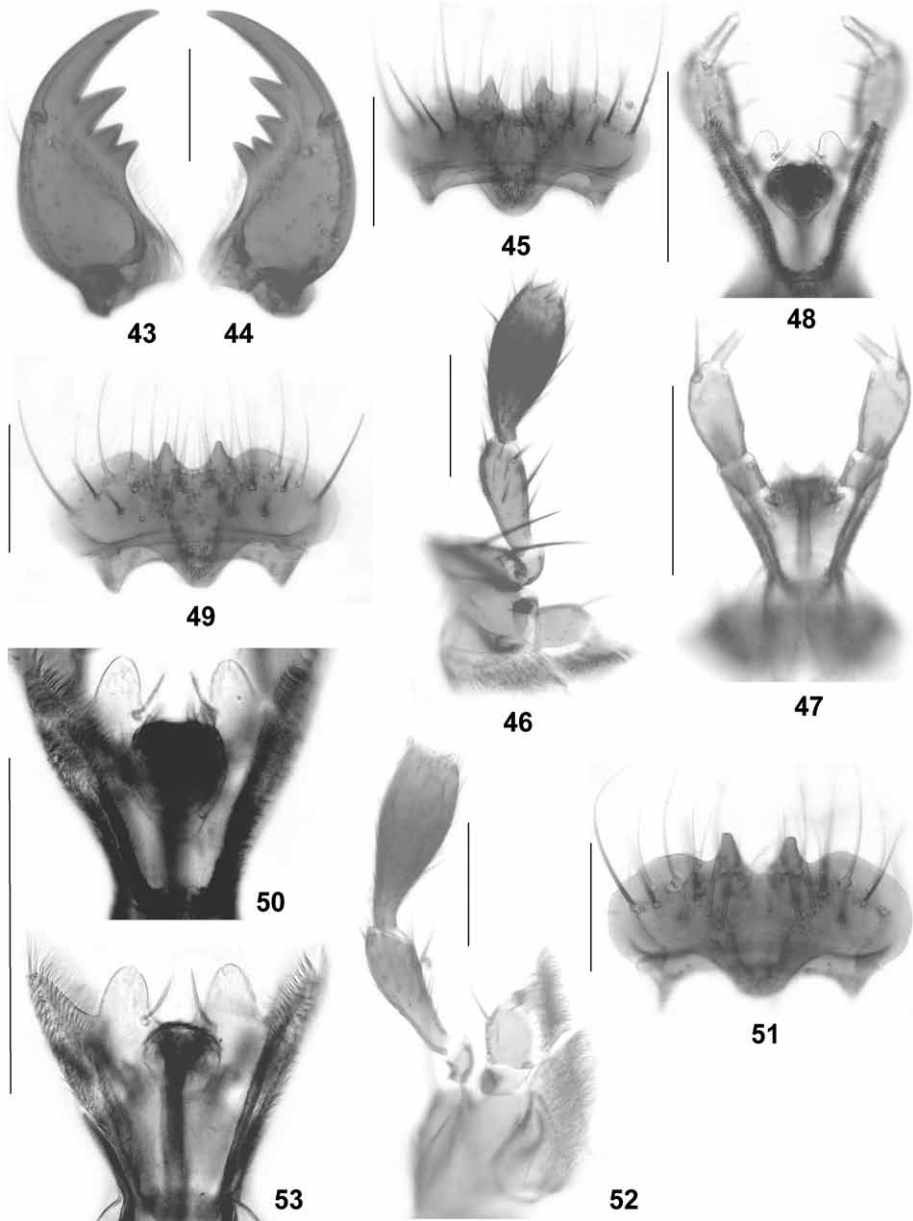
Labrum: strongly transverse; anterior margin in the middle incised; on either side of this incision with a distinct tooth-like process (Figs 45, 49, 51); length of this process variable across species groups, particularly long in the *S. claviceps* and *S. cordiformis* species groups.

Mandibles: general shape stout (Figs 43-44) to slender and apically elongated (Figs 54-55, 57-58); left mandible with three, right mandible with four molar teeth.

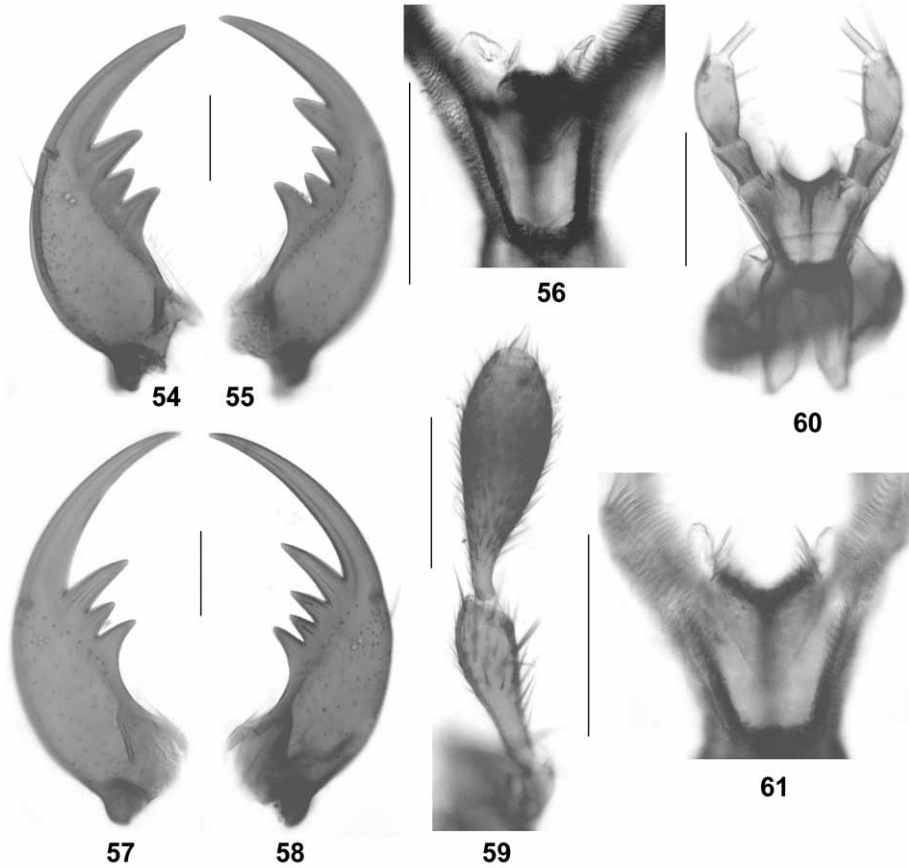
Maxilla: maxillary palpomere II slender, 2.5-4 times as long as broad; palpomere III 2-3.5 times as long as broad and almost circular in cross-section, not flattened; palpomere IV very small and of conical shape (Figs 46, 52, 59).

Labium: labial palpomere II at least twice as long as I (Figs 47, 60); palpomere III needle-shaped; ligula bilobed, each lobe with a stout basal seta facing mediad (Figs 48, 50, 53, 56, 61).

The most significant characters distinguishing the mouthparts of *Sunius* from those of similar medonine genera appear to be the shapes of the anterior margin of the labrum, of the maxillary palpomere III, and of the right mandible, as well as particularly the shape and chaetotaxy of the bilobed ligula.



Figs 43-53: Mouthparts of *Sunius melanocephalus* (FABRICIUS) (43-48), *S. propinquus* (BRISOUT) (49-50), and *S. nigrinus* (EPPELSHEIM) (52-53): (43-44) left and right mandible; (45, 49, 51) labrum; (46, 52) maxillary palpus; (47) labial palpi; (48, 50, 53) ligula. Scale bars: 0.1 mm.



Figs 54-61: Mouthparts of *Sunius claviceps* (REITTER) (54-56) and *S. furcillatus* ASSING (57-61): (54-55, 57-58) left and right mandible; (56, 61) ligula; (59) maxillary palpus; (60) labial palpi; Scale bars: 0.1 mm.

6. Synonymic catalogue of the *Sunius* species of the Palearctic region

The valid names are given in alphabetical order; the synonyms are sorted by publication year. The data in the distribution column are based exclusively on confirmed records, except for *S. adanensis*, whose original description is partly based on unrevised type material from "Syria". *Sunius laevior* is included in the catalogue, although its generic affiliations are doubtful and require confirmation. In the references column the revisionary parts are indicated in which the respective species is treated; for some species, additional literature references are given. Articles containing descriptions and/or illustrations are given in bold, those providing distribution maps are underlined. The contributions are abbreviated as follows:

A95 = ASSING (1995); A01a = ASSING (2001a); A01b = ASSING (2001b); A02 = ASSING (2002); A03a = ASSING (2003a); A03b = ASSING (2003b); A04b = ASSING (2004b); A05a = ASSING (2005a); A05b = ASSING (2005b); A05c = ASSING (2005c); A05d = ASSING (2005d); A06a = ASSING (2006a); A08a = ASSING (2008a); A08b = ASSING (2008b); A09 = ASSING (2009); A10 = ASSING (2010); Aip = ASSING (in press); App = ASSING (present paper); AW01 = ASSING & WUNDERLE (2001); AZ03 = ADORNO & ZANETTI (2003); C84 = COIFFAIT (1984).

(sub)-species	distribution	references
<i>aculeatus</i> ASSING 2005	Turkey: Muğla: Boncuk Dağı	A05a
<i>acutissimus</i> ASSING 2008	Tajikistan, Uzbekistan, Turkmenistan	A08a
<i>adanensis</i> (LOKAY 1919) = <i>phasianus</i> (BORDONI 1980)	Turkey, Iran, Syria?	A01a , A05a , A05c , A05d , A06a , A08a , A10
<i>afghanicus</i> (COIFFAIT 1973)	Afghanistan	A08a
<i>akianus</i> ASSING 2005	Turkey: Muğla: Ak Dağlar	A05a , A08a ,
<i>algericus</i> (COIFFAIT 1973)	Algeria, Tunisia, southern Italy (incl. Sicily)	A08a , A08b
<i>amanensis</i> ASSING 2005	Turkey: Antakya: Nur Dağları	A05c
<i>anophthalmus</i> HERNÁNDEZ & GARCÍA 1992	Canary Islands: La Palma	A08a
<i>atlasicus</i> (COIFFAIT 1970)	Morocco: Moyen Atlas	A08a
<i>baboricus</i> ASSING 2008	NE-Algeria	A08a , A08b
<i>baculatus</i> nov.sp.	E-Nepal	App
<i>balkarensis</i> ASSING 2001	Turkey: E-Mersin	A01a , A05a
<i>basalis</i> (REITTER 1899)	Azerbaijan	A08a , App
<i>behnei</i> ASSING 2008	Spain: Andalucía: Sierra Magina	A08a
<i>berberus</i> (COIFFAIT 1961)	NE-Algeria: Annaba env.	A08a
<i>bicolor</i> (OLIVIER 1795) = <i>ruficornis</i> (LATREILLE 1806) = <i>ruficollis</i> (KRAATZ 1857)	Atlanto-Mediterranean: Iberian Peninsula, West Europe, southern England, Italy, Central Europe (except for the southeast), southern Scandinavia	A08a , A08b , A10
<i>bihamatus</i> ASSING 2005	N-Tunisia: Teboursouk env.	A05b , A08a
<i>bohaci</i> ASSING 2008	Tajikistan	A08a
<i>bouddha</i> (COIFFAIT 1978)	Bhutan	App
<i>bozdagensis</i> ASSING 2006	Turkey: Izmir: Boz Dağlar	A06a
<i>brachati</i> ASSING 2003	Turkey: W-Antalya	A03a , A05a
<i>brachypterus</i> (GEMMINGER & HAROLD 1868) = <i>brevipennis</i> (W. SCRIBA 1868) = <i>pyrenaicus</i> (COIFFAIT 1961) = <i>franzi</i> (COIFFAIT 1970)	SW-France: Eastern Pyrénées	A08a , A08b , C84
<i>brevipennis brevipennis</i> (WOLLASTON 1864)	Canary Islands: Tenerife	A08a , A08b
<i>brevipennis canariensis</i> (BERNHAEUER 1928)	Canary Islands: Gran Canaria, La Palma, El Hierro, Lanzarote	A08a , A08b , A10
<i>brevipennis gomerenis</i> ASSING 2008	Canary Islands: La Gomera	A08a , A08b
<i>brevispinosus</i> ASSING 2005	Turkey: Kahramanmaraş	A05d , A08a , A10

(sub-)species	distribution	references
<i>calatravae</i> ASSING 2008	Spain: Ciudad Real	A08a , A08b
<i>cameroni</i> ASSING in press = <i>brachypterus</i> (CAMERON 1943)	N-India: West Bengal	Aip
<i>catalonicus</i> (COIFFAIT 1961)	NE-Spain	A08a
<i>cazorlae</i> ASSING 2003	Spain: Andalucía: Sierra de Cazorla	A03b , A08a
<i>claviceps</i> (REITTER 1908) = <i>bogdoensis</i> GREBENNIKOV 2001	Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, Russia	A08a , A08b, A10
<i>confusus</i> (COIFFAIT 1970)	Spain: Andalucía: Sierra de las Nieves	A08a , C84
<i>cordiformis</i> ASSING 2002	China	A02 , A08b, App
<i>cordobanus</i> ASSING 2008	Spain: Andalucía: Sierra de Córdoba, Sierra de Cabra	A08a , A08b
<i>cursor</i> nov.sp.	Nepal	App
<i>discretus</i> ASSING 2008	NW-Tunisia	A08a , A08b
<i>dumanlianus</i> ASSING 2005	Turkey: Antalya: Dumanlı Dağı	A05a
<i>extensissimus</i> nov.sp.	N-Oman	App
<i>fallax</i> (LOKAY 1919) = <i>austriacus</i> (COIFFAIT 1961)	southeastern Central Europe, SE- Europe, NW-Turkey, Ukraine, Moldavia, western Caucasus region	A95 , A05a, A08a , A08b, A10
<i>falsus</i> ASSING 2008	Israel, Lebanon	A08a
<i>fernandezii</i> HERNÁNDEZ & GARCÍA	Canary Islands: Tenerife	A08a , A08b
<i>filabresicus</i> ASSING 2008	Spain: Andalucía: Sierra de los Filabres	A08b
<i>fokisensis</i> ASSING & WUNDERLE 2001	S-Greece	AW01 , A08a
<i>fortespinosus</i> ASSING 2006	Turkey: Aydın/Izmir: Aydın Dağları	A06a
<i>fulgocephalus</i> (COIFFAIT 1970)	Armenia, Georgia, Azerbaijan, Iran	A08a , A08b, A10
<i>fultus</i> ASSING 2003	N-Morocco: southern Rif	A03b , A08a , A08b
<i>furcillatus</i> ASSING 2002	China	A02 , App
<i>gadoricus</i> ASSING 2008	Spain: Andalucía: Sierra de Gádor	A08b
<i>galiberti</i> (COIFFAIT 1987) = <i>apterus</i> (COIFFAIT 1975)	Nepal: Kathmandu	A10 , App
<i>geiseri</i> ASSING 2009	Greece: Samos	A09
<i>georgii</i> ADORNO & ZANETTI 2003	Italy: Sicily	A08a , A10, AZ03
<i>goektepensis</i> ASSING 2005	Turkey: Mersin: Goektepe Dağı	A05c
<i>gourvesi</i> (COIFFAIT 1981)	N-Morocco: Jebel Zerhoun	A08a
<i>hastatus</i> ASSING 2001	Morocco: Haut Atlas	A01b , A08a
<i>hatayanus</i> ASSING 2005	Turkey: S-Antakya	A05c , A10
<i>hellenicus</i> (COIFFAIT 1961)	Greece	A08a
<i>hypogaeus</i> (FAUVEL 1900)	Syria, Israel	A08a , C84
<i>ibizae</i> ASSING 2008	Spain: Ibiza	A08a
<i>ignatii</i> ADORNO & ZANETTI 2003	Italy: Sicily	A08a , AZ03
<i>inflexus</i> ASSING 2008	Tajikistan	A08a
<i>iranicus</i> ASSING 2002	Iran	A02 , A08a, A10
<i>italicus</i> (COIFFAIT 1961)	mainland Italy	A08a , A10, AZ03
<i>kaboulensis</i> COIFFAIT 1981	Afghanistan	A08a

(sub-)species	distribution	references
<i>kastcheevi</i> ASSING 2008	Kazakhstan	A08b
<i>khnzoriani</i> (COIFFAIT 1970) = <i>dolabrifer</i> ASSING 2001	Turkey, Armenia, Georgia, Iran	A01a , A05c , A05d , A06a , A08a , A10
<i>klapperichi</i> (COIFFAIT 1981)	Jordan	A08a
<i>kuehnelti</i> (SCHEERPELTZ 1963)	Greece: Pelopónnisos	A10
<i>laevior</i> (CAMERON 1943)	N-India: W-Bengal	App
<i>longispinosus</i> ASSING 2005	Turkey: Kahramanmaraş	A05d , A08a , A10
<i>macrops</i> ASSING 2010	China: Yunnan	A10
<i>mallorcensis</i> (COIFFAIT 1970)	Spain: Mallorca	A08a
<i>manasluensis</i> ASSING 2010	Nepal: Manaslu	A10 , App
<i>martinarum</i> ADORNO & ZANETTI 2003	Italy: Sicily	A08a , AZ03
<i>melanocephalus</i> (FABRICIUS 1793) = <i>nigrocephalus</i> (TURTON 1802) = <i>fuscipennis</i> (MOTSCHULSKY 1858) = <i>affinis</i> (KRAATZ 1859) = <i>macropterus</i> (BERNHAEUER 1932) = <i>armeniacus</i> (COIFFAIT 1970) = <i>anatolicus</i> ASSING 1995	trans-Palaeartic, from eastern Russia to France and NE-Spain; introduced in North America	A95 , A01a , A05a , A05c , A08a , A08b , A10
<i>menalonicus</i> ASSING 2008	Greece: Pelopónnisos: Oros Menalon	A08a
<i>meybohmi</i> ASSING 2003	Portugal, Spain	A03b , A08a
<i>microphthalmus</i> (FRANZ 1979)	Canary Islands: El Hierro	A08a
<i>montanellus</i> (BORDONI 1980)	Morocco: Haut Atlas	A08a
<i>mordicus</i> ASSING 2008	Kyrgyzstan, Kazakhstan	A08a , A10
<i>mouzaianus</i> ASSING 2008	N-Algeria	A08a
<i>nevadensis</i> (COIFFAIT 1980)	Spain: Andalucía: Sierra Nevada	A08a , A08b , A10
<i>nidicola</i> (KASHCHEEV 1982) = <i>splendidulus</i> (BOHÁČ 1988)	Kazakhstan, Turkmenistan	A08a , A10
<i>nigrinus</i> (EPPELSHEIM 1892) = <i>picinus</i> (BERNHAEUER 1902) = <i>meuseli</i> (BERNHAEUER 1905) = <i>lebedevi</i> (ROUBAL 1926)	Middle Asia (Turkmenistan, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan), Russia, NW-China	A08a , A08b
<i>nurdaghensis</i> ASSING 2001	S-Turkey: Osmaniye/Antakya: Nur Dağları	A01a , A08a ,
<i>ovaliceps</i> (FAUVEL 1878) = <i>fagniezi</i> (PEYERIMHOFF 1916) = <i>peyerimhoffi</i> (COIFFAIT 1961) = <i>deharvengi</i> (COIFFAIT 1980) = <i>murciensis</i> (COIFFAIT 1980) = <i>valentianus</i> (COIFFAIT 1980)	Western Mediterranean: southern mainland France, Spain, Morocco, Algeria, Tunisia	A05b , A08a , A08b , A10 , App , AZ03
<i>palmi</i> (FRANZ 1979)	Canary Islands: La Gomera	A08a
<i>pauli</i> ASSING 2005	Turkey: Adıyaman	A05d
<i>pennatus</i> ASSING 2008	Tajikistan	A08a
<i>pinniger</i> ASSING 2006	W-Turkey: Izmir	A06a
<i>plasoni</i> (EPPELSHEIM 1875) = <i>pinnatus</i> ASSING 2006	W-Turkey: Manisa: Karadağ	A06a , A08a

(sub-)species	distribution	references
<i>praecisus</i> ASSING 2008	Tajikistan, Iran, Afghanistan	A08a , A08b, A10
<i>propinquus</i> (BRISOUT DE BARNEVILLE 1867) = <i>vicinus</i> (BRISOUT DE BARNEVILLE 1860) = <i>laetus</i> (THOMSON 1867)	Atlanto-Mediterranean: Madeira, Azores, Iberian Peninsula, France, Belgium, Netherlands, England, Ireland, Italy, North Africa (Tunisia, Algeria, Morocco)	A08a , A08b, A10, App
<i>puetzi</i> ASSING 2004	China: Sichuan	A04b ,
<i>puglianus</i> (COIFFAIT 1961)	Italy: Puglia, Basilicata	A08a , A08b, A10, AZ03
<i>rastrifer</i> ASSING 2001	S-Turkey: Antalya	A01a , A08a
<i>rectus</i> ASSING 2008	N-Algeria	A08a
<i>renouardi</i> (COIFFAIT 1955)	Lebanon	A08a
<i>rubriceps</i> nov.sp.	S-Iran	App
<i>sardus</i> ASSING 2008	Italy: Sardinia	A08a
<i>seguræ</i> ASSING 2003	Spain: Andalucía: Sierra de Segura	A03b , A08a
<i>seminiger</i> (FAIRMAIRE 1860) = <i>aveyronensis</i> (MATHAN 1862) = <i>gracilis</i> (MULSANT & REY 1870)	S-France: southern Massif Central and adjacent areas	A08a ,
<i>sexspinosus</i> ASSING 2006	Turkey: Muğla	A06a ,
<i>simoni</i> (QUEDENFELDT 1881) = <i>nitidus</i> (QUEDENFELDT 1881) = <i>politus</i> (QUEDENFELDT 1883) = <i>quedenfeldti</i> (EPPELSHEIM 1883) = <i>nitens</i> (DUVIVIER 1883)	S-Spain, N-Morocco	A08a , A08b, A10, AZ03
<i>sinaicus</i> (COIFFAIT 1961) = <i>punctus</i> (COIFFAIT 1983) = <i>punctatus</i> (COIFFAIT 1979)	Saudia Arabia, Egypt: Sinai	A08a , App, C84
<i>spinosissimus</i> ASSING 2008	Lebanon	A08a ,
<i>tectus</i> nov.sp.	S-Oman	App
<i>tenerifensis</i> (FRANZ 1979)	Canary Islands: Tenerife	A08a ,
<i>tronqueti</i> ASSING 2008	Spain: Andalucía: Sierra Nevada	A08b
<i>tuberiventris</i> ASSING 2001	Turkey: Mersin	A01a , A05a , A05c
<i>tuniseus</i> (COIFFAIT 1973)	Tunisia: Dorsale range	A08a
<i>turgescens</i> ASSING 2010	China: Yunnan	A10
<i>vaulogeri</i> (COIFFAIT 1973)	N-Algeria	A08a , A08b
<i>viator</i> (FAUVEL 1886) = <i>peregrinus</i> (FAUVEL 1886)	Algeria	A08a
<i>wrasei</i> (SCHÜLKE 1989)	Tajikistan	A08a
<i>wunderlei</i> ASSING 2001	Turkey: Mersin	A01a , A05a

7. Key to the *Sunius* species of the Palearctic region

The following key does not account for *S. kaboulensis*, of which no material has been available for examination. Owing to low divergence and diversity of external characters, as well as to pronounced intraspecific variation and considerable overlap, a reliable

identification based on external characters alone is in most cases difficult or impossible. An examination of the male primary and secondary sexual characters is usually mandatory.

In order to facilitate identification, the key also relies on zoogeographic data. The vast majority of species is more or less microphthalmous, has reduced hind wings, and highly restricted distributions. The abbreviations of the references to illustrations in earlier contributions are the same as those used for the catalogue in section 6. Zoogeographic categories are based on LATTIN (1967).

- 1 Species from the West Palaearctic, Middle Asia, and the north (Siberia, Russian Far East) of the East Palaearctic region 2
- Species from the Himalaya and China 107
- 2 Species from the Canary Islands 3
- Species absent from the Canary Islands 10
- 3 Eyes strongly reduced, smaller than antennomere I in cross-section. Posterior margin of abdominal segment VII without palisade fringe 4
- Eyes fully developed or of moderate size, at least 1/3 the length of postocular region in dorsal view. Posterior margin of abdominal segment VII with palisade fringe 6
- 4 Eyes completely reduced. Species from La Palma
..... *S. anophthalmus* HERNÁNDEZ & GARCÍA
- Eyes small, but noticeable. Distribution different 5
- 5 Eyes approximately as large as antennomere IV in cross-section; microsculpture of head shallow or indistinct. ♂: aedeagus as in A08a: Fig. 19. El Hierro
..... *S. microphthalmus* (FRANZ)
- Eyes approximately as large as antennomere I or II in cross-section; microsculpture of head pronounced. ♂: aedeagus as in A08a: Fig. 21. Tenerife *S. tenerifensis* (FRANZ)
- 6 Species always fully winged, elytra always longer than pronotum. ♂: aedeagus with strongly sclerotised and basally U-shaped rod-like structure in internal sac 7
- Polymorphic species with several wing-dimorphic, wing-polymorphic, or brachypterous subspecies; elytra mostly shorter than pronotum. ♂: aedeagus with weakly sclerotised and basally not U-shaped rod-like structure in internal sac 8
- 7 Average coloration darker; pronotum usually brown to dark brown, rarely dark reddish; elytra pale reddish to dark brown. ♂: aedeagus smaller and with shorter ventral process, shaped as in A08a: Fig. 23. La Gomera *S. palmi* (FRANZ)
- Coloration paler; pronotum bright reddish, elytra yellowish. ♂: aedeagus larger and with longer ventral process, shaped as in A08a: Fig. 25. Tenerife
..... *S. fernandezii* HERNÁNDEZ & GARCÍA
- 8 Forebody of uniformly reddish coloration; abdomen usually with segments III-VI blackish brown to blackish and segments VII-X reddish. Head usually with distinct microsculpture. Elytra shorter than pronotum; macropterous morph unknown. ♂: aedeagus as in A08a: Figs 9-11. La Gomera *S. brevipennis gomerensis* ASSING
- Head of similar coloration as pronotum and elytra, or darker; abdomen either of uniformly dark or reddish coloration, or segment VII as dark as segment VI. Head usually without, more rarely with very weak microsculpture. Elytra of variable length; in macropterous morph 1.10-1.15 times as long as pronotum, in brachypterous and submacropterous morphs 0.85-1.05 times as long as pronotum. ♂: aedeagus of different morphology. Absent from La Gomera 9
- 9 Macropterous morph rare. ♂: aedeagus as in A08a: Figs 5-6, ventral process with stout and truncate apex, apical part of flagellum shorter. Tenerife
..... *S. brevipennis brevipennis* (WOLLASTON)

- Macropterous morph rather common. ♂: aedeagus as in A08a: Figs 7-8, 13-17; ventral process with less stout and not distinctly truncate apex, apical part of flagellum longer. Gran Canaria, La Palma, El Hierro, Lanzarote.....*S. brevipennis canariensis* (BERNHAEUER)
- 10 Posterior margin of abdominal tergite VII with palisade fringe. On average larger species, body length in normal preparation usually >3.3 mm. For three species from the Balears and from Iran with or without narrow rudiment of a palisade fringe follow this alternative 11
- Posterior margin of abdominal tergite VII without palisade fringe. Body length of most species < 3.5 mm in normal preparation 44
- 11 Head and pronotum with rather coarse and dense punctation; interstices narrower than punctures (Figs 10-11, 19-21); pronotum at most with very narrowly impunctate midline, mostly only with short rudiment of such an impunctate band in posterior portion of midline (Fig. 21). Head and pronotum reddish; elytra reddish or bicoloured; abdomen blackish with paler apex. Head weakly transverse or approximately as wide as long. Antennomere VII not distinctly oblong. Length approximately 3.5 mm. Habitus somewhat resembling that of *Acanthologlossa* KRAATZ and *Hypomedon debilicornis* (WOLLASTON). ♂: aedeagus with conspicuously long ventral process, and with numerous long dark spines in internal sac; sternite VIII with broad posterior excision (Figs 17, 23). Middle East: Arabian and Sinai peninsulas. 12
- Character combination different. Species with similarly dense coarse punctation are larger and have an oblong head, oblong antennomeres VI-VII, distinctly longer legs, and an aedeagus of different morphology. Unknown from the Arabian and Sinai peninsulas..... 14
- 12 Elytra bicoloured; anterior half infusate and posterior half reddish-yellow. ♂: sternites VII and VIII as in Figs 16-17; aedeagus with conspicuously long ventral process and internal structures of distinctive shape (Figs 12-14). N-Oman*S. extensissimus* nov.sp.
- Elytra uniformly reddish-yellow. ♂: aedeagus of different morphology 13
- 13 ♂: aedeagus with much shorter ventral process; apex of ventral process slightly bent dorsad (C84: Figs 23D-E). Saudi Arabia; Egypt: Sinai.....*S. sinaicus* (COIFFAIT)
- ♂: aedeagus with conspicuously long ventral process (Figs 24-26); internal structures of characteristic shape and arrangement (Fig. 27); sternites VII and VIII as in Figs 22-23. S-Oman *S. tectus* nov.sp.
- 14 Head and pronotum in most species with rather coarse and dense punctation (A08a: Figs 161, 163, 173, 178, 187, 202). Legs and antennae conspicuously long and slender (A08a: Figs 160, 174, 177, 186); antennomere VI oblong (A08a: Fig. 179); metatibia longer than width of abdomen. Head mostly oblong. ♂: aedeagus with conspicuously acute apex and with two long rows of numerous (> 10) spines or with an apical and a basal cluster of spines in internal sac. North Africa, southern Greece, Caucasus region, Middle Asia..... 38
- Head and pronotum with less coarse and dense punctation. Legs and antennae shorter; antennomere VI as wide as long or weakly transverse; metatibia shorter than width of abdomen. Head rarely oblong, usually as wide as long or transverse. ♂: aedeagus of different morphology 15
- 15 Small species, body length approximately 2.8 mm. Forebody uniformly brown. ♂: apex of ventral process of aedeagus long and acute (A08a: Figs 204); internal structures distinctive (A08a: Fig. 205). Tajikistan (A08a: Map 23)*S. pennatus* ASSING
- Size larger. ♂: aedeagus of different morphology 16
- 16 Dorsal surface of head with distinct microsculpture 17
- Dorsal surface of head in posterior half without distinct microsculpture 18
- Body more slender. Width of pronotum approximately 0.45-0.55 mm. ♂: ventral process of aedeagus not dentate subapically (Figs: AZ03). Distribution expansive Atlanto-Mediterranean; widespread in North Africa, Madeira, Azores, Western Europe, Italy, western Central Europe (A08a: Map 5).....*S. propinquus* (BRISOUT DE BARNEVILLE)

- Body broader and larger. Width of pronotum approximately 0.60 mm. ♂: ventral process of aedeagus distinctly dentate subapically (A08a: Fig. 42). Southern Italy, Algeria, Tunisia (A08a: Map 12) *S. algiricus* (COIFFAIT)
- 18 Forebody of more or less uniformly yellowish brown to reddish coloration; head at most only slightly darker than pronotum 19
- Head blackish brown to black, distinctly darker than pronotum 22
- 19 ♂: Ventral process of aedeagus short, apically somewhat hooked in lateral view, apically truncate and subapically dilated in ventral view (Figs 4-5); sternite VII and sternite VIII as in Figs 2-3. S-Iran..... *S. rubriceps* nov.sp.
- ♂: ventral process of aedeagus of different morphology. Species from the Western Mediterranean 20
- 20 ♂: Ventral process of aedeagus not dentate subapically (A05b: Figs 5-6; AZ03: Figs 15-18). Widespread in the Western Mediterranean: North Africa from Morocco to Tunisia, Spain, France (A08a: Map 6) *S. ovaliceps* (FAUVEL)
- ♂: ventral process of aedeagus dentate subapically. Species endemic to the Balears 21
- 21 Elytra 0.75-0.85 times as long and approximately as wide or only indistinctly wider than pronotum. ♂: ventral process of aedeagus subapically more strongly dentate (ventral view) and with more massive apex (A08a: Figs 42-43). Mallorca (A08a: Map 11) *S. mallorcensis* (COIFFAIT)
- Elytra longer, 0.85-0.95 times as long and 1.1-1.2 times as wide as pronotum. ♂: ventral process of aedeagus subapically less strongly dentate (ventral view) and with less massive apex (A08a: Figs 48-49). Ibiza (A08a: Map 11)..... *S. ibizae* ASSING
- 22 ♂: ventral process of aedeagus in lateral view apically acute or truncate, subapically not dentate. (Note: subapical tooth-like processes may be visible in ventral view.) 23
- ♂: ventral process of aedeagus in lateral view apically acute and subapically dentate, with pair of lateral teeth or with median tooth 30
- 23 ♂: ventral process of aedeagus in lateral view apically acute 24
- ♂: ventral process of aedeagus in lateral view more or less truncate (except for one species from Caucasus region), in ventral view with apex of more or less triangular shape, apically truncate, and subapically often with more or less pronounced, acute or rounded lateral projections 27
- 24 ♂: sternite VIII with conspicuous clusters of modified dark setae and with rather shallow posterior excision (A95: Fig. 2); aedeagus as in A95: Fig. 1. Widespread from the western Caucasus region and NW-Turkey to southeastern Central Europe (A08a: Map 4) *S. fallax* (LOKAY)
- ♂: sternite VIII without conspicuous clusters of modified dark setae and with deeper V-shaped posterior excision; ventral process of aedeagus of different shape 25
- 25 Elytra reddish, usually with indistinct dark spot slightly behind middle. ♂: ventral process of aedeagus subapically angled in ventral view (A08a: Figs 36-40). Widespread in the Caucasus region: Armenia, Georgia, Azerbaijan, Iran (A08a: Map 8) *S. fulgocephalus* (COIFFAIT)
- ♂: ventral process of aedeagus subapically not angled in ventral view 26
- 26 Elytra distinctly longer and larger than pronotum. ♂: aedeagus as in A02: Figs 1-2. Iran *S. iranicus* ASSING
- Dimorphic species. Submacropterous morph: elytra shorter than pronotum; hind wings of reduced length. Macropterous morph: elytra longer than pronotum; hind wings fully developed. ♂: aedeagus with apex of ventral process of distinctive shape, especially in lateral view (A95: Figs 3-4; A01a: Figs 1-4). Widespread trans-Palaeartic species, from Eastern Russia to France and NE-Spain (A08a: Maps 2-3). Macropterous morph rare, except in southwestern Turkey, where it is more common than the submacropterous morph. *S. melanocephalus* (FABRICIUS)
- 27 ♂: ventral process of aedeagus subapically with pronounced lateral projections (A01a: Figs 5-6). Turkey, Iran, ?Syria (A08a: Map 9) *S. adanensis* (LOKAY) (macropterous morph)

- ♂: ventral process of aedeagus subapically with less pronounced lateral projections.....28
- 28 ♂: ventral process of aedeagus very stout in lateral view, broadly truncate apically (A08a: Figs 37-38). Israel, Lebanon (A08a: Map 9).....*S. falsus* ASSING
- ♂: ventral process of aedeagus less stout in lateral view, more narrowly truncate apically.....29
- 29 ♂: ventral process of aedeagus in ventral view with small, but distinct tooth-like lateral projections subapically; internal rod-like structure dark brown to blackish (A01a: Figs 8-9). Distribution: Turkey, Armenia, Georgia, Iran (A08a: Map 10).....*S. khnzoriani* (COIFFAIT) (macropterous morph)
- ♂: ventral process of aedeagus in ventral view without lateral projections; internal rod-like structure pale brown (A01a: Figs 17-19). S-Turkey (A08a: Map 10).....*S. rastrifer* ASSING (macropterous morph)
- 30 Species from Europe and North Africa. Pronotum and elytra more or less reddish. ♂: posterior excision of sternite VIII unmarginated and not distinctly U-shaped.....31
- Species from Middle Asia and the region to the north of the Caspian Sea. ♂: posterior excision of sternite VIII distinctly U-shaped and finely marginated.....34
- 31 ♂: ventral process of aedeagus subapically with median tooth-like projection (A03b: Figs 24-26). Iberian Peninsula.....*S. meybohmi* ASSING
- ♂: ventral process of aedeagus subapically with pair of lateral tooth-like projections32
- 32 ♂: ventral process very long and straight (C84: Figs 28M-O). Atlanto-Mediterranean distribution, widespread from the Iberian Peninsula and Italy to Central Europe and southern Scandinavia (A08a: Map 11).....*S. bicolor* (OLIVIER)
- ♂: ventral process shorter. Distribution confined to Italy.....33
- 33 ♂: aedeagus as in AZ03: Figs 31-33. Sicily.....*S. martinarum* ADORNO & ZANETTI
- ♂: aedeagus as in AZ03: Fig. 42. Mainland Italy (A08a: Map 12).....*S. italicus* (COIFFAIT)
- 34 ♂: ventral process of aedeagus subapically with pronounced median tooth-like projection (A08a: Figs 71-75). Kazakhstan, Kyrgyzstan *S. mordicus* ASSING
- ♂: ventral process of aedeagus subapically with pair of smaller lateral projections.....35
- 35 ♂: ventral process of aedeagus short and apically curved in lateral view; internal sac with two distinctly sclerotized structures, one of them straight and the other curved (A08b: Figs 37-39). Kazakhstan *S. kastcheevi* ASSING
- ♂: ventral process of aedeagus much longer and apically straight in lateral view.....36
- 36 ♂: aedeagus with 2-3 short dark spines in internal sac (A08a: Figs 55-63). Tajikistan, Iran, Afghanistan (A08a: Map 13).....*S. praecisus* ASSING
- ♂: aedeagus with distinctly longer spines in internal sac37
- 37 Pronotum and elytra often reddish. ♂: aedeagus slightly smaller; basal internal structures shorter and less massive, apical internal structures less prominent (A08a: Figs 52-54). Middle Asia, Russia, NW-China (A08a: Map 13).....*S. nigrinus* (ÉPPELSHEIM)
- Whole body blackish brown to black. ♂: aedeagus larger and with more massive internal structures (A08a: Figs 65-67). Afghanistan *S. afghanicus* (COIFFAIT)
- 38 Elytra bicoloured, anteriorly infuscate and posteriorly reddish-yellow39
- Elytra not bicoloured, uniformly reddish or dark.....40
- 39 Rather small, slender, and pale-coloured species (A08a: Fig. 208); head and pronotum reddish; elytra with the anterior 1/3-1/2 infuscate and the posterior 1/2-2/3 reddish-yellow. ♂: ventral process of aedeagus shaped as in Figs 7-8, somewhat asymmetric in ventral view; internal sac with a basal and an apical cluster of sclerotized spines. Azerbaijan, Iran.....*S. basalis* (REITTER)
- Large species (A10: Figs 7-8). Reddish-yellow coloration of the elytra confined to the posterior 1/5-1/4; forebody blackish. ♂: aedeagus of different shape; ventral process symmetric in ventral view; internal sac with two series of small spines (A10: Figs 9-10). S-Greece: Pelopónnisos*S. kuehnelii* (SCHEERPELTZ)

- 40 Forebody more or less uniformly reddish to castaneous41
 - Head dark-brown to blackish42
- 41 ♂: aedeagus with long and very acute (lateral view), laterally not compressed ventral process (A08a: Figs 165-172). Middle Asia, S-Russia (A08a: Map 22)
 *S. claviceps* (REITTER)
 - ♂: aedeagus with much shorter, apically rounded (lateral view), and laterally compressed ventral process (A08a: Fig. 162). Confirmed records only from Algeria
 *S. viator* (FAUVEL)
- 42 Pronotum reddish to reddish-brown, distinctly contrasting with the blackish head. ♂: posterior margin of sternite VII with deep and almost semi-circular concavity in the middle; aedeagus as in A08a: Figs 175-176, ventral process apically slender and gradually narrowed in ventral view. Tajikistan (A08a: Map 23)*S. wrasei* (SCHÜLKE)
 - Pronotum blackish-brown to black, of similar coloration as head. ♂: posterior margin of sternite VII moderately concave in the middle (A08a: Figs 180, 188); ventral process of aedeagus of different shape43
- 43 Head more slender, 1.08 times as long as wide, posteriorly tapering. Eyes more prominent (A08a: Fig. 178; A10: Fig. 2). Elytra approximately 1.2 times as long and 1.3 times as broad as pronotum, the latter more slender, about 1.10-1.15 times as long as wide (A08a: Figs 177-178; A10: Fig. 2). ♂: aedeagus with ventral process of broadly triangular shape in ventral view (A08a: Figs 182-185; A10: Figs 4-6). Turkmenistan, Kazakhstan*S. nidicola* (KASHCHEEV)
 - Head broader, < 1.05 times as long as wide, and posteriorly not tapering. Elytra much shorter, approximately as long and 1.10-1.15 times as wide as pronotum, the latter approximately 1.05 times as long as wide and 0.90-0.95 times as wide as head (A08a: Figs 186-187). ♂: ventral process of aedeagus apically abruptly narrowed and extremely acute in ventral view (A08a: Figs 190-191). Tajikistan, Uzbekistan, Turkmenistan (A08a: Map 22) *S. acutissimus* ASSING
- 44 Species from Tajikistan (A08a: Map 23)45
 - Species absent from Middle Asia46
- 45 ♂: posterior margin of sternite VII indistinctly concave (A08a: Fig. 196); posterior excision of sternite VIII moderately deep and broadly V-shaped (A08a: Fig. 197); aedeagus in lateral view with apically acute and subapically moderately angled ventral process; internal sac with two rows of relatively long and slender spines (A08a: Figs 194-195)*S. bohaci* ASSING
 - ♂: posterior margin of sternite VII distinctly concave in the middle (Fig. 201); posterior excision of sternite VIII slightly deeper and narrower (Fig. 202); ventral process of aedeagus in lateral view subapically strongly bent; internal sac with two rows of stouter and more strongly sclerotised spines (Figs 199-200)*S. inflexus* ASSING
- 46 Species from Greece, Turkey, the Caucasus region, and the Middle East47
 - Distribution different76
- 47 Species from Greece (including Greek islands)48
 - Species from Turkey, the Caucasus region, and the Middle East51
- 48 2.6-3.0 mm. Whole body of reddish-yellow coloration. Species from the Pelopónnisos and Samos49
 - Slightly or distinctly larger species. Abdomen blackish; head usually at least slightly darker than pronotum50
- 49 ♂: ventral process of aedeagus angled in the middle (lateral view), its apex rounded in ventral view (A08a: Figs 156-158); sternite VIII with pubescent tubercle (A08a: Fig. 159) and with somewhat broader and deeper posterior excision (A08a: Fig. 159). Pelopónnisos: Menalon Oros (A08a: Map 7)*S. menalonicus* ASSING

- ♂: ventral process of aedeagus straight and apically acute both in lateral and in ventral view (A09: Figs 3-4); sternite VIII with somewhat denser pubescence in the middle, but without tubercle, posterior margin with very small and shallow median excision (A09: Fig. 2). Samos *S. geiseri* ASSING
- 50 Slightly larger species. ♂: ventral process of aedeagus stouter and smoothly curved in lateral view; internal structures large and weakly sclerotised (C84: Figs 29H-J). Confirmed records only from Corfu and the Pelopónnisos (A08a: Map 7).....
..... *S. hellenicus* (COIFFAIT)
- Smaller species. ♂: ventral process longer and more slender; internal structures small and blackish (AW01: Figs 17-18). Southern mainland Greece, northern Pelopónnisos (A08a: Map 7).....*S. jokisensis* ASSING & WUNDERLE
- 51 Species from the Middle East south of Turkey 52
- Species from Turkey, the Caucasus region, and Iran 55
- 52 Species from Jordan (A08a: Map 14). ♂: unknown.....*S. klapperichi* (COIFFAIT)
- Distribution different 53
- 53 ♂: aedeagus as in C84: Figs 25A-B. Antilebanon, Mount Hermon, and Golan Heights (Syria, Israel) (A08a: Map 14).....*S. hypogaeus* (FAUVEL)
- Species from Lebanon (A08a: Map 14). ♂: aedeagus of different morphology 54
- 54 ♂: sternite VIII with rather broad and deep posterior excision, anterior to this excision with weakly elevated, oblong, non-pubescent carina extending approximately to anterior third of sternite, at apex of excision with cluster of short setae (A08a: Fig. 78); aedeagus with smaller and less strongly sclerotised species (A08a: Figs 76-77).....
..... *S. renouardi* (COIFFAIT)
- ♂: sternite VIII with shallow posterior excision, without carina or tubercle (A08a: Fig. 82); aedeagus with distinctly larger and more strongly sclerotised spines in internal sac (A08a: Figs 79-81). Southern Lebanon Mountains *S. spinosissimus* ASSING
- 55 Larger species, body size in normal preparation > 3.0 mm. Head relatively smaller, approximately as wide as or narrower than pronotum. Eyes at least half the length of postgenae in dorsal view, or nearly so. ♂: sternite VIII without tubercle or process; aedeagus with stout and relatively short ventral process, in ventral view often with lateral subapical projections and apically truncate, in lateral view apically truncate; internal sac with long rod-like structure in internal sac..... 56
- Smaller species, size (normal preparation) usually < 3.4 mm. Head noticeably broader than pronotum. Eyes less than half – usually about one third – the length of postgenae in dorsal view. Forebody uniformly ferruginous or testaceous. ♂: sternite VIII in posterior median area with densely pubescent tubercle, with conspicuous process, or without such modifications; ventral process of aedeagus more slender, in ventral view without lateral projections and apically not truncate, in lateral view apically not truncate; internal sac often with spines, but without rod-like structure. Southern and western Anatolia 60
- 56 Head usually of the same colour as pronotum. Endemic species of the Ak Dağlar (Muğla) and the Nur Dağları (Antakya)..... 57
- Head usually of darker colour than pronotum. More widespread species 58
- 57 ♂: ventral process of aedeagus in ventral view subapically with lateral projections (A05a: Figs 5-9). Muğla: Ak Dağlar (A08a: Map 10).....*S. akianus* ASSING
- ♂: ventral process of aedeagus in ventral view subapically without lateral projections (A01a: Figs 13-14). Antakya: Nur Dağları (A08a: Map 10).....*S. nurdaghensis* ASSING
- 58 ♂: ventral process of aedeagus subapically with larger (wing-like) lateral projections at a greater distance from apex (A01a: Figs 5-6). Widespread from northwestern to eastern Anatolia and Iran (A08a: Map 9)..... *S. adanensis* (LOKAY) (micropterous morph)
- ♂: ventral process of aedeagus in ventral view subapically without, or with smaller lateral projections nearer to apex 59

- 59 ♂: ventral process of aedeagus in ventral view with small, but distinct tooth-like lateral projections subapically; internal rod-like structure dark-brown to blackish (A01a: Figs 8-9). Distribution: Turkey, Armenia, Georgia, Iran (A08a: Map 10).....*S. khnzoriani* (COIFFAIT) (micropterous morph)
- ♂: ventral process of aedeagus in ventral view without lateral projections; internal rod-like structure pale-brown (A01a: Figs 17-19). S-Turkey (A08a: Map 10).....*S. rastrifer* ASSING (micropterous morph)
- 60 ♂: sternite VIII without conspicuous modifications 61
- ♂: sternite VIII either with distinct spine, tubercle, and/or with patch of tomentose or dense pubescence near posterior emargination 69
- 61 ♂: aedeagus with series of distinctly sclerotised spines in internal sac 62
- ♂: aedeagus without series of distinctly sclerotised spines in internal sac 67
- 62 ♂: ventral process of aedeagus apically long and slender in lateral view; spines in internal sac of aedeagus shorter and/or apically distinctly curved. Central southern Anatolia..... 63
- ♂: ventral process of aedeagus apically distinctly shorter and stouter; spines in internal sac of aedeagus conspicuously long and apically at most weakly curved. Western Anatolia..... 66
- 63 ♂: ventral process of aedeagus in lateral view apically distinctly bent; internal sac of aedeagus with row of 3-4 spines of subequal length (plus smaller spines) (A05c: Figs 10-12). Antakya: Southern Nur Dağları*S. amanensis* ASSING
- ♂: ventral process of aedeagus in lateral view weakly curved at most; internal sac of aedeagus with one or two very large spines and additional distinctly smaller spines. Distribution different..... 64
- 64 ♂: apex of ventral process of aedeagus in lateral view less slender; large spine in internal sac of aedeagus strongly curved (A05d: Figs 15-18). S-Malatya: Malatya Dağları.....*S. pauli* ASSING
- ♂: apex of ventral process of aedeagus in lateral view more slender; large spine in internal sac of aedeagus moderately curved at most. Species from Kahramanmaraş..... 65
- 65 ♂: sclerotised spines in internal sac shorter (A05d: Figs 3-7). Area to the west of Kahramanmaraş: Başkonuş Yaylası.....*S. brevispinosus* ASSING
- ♂: sclerotised spines in internal sac longer (A05d: Figs 9-11). Area to the southwest of Kahramanmaraş.....*S. longispinosus* ASSING
- 66 Coloration of forebody usually yellowish-brown to reddish-brown, with the elytra sometimes darker than head and pronotum. ♂: ventral process of aedeagus shorter, in lateral view somewhat bent, and apically of distinctive shape, in ventral view apically rounded; internal sac of aedeagus with 5 darker and longer spines (A06a: Figs 30-33). İzmir/Aydın: Aydın Dağları.....*S. fortispinosus* ASSING
- Coloration of forebody uniformly pale yellowish-red. ♂: ventral process of aedeagus long, in lateral view straight, and apically of different shape, in ventral view apically almost acute; internal sac of aedeagus with 6 less dark and slightly shorter spines (A06a: Figs 42-47). Muğla: surroundings of Muğla*S. sexspinosus* ASSING
- 67 ♂: aedeagus subapically not dentate and with relatively short ventral process (A05a: Figs 23-25). Southwest of Antalya province: Dumanlı Dağı*S. dumanlianus* ASSING
- ♂: aedeagus subapically dentate and with longer ventral process. Distribution different..... 68
- 68 Forebody darker and somewhat bicoloured: head dark-brown, pronotum bright reddish, elytra brown. ♂: ventral process of aedeagus apically very slender and of distinctive shape; internal structures distinctive (A06a: Figs 6-9). İzmir: Boz Dağlar*S. bozdagensis* ASSING
- Forebody uniformly reddish. ♂: ventral process of aedeagus apically less slender and of different shape; internal structures of aedeagus different (A05c: Figs 18-20). Southern Antakya.....*S. hatayanus* ASSING

- 69 Abdomen darker, distinctly contrasting with the rufous forebody. Species from the western Taurus and western Anatolia (Antalya, Muğla) 70
- Abdomen more weakly infuscate, less distinctly contrasting with the rufous forebody. Species from the eastern Taurus (Mersin and eastwards) 73
- 70 ♂: sternite VIII with densely pubescent median tubercle (Fig.: A03a). Aedeagus shaped as in A03a: Figs 19-20, without sclerotized spines in internal sac. Southwestern Antalya: Ak Dağlar *S. brachati* ASSING
- ♂: sternite VIII with median process or fin-like tubercle. Aedeagus of different shape. Species with more western distributions 71
- 71 ♂: sternite VIII with conspicuous suberect median process (A05a: Figs 12-15). Aedeagus shaped as in A05a: Figs 16-19, with two semitransparent spines in internal sac. Muğla: Boncuk Dağı *S. aculeatus* ASSING
- ♂: sternite VIII with fin-like tubercle. Aedeagus and distribution different 72
- 72 ♂: process of sternite VIII posteriorly rounded in lateral view and apically acute in ventral view (A06a: Figs 16-18); ventral process of aedeagus apically less slender in lateral view (A06a: Figs 19-23). Izmir: surroundings of Karaburun *S. pinniger* ASSING
- ♂: process of sternite VIII posteriorly obliquely truncate in lateral view and apically rounded in ventral view (A06a: Figs 53-56); ventral process of aedeagus apically more slender in lateral view (A06a: Figs 57-60). Manisa: Karadağ *S. plasoni* (EPPELSHEIM)
- 73 ♂: apical part of ventral process of aedeagus shorter and stouter, ventral outline in lateral aspect not distinctly concave (A05c: Figs 3-5). Mersin *S. goektepensis* ASSING
- ♂: apical part of ventral process of aedeagus longer and more slender, ventral outline in lateral view concave 74
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- ♂: tubercle of abdominal sternite VIII with longer pubescence; ventral process of aedeagus with shorter apical part and with strongly concave basal part (lateral view); spines in internal sac larger 75
- 75 ♂: aedeagus with apical part of ventral process longer and more slender, and with basal part of ventral process less broadly concave; spines in internal sac smaller (A01a: Figs 25-26). W-Mersin *S. wunderlei* ASSING
- ♂: aedeagus with apical part of ventral process shorter and stouter, and with basal part of ventral process more broadly concave; spines in internal sac larger (A01a: Figs 28-29). E-Mersin *S. balkarensis* ASSING
- 76 Species from Italy 77
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- 77 Species from Sicily 78
- Species from Sardinia and southern mainland Italy 79
- 78 ♂: aedeagus as illustrated in AZ03: 20-22. Sicily: Nebrodi: Bosco di Malabotta *S. georgii* ADORNO & ZANETTI
- ♂: aedeagus as illustrated in AZ03: Figs 9-11. Sicily: Environs of Ficuzza *S. ignatii* ADORNO & ZANETTI
- 79 Forebody yellowish to yellowish-brown. ♂: sternite VIII with pubescent tubercle; aedeagus with apex in lateral view acute and in ventral view broadly rounded; spines in internal sac more slender (AZ03: 26-28). Southern Italy: Puglia, Basilicata (A08a: Map 21) *S. puglianus* (COIFFAIT)
- Forebody brown to dark-brown. ♂: sternite VIII with weakly defined elevation (A08a: Figs 149-150); aedeagus with apex in lateral view not distinctly acute and in ventral view more slender (A08a: Figs 151-152); spines in internal sac stouter (A08a: Fig. 153). Sardinia (A08a: Map 21) *S. sardus* ASSING

80	Species from France and northern Spain.....	81
-	Distribution different.....	83
81	♂: sternite VIII without tubercle or keel, posterior excision moderately deep; aedeagus with few weakly sclerotised spines in internal sac (A08a: Figs 130-131). France: southern Massif Central (A08a: Map 15).....	<i>S. seminiger</i> (FAIRMAIRE)
-	♂: sternite VIII with median tubercle or keel; aedeagus of different morphology. Distribution different.....	82
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-	♂: sternite VIII with weakly elevated tubercle (A08a: Fig. 85); aedeagus with apical part of ventral process distinctly shorter (A08a: Figs 83-84). NE-Spain (A08a: Map 15)....	<i>S. catalonicus</i> (COIFFAIT)
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-	♂: sternite VII unmodified.....	85
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- 90 ♂: ventral process of aedeagus apically stouter in lateral view and rounded in ventral view; internal sac with stout spines (A08b: Figs 24-28). Andalucía: Sierra de Gádor (A08b: Map 1)..... *S. gadoricus* ASSING
- ♂: ventral process of aedeagus apically more slender in lateral view and acute in ventral view; internal structures of different shape.91
- 91 ♂: ventral process of aedeagus apically very slender and longer in lateral view; internal sac with fewer and longer, apically curved spines (A03b: Figs 18-20). Andalucía: Sierra de Segura (A08a: Map 16) *S. seguræ* ASSING
- ♂: ventral process of aedeagus apically less slender and shorter in lateral view; internal sac with more numerous and shorter, apically straight spines (A08b: Figs 24-28). Andalucía: Sierra de los Filabres (A08b: Map 1)..... *S. filabresicus* ASSING
- 92 ♂: sternite VIII without tubercle, posterior excision moderately deep and U-shaped (A08a: Fig. 99); aedeagus with ventral process apically acute in ventral view (A08a: Figs 97-98). Castilla-La Mancha: Ciudad Real (A08a: Map 15) *S. calatravae* ASSING
- ♂: sternite VIII with weakly elevated tubercle, posterior excision V-shaped; aedeagus with ventral process apically rounded in ventral view. Distribution different93
- 93 ♂: sternite VIII with posterior excision broad (A08a: Fig. 94); ventral process of aedeagus shorter and broader in ventral view (A08a: Figs 95-96). Andalucía: Jaén: Sierra Magina (A08a: Map 16) *S. behnei* ASSING
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- 94 Species from Tunisia95
- Species from Morocco and Algeria97
- 95 ♂: sternite VIII with moderately deep V-shaped posterior excision, otherwise unmodified; aedeagus of highly distinctive morphology, ventral process apically almost hook-shaped in lateral view; internal sac with subapical structure of characteristic shape (A05b: Figs 10-11). Surroundings of Teboursouk (A08a: Map 18)..... *S. bihamatus* ASSING
- ♂: sternite VIII with pubescent tubercle (A08a: Figs 109, 116); aedeagus of completely different morphology. Distribution different96
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- 97 Species from Morocco98
- Species from Algeria102
- 98 Eyes smaller, approximately 1/5 the length of postocular region in dorsal view. ♂: sternite VIII with rather deep posterior excision, otherwise unmodified; aedeagus with conspicuously long and slender (lateral view) ventral process; internal sac with rather long and slender spines (A01b: Figs 1-2). Haut Atlas (A08a: Map 19)..... *S. hastatus* ASSING
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- 99 ♂: sternite VIII with pronounced median keel or with distinct process; aedeagus with distinctly sclerotised spines in internal sac.....100
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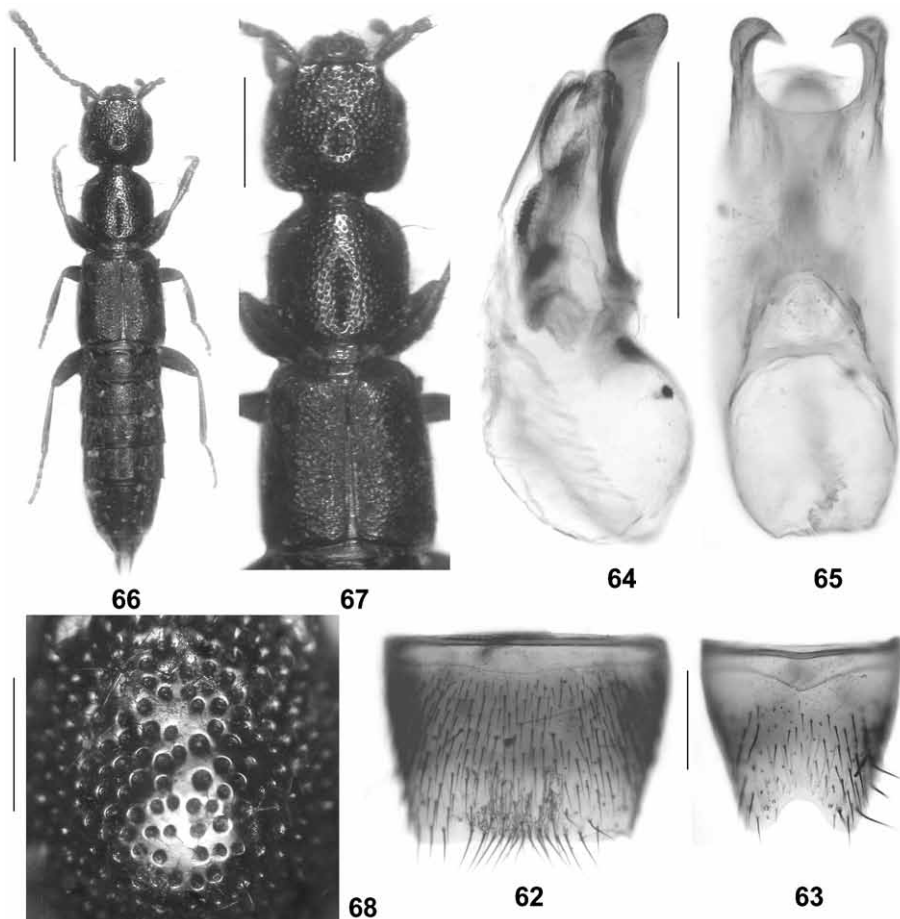
- 100 ♂: sternite VIII with distinct median keel-like elevation visible in lateral view (A08a: Figs 120-121); ventral process of aedeagus with shorter and stouter apical portion (lateral view) and with more slender spines in internal sac (A08a: Figs 117-119). N-Morocco: Jebel Zerhoun (A08a: Map 19)..... *S. gourvesi* (COIFFAIT)
- ♂: sternite VIII with pronounced projection pointing postero-ventrad (A03b: Figs 4-5); ventral process of aedeagus with longer and more slender apical portion (lateral view) and with stouter spines in internal sac (A03b: Figs 6-8). N-Morocco: southern Rif (A08a: Map 19)..... *S. fultus* ASSING
- 101 Abdomen dark-brown to blackish, distinctly contrasting with forebody. ♂: sternite VIII with shallow posterior excision (A08a: Fig. 124); aedeagus shaped as in A08a: Figs 122-123, with few weakly sclerotised spines in internal sac. Moyen Atlas (A08a: Map 19)..... *S. atlasticus* (COIFFAIT)
- Abdomen of similar coloration as forebody, not distinctly darker. ♂: sternite VIII with very shallow posterior excision (A08a: Fig. 127); ventral process of aedeagus with conspicuously long and stout (lateral view) apical portion; internal sac without sclerotised spines (A08a: Figs 125-126). Haut Atlas (A08a: Map 19)..... *S. montanellus* (BORDONI)
- 102 ♂: sternite VIII with more or less pronounced median tubercle 103
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- 104 ♂: aedeagus without spines in internal sac; posterior excision of sternite VIII shallow to moderately deep (A08a: Figs 129, 134)..... 105
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- 105 ♂: sternite VIII with shallow posterior excision (A08a: Fig. 134); aedeagus with straight ventral process (A08a: Figs 132-133). Central northern Algeria: Theniet el Had (A08a: Map 20)..... *S. rectus* ASSING
- ♂: sternite VIII with broad and moderately deep posterior excision (A08a: Fig. 129); ventral process of aedeagus of distinctive shape (A08a: Fig. 128). NE-Algeria: environs of Annaba (A08a: Map 20)..... *S. berberus* (COIFFAIT)
- 106 ♂: ventral process of aedeagus apically of highly distinctive shape (A08a: Figs 135-136); spines in internal sac of conspicuous pectinate arrangement, long, semi-transparent, and curved (A08a: Fig. 137). Central northern Algeria: Theniet el Had (A08a: Map 20)..... *S. vaulogeri* (COIFFAIT)
- ♂: ventral process of aedeagus long and slender (A08a: Figs 139-140); internal sac with four straight and weakly sclerotised spines (A08a: Fig. 141). Djebel Mouzaïa (A08a: Map 20)..... *S. mouzaianus* ASSING
- 107 Eyes large and bulging, much longer than postocular portion of head in dorsal view. Micropterous or submacropterous species: elytra at most approximately 0.9 times as long as pronotum, in most species much shorter than pronotum (Figs 30, 32, 39). 108
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- 108 Species from China 109
- Species from the Himalaya (Nepal, N-India, Bhutan)..... 110
- 109 Legs uniformly reddish. Elytra 0.75-0.80 times as long as pronotum (A10: Figs 31-32). ♂: aedeagus shaped as in A10: Figs 35-37. N-Yunnan..... *S. turgescens* ASSING

- Legs of darker coloration; femora blackish-brown, tibiae pale-brown. Elytra longer, approximately 0.90 times as long as pronotum. ♂: aedeagus shaped as in A10: Figs 28-30. Yunnan..... *S. macrops* ASSING
- 110 ♂: aedeagus with slender ventral process (Fig. 42). Central and eastern Nepal.
..... *S. cursor* nov.sp.
- ♂: aedeagus with much stouter ventral process 111
- 111 ♂: internal structures of aedeagus conspicuously long, distinctly projecting beyond apex of ventral process in normal position 112
- ♂: internal structures of aedeagus shorter, not projecting beyond apex of ventral process in normal position..... 113
- 112 ♂: posterior excision of sternite VIII shallow (A10: Fig 21); ventral process of characteristic shape; internal structures differently shaped, both strongly asymmetric. Central Nepal: Kathmandu..... *S. galiberti* (COIFFAIT)
- ♂: posterior excision of sternite VIII deeper (Fig. 34); ventral process of completely different shape; pair of internal structures of similar shape and not asymmetric (Figs 35-37). Eastern Nepal..... *S. baculatus* nov.sp.
- 113 ♂: ventral process of aedeagus apically spear-shaped; internal structures U-shaped and relatively short (Aip: Figs 182-185). N-India: West Bengal: Ghum district
..... *S. cameroni* ASSING
- ♂: ventral process of aedeagus shorter and stouter, not spear-shaped; internal structures longer, straight and only apically curved (e.g., Fig. 31). Distribution different..... 114
- 114 ♂: ventral process of aedeagus apically more slender; internal structures weakly curved apically (A10: Figs 16-18). Central Nepal: Manaslu. *S. manasluensis* ASSING
- ♂: ventral process of aedeagus apically shorter and stouter; internal structures more strongly curved apically (Fig. 31). Bhutan..... *S. bouddha* (COIFFAIT)
- 115 Head and pronotum conspicuously finely and densely punctate (Figs 28-29). Elytra very long, approximately 1.2 times as long as pronotum (Fig. 28). ♂ unknown. N-India: West Bengal..... *S. laevior* (CAMERON)
- Head and pronotum with much coarser and less dense punctation. Elytra at least slightly shorter. Species from China 116
- 116 Coloration of legs dark-yellowish to pale-reddish. Body more slender. ♂: sternite VIII with narrow posterior excision (A02: Fig. 8); aedeagus long and slender with long, slender, and apically acute ventral process; internal sac with pair of long series of minute spines (A02: Figs 5-6). China: Hubei, Shaanxi, Sichuan *S. furcillatus* ASSING
- Coloration of legs darker; femora dark-brown to blackish-brown; tibiae reddish-brown to dark-brown. ♂: posterior excision of sternite VIII much broader (A02: Fig 12; A04b: Fig. 4); aedeagus stouter; ventral process shorter, broader, and apically more or less truncate in ventral view..... 117
- 117 ♂: apex of aedeagus heart-shaped in ventral view (A02: Figs 9-10). Widespread in China..... *S. cordiformis* ASSING
- ♂: apex of aedeagus not heart-shaped in ventral view (A04: Figs 5-8). China: Sichuan.....
..... *S. puetzi* ASSING

8. Species excluded from *Sunius*

An examination of the type material of the eight previously unrevised species from the East Palaearctic revealed that only one of them, *S. bouddha*, undoubtedly belongs to *Sunius* and one additional species, *S. laevior*, is doubtfully attributed to the genus. The remaining six species clearly belong to other genera. One of them, *S. gratus*, is attributed to the *Medon apicalis* group. A second species, *S. punctatus*, probably is a member of the

M. ferrugineus group. Two species, *S. monticola* and *S. immsi* are placed in newly described medonine genera (ASSING 2011a-b), and the remaining two species, *S. ghumensis* and *S. fungi*, are of doubtful generic affiliations, particularly because their male sexual characters are unknown.



Figs 62-68: *Medon gratus* CAMERON (62-65) and *M. punctatus* (COIFFAIT) (66-68): (62) male sternite VII; (63) male sternite VIII; (64-65) aedeagus in lateral and in ventral view; (66) habitus; (67) forebody; (68) median dorsal portion of head. Scale bars: 66: 1.0 mm; 67: 0.5 mm; 62-65, 68: 0.2 mm.

Medon gratus CAMERON 1931 (Figs 62-65)

Medon gratus CAMERON 1931: 143.

Sunius gratus: SMETANA (2004).

Medon reuteri FELDMANN 2007: 853 ff.; **nov.syn.**

Type material examined: *M. gratus*: Lectotype ♂, present designation: "Chakrata Dist., Chulli Khud 6500 / Dr. Cameron. 20.V.22. / M.Cameron Bequest B.M. 1955-147. / Syntype / Syntype *Medon gratus* Cameron 1931, det. R.G. Booth 2010 / Lectotypus ♂ *Medon*

gratus Cameron, desig. V. Assing 2010 / Medon *gratus* Cameron, det. V. Assing 2010" (BMNH).
Paralectotypes: 1♂: "Deoban 9331, Chakrata U.P. / Dr. Cameron. 3.5.21. / M.Cameron Bequest B.M. 1955-147. / Syntype / Syntype Medon *gratus* Cameron 1931, det. R.G. Booth 2010 / Paralectotypus ♂ *Medon gratus* Cameron, desig. V. Assing 2010 / Medon *gratus* Cameron, det. V. Assing 2010" (BMNH); 1♂: "Type / Bindal Gadh. Khonain. / Dr. Cameron. 5.V.21. / Medon propinquus Bris / Medon *gratus* Cam. Type / M.Cameron Bequest B.M. 1955-147. / Syntype / Paralectotypus ♂ *Medon gratus* Cameron, desig. V. Assing 2010 / Medon *gratus* Cameron, det. V. Assing 2010" (BMNH); 1♀: "Chakrata Dist. Manjgaon 6500 / Dr. Cameron. 18.V.22. / M.Cameron Bequest B.M. 1955-147. / Syntype / Syntype Medon *gratus* Cameron 1931, det. R.G. Booth 2010 / Paralectotypus ♀ *Medon gratus* Cameron, desig. V. Assing 2010 / Medon *gratus* Cameron, det. V. Assing 2010" (BMNH).

C o m m e n t : The original description of *Medon gratus* is based on an unspecified number of syntypes from "Chakrata district: Konain; Majgaon; Chulli Khud; Deoban, alt. 6500 to 9000 feet" (CAMERON 1931). Four syntypes (three males and one female) from four localities were examined; one of the males is designated as the lectotype. The species is listed as *Sunius* in the recent Palaeartic catalogue (SMETANA 2004), probably because CAMERON (1931) states that it is "near the European *M. propinquus* Bris."

Medon reuteri was described from a single male from "E-Afghanistan, Kunar, Chapa Dara, ca. 2000 m, 23.VII.2007" (FELDMANN 2007). The holotype was not examined, but, based on the photographs of the male primary and secondary sexual characters provided with the original description, there is no doubt that it is conspecific with the lectotype of *M. gratus*.

This species belongs to the *Medon apicalis* group (see ASSING 2004a, 2006b, 2007) and is most closely related to *M. maronitus* (SAULCY 1865) from the Eastern Mediterranean (including most of the Middle East) and *M. bucharicus* (BERNHAEUER 1902) from Middle Asia. It is best distinguished from these species by the shape of the aedeagus. The male sexual characters of *M. maronitus* and *M. bucharicus* are illustrated by ASSING (2004a, 2006b).

For a description and photographs of the external characters of *M. gratus* (as *M. reuteri*) see FELDMANN (2007). The male primary and secondary sexual characters of the type material of *M. gratus* are illustrated in Figs 62-65.

D i s t r i b u t i o n a n d n a t u r a l h i s t o r y : The species is currently known from Uttarranchal (northern India) and Eastern Afghanistan, suggesting that it is widespread in the western Himalaya and adjacent mountain ranges. Specimens have been collected at altitudes of approximately 2000-2800 m in May and July.

***Medon punctatus* (COIFFAIT 1975), nov.comb. (Figs 66-68)**

Hypomedon punctatus COIFFAIT 1975: 178 f.

Type material examined: Holotype ♀: "Kali-Gandaki-Tal, zw. Ghasa u. Lete / Zentral-Nepal, Sept.-Okt.1971, lg. H. Franz / Holotype⁷ Hypomedon punctatum [sic] H. Coiffait 1975 / Medon punctatus (Coiffait), det. V. Assing 2011" (NHMW).

C o m m e n t : The original description is based on a single female from "Kali-Gandaki-Tal entre Ghasa et Lete, Népal central" (COIFFAIT 1975). The holotype was located in the Franz collection at the NHMW. The species is tentatively attributed to the *Medon ferrugineus* group, mainly because the labrum is not distinctly dentate on either side of the anterior median excision and because of the presence of similar representatives of the *M. ferrugineus* group in the Himalaya. The male sexual characters would be essential to confirm this hypothesis.

Redescription: Body length 4.2 mm. Habitus as in Fig. 66. Coloration: head, pronotum, and abdomen blackish; elytra dark-brown; legs reddish-brown with slightly darker femora; antennae reddish.

Head (Fig. 67) approximately 1.05 times as wide as long; punctation moderately coarse, defined, and dense; interstices without microsculpture, on average narrower than diameter of punctures (Fig. 68). Eyes rather large, almost as long as postocular region in dorsal view.

Pronotum (Fig. 67) as wide as long and as wide as head; punctation dense, slightly less coarse than that of head; midline narrowly impunctate only in posterior half.

Elytra approximately 1.05 times as long and 1.25 times as broad as pronotum; humeral angles marked (Fig. 67); punctation fine and dense; interstices without microsculpture. Hind wings fully developed.

Abdomen slightly narrower than elytra; punctation fine, denser on anterior than on posterior tergites; interstices with shallow microsculpture composed predominantly of short transverse meshes; posterior margin of tergite VII with palisade fringe.

♂: unknown.

Comparative notes: Among the Himalayan *Medon* species, *M. punctatus* is characterized particularly by the dense and defined punctation, as well as by the long elytra.

Distribution and natural history: The species is known only from the type locality in central Nepal. Bionomic data are not available.

"*Medon*" fungi CAMERON 1943 (Figs 69-77)

Medon (*Hypomedon*) *fungi* CAMERON 1943: 34.

Sunius fungi: SMETANA (2004).

Type material examined: Holotype ♀: "Ghum district, v-vi-31, Dr. Cameron / Fungus / *M. fungi* Cam. Type / M.Cameron Bequest B.M. 1955-147. / Type / Syntype / Syntype *Medon fungi* Cameron 1943, det. R.G. Booth 2010 / Holotypus ♀ *Medon fungi* Cameron, rev. V. Assing 2010 / "*Medon*" *fungi* Cameron, det. V. Assing 2010" (BMNH). Paratype ♀: "Ghum dist, v-vi-1931, Dr. Cameron / Fungus / M.Cameron Bequest B.M. 1955-147. / Syntype / Syntype *Medon fungi* Cameron 1943, det. R.G. Booth 2010 / Paratypus ♀ *Medon fungi* Cameron, rev. V. Assing 2010 / "*Medon*" *fungi* Cameron, det. V. Assing 2010" (BMNH).

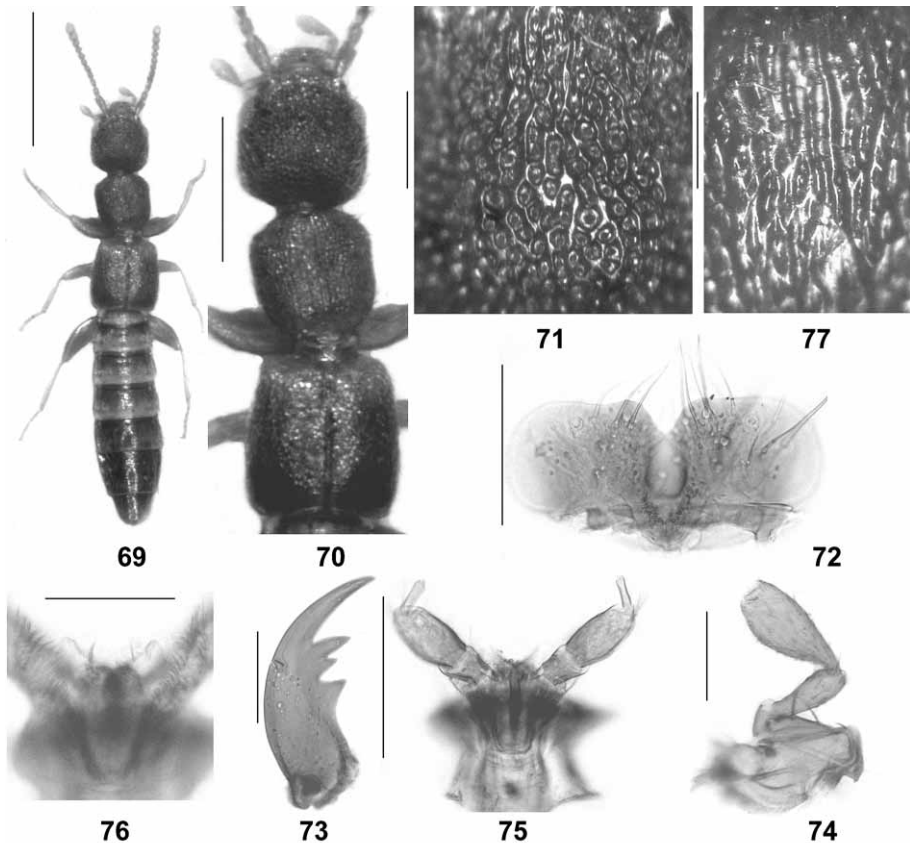
Comment: CAMERON (1943) explicitly designated a holotype ("Type in my collection"). Also, it can be inferred from his use of the plural "specimens" that he had examined additional paratypes. Consequently, despite the syntype labels attached to the above material, the specimen with Cameron's type label has holotype status and the second female represents a paratype. The species is listed as *Sunius* in the recent Palaearctic catalogue (SMETANA 2004), probably because Cameron originally attributed it to the subgenus *Hypomedon* MULSANT & REY 1878, a name that in Cameron's days was used for the species today included in *Sunius*.

An examination of the external characters and the mouthparts of the type material revealed that the species does not belong to the genus *Sunius*. The punctuation of the head and the pronotum, the shape of the elytra, the shape and chaetotaxy of the labrum, as well as the morphology of the labium suggest that *M. fungi* is not congeneric with true *Medon* either and probably represents an undescribed genus. However, since the male sexual characters are unknown, assigning the species to a new genus does not seem ad-

visible. Instead, it is temporarily attributed to *Medon*, a genus which already includes numerous species of doubtful generic assignment.

Redescription: Small species; body length 3.2-3.3 mm. Habitus as in Fig. 69. Coloration: body reddish to reddish-brown, with the elytra anteriorly diffusely yellowish and the preapical abdominal segments (segment VII, anterior 3/4 of segment VIII) infuscate; legs and antennae reddish-yellow.

Head (Fig. 70) approximately as long as wide; posterior angles weakly marked; punctuation extremely coarse and dense, interstices reduced to narrow ridges, rendering the surface matt (Fig. 71). Eyes moderately convex, moderately projecting from lateral contours of head, and moderately large, distinctly shorter than postocular portion in dorsal view. Labrum transverse, anterior margin deeply incised in the middle, on either side of this incision without tooth-like processes (Fig. 72); maxillary palpus as in Fig. 74; labium as in Fig. 75, ligula bilobed (Fig. 76); left mandible as in Fig. 73. Gular sutures relatively broadly separated. Antenna of similar morphology as in *Sunius* species.



Figs 69-77: "*Medon*" *fungi* CAMERON: (69) habitus; (70) forebody; (71) median dorsal portion of head; (72) labrum; (73) right mandible; (74) maxilla; (75) labium; (76) ligula; (77) median dorsal portion of pronotum. Scale bars: 69: 1.0 mm; 70: 0.5 mm; 71-75, 77: 0.1 mm; 76: 0.05 mm.

Pronotum (Fig. 70) approximately as wide as long and almost as wide as head, weakly tapering posteriad, and strongly convex in cross-section (more so than in *Sunius*); posterior angles weakly marked; punctation extremely coarse and longitudinally confluent (Fig. 71).

Elytra approximately as long and 1.2 times as wide as pronotum, rather strongly convex in cross-section; lateral margins distinctly convex in dorsal view (Fig. 70); punctation relatively fine, shallow, and rather dense; interstices glossy. Hind wings apparently fully developed. Metatarsomere I longer than II, but shorter than the combined length of II and III.

Abdomen approximately as wide as elytra, widest at segment VI; punctation very fine, relatively dense on anterior tergites and sparse on posterior tergites; interstices with shallow microsculpture and somewhat glossy; posterior margin of tergite VII with palisade fringe.

♂: unknown.

Comparative notes: The species is readily distinguished from all true *Medon* and *Sunius* species by the conspicuous punctation of the head and pronotum alone.

Distribution and natural history: The known distribution is confined to the environs of Ghum in West Bengal, northeastern India. The type specimens were collected from fungi during the period May-June.

"*Medon*" *ghumensis* CAMERON 1943 (Figs 78-83)

Medon (*Hypomedon*) *ghumensis* CAMERON 1943: 35.

Sunius ghumensis: SMETANA (2004).

Type material examined: Holotype ♀: "Type / Ghum district, v-vi-31, Dr. Cameron / Fungus / *M. ghumensis* Cam. Type / M. Cameron Bequest B.M. 1955-147. / Syntype / Holotypus ♀ *Medon ghumensis* Cameron, rev. V. Assing 2010 / "*Medon*" *ghumensis* Cameron, det. V. Assing 2010" (BMNH). Paratypes: 2 ♀♀: Ghum district, v-vi-31, Dr. Cameron / M. Cameron Bequest B.M. 1955-147. / Syntype / Syntype *Medon ghumensis* Cameron 1943, det. R.G. Booth 2010 / Paratypus ♀ *Medon ghumensis* Cameron, rev. V. Assing 2010 / "*Medon*" *ghumensis* Cameron, det. V. Assing 2010" (BMNH).

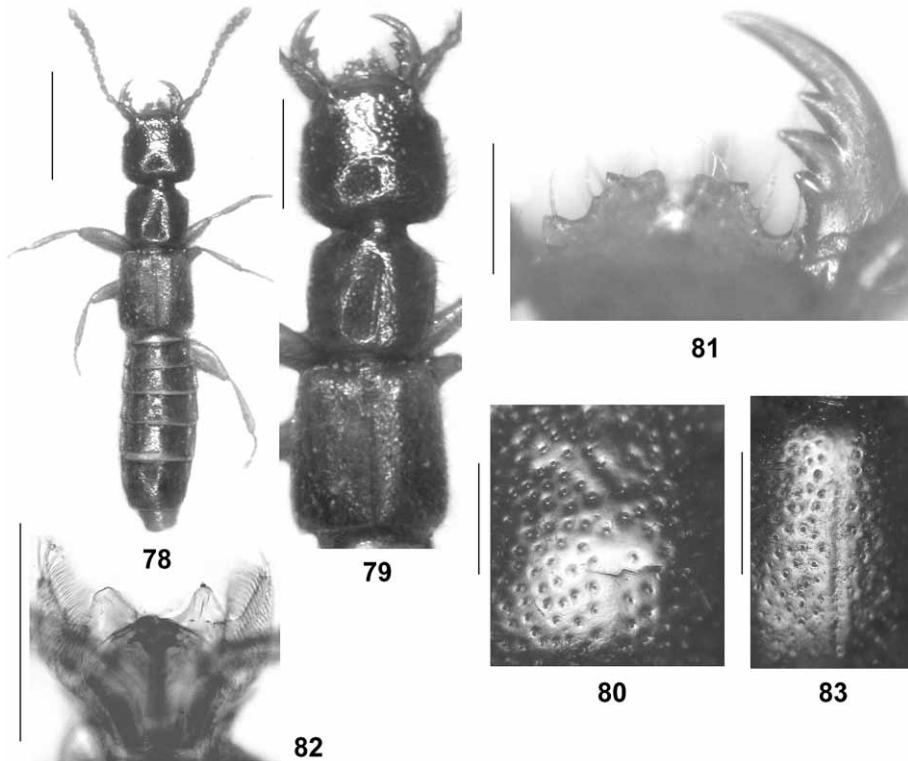
Comment: In stating "Type in my collection" CAMERON (1943) explicitly designated a holotype. Consequently, despite the syntype labels attached to the above material, the specimen with Cameron's type label has holotype status and the two other females represent a paratypes. The species is listed as *Sunius* in the recent Palaearctic catalogue (SMETANA 2004).

An examination of the external characters and the mouthparts of the type material revealed that the species does not belong to *Sunius*, as can be inferred particularly from the different shape of the labrum and the different morphology of the labium. Although it is probably not congeneric with true *Medon* either, it is temporarily attributed to this genus, which already includes numerous species of doubtful generic assignment.

Redescription: Body length 4.2-4.8 mm. Habitus as in Fig. 78. Coloration: Head dark-brown; pronotum reddish to dark-brown; elytra brown with the anterior portion diffusely and more or less extensively yellowish to yellowish-brown; abdomen reddish to reddish-brown, with the preapical segments sometimes somewhat infuscate; legs and antennae reddish-yellow to reddish.

Head (Fig. 79) 1.05-1.10 times as long as wide; posterior angles moderately marked; punctuation moderately fine and moderately dense, somewhat sparser in median dorsal portion; interstices without microsculpture, narrower than, or approximately as wide as diameter of punctures (Fig. 80). Eyes relatively small and weakly protruding from lateral contours of head, approximately half as long as postocular portion or nearly so. Labrum transverse, anterior margin deeply incised in the middle, on either side of this incision with two tooth-like processes and an additional lateral process, mediad of this lateral process deeply sinuate (Fig. 81); maxillary palpus similar to that of "*M.*" *fungi*; ligula bilobed, without stout seta (Fig. 82); left mandible with two, right mandible with three molar teeth (Fig. 81). Gular sutures relatively broadly separated. Antenna of similar morphology as in *Sunius* species.

Pronotum (Fig. 79) 1.05-1.10 times as wide as long and approximately 0.9 times as wide as head, weakly tapering posteriad; posterior angles weakly marked; punctuation similar to that of head, but on average shallower; midline narrowly impunctate; interstices without microsculpture (Fig. 83).



Figs 78-83: "*Medon*" *ghumensis* CAMERON: (78) habitus; (79) forebody; (80) median dorsal portion of head; (81) labrum and right mandible; (82) ligula; (83) median dorsal portion of pronotum. Scale bars: 78: 1.0 mm; 79: 0.5 mm; 80, 83: 0.2 mm; 81-82: 0.1 mm.

Elytra approximately 1.1 times as long and 1.20-1.25 times as wide as pronotum, moderately convex in cross-section; lateral margins weakly convex in dorsal view (Fig. 79); punctuation relatively fine, shallow, and rather ill-defined; interstices glossy. Hind wings apparently fully developed. Tarsi short; metatarsus approximately 0.6-0.7 times as long as metatibia. Metatarsomere I relatively short, slightly longer than II.

Abdomen approximately as wide as elytra, widest at segment VI; punctuation very fine, relatively dense on anterior tergites and somewhat sparser on posterior tergites; interstices with shallow microsculpture and rather glossy; posterior margin of tergite VII with palisade fringe.

♂: unknown.

Distribution and natural history: The known distribution is confined to the environs of Ghum in West Bengal, northeastern India. The type specimens were collected from fungi during the period May-June.

Acknowledgements

Thanks are extended to the colleagues listed in the materials section for the loan of material from their respective collections. In particular, I am grateful to Johannes Frisch for the generous permission to retain the male of *S. basalis*. Benedikt Feldmann, Münster, proof-read the manuscript.

Zusammenfassung

Die in der Paläarktis vertretenen Arten der Gattung *Sunius* STEPHENS 1829 (Subtribus Medonina) waren zuvor im Rahmen von zwölf Beiträgen revidiert worden, mit Ausnahme von acht aus der Ostpaläarktis beschriebenen Arten. Nach Untersuchung von Typenmaterial gehören nur zwei dieser Arten – davon eine nicht sicher – zu *Sunius*. Die übrigen sechs Arten werden in andere Gattungen gestellt. Elf Arten werden beschrieben und abgebildet: *Sunius laevior* (CAMERON 1943), *S. bouddha* (COIFFAIT 1978), *S. baculatus* nov.sp. (Nepal), *S. cursor* nov.sp. (Nepal), *S. rubriceps* nov.sp. (Iran), *S. extensissimus* nov.sp. (Oman), *S. tectus* nov.sp. (Oman), *Medon gratus* CAMERON 1931, *M. punctatus* (COIFFAIT 1975), nov.comb., "*Medon*" *fungi* CAMERON 1943 und "*M.*" *ghumensis* CAMERON 1943. Die bislang unbekanntenen männlichen Sexualmerkmale von *Sunius basalis* (REITTER 1899) sowie die Mundteile von Vertretern unterschiedlicher Artengruppen der Gattung *Sunius* werden beschrieben und abgebildet. *Medon reuteri* FELDMANN 2007, nov.syn., wird mit *M. gratus* CAMERON 1931 synonymisiert. Für *Medon gratus* wird ein Lectotypus designiert. Für sieben Arten werden weitere Nachweise gemeldet. Eine Gesamtbestimmungstabelle und ein Katalog der *Sunius*-Arten der Paläarktis werden erstellt. Die Gattung enthält derzeit 113 Arten, davon eine mit drei Unterarten, in der Paläarktis. Die große Mehrheit, 102 Arten, ist in der Westpaläarktis einschließlich Mittelasiens verbreitet; das Verbreitungsgebiet einer transpaläarktischen Art reicht östlich bis in den Fernen Osten Russlands. Mit nur elf Arten ist die Diversität der *Sunius*-Fauna in der Ostpaläarktis deutlich geringer. Die Gattungszugehörigkeit einer ostpaläarktischen Art ist unsicher, da die männlichen Geschlechtsmerkmale bisher unbekannt sind.

References

- ADORNO A. & A. ZANETTI (2003): Descrizione di tre nuove specie siciliane del genere *Sunius* CURTIS, 1829 con note sulle specie italiane e su alcune specie mediterranee occidentali (Coleoptera, Staphylinidae: Paederinae). — Bollettino del Museo Civico di Storia Naturale di Verona, Botanica Zoologia **27**: 31-44.
- ASSING V. (1995): Über *Sunius fallax* (LOKAY, 1919) (Col., Staphylinidae). — Entomologische Nachrichten und Berichte **38** (1994): 267-269.
- ASSING V. (2001a): On the Turkish species of *Sunius* CURTIS 1829 (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **33** (1): 195-210.
- ASSING V. (2001b): A new species of *Sunius* CURTIS 1829 from the Haut Atlas, Morocco (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **33** (1): 191-193.
- ASSING V. (2002): New species of *Sunius* CURTIS from China and Iran (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **34** (1): 289-296.
- ASSING V. (2003a): New species and records of Staphylinidae from Turkey (Insecta: Coleoptera: Staphylinidae). — Entomologische Blätter **98** (2002): 153-177.
- ASSING V. (2003b): New species of *Sunius* from the western Mediterranean (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **35** (2): 677-684.
- ASSING V. (2004a): A revision of the *Medon* species of the Eastern Mediterranean and adjacent regions (Insecta: Coleoptera: Staphylinidae: Paederinae). — Bonner zoologische Beiträge **52**: 33-82.
- ASSING V. (2004b): A new species of *Sunius* CURTIS from China (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **36** (2): 663-665.
- ASSING V. (2005a): On the Turkish species of *Sunius*. IV. New micropterous species from southwestern Anatolia and additional records (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **37** (1): 415-423.
- ASSING V. (2005b): New species and records of Staphylinidae from Tunisia (Insecta: Coleoptera). — Linzer biologische Beiträge **37** (1): 749-770.
- ASSING V. (2005c): On the Turkish species of *Sunius*. V. New species, additional records, a new synonymy, and an updated key to species (Coleoptera: Staphylinidae, Paederinae). — Beiträge zur Entomologie, Keltern **55**: 109-121.
- ASSING V. (2005d): On the Turkish species of *Sunius*. VI. New micropterous species from central southern Anatolia and additional records (Coleoptera: Staphylinidae, Paederinae). — Beiträge zur Entomologie, Keltern **55**: 289-298.
- ASSING V. (2005e): Two new species and new records of Staphylinidae from the Greek island Lesbos (Insecta: Coleoptera). — Linzer biologische Beiträge **37** (2): 1035-1046.
- ASSING V. (2006a): On the Turkish species of *Sunius*. VII. Five new micropterous species from western Anatolia and additional records (Coleoptera: Staphylinidae, Paederinae). — Beiträge zur Entomologie, Keltern **56** (2): 297-315.
- ASSING V. (2006b): A revision of Western Palearctic *Medon*: the species of the Atlantic Islands, the Western Mediterranean, and Europe, except for the southeast (Insecta: Coleoptera: Staphylinidae: Paederinae). — Bonner zoologische Beiträge **54** (2005): 25-95.
- ASSING V. (2007): New species and additional records of Staphylinidae from Turkey V (Coleoptera). — Stuttgarter Beiträge zur Naturkunde Serie A (Biologie) **700**: 1-64.
- ASSING V. (2008a): A revision of the *Sunius* species of the Western Palearctic region and Middle Asia (Coleoptera: Staphylinidae: Paederinae). — Linzer biologische Beiträge **40** (1): 5-135.
- ASSING V. (2008b): Four new species and additional records of Palearctic *Sunius*, with two new synonymies (Coleoptera: Staphylinidae: Paederinae). — Beiträge zur Entomologie, Keltern **58** (2): 455-470.
- ASSING V. (2009): Two new species of Paederinae from the Greek island Samos (Coleoptera: Staphylinidae). — Linzer biologische Beiträge **41** (1): 437-443.

- ASSING V. (2010): A revision of Palaearctic *Sunius*. XII. New species, new synonymies, and additional records (Coleoptera: Staphylinidae: Paederinae). — Linzer biologische Beiträge **42** (2): 1045-1061.
- ASSING V. (2011a): *Trisunius* gen.nov. from the southern East Palaearctic and the Oriental regions (Coleoptera: Staphylinidae: Paederinae: Medonina). — Linzer biologische Beiträge **43** (1): 195-220.
- ASSING V. (2011b): *Orsunius* gen.nov. from the Oriental region (Coleoptera: Staphylinidae: Paederinae: Medonina). — Linzer biologische Beiträge **43** (1): 221-244.
- ASSING V. (in press): A revision of the genus *Neosclerus* CAMERON (Coleoptera: Staphylinidae: Paederinae). — Beiträge zur Entomologie, Keltern **61** (1) (2011).
- ASSING V. & P. WUNDERLE (2001): On the Staphylinidae of Greece. II. New species and new records from central and northern Greece (Insecta: Coleoptera). — Linzer biologische Beiträge **33** (1): 103-136.
- BERNHAEUER M. (1914): Neue Staphylinen der indo-malaysischen Fauna. — Verhandlungen der Kaiserlich-Königlichen Zoologisch-Botanischen Gesellschaft in Wien **64**: 76-109.
- CAMERON M. (1931): The fauna of British India including Ceylon and Burma. Coleoptera. Staphylinidae. Volume 2. — London, Taylor and Francis: viii + 1-257.
- CAMERON M. (1943): Descriptions of new Staphylinidae (Coleopt.). — The Proceedings of the Royal Entomological Society of London (B) **12**: 32-36.
- COIFFAIT H. (1961): Les *Hypomedon* d'Europe et de la région méditerranéenne (Coleoptera: Staphylinidae). — Revue française d'Entomologie **28**: 16-40.
- COIFFAIT H. (1975): Xantholininae, Paederinae et Euaesthetinae récoltés au Népal par le professeur Franz (Col. Staphylinidae). — Nouvelle Revue d'Entomologie **5** (2): 153-186.
- COIFFAIT H. (1978): Ergebnisse der Bhutan-Expedition 1972 des naturhistorischen Museums in Basel. Coleoptera: Fam. Staphylinidae Subfam. Paederinae, Euaesthetinae, Piestinae, Osoriinae et Omalinae [sic] (Col. Staphylinidae). — Entomologica Basiliensia **3**: 109-150.
- COIFFAIT H. (1979): Insects of Saudi Arabia. Coleoptera: Fam. Staphylinidae, Subfam. Xantholininae [sic], Staphylininae, Paederinae, Oxytelinae, Aleocharinae. — Fauna of Saudi Arabia **1**: 162-180.
- COIFFAIT H. (1983): Nouvelles rectifications taxonomiques. — Nouvelle Revue d'Entomologie **13**: 345-346.
- COIFFAIT H. (1984): Coléoptères Staphylinidae de la région paléarctique occidentale. V. Sous famille Paederinae Tribu Paederini 2, Sous famille Euaesthetinae. — Supplément à la Nouvelle Revue d'Entomologie **13** (4): 1-424.
- COIFFAIT H. (1987): Nouvelles corrections homonymiques (Col. Staphylinidae). — Nouvelle Revue d'Entomologie (N.S.) **3** (4) (1986): 497-498.
- FELDMANN B. (2007): A new *Medon* species from Afghanistan (Coleoptera: Staphylinidae, Paederinae). — Linzer biologische Beiträge **39** (2): 853-856.
- LATTIN G. DE (1967): Grundriss der Zoogeographie. — Stuttgart, Gustav Fischer: 602 pp.
- LÖBL I. & A. SMETANA (2004): Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinidae. — Apollo Books, Stenstrup, 942 pp.
- SMETANA A. (2004): Subfamily Paederinae FLEMING, 1821. — In: LÖBL I. & A. SMETANA (eds), Catalogue of Palaearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinidae. — Apollo Books, Stenstrup: 579-624.

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