

Linzer biol. Beitr.	45/1	141-154	31.7.2013
---------------------	------	---------	-----------

On the Staphylinidae of Saudi Arabia, with descriptions of two new species (Insecta: Coleoptera)

V. ASSING, M. SCHÜLKE¹, M.R. SHARAF & A.S. ALDAWOOD

A b s t r a c t : A study of material of Staphylinidae recently collected in Saudi Arabia yielded at least 34 species, 16 of which were identified down to species level. Ten species are reported from Saudi Arabia for the first time, one of them additionally from Oman. *Pinophilinus spinosus* ASSING nov.sp. (Paederinae: Pinophilini) and *Tachyporus saudicus* SCHÜLKE nov.sp. (Tachyporinae: Tachyporini) are described, illustrated, and distinguished from similar and geographically close congeners. Type material of *Pinophilinus schatzmayri* (KOCH 1934) is studied and illustrated. A key to the Arabian species of *Pinophilinus* EICHELBAUM 1908 is provided. The distribution of Arabian *Pinophilinus* species is mapped.

K e y w o r d s : Coleoptera, Staphylinidae, *Pinophilinus*, *Tachyporus*, Palaearctic region, Saudi Arabia, Oman, taxonomy, new species, new records, key to species.

Introduction

The staphylinid fauna of the Arabian Peninsula is composed of various zoogeographic elements, particularly species (groups) of Afrotropical, Mediterranean, and Iranian affiliations, as well as species with Cosmopolitan or vast distributions ranging from the Afrotropical to the Oriental region (ASSING 2008a, 2012). According to SMETANA (2004) and an unpublished update (June 2012) of this catalogue (SCHÜLKE unpubl.), only approximately 115 species and subspecies have been reported from Saudi Arabia, although the Staphylinidae of this country have specifically been addressed in several articles (BESUCHET 1981, COIFFAIT 1979, 1981, 1982, 1985, FRANZ 1979, GUSAROV 1997, PUTHZ 1980, VIT 2006).

A study of recently collected material from Saudi Arabia, in total 143 specimens, yielded at least 34 species of Staphylinidae, part of which were identified at species level. The remainder were either represented exclusively by females, are undescribed, or belong to taxa that are currently in a state of taxonomic confusion and require revision. Ten of the identified described species represent new country records for Saudi Arabia.

¹ 84th contribution to the knowledge of Tachyporinae

Material and Methods

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

KSMA..... King Saud University Museum of Arthropods, Riyadh
 MNHUB..... Museum für Naturkunde der Humboldt-Universität, Berlin (J. Frisch)
 NHMB Naturhistorisches Museum Basel (M. Geiser, I. Zürcher)
 cAss..... private collection Volker Assing, Hannover
 cSch..... private collection Michael Schülke, Berlin

The morphological studies were conducted using Stemi SV 11 (Zeiss Germany) and SZH10 (Olympus) microscopes, as well as Jenalab (Carl Zeiss Jena) and PZO (Warsaw) compound microscopes. Digital cameras (Nikon Coolpix 995) were used for the photographs.

Head length was measured from the anterior margin of the labrum 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 (unless noted otherwise in the description of *Tachyporus saudicus*), the length of the forebody from the anterior margin of the mandibles (in resting position) to the posterior margin of the elytra, total length from the anterior margin of the mandibles to the abdominal apex, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagus.

The limits of the zoogeographical regions are based on SMETANA (2004). Except for *Tachyporus saudicus* (identified by the second author) and *Schatzmayrina oxyclypea* (identified by Volker Puthz), all the species were identified by the first author.

Species recorded from southwestern Saudi Arabia

The unidentified species not listed below belong to the following genera: *Platystethus* MANNERHEIM 1830 (1 species), *Scopaeus* ERICHSON 1839 (at least 3 species), *Heterothops* STEPHENS 1829 (1 species), *Falagria* LEACH 1819 (1 species), *Anaulacaspis* GANGLBAUER 1895 (3 species), *Tomoglossa* KRAATZ 1856 (1 species), and *Atheta* THOMSON 1858 (1 species of the *A. laticollis* group). An undescribed species of *Rugilus* LEACH 1819 is described separately in ASSING (2013).

Acrotone (Phanerosphena) rougemonti (PACE 1991), nov.comb.

Material examined: Saudi Arabia: 1♂, 3♀♀, Khamis Mushayt, Wadi Bishah, 18°20'01"N, 42°42'13"E, 1990 m, 27.IV.2011, leg. Sharaf (cAss); 1 ex., Wadi Aljora near Abadan, 17.29°N, 43.07°E, 465 m, 12.XI.2012, leg. Sharaf (cAss).

Comment: This species, the type species of the subgeneric name *Phanerosphena* PACE 1991, was previously known only from two localities in Yemen (PACE 1991) and originally described as *Atheta (Phanerosphena) rougemonti*. An examination of the above material, which represents the first record from Saudi Arabia, revealed that *A. rougemonti* is a close relative of *Acrotone pellucida* (FAUVEL 1878) and *A. oxypodoides* (BRUNDIN 1952). In his revisionary work, BRUNDIN (1952) attributed them to *Acrotone* THOMSON 1859, which in those days was regarded as a subgenus of *Atheta* THOMSON 1858, but today is treated as a distinct genus by most authors. Subsequently, *A. pellucida*

and *A. oxypodoides* were assigned to the genus *Paradilacra* BERNHAUER 1909 (see SMETANA 2004) and then reinstated in *Acrotona* by ASSING (2010). *Acrotona rougemonti*, *A. pellucida*, and *A. oxypodoides* are distinguished from other *Acrotona* species particularly by a different morphology of the median lobe of the aedeagus, of the parameres, and by longer and more slender legs, suggesting that both taxa form separate lineages. On the other hand, a close relationship is indicated by similar external characters and a similar morphology of the spermatheca. In consequence, until the systematic affiliations have been thoroughly studied based on a phylogenetic approach, *Phanerosphena* is proposed to represent a subgenus of *Acrotona*. Other species that have been attributed to *Phanerosphena* are: *Atheta perlaeta* PACE 1986 (= *A. tronqueti* PACE 1988) (Himalaya, Oriental region), *A. retroarmata* PACE 1998 (Hong Kong), *A. alboguttata* BERNHAUER 1915 (Afrotropical region), *A. tridentata* (KRAATZ, 1859) (Oriental region), *A. coprophila* CAMERON 1950 (Oriental region), and *A. spinosa* SCHEERPELTZ 1962 (China, Thailand). However, at least *A. retroarmata* is unlikely to be correctly assigned to *Phanerosphena*, as can be inferred from the illustrations provided by PACE (1998).

***Brachida africana* (BERNHAUER & SCHEERPELTZ 1926)**

Material examined: Saudi Arabia: 2♂♂, Wadi Aljora near Abadan, 17.29°N, 43.07°E, 465 m, 12.XI.2012, leg. Sharaf (cAss).

Comment: *Brachida africana* was originally described from Tanzania and subsequently reported also from Kenya (PACE 1994). The aedeagus of the above males is practically identical to the drawing of the aedeagus of one of the type specimens provided by PACE (1994). The observed slight differences are most likely explained by intraspecific variation. The above specimens represent the first records from Saudi Arabia and the Palaearctic region sensu SMETANA (2004).

***Atheta coriaria* (KRAATZ 1856)**

Material examined: Saudi Arabia: 2 exs., Tamnia Dam (Abha), 18.02°N, 42.76°E, 2320 m, 14.XI.2012, leg. Sharaf (cAss).

Comment: *Atheta coriaria* is a common Cosmopolitan species, but was previously unknown from Saudi Arabia (SMETANA 2004).

***Peltodonia* sp. n.**

Material examined: Saudi Arabia: 5♀♀, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 11.V.2011, leg. Sharaf (cAss); 2♀♀, same data, but 19°55'47"N, 41°26'34"E, 23.IX.2011, leg. Sharaf (cAss).

Comment: The above specimens, all them unfortunately females, evidently represent an undescribed species of *Peltodonia* BERNHAUER 1936 closely related to *P. bodemeyeri* BERNHAUER 1936 from Turkey. Males would be desirable for a description.

***Piochardia oberthuri* (FAUVEL 1878)**

Material examined: Saudi Arabia: 1♀, Khamis Mushayt, W Ben Hashbal, 18°35'41"N, 42°39'01"E, 1890 m, 26.IV.2011, leg. Sharaf (cAss).

C o m m e n t : Species of *Piochardia* HEYDEN 1870 are associated with ants of the genus *Cataglyphis* FÖRSTER. The previously known distribution of *P. oberthuri* was confined to North Africa from Algeria in the west to Libya in the east (ASSING 1999). The above specimen considerably expands the distribution towards the east. It was found in association with *Cataglyphis holgerseni* COLLINGWOOD & AGOSTI 1996 (det. Sharaf). The nest was built in sandy dry soil under a large rock.

***Mimogonus fumator* (FAUVEL 1889)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 1♂, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°56'N, 41°27'E, 740 m, 23.IX.2011, leg. Sharaf (cAss).

C o m m e n t : This widespread species has been recorded from the Oriental, the Afro-tropical, and the Neotropical regions. In the West Palaearctic it was previously only once reported from Israel. For more information, a redescription, and illustrations of the external and male sexual characters see ASSING & FELDMANN (2012).

***Carpelimus atomus* (SAULCY 1865)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 26 exs., Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 15.V.2011, leg. Sharaf (MNHUB, cAss).

C o m m e n t : This species is widespread and common in North Africa and the Middle East. It had been recorded from Saudi Arabia by GUSAROV (1997).

***Schatzmayrina oxyclypea oxyclypea* KOCH 1934**

M a t e r i a l e x a m i n e d : Saudi Arabia: 1♀, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 15.V.2011, leg. Sharaf (cAss); 1♀, same data, but 11.V.2011 (cAss); 1♀, same data, but 19°55'47"N, 41°26'34"E, 23.IX.2011 (cAss); 1♀, Al Bahah, Shada Mt., 19°50'20"N, 41°18'42"E, 1620 m, 22.IX.2011, leg. Sharaf (cAss).

C o m m e n t : *Schatzmayrina oxyclypea oxyclypea* had previously been reported from the Afrotropical region, North Africa, and Yemen; for data and a distribution map see PUTHZ (2007). Two other subspecies are distributed in the Oriental region. The above specimens represent the first records from Saudi Arabia.

***Paederus fuscipes* CURTIS 1826**

M a t e r i a l e x a m i n e d : Saudi Arabia: 3 exs., Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 15.V.2011, leg. Sharaf (cAss); 1 ex., same data, but 11.V.2011 (cAss).

C o m m e n t : The vast distribution of this common species ranges from the Afrotropical region across the Palaearctic and Oriental regions to Australia. According to SMETANA (2004), it was previously unknown from Saudi Arabia.

***Pinobius indicus* (KRAATZ 1859)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 1♀, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 11.V.2011, leg. Sharaf (cAss).

C o m m e n t : According to SMETANA (2004), *P. indicus* is distributed from the Afrotropical to the Oriental region. It had been recorded from Saudi Arabia by COIFFAIT (1982) and GUSAROV (1997).

***Astenus indicus* (KRAATZ 1859)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 1♂, 1♀, Al Urdiyah, Wadi Gonouna, 19°25'46"N, 41°36'18"E, 350 m, 12.V.2011, leg. Sharaf (cAss). Oman: 2♂♂, Dhofar, "DS", 31.VIII.1994, leg. Rihane (cAss); 1♂, Dhofar, Rouri, 13.X.1004, leg. Rihane (cAss).

C o m m e n t : *Astenus indicus* was previously known from the Afrotropical region, Sicily, Egypt, the East Palaearctic, and the Australian region (SMETANA 2004). The above specimens from Saudi Arabia and Oman represent new country records.

***Astenus nigromaculatus* (MOTSCHULSKY 1858)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 2♀♀, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 15.V.2011, leg. Sharaf (cAss); 1♀, same data, but 11.V.2011 (cAss); 1♀, Al Bahah, W Elzaraeb, 20°04'24"N, 41°23'12"E, 2090 m, 9.V.2011, leg. Sharaf (cAss); 1♀, Al Urdiyah, Wadi Gonouna, 19°25'46"N, 41°36'18"E, 350 m, 12.V.2011, leg. Sharaf (cAss).

C o m m e n t : The distribution of *A. nigromaculatus* ranges from the Canary Islands and the Iberian Peninsula across North Africa to the Middle East (SMETANA 2004). The species had already been recorded from Saudi Arabia by COIFFAIT (1981, 1982).

***Hypomedon galilaeus* (BORDONI 1980)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 2♂♂, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 11.V.2011, leg. Sharaf (cAss); 1♀, Wadi Aljora near Abadan, 17.29°N, 43.07°E, 465 m, 12.XI.2012, leg. Sharaf (cAss).

C o m m e n t : The previously known distribution of *H. galilaeus* was confined to Israel and Lebanon (ASSING 2008b). The above material represents the first records from Saudi Arabia.

***Lithocharis mateui* COIFFAIT 1968**

M a t e r i a l e x a m i n e d : Saudi Arabia: 1♂, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 11.V.2011, leg. Sharaf (cAss); 1♀, Al Atawla (Baha-Taif Rd), Wadi Bawah, 20°45'N, 41°15'E, 1310 m, 8.XI.2012, leg. Sharaf (cAss); 1♂, Wadi Shahdan (Jizan), 17.45°N, 42.72°E, 200 m, 13.XI.2012, leg. Sharaf (cAss).

C o m m e n t : This species was originally described from Chad (Ennedi) and subsequently reported also from the Middle East (ASSING 2007, SMETANA 2004), including Saudi Arabia (COIFFAIT 1979, 1981, GUSAROV 1997).

***Gabronthus maritimus* (MOTSCHULSKY 1858)**

M a t e r i a l e x a m i n e d : Saudi Arabia: 2 exs., Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 11.V.2011, leg. Sharaf; 2 exs., same data, but 15.V.2011.; 1 ex., same data, but 19°55'47"N, 41°26'34"E, 20.IX.2011, leg. Sharaf; 1 ex., Al Bahah, W Turabah, Al Mandaq, 20°12'40"N, 41°17'18"E, 1790 m, 10.V.2011, leg. Sharaf; 1 ex., Khamis Mushayt, Wadi Bishah, 18°20'01"N, 42°42'13"E, 1990 m, 27.IV.2011, leg. Sharaf (material in MNHUB and cAss); 3 exs., Tammia Dam (Abha), 18.02°N, 42.76°E, 2320 m, 14.XI.2012, leg. Sharaf (cAss); 1 ex., Wadi Shahdan (Jizan), 17.45°N, 42.72°E, 200 m, 13.XI.2012, leg. Sharaf (cAss).

C o m m e n t : The vast distribution of *G. maritimus* includes the Afrotropical, Palaearctic, and Oriental regions (SMETANA 2004). The species had already been reported from Saudi Arabia by COIFFAIT (1981) and GUSAROV (1997).

***Philonthus turbidus* ERICHSON 1840**

Material examined: Saudi Arabia: 1♂, Khamis Mushayt, Wadi Bishah, 18°20'01"N, 42°42'13"E, 1990 m, 27.IV.2011, leg. Sharaf (cAss).

Comment: *Philonthus turbidus* is widespread in the southern Palaearctic, the Afrotropical, Oriental, and Nearctic regions (SMETANA 2004). It had been reported from Saudi Arabia by COIFFAIT (1979, 1981) and GUSAROV (1997).

***Philonthus bisignatus* BOHEMAN 1848**

Material examined: Saudi Arabia: 1♂, 2♀, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 740 m, 11.V.2011, leg. Sharaf (cAss); 1♂, Al Bahah, Shada Mt., 19°50'20"N, 41°18'42"E, 1620 m, 22.IX.2011, leg. Sharaf.

Comment: *Philonthus bisignatus* is widespread in the Afrotropical region. It had been unknown from the Palaearctic region sensu SMETANA (2004) until it was recently recorded from Yemen for the first time (ASSING 2012). The above specimens represent the first records from Saudi Arabia and the second record from the Palaearctic region.

On the Arabian species of *Pinophilinus* EICHELBAUM 1908***Pinophilinus spinosus* ASSING nov.sp. (Figs 1-5, Map 1)**

Type material: Holotype ♂: "SAUDI ARABIA 740 m, Al Bahah, Al Mukhwah Dhi Ayn Arch. vill., 19°55'46"N, 41°26'30"E, 11.V.2011, leg. Sharaf / Holotypus ♂ *Pinophilinus spinosus* sp. n., det. V. Assing 2012" (KSMA). Paratype ♀: "Saudi Arabia, Al Bahah, Shada Mnt., 22.IX.2011, 19°50'19.7"N, 41°18'42.2"E, 1620 m, Leg. M.R. Sharaf 0036" (cAss).

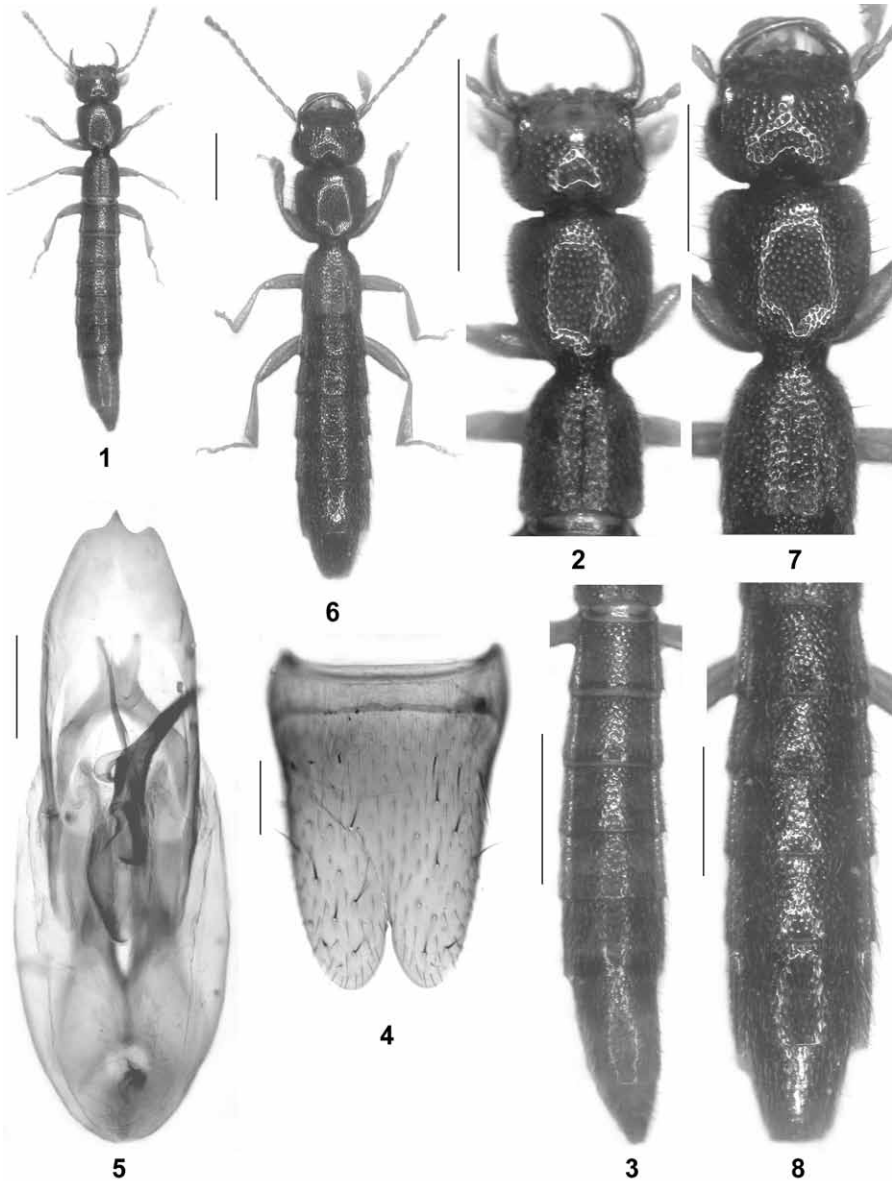
Etymology: The specific epithet (Latin, adjective) refers to the presence of a large spine in the internal sac of the aedeagus.

Description: Body length 5.8-6.5 mm; length of forebody 2.2-2.4 mm. Habitus as in Fig. 1. Coloration: whole body pale-reddish; legs and antennae yellow.

Head (Fig. 2) strongly transverse, approximately 1.4 times as wide as long; posterior margin concave in the middle; frons practically impunctate; punctation of vertex dense, somewhat sparser in posterior median portion, rather coarse, and defined; interstices glossy, without microsculpture, on average as broad as, or slightly narrower than diameter of punctures, somewhat broader in posterior median portion. Eyes weakly convex and rather large, distinctly longer than postocular region in dorsal view. Antenna approximately 1.4 mm long; antennomere III approximately twice as long as broad, IV-V approximately 1.5 times as long as broad, VI and VII weakly oblong, VIII approximately as long as broad, and IX and X weakly transverse.

Pronotum (Fig. 2) indistinctly oblong, at anterior angles approximately as wide as head, and distinctly tapering posteriad in posterior half; posterior angles abruptly rounded, moderately marked; punctation similar to that of head; interstices without microsculpture, on average somewhat narrower than diameter of punctures.

Elytra (Fig. 2) short and narrow, approximately 0.75 times as long and 0.81-0.82 times as broad as pronotum, slightly widened posteriad; humeral angles almost obsolete; punctures similar to those of pronotum, or slightly larger; interstices without microsculpture.



Figs 1-8: *Pinophilinus spinosus* nov.sp. (1-5) and *P. schatzmayri* (KOCH) (6-8): (1, 6) habitus; (2, 7) forebody; (3, 8) abdomen; (4) male sternite VIII; (5) aedeagus in ventral view. Scale bars: 1-3, 6-8: 1.0 mm; 4-5: 0.2 mm.

Hind wings completely reduced. Metatarsomere I as long as the combined length of II-IV.

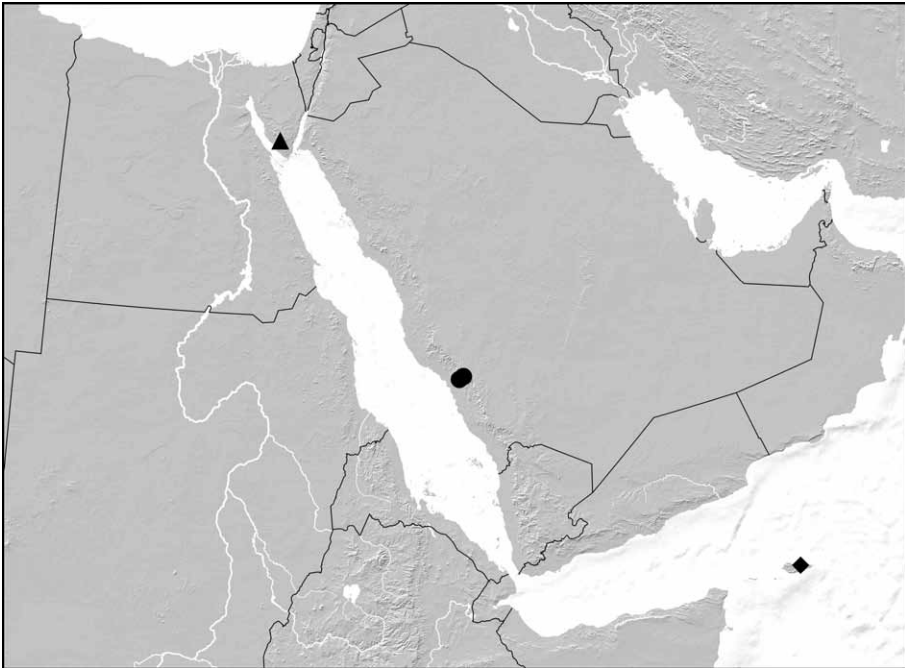
Abdomen (Fig. 3) long and slender, broader than elytra; maximal width at segment VII; punctation of tergites III-V coarse and dense, that of tergites VII and VIII rather fine and

much sparser, that of tergite VI intermediate; interstices without microsculpture; posterior margin of tergite VII without palisade fringe.

♂: sternite VIII oblong, distinctly tapering posteriad, and with V-shaped posterior excision (Fig. 4); aedeagus approximately 1.2 mm long, with slightly asymmetric and in the middle pointed ventral process (ventral view) and with large sclerotized spine in the internal sac (Fig. 5).

Comparative notes: Two *Pinophilinus* species were previously known from the Arabian region, *P. schatzmayri* (KOCH 1934) from the south of the Sinai Peninsula and *P. socotranus* ASSING 2012 from Socotra Island, Yemen. *Pinophilinus spinosus* is distinguished from these species as follows:

from *P. schatzmayri* (male unknown) by much smaller size (*P. schatzmayri*: length of forebody 3.4 mm) (compare Figs 1 and 6), much shorter antennae (*P. schatzmayri*: antennae 2.1 mm long; antennomere III approximately three times as long as broad, IV-VIII distinctly oblong), larger and less convex eyes, finer setation of the head and pronotum (*P. schatzmayri*: head and pronotum with long and dark lateral setae), the posteriorly more distinctly narrowed pronotum (*P. schatzmayri*: lateral margins in anterior two thirds of pronotum almost parallel), and the less coarse punctation of the abdomen; from *P. socotranus* by much paler coloration (*P. socotranus*: body dark-brown), denser punctation of the whole body, distinctly longer antennae with more slender antennomeres (*P. socotranus*: antenna approximately 1.2 mm long; antennomere III approximately 1.5 times as long as broad, IV-VII weakly oblong), much larger eyes (*P. socotranus*:



Map 1: Distribution of Arabian *Pinophilinus* species: *P. schatzmayri* (KOCH) (triangle); *P. spinosus* nov.sp. (circles); *P. socotranus* ASSING (diamond).

shorter than postocular region in dorsal view), the more convex (cross-section) and posteriorly less strongly narrowed pronotum, the longer, more slender, and less convex elytra, the larger and deeper posterior excision of the male sternite VIII, and by the completely different morphology of the aedeagus.

For illustrations of *P. schatzmayri* and *P. socotranus* see Figs 6-8 and ASSING (2012), respectively.

Distribution and natural history: The type specimens were collected in two localities in Al Bahah, southwestern Saudi Arabia (Map 1), at altitudes of 740 and 1620 m in May and September. The reduced hind wings, the short elytra, and the absence of a palisade fringe at the posterior margin of tergite VII suggest that the distribution of *P. spinosus* is restricted. The holotype was collected from leaf litter under an old *Ficus* tree, the paratype from soil under a large plastic bag.

***Pinophilinus schatzmayri* (KOCH 1934) (Figs 6-8, Map 1)**

Pinophilus (*Pinophilinus*) *schatzmayri* KOCH 1934: 75 f.

Type material examined: Syntype ♀: "Sinai W. Isla, 28.2.1933, A. Schatzmayr / Syntypus ♀ *Pinophilus schatzmayri* Koch, rev. √: Assing 2012 / *Pinophilinus schatzmayri* (Koch), det. √: Assing 2012" (NHMB).

Comment: The original description is based on two female syntypes from "Wadi Isla, 28.2.1933 (Süd-Sinai)" (KOCH 1934). One of the type specimens was located in the Frey collection, which is currently housed in the NHMB. This species is characterized particularly by its large size (total length 7.5 mm; length of forebody 3.4 mm), pale-reddish coloration, long and slender antennae (2.1 mm) with distinctly oblong antennomeres I-IX, and by the dense and coarse punctation of the whole body, particularly of the abdomen. The habitus, the forebody, and the abdomen of the examined syntype are illustrated in Figs 6-8.

Key to the Arabian species of *Pinophilinus*

- 1 Large species; body length approximately 7.5 mm; length of forebody > 3.0 mm. Antenna approximately 2.1 mm long and slender; antennomere III approximately 3 times as long as broad; IX distinctly oblong. Coloration of body pale-reddish. Body, particularly abdomen, with coarse and dense punctation. Sinai Peninsula (Map 1).....*P. schatzmayri* (KOCH)
- Distinctly smaller and more slender species; body length < 7.0 mm; length of forebody < 2.5 mm. Antenna < 1.5 mm long and less slender; antennomere III at most twice as long as broad; IX at least as broad as long2
- 2 Body dark-brown. Eyes small, shorter than postocular region in dorsal view (ASSING 2012: figure 11). Antenna shorter (1.2 mm) and less slender (ASSING 2012: figure 10); antennomere III approximately 1.5 times as long as broad; IV-V indistinctly oblong. Pronotum somewhat flattened and distinctly narrowed posteriorly (ASSING 2012: figure 11). Head and pronotum with moderately dense punctation; interstices on average broader than diameter of punctures. ♂: sternite VIII with very small posterior excision (ASSING 2012: figure 13); aedeagus symmetric and apically very acute in ventral view; internal sac without large sclerotized spine (ASSING 2012: figures 14-15). Socotra Island (Yemen) (Map 1).....*P. socotranus* ASSING
- Body pale-reddish. Eyes rather large, distinctly longer than postocular region in dorsal view. Antennae longer (1.4 mm) and more slender (Fig. 1); antennomere III approximately twice as long as broad; IV-V approximately 1.5 times as long as broad. Pronotum more convex in cross-section and less strongly narrowed posteriorly (Fig. 2). Head and pronotum with dense punctation; interstices on average narrower than

diameter of punctures (Fig. 2). ♂: sternite VIII with larger and deeper posterior excision (Fig. 4); aedeagus with slightly asymmetric and much less acute apex in ventral view; internal sac with large sclerotized spine (Fig. 5). Southwestern Saudi Arabia (Map 1)..... *P. spinosus* nov.sp.

A new species of *Tachyporus* GRAVENHORST 1802

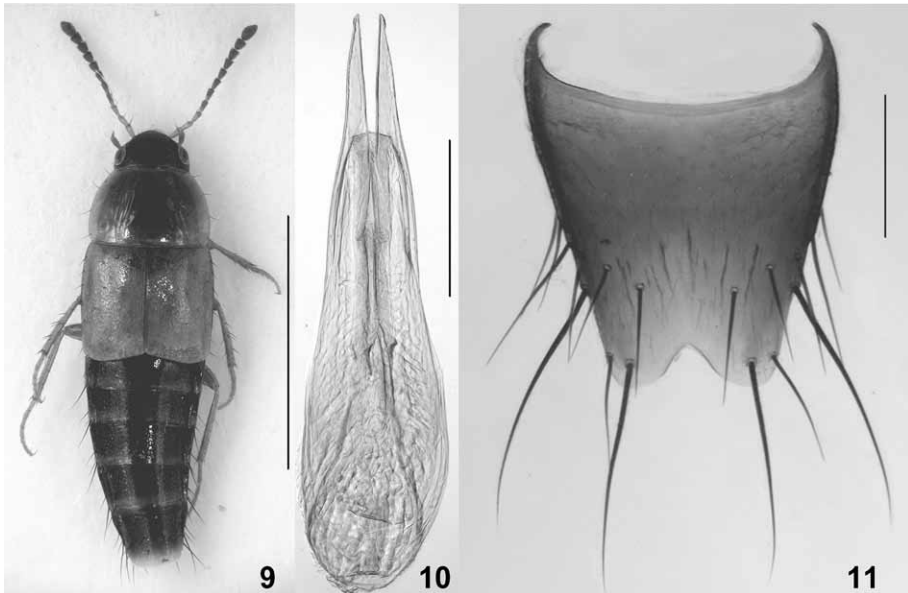
Tachyporus saudicus SCHÜLKE nov.sp. (Figs 9-12)

Type material: Holotype ♂: "SAUDI ARABIA 740 m, Al Bahah, W Turabah, Al Mandaq, 20°12'40"N, 41°17'18"E, 1790 m, 10.V.2011, leg. Sharaf / Holotypus *Tachyporus saudicus* sp. n., det. M. Schülke 2012" (KSMA). Paratypes: 3♂♂, 3♀♀ [1♂, 3♀♀ teneral]: same data as holotype (cSch, cAss).

E t y m o l o g y : The specific epithet (Latin, adjective) is derived from Saudi Arabia where the species was discovered.

D e s c r i p t i o n : Measurements (in mm) and indices: body length 2.7-3.4; length of forebody 1.7-1.9; head width 0.59-0.60; pronotal width 0.96-1.00; pronotal length 0.64-0.66; elytral sutural length (apex of scutellum to sutural angle) 0.77-0.79; elytral humeral length (anterior to posterior margin) 0.96-1.01; elytral width 1.03-1.10; aedeagus length 0.69-0.72. Ratios: head width / pronotal width 0.60-0.62; pronotal length / elytral length 0.77-0.83; elytral humeral length / elytral width 0.90-0.97.

Habitus as in Fig. 9. Coloration: head black, pronotum and elytra yellowish-brown, disc of pronotum dark-brown, only one specimen with oblique brown elytral markings, abdomen dark-brown to black, posterior margins of segments yellowish-brown, legs and basal antennomeres yellow, antennomeres IV-XI and maxillary palpus brownish.



Figs 9-11: *Tachyporus saudicus* nov.sp.: (9) habitus; (10) aedeagus in ventral view; (11) sternite VIII. Scale bars: 9: 2.0 mm; 10-11: 0.2 mm.

Head transverse; posterior part concealed under pronotal anterior margin; punctation of frons and vertex fine and sparse, distance between punctures approximately 30 μm ; without microsculpture. Eyes weakly convex and rather large, distinctly longer than postocular region in dorsal view. Antenna approximately 1.1 mm long; antennomeres I-III more than twice as long as broad, antennomeres IV-X of decreasing length, antennomere X as long as broad, antennomere XI slightly elongated, 1.7 times as long as broad. Antennomeres I-III only with sensory bristles, antennomeres IV-XI with dense pubescence.

Pronotum distinctly transverse, 1.6-1.7 times as wide as head; anterior angles bent lateroventral, posterior angles broadly rounded; punctation similar to that of head, pubescence almost invisible, only 1-2 μm long; microsculpture absent. Anterior, posterior, and lateral margins each with four distinct bristle-bearing punctures, bristles approximately 100 μm long.

Elytra moderately long, 1.2-1.3 times as long as pronotum, slightly widened posteriorly, 0.90-0.97 times as long as wide; punctures as sparse as those of pronotum, but distinctly coarser with pubescence of approximately 50 μm length. Elytra covered with rows of sensory bristles of approximately 100 μm length forming distinct rows: humeral 0-1, sublateral 1-2, inner discal 2, middle discal 3, outer discal 2, sutural 3-4, apical 3 and lateral 5-6; surface of elytra without any microsculpture. Hind wings fully developed.

Abdomen with punctation and pubescence of tergites similar to those of pronotum; tergites with indistinct microsculpture composed of transverse striae or meshes (2 meshes per 10 μm); posterior margin of tergite VII with distinct palisade fringe.

♂: protarsomeres I-IV distinctly dilated; sternite VIII with distinct posterior emargination (Fig. 11); aedeagus approximately 0.7 mm long, without large sclerotized structures in the internal sac (Fig. 10).

Comparative notes: No records of *Tachyporus* species were previously known from the Arabian Peninsula. Only few species have been recorded from the adjacent regions, such as *T. nitidulus* (FABRICIUS 1781) from Egypt, Lebanon, Syria, Iran, Israel and Iraq, *T. abner* SAULCY 1865 from Israel, Jordan and Iran, *T. caucasicus* KOLENATI 1846 from Israel, Jordan, Syria and Iran, *T. hypnorum* (FABRICIUS 1775) from Lebanon and Iran, and *T. pusillus* GRAVENHORST 1806 from Egypt, Israel, Syria and Iran. The record of *T. solutus* ERICHSON 1839 from Syria (SMETANA 2004) remains doubtful, most likely it is based on a confusion with *T. caucasicus*.

Tachyporus saudicus is highly similar in size, habitus, and elytral chaetotaxy to *T. abner* and *T. pusillus*, but distinguished as follows:

from *T. abner* by the much paler coloration of the whole body, especially of the elytra (with characteristic black markings in *T. abner*), variability of the presence of humeral bristle-bearing punctures on the elytra, and the larger size of the aedeagus (*T. abner*: 0.58-0.63 mm).

from *T. pusillus* by usually paler coloration (*T. pusillus*: body dark-brown), the variability of the presence of humeral bristle-bearing punctures on the elytra, the absence of elytral microsculpture, and the smaller aedeagus (*T. pusillus*: 0.79-0.85 mm).

Other pale-coloured species with similar oblique elytral markings (*T. himalayicus* BERNHAUER 1920, *T. montanus* BERNHAUER, 1915, and other probably undescribed species) are distinguished by the reduced number of elytral sensory bristles, especially the reduced number of discal bristles.

Distribution and natural history: The type specimens were collected in a pasture, probably from under stones, in Wadi Turabah, Al Bahah, south-western Saudi Arabia, at an altitude of 1790 m in May. The type locality is illustrated in Fig. 12.

Acknowledgements

This project was supported by King Saud University, Deanship of Scientific research, College of Food and Agriculture Sciences, Research Center, Saudi Arabia. Our thanks are due to Volker Puthz, Schlitz, for his assistance with the identification of *Schatzmayrina oxyclypea* and to Benedikt Feldmann, Münster, for proof-reading an earlier draft of the manuscript.



Fig. 12: Type locality of *Tachyporus saudicus* nov.sp.

Zusammenfassung

Die Bearbeitung von im südwestlichen Saudi-Arabien gesammelten Material ergab mindestens 33 Staphyliniden-Arten, 16 davon wurden bis zur Art determiniert. Zehn beschriebene Arten werden erstmals aus Saudi-Arabien, eine davon erstmals auch aus Oman nachgewiesen. *Pinophilinus spinosus* ASSING nov.sp. (Paederinae: Pinophilini) und *Tachyporus saudicus* SCHÜLKE nov.sp. (Tachyporinae: Tachyporini) werden beschrieben, abgebildet und von anderen Arten ihrer Gattungen unterschieden. Typenmaterial von *P. schatzmayri* (KOCH 1934) wird revidiert und abgebildet. Eine Bestimmungstabelle der arabischen Arten der Gattung *Pinophilinus* EICHELBAUM 1908 wird erstellt. Die Verbreitung der arabischen *Pinophilinus*-Arten wird anhand einer Karte illustriert.

References

- ASSING V. (1999): A revision of the genus *Piochardia* HEYDEN, 1870 (Insecta: Coleoptera: Staphylinidae: Aleocharinae). — *Annalen des Naturhistorischen Museums in Wien* **101B**: 277-301.
- ASSING V. (2007): New species and additional records of Paederinae and Aleocharinae from Iran (Coleoptera, Staphylinidae). — *Deutsche Entomologische Zeitschrift* **54** (2): 179-193.
- ASSING V. (2008a): On the Cryptobiina of the Arabian peninsula (Coleoptera: Staphylinidae: Paederinae). — *Zootaxa* **1892**: 53-64.
- ASSING V. (2008b): On the taxonomy and zoogeography of some Palaearctic Paederinae and Xantholinini (Coleoptera: Staphylinidae). — *Linzer biologische Beiträge* **40** (2): 1237-1294.
- ASSING V. (2010): Four new species and additional records of Staphylinidae from Spain, primarily from the south (Insecta: Coleoptera). — *Linzer biologische Beiträge* **42** (2): 1105-1124.
- ASSING V. (2012): On the Staphylinidae of Socotra Island, Yemen (Insecta: Coleoptera). — *Linzer biologische Beiträge* **44** (2): 973-986.
- ASSING V. (2013): A revision of Palaearctic and Oriental *Rugilus*. III. Five new species from the Palaearctic region and additional records (Coleoptera: Staphylinidae: Paederinae). — *Linzer biologische Beiträge* **45** (1): 171-190.
- ASSING V. & B. FELDMANN (2012): On the Staphylinidae of Israel (Insecta: Coleoptera). — *Linzer biologische Beiträge* **44** (1): 351-363.
- BESUCHET C. (1981): Insects of Saudi Arabia. Coleoptera: Fam. Pselaphidae. — *Fauna of Saudi Arabia* **3**: 243-250.
- BRUNDIN L. (1952): *Acrotona*-Studien. (Gattung *Atheta*, Col., Staphylinidae). — *Entomologisk Tidskrift* **73**: 93-145
- COIFFAIT H. (1979): Insects of Saudi Arabia. Coleoptera: Fam. Staphylinidae, Subfam. Xantholinae [sic], Staphylininae, Paederinae, Oxytelinae, Aleocharinae. — *Fauna of Saudi Arabia* **1**: 162-180.
- COIFFAIT H. (1981): Insects of Saudi Arabia. Coleoptera: Fam. Staphylinidae, Subfam. Xantholininae, Staphylininae, Paederinae, Oxytelinae, Aleocharinae (Part 2). — *Fauna of Saudi Arabia* **3**: 236-242.
- COIFFAIT H. (1982): Staphylinides nouveaux d'Arabie Saoudite. — *Bulletin de la Société d'Histoire Naturelle de Toulouse* **117**: 203-206.
- COIFFAIT H. (1985): Quatrième contribution à la connaissance des Staphylinides d'Arabie Saoudite (Coleoptera, Staphylinidae). — *Nouvelle Revue d'Entomologie (Nouvelle Serie)* **2** (4): 393-396.
- FRANZ H. (1979): Insects of Saudi Arabia. Coleoptera: Fam. Scydmaenidae. — *Fauna of Saudi Arabia* **1**: 181-183.
- GUSAROV V.I. (1997): Staphylinids (Coleoptera: Staphylinidae) from Saudi Arabia and Oman. — *Fauna of Saudi Arabia* **16**: 277-290.
- KOCH C. (1934): Wissenschaftliche Ergebnisse der entomologischen Expeditionen seiner Durchlaucht des Fürsten Alessandro C. della Torre e Tasso nach Aegypten und auf die Halbinsel Sinai. IV. Staphylinidae (Coleoptera). — *Bulletin de la Société Royale Entomologique d'Égypte* **1934**: 33-91.
- PACE R. (1991): Aleocharinae dello Yemen (Coleoptera, Staphylinidae). — *Bollettino del Museo Civico di Storia Naturale di Verona* **15** (1988): 125-150.
- PACE R. (1994): Aleocharinae della sottoregione africana orientale al Museo di Ginevra (Coleoptera, Staphylinidae) Parte I. — *Revue Suisse de Zoologie* **100** (4): 117-193.

- PACE R. (1998): Aleocharinae della China: parte IV (Coleoptera, Staphylinidae). — *Revue Suisse de Zoologie* **105** (4): 911-982.
- PUTHZ V. (1980): Insects of Saudi Arabia. Coleoptera: Fam. Staphylinidae, Subfam. Steninae. — *Fauna of Saudi Arabia* **2**: 112-113.
- PUTHZ V. (2007): First record of the euaesthetine genus *Schatzmayrina* KOCH in the Neotropics (Coleoptera: Staphylinidae). — *Mitteilungen des Internationalen Entomologischen Vereins Frankfurt a.M.* **32** (3/4): 83-88.
- SMETANA A. (2004): Staphylinidae, subfamilies Omaliinae–Dasycerinae, Phloeocharinae–Apaticinae, Piestinae–Staphylininae, pp. 237–272, 329–495, 505–698. — In: LÖBL I. & A. SMETANA (eds), *Catalogue of Palearctic Coleoptera. II. Hydrophiloidea–Histeroidea–Staphylinoidea*. — Stenstrup, Apollo Books: 942 pp.
- VIT S. (2006): Scydmaenini (Coleoptera: Scydmaenidae) of the Arabian Peninsula. — *Fauna of Arabia* **22**: 435-447.

Authors' addresses:

Dr. Volker ASSING
Gabelsbergerstr. 2
D-30163 Hannover, Germany
E-mail: vassing.hann@t-online.de

Michael SCHÜLKE
Blankenfelder Straße 99
D-13127 Berlin, Germany
E-mail: mschuelke.berlin@t-online.de

Drs Mostafa R. SHARAF & Abdulrahman S. ALDAWOOD
King Saud University
Riyadh 11451, PO box 2460, Saudi Arabia
E-mail: antsharaf@gmail.com