

A review of the Pselaphinae (Coleoptera: Staphylinidae) from Socotra Island

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Abstract. First records of the Pselaphinae (Staphylinidae) from Socotra Island, Yemen, are given. Three new species: *Epicaris bezdeki* sp. nov., *Trissemus socotranus* sp. nov. and *Centrophthalmus scanticola* sp. nov. are described. A new diagnosis of the genus *Epicaris* Reitter, 1882 is provided and a redescription is also given. The list of the Pselaphinae of Socotra Island is completed by records of *Articerodes syriacus* (Saulcy, 1865), *Ctenisomorphus major* (Raffray, 1877), and *Trissemus maroccanus wittmeri* Besuchet, 1981.

Key words. Coleoptera, Staphylinidae, Pselaphinae, *Centrophthalmus*, *Epicaris*, *Trissemus*, taxonomy, new species, new records, Yemen, Socotra

Introduction

Socotra is relatively large island in the Indian Ocean, lying some 240 kilometres east of the Horn of Africa and 380 kilometres south of the Arabian Peninsula. The island is very isolated with a high level of endemism, e. g., a third of its plant life is found nowhere else on the planet (for review see BATELKA 2012). The beetle fauna of the island is very poorly known in general (cf. HÁJEK & BEZDĚK 2012) and only 23 taxa of Staphylinidae identified to species level are known from the island (ASSING 2012, 2013; HLAVÁČ 2012; LÖBL 2012). No members of the subfamily Pselaphinae have been recorded from Socotra until now.

The aim of this paper is to provide the first report of the Pselaphinae of Socotra, thanks to the result of study of the material collected during more Czech biological expeditions to Socotra from 2001 to 2012.

Materials and methods

Dissections were made using standard techniques, and genitalia and other small structures were mounted in Euparal on acetate labels pinned together with the specimens. Leica S8APO and ZEISS microscopes were used for the study. Body length is a sum of head + pronotum + elytra + abdomen lengths, measured separately in dorsal view. Width of the head is measured across the eyes; width of the pronotum, elytra and abdomen is always the maximum width. Length of the elytra is measured along suture.

The material used in this study is deposited in the following collections:

- CULS Faculty of Forestry and Wood Sciences, Czech University of Life Sciences, Prague, Czech Republic (Jan Farkač);
 NMPC Národní muzeum, Prague, Czech Republic (Jiří Hájek);
 PHCP Peter Hlaváč collection, Prague, Czech Republic.

Other abbreviations: (p) – printed, ‘/’ indicates different label. All information about the distribution of known species follows BESUCHET & LÖBL (2004). All type specimens are provided with the following, red printed determination label: ‘Holotype’ or ‘Paratype’, ‘name of the taxon’, P. Hlaváč det. 2012.

Taxonomy

BRACHYGLUTINI

Trissemus maroccanus wittmeri Besuchet, 1981

(Fig. 1)

Material examined. 1 ♂: (p) ‘Yemen, Soqotra Is. 21.xi.-12.xii.2003, HADIBOH env., ca 10-100m, N12°65’02” E54°02’04” [GPS], David Král lgt. / (p) YEMEN – SOQOTRA 2003, Expedition: Jan Farkač, Petr Kabátek & David Král’ (NMPC).

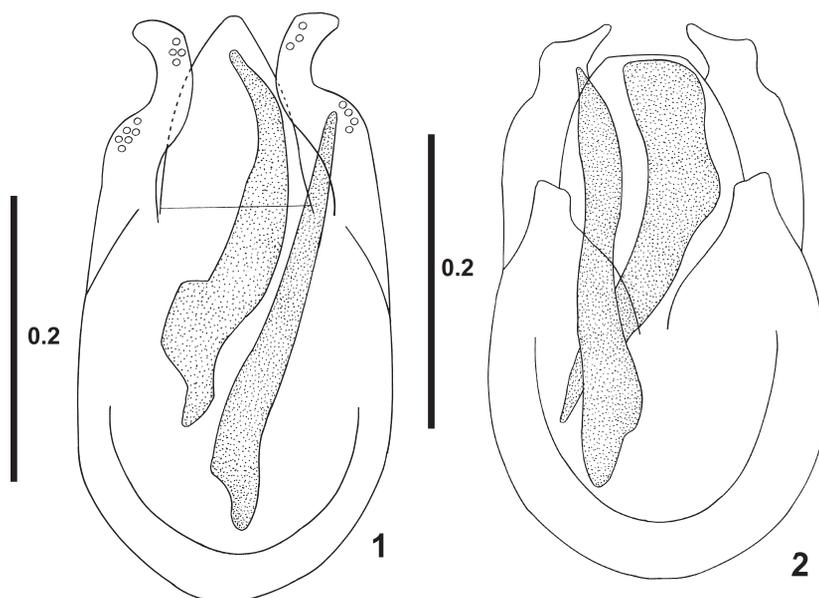
Notes. The specimen from Socotra is tentatively identified as *Trissemus maroccanus wittmeri* described from Saudi Arabia (BESUCHET 1981) due to its distribution. As stated in the original description, there is no external character supporting the new subspecies that was described based only on a slightly different structure of the aedeagus. These differences are quite small and may be intraspecific variation rather than a character appropriate to define different subspecies. That is supported also by the structure of the aedeagus of the specimen from Socotra, whose form is somewhat between the two known subspecies. It is highly likely that more material will prove that both subspecies are synonyms.

Distribution. Saudi Arabia, Yemen. **First record from Socotra Island.**

Trissemus socotranus sp. nov.

(Figs 2–5)

Type material. HOLOTYPE: ♂ (NMPC): (p) ‘YEMEN, Socotra, Aloove area, Hassan vill. env. 221 m, 12°31.2’N, 54°07.4’E, 9-10.xi.2010, P. Hlaváč, at light’. PARATYPES: 2 ♂♂, 1 ♀: same data as holotype (NMPC, PHCP); 1 ♂: (p) ‘YEMEN, Socotra, wadi Ayhaft, 12°36.5’N, 53°58.9’E, 200m, 7-8.xi.2010, J. Hájek leg.’ (NMPC); 4 ♂♂, 2 ♀♀: (p) ‘YEMEN, Soqotra Is., 2003, 2-3/xii., Dixam plateau, WADI ESGEGO, 300m, N12°28’09”, E54°00’36” [GPS], David



Figs 1–2. Aedeagus, dorsal aspect. 1 – *Trissemus maroccanus wittmeri* Besuchet, 1981; 2 – *Trissemus socotranus* sp. nov. Scale bars in mm.

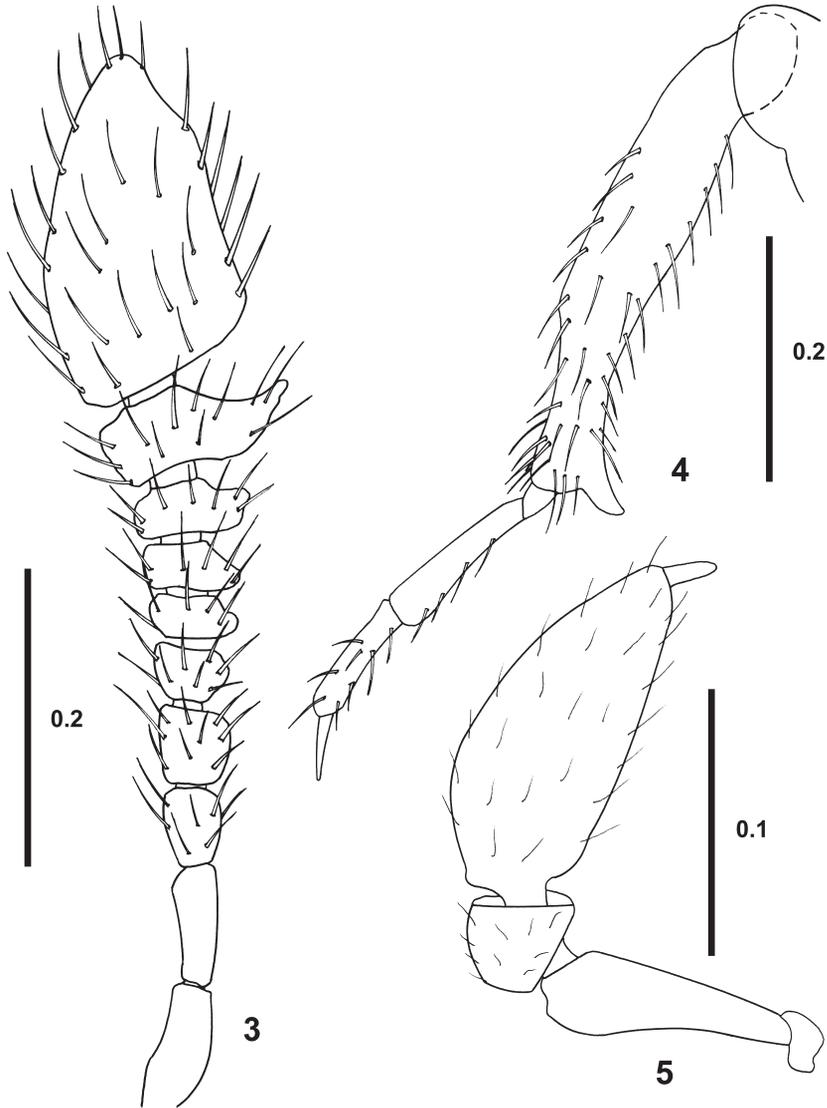
Král lgt. / (p) YEMEN – SOQOTRA 2003 Expedition; Jan Farkač, Petr Kabátek & David Král' (NMPC, PHCP); 1 ♂: (p) 'YEMEN, Soqotra Is., 21.xi.-12.xii.2003, HADIBOH env., ca 10-100m, N12°65'02", E54°02'04" [GPS], David Král lgt. / (p) YEMEN – SOQOTRA 2003 Expedition; Jan Farkač, Petr Kabátek & David Král' (PHCP); 1 ♂: (p) 'YEMEN, Soqotra Is., 28-29.xi. 2003, HOMHIL protected area, N12°34'27", E54°18'32" [GPS], Jan Farkač lgt. / (p) YEMEN – SOQOTRA 2003 Expedition; Jan Farkač, Petr Kabátek & David Král' (NMPC); 3 ♂♂, 2 ♀♀: 'YEMEN: Socotra isl., Ayhaft, 15.iii.2000, Leg. Bejček & Šťastný' (CULS, NMPC); 1 ♂, 'YEMEN: Socotra isl., Zerik, 25-27.iii.2001' (NMPC).

Description. Body shiny, pale yellowish-brown, maxillary palpi, antennae and legs lighter, yellow. Body length: 1.80–1.95 mm, width 0.82–0.85 mm, whole dorsum smooth, impunctate, with fine, short pubescence.

Head dorsally flattened, with large, subequal frontal and vertexal foveae, temples short, round; eyes very large, protuberant; maxillary palpi (Fig. 5) large, palpomere I transverse, II slightly pedunculate, III about as long as wide and about 0.35 times shorter than II, palpomere IV about 1.50 times as long as II and 2.30 times as long as wide, apical pseudosegment small, about 7.50 times shorter than palpomere IV. Antennae (Fig. 3) about 0.70 mm long, scape about as long as pedicel but more robust, pedicel about as long as III, antennomere III 1.50 times as long as IV, antennomere V as long as IV, both elongate, antennomeres V–X transverse, modified, all with more or less developed lateral projection, X almost three times as wide as long, terminal antennomere five times as long as X and more than twice as long as pedicel.

Pronotum about 1.25–1.35 times as wide as long and about 1.10 times as long as head, widest at mid-length, slightly convergent in basal half and shortly parallel before base, with pair of deep lateral foveae and smaller median antebasal fovea.

Elytra about 1.30–1.35 times as wide as long, with three laterobasal foveae, sutural and humeral foveae prolonged mesally by striae, humeral striae reaching apical quarter and sutural striae reaching apex of elytra.



Figs 3–5. *Trissemus socotranus* sp. nov. 3 – left antenna, antennomeres II–XI; 4 – left tibia and tarsus; 5 – left maxillary palpus. Scale bars in mm.

Abdomen slightly shorter and slightly narrower than elytra, first visible (IV) tergite about twice as long as second (V), with two short, oblique discal carinae almost reaching basal third of tergite length, distance between carinae 0.35 of basal width of tergite, paratergites IV–VI well-developed.

Legs. Mesotibiae (Fig. 4) with robust subapical spur.

Aedeagus as in Fig. 2.

Sexual dimorphism. Females similar to male, but with unmodified, simple antennae, and lacking robust subapical spur on mesotibiae.

Differential diagnosis. *Trissemus* Jeannel, 1949 with 175 species and 11 subspecies is one of the largest genera of the subfamily Pselaphinae. The regions closest to the island of Socotra, the Arabian Peninsula (12 taxa) and East Africa (27 taxa) are relatively species-poor compared to tropical Africa and Asia (114 taxa). Madagascar and South Africa host 16 species, and the rest of the Palaearctic region holds 17 species and subspecies (A. F. NEWTON & P. HLAVÁČ, unpublished data). *Trissemus socotranus* sp. nov. can be easily separated from all other species by: 1) modified structure of antennomeres VI–X in male; 2) first visible (IV) tergite about twice as long as second (V), with two short, oblique discal carinae almost extending through the basal third of tergite length, distance between carinae 0.35 of basal width of tergite, paratergites IV–VI well-developed; 3) mesotibiae with robust subapical spur; and 4) shape and structure of the aedeagus.

Etymology. Named after Socotra Island, place of the discovery of this species.

Collection circumstances. All specimens were collected at light in arid areas.

CLAVIGERINI

Articerodes syriacus (Saulcy, 1865)

(Figs 6–7)

Material examined. 2 ♂♂ 1 ♀: (p) ‘YEMEN, SOCOTRA, Al Haghier Mts., wadi Madar, 1180-1230 m 12°33.2’N, 54°00.4’E, 12-14.xi.2010, J. Batelka leg.’ (NMPC, PHCP).

Biology. This species usually lives with ants of the genus *Lasius* Fabricius, 1804 (JEANNEL 1949: 31). Socotran specimens have been collected on grassy slope in nests of *Lepisiota spinisquama* Kuznetsov, 1929 (B. Taylor det. 2010), which are found beneath stones.

Distribution. This species is known from a relatively large area (Ethiopia, Greece, Iran, Iraq, Israel, Lebanon, Tajikistan, Turkey, Uzbekistan). **First record from Socotra Island.**

CTENISTINI

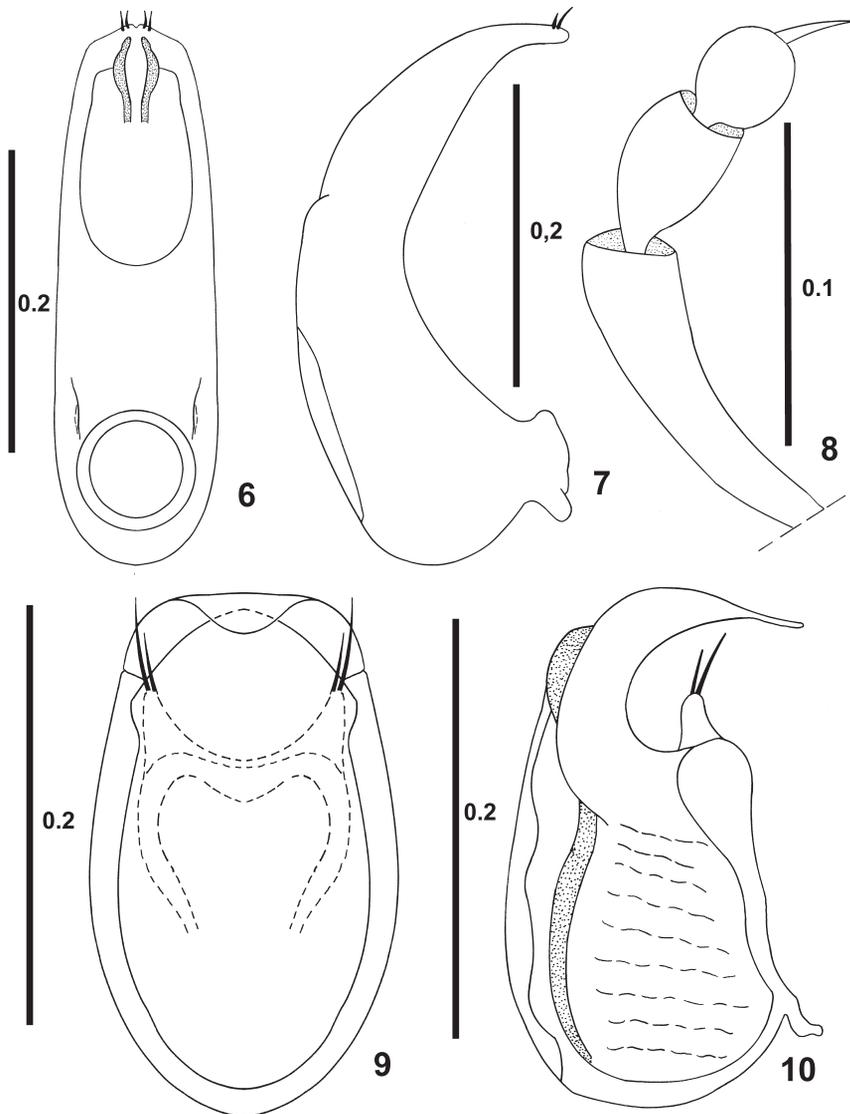
Epicaris Reitter, 1882

Epicaris Reitter, 1882: 202. Type species: *Tetraxis ventralis* Raffray, 1882, by monotypy; JEANNEL (1949): 192 (redescription); JEANNEL (1959): 627 (distribution).

Taphrophorus Schaufuss, 1882: 350. Type species: *Taphrophorus doriae* Schaufuss, 1882, by subsequent designation of JEANNEL (1949): 192; synonymized by RAFFRAY (1904): 361.

Diagnosis (extended due to the incorporation of the new species). Large sized pselaphine of the tribe Ctenistini characterized by the following characters: 1) body shiny, dorsally with squamous setae restricted to base of head and base of pronotum; 2) head ventrally with belt of squamous setae except where interrupted by gular carina, additional squamous setae

well-defined on mesoventrite, first (sternite III), and anterior and posterior parts of second (IV) abdominal ventrites; 3) head with very small frontal and vertexal foveae; 4) two pairs of trichomes present on apical corners of elytra; 5) antennal club trimerous, weakly defined, unmodified in males, scape and pedicel cylindrical, antennomeres III–X more or less conical, XI conical in basal half then taper to apex; 6) maxillary palpi varying from very small, not



Figs 6–10. 6–7 – *Articerodes syriacus* (Saulcy, 1865). 6 – aedeagus, dorsal aspect; 7 – aedeagus, lateral aspect. 8–10 – *Epicaris bezdeki* sp. nov. 8 – left maxillary palpus; 9 – aedeagus, dorsal aspect; 10 – aedeagus, lateral aspect. Scale bars in mm.

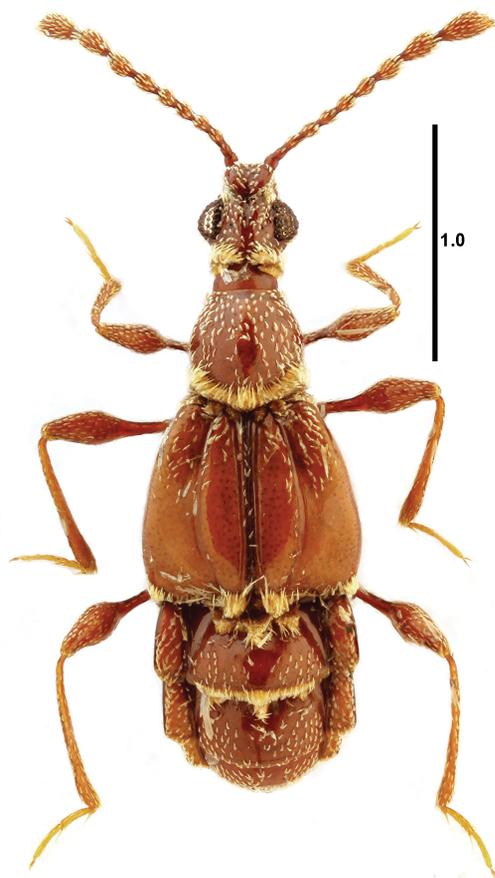


Fig. 11. *Epicaris bezdeki* sp. nov., habitus. Scale bar in mm.

visible dorsally and lacking lateral spines, to large, with transverse and spinose palpomeres III and IV; 7) abdomen with first and second (IV and V) visible tergites subequal.

Redescription. Body shiny, light reddish-brown, head and pronotum glabrous, with spatulate pubescence, elytra with uneven punctuation and sparse, spatulate pubescence, all tergites and paratergites with denser, spatulate pubescence.

Head slightly triangular, frontal rostrum prominent, antennal tubercles indistinct, frontal and vertexal foveae very small, puncture-like, with 11 antennomeres, antennal club weakly formed by apical 3 antennomeres, eyes large, longer than temples and prominent, gula with transverse posterior fovea, base of head with squamous setae.

Pronotum rhombic, longer than wide, with slightly swollen sides at middle, apex with band of squamous setae.

Venter shiny, with sparse pubescence, pubescence denser only on sides of metaventrite, metaventrite evenly convex with shallow median groove in apical half terminating at metaventral notch, metaventrite about three times as long as mesoventrite, pro- and mesocoxae contiguous, metacoxae separated by

median process of first abdominal ventrite (sternite III) bearing small fovea, and by metaventral notch on opposite side, second (IV) and third (V) ventrites equal in length, distinctly longer than first (III) and fourth (VI) ventrites.

Each elytron with two basal foveae, sutural and discal striae extending from fovea of origin to near elytral apex, with trichome on each apical corners.

Legs long and slender, femora pedunculate in apical half, tarsomeres II and III equal.

Abdomen with first and second visible tergites (IV–V) subequal, about twice as long as third visible tergite (VI), paratergites IV–VI well-defined.

Sexual dimorphism. Female without conspicuous differences in comparison with male.

Remarks to classification. The shape of the maxillary palpi used to be one of the most important characters to separate genera of the tribe Ctenistini (PARK 1942; JEANNEL 1949, 1959). Thus the placement of *E. bezdeki* sp. nov., with very reduced maxillary palpi that lack spines within

Epicaris could be seen as dubious. However, maxillary palpi are one of the most flexible and unstable body parts in the Pselaphinae. One of the evolutionary trends in the tribe Ctenistini seems to be towards diminution of the maxillary palpi (J. Parker, pers. comm. 2013). Four genera of Ctenistini have similarly reduced maxillary palpi, which are not visible in dorsal view: *Chennium* Latreille, 1807 (13 species in Palaearctic region from Spain to Turkmenistan and Uzbekistan), *Chenniopsis* Raffray, 1904 (1 species from Madagascar), *Atinus* Horn, 1868 (2 species from USA), and *Biotus* Casey, 1887 (1 species from USA). These genera, probably except for *Chenniopsis*, are myrmecophilous, which is also very probably the case of *Epicaris* due to the presence of trichomes on the elytra. Except for the form of the maxillary palpi, there are no other characters supporting the exclusion of *E. bezdeki* sp. nov. from *Epicaris*, and the diminution of the maxillary palpi of the three genera mentioned above, as well as in *E. bezdeki* sp. nov., could be simply a result of their adaptation to myrmecophily.

Epicaris bezdeki sp. nov.

(Figs 8–11)

Type material. HOLOTYPE: ♂ (NMPC): (p) 'YEMEN, SOCOTRA, Dixam plateau, Firmihin, (*Dracaena* forest), 490 m, 12°28.6'N, 54°01.1'E, 15-16.xi.2010, at light, J. Bezděk leg.' PARATYPES: 1 ♂: same data as holotype (PHCP); 8 ♂♂: 'Yemen, Socotra Island, Firmihin, 400-500m, N 12°28'27" E 54°0'54", 6-7.ii. 2010, at light, L. Purchart & J. Vybíral lgt.' (NMPC, PHCP); 1 ♂: (p) 'Yemen, Socotra Isl., Noked, Mokhar, 31.iii.2001, leg. V. Bejček & K. Šťastný' (NMPC); 1 ♂: (p) 'YEMEN, Soqotra Is., 2003, 2-3/xii., Dixam plateau, WADI ESGEGO, 300m, N12°28'09", E54°00'36" [GPS], David Král lgt. / (p) YEMEN – SOQOTRA 2003 Expedition; Jan Farkač, Petr Kabátek & David Král' (NMPC); 7 spec.: (p) 'YEMEN: Socotra isl., Vadi Faar, 1.iv.2001' (CULS, NMPC, PHCP); 3 spec.: (p) 'YEMEN: Socotra isl., Vadi Faar, 69 m, 12.433N, 54.195S, 3.xii.2000, Leg. Bejček & Šťastný' (NMPC); 3 spec.: (p) 'YEMEN: Socotra isl., Calantia, 29-30.iii.2001' (CULS, NMPC); 5 spec.: (p) 'YEMEN: Socotra isl., Zerik, 25-27.iii.2001' (CULS, NMPC, PHCP); 3 spec.: 'YEMEN: Socotra isl., Shoab, 10.iii.2000' (NMPC); 1 spec.: 'Yemen, Soqotra Is., 2.-3.xii.2003, Dixam plat.: Wadi Esgego, N 12°28'09" E 54°00'36", 300 m [GPS]; Jan Farkač lgt. / YEMEN – SOQOTRA 2003, Expedition; Jan Farkač, Petr Kabátek & David Král' (NMPC). 1 spec.: 'Yemen, Soqotra Island, Alooove area, ALOOVE vill. env., *Jatropha unicostata* shrubland, with *Boswellia elongata* trees, 19-20.vi.2012, 12°31,2' N, 54°07,4' E, 221 m / SOCOTRA expedition 2012, J. Bezděk, J. Hájek, V. Hula, P. Kment, I. Malenovský, J. Niedobová & L. Pulchart leg.' (NMPC).

Description. Body (Fig. 11) shiny, reddish-brown, length: 3.05–3.35 mm, width: 1.10–1.15 mm, unevenly and sparsely covered by spatulate pubescence.

Head about as long as wide or slightly longer than wide; maxillary palpi (Fig. 8) with palpomere II pedunculate, palpomere III cylindrical, about twice as long as wide and less than half of length of II, palpomere IV spherical, shorter than III, with long, acute apical pseudosegment; antennae long, about 1.35 mm long, scape twice as long as pedicel, pedicel smallest, 1.7 times as short as antennomere III, IV–VII subequal in length, about 1.3 times as long as III, VI and VII wider than VI and V, antennomere VIII slightly longer than VII, antennal club formed by apical three antennomeres, weakly defined, terminal antennomere 1.4 times as long as X.

Pronotum about as long as wide, slightly longer than head.

Elytra about 1.2 times as wide as long.

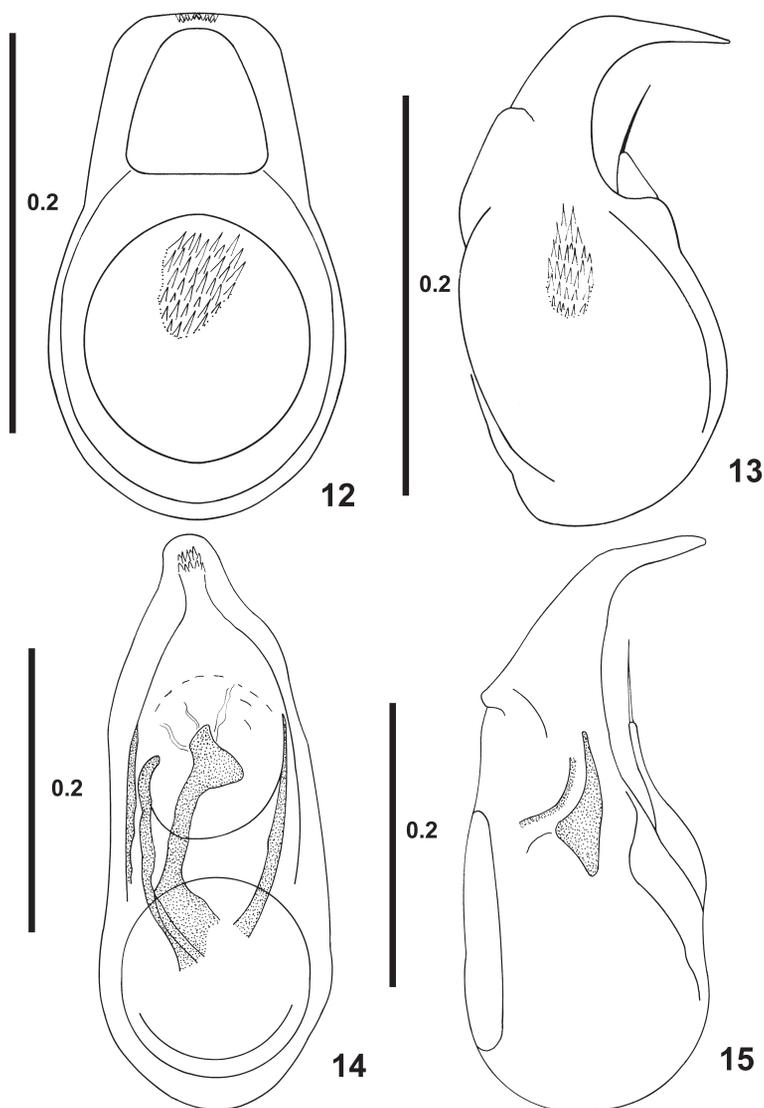
Abdomen 1.15–1.20 times as long as elytra.

Aedeagus as in Figs 9–10.

Differential diagnosis. *Epicaris bezdeki* sp. nov. differs from its congeners *E. ventralis* (Raffray, 1882) and *E. crassicornis* Raffray, 1913 by having very small maxillary palpi, that are not visible in dorsal view and which lack lateral spines.

Etymology. Named after our friend Jan Bezděk (Brno), well-known specialist on Chrysomelidae and the collector of the holotype.

Collection circumstances. All specimens were collected at light in an arid area. The presence of well-developed trichomes on the elytral apices indicates that this species is most probably a myrmecophile, a way of life that is quite common for many Ctenistini (PARK 1942, JEANNEL 1950, CHANDLER 2001).



Figs 12–15. 12–13 – *Ctenisomorphus major major* (Raffray, 1877). 12 – aedeagus, dorsal aspect; 13 – aedeagus, lateral aspect. 14–15 – *Centrophthalmus scanticola* sp. nov. 14 – aedeagus, dorsal aspect; 15 – aedeagus, lateral aspect. Scale bars in mm.

Ctenisomorphus major major (Raffray, 1877)

(Figs 12–13)

Material examined. 1 ex: (p) ‘YEMEN, SOCOTRA ISLAND, Delisha vill. 3 env. *Jatropha unicastata* shrubland, at light, 8.vi.2012, 12°41.2'N, 54°07.7'E, 36 m / SOCOTRA expedition 2012, J. Bezděk, J. Hájek, V. Hula, P. Kment, I. Malenovský, J. Niedobová & L. Purchart leg.’ (NMPC). 1 ♂: (p) ‘YEMEN, SOCOTRA, wadi Ayhaft, 12°36.5'N, 53°58.9'E, 200 m, 7-8.xi.2010, at light, P. Hlaváč lgt.’ (PHCP).

Distribution. This species is known from a large area in Africa and western Asia (Iran, Israel, Jordan, Saudi Arabia, Egypt, Turkey, Ethiopia, Algeria, Tunisia, Chad, Sudan, Eritrea, Kenya, Mauritania, Niger) (JEANNEL 1949). **First record from Socotra Island.**

TYRINI

Centrophthalmus scanticola sp. nov.

(Figs 14–15)

Type material. HOLOTYPE: ♂ (NMPC): (p) ‘YEMEN, SOCOTRA, Al Haghier Mts. [sifting], Scant Mt. env., 1450 m, 12°34.6'N, 54°01.5'E, 12-13.xi.2010, P. Hlaváč'. PARATYPES: 2 ♂♂, 4 ♀♀: same data as holotype (NMPC, PHCP); 2 spec.: ‘YEMEN: Socotra Isl., Hagher Mts., Wadi Madar, 18.vi.2012, 1170 m, montane shrubland with *Cephalocroton socotranus* / SOCOTRA expedition 2012, J. Bezděk, J. Hájek, V. Hula, P. Kment, I. Malenovský, J. Niebovová & L. Purchart leg.’ (NMPC).

Description. Body shiny, dark reddish-brown, maxillary palpi, antennae and legs slightly lighter, length: 2.00–2.10 mm, width about 0.80 mm, rather uniformly covered with long pubescence that is longer on humeral part of elytra and sides of posterior half of pronotum; median antebasal fovea of pronotum with bunch of long setae.

Head strongly triangular, about 1.30 times as wide as long; surface with uneven tubercles, with prominent frontal rostrum; antennal tubercles short and prominent, very close, separated by thin frontal sulcus; frontal fovea circular, much larger than small puncture-like, vertexal foveae; temples very strongly convergent posteriorly, with long and sharp spine projecting laterad; eyes prominent, composed of 7–9 facets; maxillary palpi large, palpomere II pedunculate, slightly longer than III, which is triangular and enlarged apicad, palpomere IV located in internal angle of palpomere III, palpomere III slightly more than twice as long as IV, apical pseudosegment acute, about three times shorter than palpomere IV; antennae about 1.00–1.05 mm long, scape three times as long as pedicel, pedicel as long as antennomere III, both 1.50 times as long as IV, antennomeres I–VII elongate except VI which is smallest and quadrate, VIII slightly longer than VII and about as long as wide, antennomeres IX and X transverse and modified, with lateral projection, IX slightly longer than X and about 1.50 times as wide as long, X twice as wide as long, terminal antennomere slightly more than 3 times as long as X and about as long as pedicel.

Pronotum about 1.15–1.20 times as wide as long and about 1.20 times as long as head, evenly covered with large tubercles, with large setose median and lateral foveae.

Venter shiny, posterior part of prosternum with dense, long setae, mesoventrite and metaventrite with about same median length, metaventral setose fovea present, metaventrite slightly convex, terminating in metaventral notch, procoxae contiguous, meso- and metacoxae separated, first (sternite III) and second (IV) abdominal ventrites with long, golden, dense setae, third ventrite (V) about as long as previous two together, with normal pubescence but lacking long, golden, dense setae.

Elytra about 1.70–1.80 times as wide as long, evenly covered with distinct tubercles.

Abdomen large, about 1.60–1.70 times as long as elytra and about 1.15 times wider than elytra, widest at posterior part of first (IV) visible tergite, second (V) visible tergite about 1.75 times as long as first (IV) tergite, both similarly tuberculate, paratergites IV–VI well-developed.

Legs with protibiae strongly curved at middle.

Aedeagus as in Figs 14–15.

Sexual dimorphism. Female slightly larger than male; antennomeres IX and X simple, lacking lateral projection.

Differential diagnosis. *Centrophthalmus* Schmidt-Göbel, 1838 is a large genus with 132 described species and 3 subspecies mainly distributed in tropical Africa (66 species) and the Oriental Region (30 species). The closest regions to the island of Socotra are the Arabian Peninsula (6 species) and East Africa (19 species), both being relatively species-poor (A. F. NEWTON & P. HLAVÁČ, unpublished data), although some other undescribed species from both regions are in the collection of the senior author. *Centrophthalmus scanticola* sp. nov. can be easily recognized from them by 1) having surface of head, pronotum, elytra as well as first two visible tergites with rough tubercles; 2) protibiae strongly curved at middle; 3) second (V) visible tergite about 1.75 times as long as first (IV) tergite; and 4) by the structure of aedeagus.

Etymology. The specific epithet meaning ‘inhabiting Scant’ is derived from the type locality, Mt. Scant, the highest peak of the Al Hagher Mts. and of Socotra Island.

Collection circumstances. All specimens of the new species were collected by sifting leaf-litter under various trees and bushes at altitudes 1170–1450 m, on the top of Hagher Mts.

Discussion

The Pselaphinae of Socotra show a clear similarity to the fauna of the Arabian Peninsula and the Horn of Africa (Eritrea, Ethiopia, Somalia and Kenya). There are 85 genera of pselaphines in this region including Socotra (A. F. NEWTON & P. HLAVÁČ, unpublished data), and 61 genera are restricted to only one destination. Only three genera, *Epicaris*, *Trissemus* and *Centrophthalmus* are known from the whole area. Other Socotran genera of the Pselaphinae, *Articerodes* Raffray, 1890 and *Ctenisomorphus* Raffray, 1890 are shared with the Arabian Peninsula. As a consequence of this study and together with the last contribution on the pselaphines of the United Arab Emirates (BESUCHET & CUCCODORO 2011), 164 species and subspecies of Pselaphinae are now known from the Horn of Africa, 82 from the Arabian Peninsula (A. F. NEWTON & P. HLAVÁČ, unpublished data), and five from Socotra Island (this paper).

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References

- ASSING V. 2012: On the Staphylinidae of Socotra Island, Yemen (Insecta: Coleoptera). *Linzer Biologische Beiträge* **44**: 973–986.
- ASSING V. 2013: A revision of Pseudobium IV. Three new species, a new synonymy, and additional records (Coleoptera: Staphylinidae: Paederinae). *Linzer Biologische Beiträge* **45**: 229–245.
- BATELKA J. 2012: Socotra Archipelago – a lifeboat in the sea of changes: advancement in Socotran insect biodiversity survey. Pp. 1–26. In: HÁJEK J. & BEZDĚK J. (eds.): Insect biodiversity of the Socotra Archipelago. *Acta Entomologica Musei Nationalis Pragae* **52 (Supplementum 2)**: i–vi + 1–557.
- BESUCHET C. 1981: Insects of Saudi Arabia. Coleoptera: Fam. Pselaphidae. *Fauna of Saudi Arabia* **3**: 243–250.
- BESUCHET C. & CUCCODORO G. 2011: Order Coleoptera, family Staphylinidae, Subfamily Pselaphinae. Pp. 151–167. In: HARTEN A. VAN (ed.): *Arthropod fauna of the United Arab Emirates, Volume 4*. Multiply Marketing Consultancy Services, Abu Dhabi, 816 pp.
- CHANDLER D. S. 2001: Biology, morphology, and systematics of the ant-like litter beetles of Australia (Coleoptera: Staphylinidae: Pselaphinae). *Memoirs on Entomology International* **15**: 1–560.
- HÁJEK J. & BEZDĚK J. (eds.): Insect biodiversity of the Socotra Archipelago. *Acta Entomologica Musei Nationalis Pragae* **52 (Supplementum 2)**: i–vi + 1–557.
- HLAVÁČ P. 2012: New species of Euconus, subgen. Euconophron (Coleoptera: Staphylinidae: Scydmaeninae) from Socotra Island. Pp. 135–139. In: HÁJEK J. & BEZDĚK J. (eds.): Insect biodiversity of the Socotra Archipelago. *Acta Entomologica Musei Nationalis Pragae* **52 (Supplementum 2)**: i–vi + 1–553.
- JEANNEL R. 1949: Les Pselaphides de l'Afrique orientale. *Mémoires du Muséum National d'Histoire Naturelle, Nouvelle Série* **29**(1): 1–226.
- JEANNEL R. 1950: Coléoptères psélaphides. *Faune de France* **53**: I–III + 1–421.
- JEANNEL R. 1959: Révision des psélaphides de l'Afrique intertropicale. *Annales du Musée Royal du Congo Belge, Série 8^{me} (Sciences Zoologiques)* **75**: 1–742.
- LÖBL I. 2012: Baeocera socotrana sp. nov., the first species of Scaphidiinae (Coleoptera: Staphylinidae) reported from Socotra Island. Pp. 141–145. In: HÁJEK J. & BEZDĚK J. (eds.): Insect biodiversity of the Socotra Archipelago. *Acta Entomologica Musei Nationalis Pragae* **52 (Supplementum 2)**: i–vi + 1–553.
- LÖBL I. & BESUCHET C. 2004: Subfamily Pselaphinae Latreille, 1802. Pp. 272–329. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palearctic Coleoptera. Volume 2. Hydrophiloidea – Histeroidea – Staphylinoidea*. Apollo Books, Stenstrup, 942 pp.
- PARK O. 1942: A study in neotropical Pselaphidae. *Northwestern University Studies in the Biological Sciences and Medicine* **1**: X + 403 pp + 21 pls.
- RAFFRAY A. 1882: Pselaphides nouveaux ou peu connus. 1^{er} mémoire. *Revue d'Entomologie* **1**: 1–16, 25–40, 49–64, 73–85 + pls. 1–2.
- RAFFRAY A. 1904: Genera et catalogue des Pselaphides. *Annales de la Société Entomologique de France* **73**: 1–400.
- REITTER E. 1882: Versuch einer systematischen Eintheilung der Clavigeriden und Pselaphiden. *Verhandlungen des Naturforschenden Vereines in Brünn* **20** (1881): 177–211.