

***Stomanomala subcostata* (Coleoptera: Scarabaeidae),
the first record of ruteline chafer from Socotra
Archipelago, Yemen**

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Abstract. *Stomanomala subcostata* (Fairmaire, 1887) is recorded from the Socotra Archipelago (Yemen) for the first time, it represents the only known Socotran ruteline chafer. The hitherto known distribution range of this species in Socotra Archipelago is summarized and its habitat preferences are briefly discussed.

Key words. Coleoptera, Scarabaeidae, Rutelinae, *Stomanomala*, new record, Abdel Kuri, Socotra, Yemen

Introduction

The Afrotropical ruteline genus *Stomanomala* Kolbe, 1897 currently contains the only species *S. subcostata* (Fairmaire, 1887). There is only a few published information about this species. It has been described under the name *Rhinyptia subcostata* Fairmaire, 1887 based on at least two specimens collected by French explorer and diplomat G. E. J. Révoil in northern Somalia (FAIRMAIRE 1887). Later on, FREY (1976) reported additional specimens from the Sar Uanle dune system in southern Somalia and synonymized *Stomanomala epistomatica* Kolbe, 1897, described originally from Zanzibar, with *Rhinyptia subcostata*.

To date, not any member of the subfamily Rutelinae was recorded from the Socotra Archipelago. Specimens of *S. subcostata* collected during several recent Czech and Lithuanian biological expeditions to Socotra in 2000–2012 considerably enlarged the known geographic area of this species, moreover they also represent new records of Rutelinae for the archipelago.

Material and methods

Altogether 96 specimens (see material below) were studied. Genitalia of three males were dissected for study. Material was examined with an Olympus SZ61 stereomicroscope. The habitus photographs were taken using a Canon MP-E 65mm/2.8 1–5× Macro attached to a Canon EOS 550D. Partially focused images of the specimen were combined using Helicon Focus 3.20.2 Pro software.

Exact label data are cited for the type material examined. Separate labels are indicated by double vertical bar ‘||’, lines within each label are separated by a single vertical bar ‘|’. Information in quotation marks indicates the original spelling. Our remarks and additional comments are placed in brackets, [p] – preceding data (within quotation marks) are printed; [h] – the same but handwritten. ST – syntype. Spelling of local Socotran geographical names follows BEZDĚK et al. (2012).

The following acronyms identify the collections housing the material examined (curators’ names are in parentheses):

IECA	Biology Centre CAS, Institute of Entomology, České Budějovice, Czech Republic (Aleš Bezděk);
MNHN	Muséum national d’Histoire naturelle, Paris, France (Antoine Mantilleri, Olivier Montreuil);
NMPC	National Museum, Praha, Czech Republic (Jiří Hájek);
RBINS	Institut royal des Sciences naturelles de Belgique, Bruxelles, Belgium (Wouter Dekoninck).

New records

Stomanomala subcostata (Fairmaire, 1887)

(Figs 1–7)

Rhinyptia subcostata Fairmaire, 1887: 123 (description), NONFRIED (1891): 347 (catalogue); OHAUS (1918): 156 (catalogue).

Rhinyptia (Pararhinyptia) subcostata: MACHATSCHKE (1957): 183 (subgeneric placement, catalogue), MACHATSCHKE (1972): 256 (catalogue).

Stomanomala subcostata: FREY (1976): 279 (generic placement).

Stomanomala epistomatica Kolbe, 1897: 86, figs 3, 3a (description, figures), MACHATSCHKE (1957): 138, plate 3, fig. 3 (catalogue, diagnosis, figures), MACHATSCHKE (1972): 216 (catalogue).

Stomanomala epistomalis [incorrect subsequent spelling]: OHAUS (1918): 121 (catalogue); FREY (1976): 279 (syn. of *S. subcostata*).

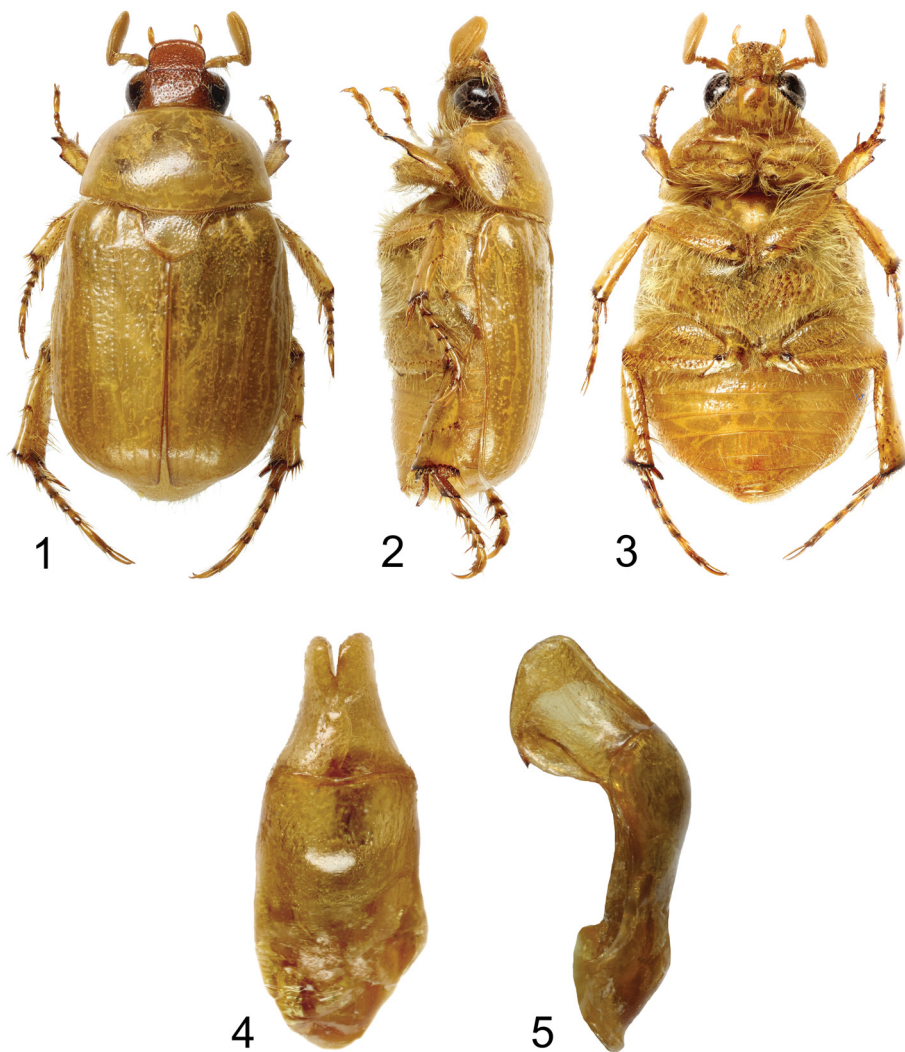
Type locality. *Rhinyptia subcostata*: ‘Somâlis nord’ [= North Somalia], *Stomanomala epistomatica*: ‘Sansibar’ [= Zanzibar Island].

Type material examined. *Rhinyptia subcostata*. SYNTYPES: ♂, labelled: ‘MUSEUM PARIS | SOMALI | G. RÉVOIL 1881 [p] || TYPE [p, red label] || 178 | 81 [hw, round label] || Rhinyptia | subcostata | Frm [hw] || Stomanomala | Kolbe [hw] | det. G. Frey, 197 [p]’ (MNHN); ♂, labelled: ‘MUSEUM PARIS | SOMALI | G. RÉVOIL 1881 [p] || TYPE [p, red label] || 178 | 81 [hw, round label] || Stomanomala | subcostata [hw] | det. G. Frey, 197 [p] 6 | Kolbe [hw]’ (MNHN).

Additional material examined (94 specimens). **YEMEN:** ABD EL KURI ISLAND: Towanie vill. env., 12°10’N 52°13’E, 25.–27.ii.2008, A. Saldaitis lgt., 71 ♂♂ (RBINS). **SOCOTRA ISLAND:** Shuab, 10.iii.2000, K. Šťastný & V. Bejček lgt., 1 ♂ (NMPC); Neet, x.2000, K. Šťastný & V. Bejček lgt., 6 ♂♂ (NMPC), 1 ♂ (RBINS); Shuab, cost line, mangroves, 24.iii.2009, A. Saldaitis lgt., 5 ♂♂ (RBINS); Erisseyl env., sand dunes, 18.i.2010, A. Saldaitis lgt., 1 ♂ (RBINS); Noked plain, Abatara, border of sand dunes and shrubland, 12°22.1’N 54°03.4’E, 20 m, 12.–13.vi.2012, Socotra expedition 2012, J. Bezděk, J. Hájek, V. Hula, P. Kment, I. Malenovský, J. Niedobová & L. Purchart lgt., 1 ♂ (NMPC); Halla area, Arher, freshwater spring in sand dune, 12°33.0’N 54°27.6’E, 5 m, 9.–10. + 15.vi.2012, Socotra expedition 2012, J. Bezděk, J. Hájek, V. Hula, P. Kment, I. Malenovský, J. Niedobová & L. Purchart lgt., 6 ♂♂ (NMPC, one specimen in pure alcohol), 2 ♂♂ (IECA).

Collection circumstances. As far as it is known, specimens were captured attracted to light (J. Bezděk, pers. comm.). All Socotran specimens examined by us were males and were strictly associated with coastal sandy areas (see Figs 6–7).

Distribution. Somalia (FAIRMAIRE 1887, FREY 1976), Tanzania: Zanzibar Island (KOLBE 1897), Yemen: Socotra Archipelago (this paper).



Figs 1–5. *Stomanomala subcostata* (Fairmaire, 1887), ♂, Socotra, Haala area, Arher (NMPC). 1–3 – habitus, 4–5 – aedeagus. 1, 4 – dorsal aspect, 2, 5 – lateral aspect, 3 – ventral aspect. Total body length – 12.5 mm, total aedeagus length – 2.6 mm.



Fig. 6. Sketch map of the Socotra Island with known distribution of *Stomanomala subcostata* (Fairmaire, 1887).



Fig. 7. Coastal sandy area near Shuab, Socotra, April 2012, habitat of *Stomanomala subcostata* (Fairmaire, 1887) (photo Jiří Hájek).

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References

- BEZDĚK J., PURCHART L., KRÁL K. & HULA. V. 2012: List of local Socotran geographical names used in entomological literature. Pp. 27–67. In: HÁJEK J. & BEZDĚK J. (eds): Insect biodiversity of Socotra Archipelago. *Acta Entomologica Musei Nationalis Pragae* **52 (Supplementum 2)**: i–vi + 1–557.
- FAIRMAIRE L. 1887: Coléoptères des voyages de M. G. Revoil chez les Somâlis et dans l'intérieur du Zanguebar. *Annales de la Société Entomologique de France, Série 6* **7**: 69–186.
- FREY G. 1976: Einige neue Ruteliden und Sericinen aus Ostafrika (Coleoptera Scarabaeidae). *Monitore Zoologico Italiano, Nuova Serie, Supplemento* **7**: 277–285.
- KOLBE H. J. 1897: Ueber die von Herrn Dr. F. Stuhlmann in Deutsch-Ostafrika und Mosambik während der Jahre 1888 bis 1890 gesammelten Coleopteren. *Mitteilungen aus dem Naturhistorischen Museum in Hamburg* **14**: 76–101 + 1 pl.
- MACHATSCHKE J. W. 1957: Coleoptera Lamellicornia, Fam. Scarabaeidae, Subfam. Rutelinae. Zweiter Teil. Pp. 1–219 + 5 pls. In: WYTSMAN P. (ed.): *Genera Insectorum. Fascicule 199B*. Crainhem, Quatre-Bras, 219 pp. + 5 pls.
- MACHATSCHKE J. W. 1972: *Coleopterorum Catalogus Supplementa. Pars 66, Fascicle 1. Scarabaeoidea: Melolonthidae, Rutelinae*. Dr. W. Junk, Gravenhage, 361 pp.
- NONFRIED A. F. 1891: Verzeichniss der Rutelidae beschrieben nach der Herausgabe des Münchener Kataloges. *Berliner Entomologische Zeitschrift* **36**: 347–358.
- OHAUS F. 1918: Pars 66: Scarabaeidae: Euchirinae, Phaenomerinae, Rutelinae. In: SCHENKLING S. (ed.): *Coleopterorum Catalogus. Volumen XX*. W. Junk, Berlin, 241 pp.