Scythridids of the Arabian Peninsula, III: Yemen – One new species and notes on some others (Lepidoptera: Scythrididae)

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Abstract. A new scythridid species from Yemen, *Scythris tephrella* **sp. n.**, is described and *Enolmis desidella* ssp. *saudita* P.d'E. is raised from subspecies to species rank. New information is supplied on some other species from the Arabian Peninsula.

Samenvatting. Scythrididae van het Arabisch Schiereiland, III: Jemen – een nieuwe soort en bemerking over enkele andere soorten (Lepidoptera: Scythrididae)
Een nieuwe Scythrididae soort wordt beschreven uit Jemen, *Scythris tephrella* **sp. n.**, en *Enolmis desidella* ssp. *saudita* P.d'E. wordt tot de soortrang verheven. Nieuwe informatie over enkele andere soorten uit het Arabisch Schiereiland wordt meegedeeld.

Resumé. Scythrididae de la Péninsule arabique, III: Yemen Une nouvelle espèce et des notes sur d'autres espèces (Lepidoptera: Scythrididae)
Une nouvelle espèce de Scythrididae de Yemen, *Scythris tephrella* **sp. n.**, est descrite, et *Enolmis desidella* ssp. *saudita* P.d'E. est élevé du rang de sous-espèce à espèce. Des renseignements nouveaux sont donnés concernant d'autres espèces de la Péninsule arabique.

Zusammenfassung. Eine neue Art aus Jemen, *Scythris tephrella* **sp. n.**, wird beschrieben, und den Rang des Taxon *Enolmis desidella* spp. *saudita* P.d'E. ist von Subspecies zu Species gehebt. Neue Angaben über einige anderen Arten aus dem Arabischen Halbinsel sind vorgestellt.

Key words: Scythrididae – *Scythris* – Yemen – taxonomy – faunistics.

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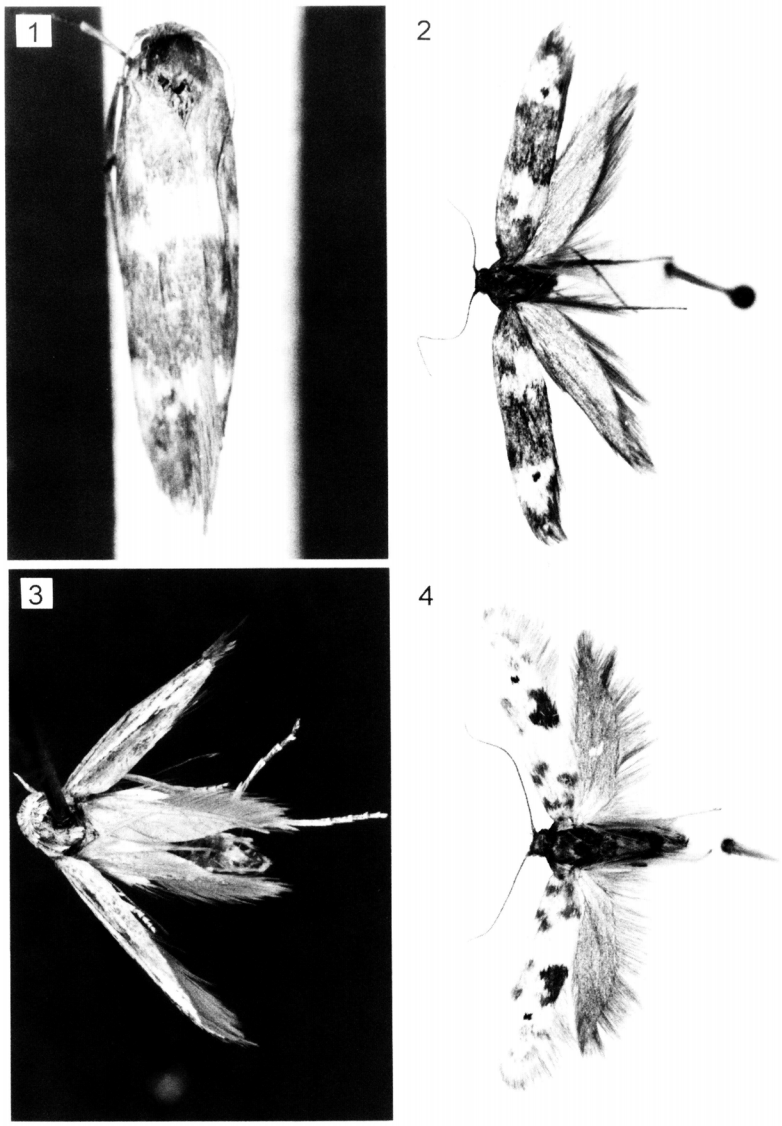
In recent years new information has been obtained with reference to the scythridid fauna of the Arabian Peninsula. Passerin d'Entrèves (1986) examined material from Saudi Arabia and described one new species and one subspecies of *Enolmis*. Later, Passerin d'Entrèves & Roggera (2004) described a new species of the genus *Apostibes*, and they also extended the known distribution area for some species from Saudi Arabia previously not known. From Oman, six new species were described along with the presentation of five other species from Oman that were recorded for the first time (Bengtsson 2002a). A large collection of scythridids from Yemen was examined by Bengtsson (2002b) and the outcome was no less than 39 species new to science.

Dr. Wolfram Mey, Humboldt-Universität zu Berlin, and Dr. Lauri Kaila, Finnish Museum of Natural History, kindly sent me additional material originating from Yemen. Some remaining scythridids from an earlier sending, generously provided by Mr. Ole Karsholt, Zoological Museum, University of Copenhagen, were still at my disposal, and are part of the account in this article. I owe these three colleagues a great debt for allowing me to examine the scythridid moths from which an entire new species and some additional interesting information about the scythridid fauna of the Arabian Peninsula were discovered. Finally, I want to thank Dr. Angela Roggero and Prof. Pietro Passerin d'Entrèves for letting me include 3 paratypes of *S. tephrella* **sp. n.** in the type series.



Figs. 1–4. Imagines of Scythrididae. **1**.– ***Enolmis arabica*** P. d'E., Yemen, 14.XI.1996, 14.46/49.13, Al Ain, Al Mukalla, 150 m, leg. H. Hacker, in coll. ZMHB [Berlin]; **2**.– ***Enolmis saudita*** P. d'E. **stat. nov.,** Yemen, Prov. Sana'a, Jabalan, Nabai Shu'ayb, SE side, 3450 m, 19.iv.1998, M. Fibiger leg., in coll. ZMUC [Copenhagen], (Genitalia on slide BÅB 777X); **3**.– ***Scythris tephrella*** sp. n. Holotype, Yemen, 14.XI.1996, 14.46/49.18, Al Ain, Al Mukalla, 150 m, leg. H. Hacker, in coll. ZMHB [Berlin], (Genitalia on slide BÅB 1008X); **4**.– ***Enolmis desidella*** (Stt.), Turkey, St. 2383, Adana 1700 m, 18 km N Saimbeyli, 6.VIII.1997, leg. W. De Prins, in coll. BÅB.

Enolmis arabica Passerin d'Entrèves, 1986

Enolmis arabica Passerin d'Entrèves: Lepidoptera: Fam. Scythrididae of Saudi Arabia (Part 1). — *Fauna of Saudi Arabia* **8**: 256–261.

The description of *Enolmis jemenesis* Bgts. (Bengtsson 2002b) was based on three females that both in the external appearance and in the genitalia deviated noticeably from all known species of the genus *Enolmis*. The wingspan of each specimen of the type material was only 10 mm, much less than in any other species, and the coloration of the forewing was unusually dark for an *Enolmis*. From another district of Yemen further *Enolmis* specimens have emerged that have proven to belong to *Enolmis arabica* Passerin d'Entrèves, 1986. The forewing coloration in these specimens (Fig. 1) is darker than the description indicates and the moths are in that respect similar to *E. jemensis*. However, the wingspan is 15–16 mm which better corresponds with what is stated by Passerin d'Entrèves (op cit.) for *E. arabica* (13.5–15 mm).

It is not unusual that the size of the male and female may differ considerably in some species of scythridids, but this is not particularly expressed in *Enolmis.* The still darker coloration in the forewing of *E. jemenensis*, compared to *E. arabica*, is a feature to consider, as well. These circumstances speak for retaining the two taxa as separate species until males and females of at least one of the species are found together.

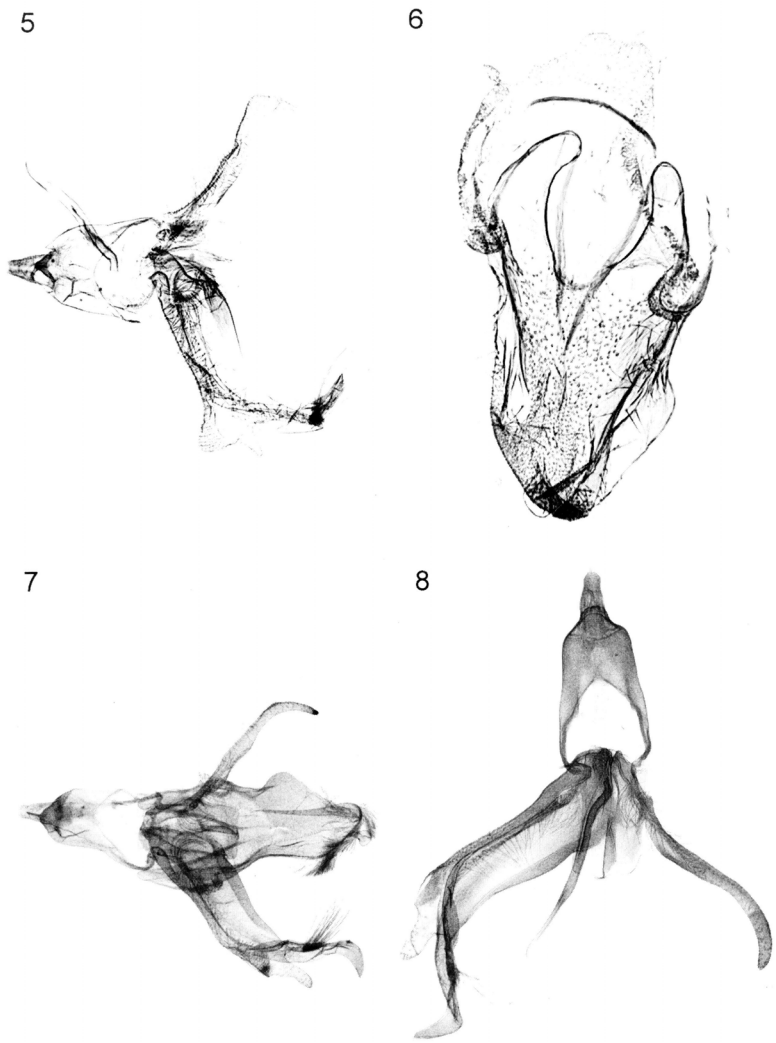
Examined material: 2♂, YEMEN, Sana'a, Sana'a, V.1992, R. Linnavori leg. In coll. NHMH [Helsinki]. One specimen with genitalia on slide BÅB 1020X (Figs. 11–12).

Distribution: Saudi Arabia (prov. 'Asīr); Yemen (prov. Sana'a). **New to Yemen**.

Enolmis saudita Passerin d'Entrèves, 1986 **stat. nov.**

Enolmis desidella ssp. *saudita* Passerin d'Entrèves: Lepidoptera: Fam. Scythrididae of Saudi Arabia (Part 1). — *Fauna of Saudi Arabia* **8**: 256–261.

This is one of the largest species in *Enolmis*. Passerin d'Entrèves (1986), basing his description on eight specimens, stated the wingspan to be about 17 mm. In his article he gave an accurate drawing of the male genitalia. Obviously the variation was small as he did not mention anything about this either regarding the genitalia or the external appearance. Although an apparent difference in the forewing markings between *Enolmis desidella* (Lederer, 1855) and *E. desidella saudita* P.d'E., 1986 may be noted, he refrained from describing a new species. Instead he considered the taxon to be a subspecies of *desidella*, obviously with some hesitation. The female is still unknown.



Figs. 5–8. Male genitalia of ***Enolmis desidella*** (Stt.). **5**.– Turkey, Prov. Mersin, 5 km NW Erdemli, 200 m, 16.VII.1986, leg. M. Fibiger, in coll. ZMUC [Copenhagen], (Genitalia on slide BÅB 441X); **6**.– Tergum 8 (top) and sternum 8 (bottom) of same specimen as in Fig. 5 (not in scale); **7**.– "Syria, Stgr.", in coll. ZMHB [Berlin], (Genitalia on slide Ha 54); **8**.– [Lebanon] "Beirut, Stgr. Typus", in coll ZMHB [Berlin], (Genitalia on slide Ha 204).

The wingspan of *E. desidella* usually falls below 16 mm while ssp. *saudita* regularly exceeds 17 mm. The forewing appearance is quite different, *saudita* by being of "normal" *Enolmis* type, having a dark brown, broad, central fascia covering almost a third of the wing area (Fig. 2). *E. desidella*, however, is frequently of *delicatella* type, exhibiting a white or dirty whitish forewing with small markings, of which the most prominent is a dark greyish or brownish dash at mid dorsum (Fig. 4). Occasionally specimens of *desidella* may have a similar wing pattern as *E. acanthella* (Godart, 1824) but never as dark as in *saudita*. *E. saudita* may also be confused with *E. gigantella* (Lucas, 1942), which is found in Morocco, but the dark pattern is richer brown in *gigantella*.

Some constant differences can be recognized in the genitalia, as well. In *saudita* (Figs. 9–10) the hind lobe at the tip of the left valva is longer and more slender, and the apical brush on the anterior lobe is located closer to the apex that lacks the distal, bent extension. At the base of the incision between the valva lobes there is an additional flap in *saudita*; this lobe is absent in *desidella* (Figs. 5–8). The eighth sternite (S8) is narrower even though in some specimens of *desidella* the sternal plate can be almost as narrow. At the tip of S8 the lateral protuberance is much more prominent in *saudita,* but only a small flap in *desidella*. Even though in exceptional cases slightly overlapping, all these differences point towards two different species, especially the very unlike external appearances. *E. saudita* is therefore considered a *bona species*.

Examined material: 1♂, YEMEN, Prov. Sana'a, Jabalan NabaiShu'ayb. SE side 3450 m. 19.iv.1998. M. Fibiger *et al*. Gen. prep. BÅB 777X. In coll. ZMUC [Copenhagen] – 1♂, Yemen, Prov. Sana'a, 6 km NW Suq Baw'an, 20.iv.1998, 3035 m, M. Fibiger *et al*. In coll. ZMUC [Copenhagen] – 1♂, YEMEN, Prov. Sana'a, Jabalan NabaiShu'ayb. SE side 3450 m. 20.iv.1998. M. Fibiger *et al*. Gen. prep. BÅB 4419. In coll. BÅB.

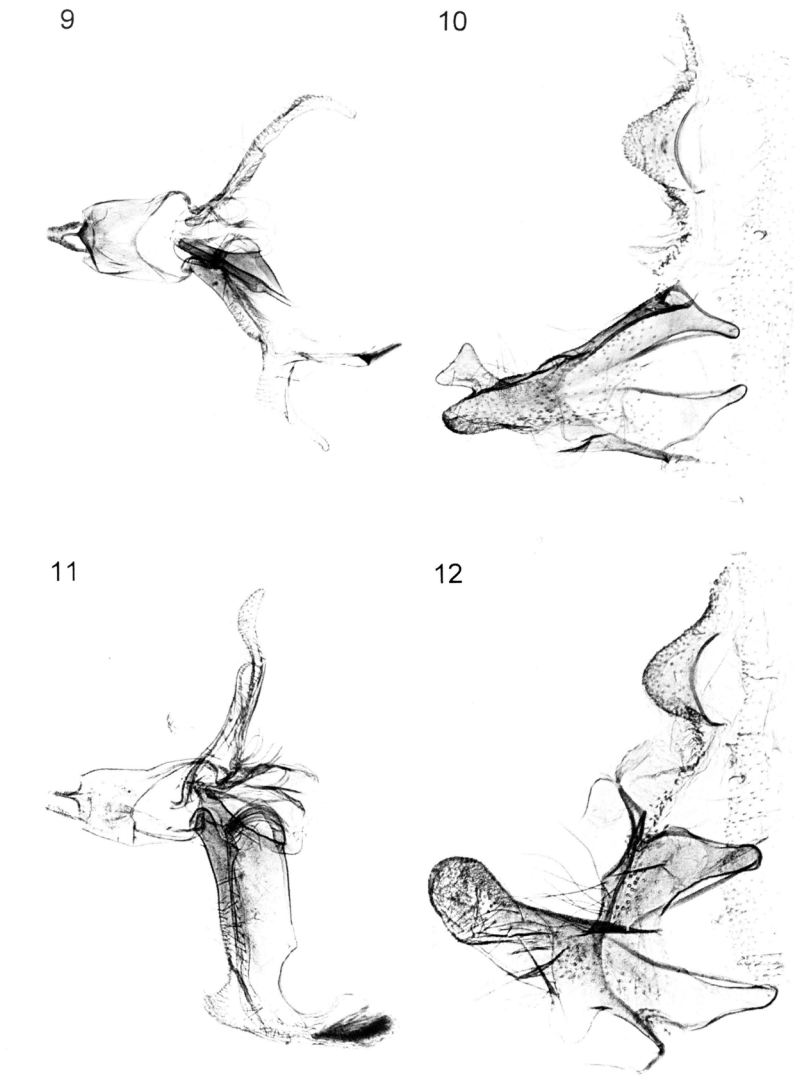
Distribution: Saudi Arabia (prov. 'Asīr), Yemen (prov. Sana'a). **New to Yemen**.

Scythris scyphella Bengtsson, 2002

Scythris scyphella Bengtsson: *Esperiana* **9**: 86.

The members of the *elachistoides* species-group are amongst the smallest scythridids, only having a wingspan of 5–8 mm. *S. scyphella*, one of five species in the group, was described on the basis of solely one female specimen (Bengtsson 2002b). Depending on how to assess the shape of aedeagus and segment 8, the *fibigeri* species-group, comprising four species, might be included in the *elachistoides* species-group.

All species are so far restricted to the Arabian Peninsula with the exception of one recently discovered but still undescribed species from Namibia (Bengtsson 2005). Now the male of *scyphella* has emerged and the genitalia are here described for the first time (Fig. 13–14).



Figs. 9–12. Male genitalia of *Enolmis* spp. **9**.– ***Enolmis saudita*** P. d'E. **stat. nov.,** Yemen, Prov. Sana'a, Jabalan, Nabai Shu'ayb, SE side, 3450 m, 19.iv.1998, M. Fibiger leg., in coll. ZMUC [Copenhagen], (Genitalia on slide BÅB 777X); **10**.– Sternum 8 (left) and tergum 8 (right) of same specimen as in Fig. 9; **11**.– ***Enolmis arabica*** P. d'E., Yemen, Sana'a, Sana'a, V.1992, R. Linnavori, in coll. NHMH [Helsinki], (Genitalia on slide BÅB 1020X); **12**.– Sternum 8 (left) and tergum 8 (right) of same specimen as in Fig. 11.

Description of the male: The external appearance of the male is similar to the female (see Bengtsson 2002b) and the male genitalia are characteristic for the group. The most typical genital features which in combination are separating *scyphella* from other species are 1) the shape of uncus which is laminar with a sclerotized, horseshoe-shaped rim, not converging anteriorly and with a flat hind margin without distinct, sharp corners, 2) gnathos a roundish, comparatively stout, callose sclerotization, 3) a strongly sclerotized structure, attached to the tegumen and sternum 8, short and cone-shaped, slightly differing in shape from other closely related species, and 4) sternum 8 subrectangular with shallow incurvation posteriorly. Aedeagus as in *elachistoides* Bengtsson, 2002, short, broad at base, tapered and bent in middle. Tergum 8 triangular, anteriorly concave.

Examined material: 5♂, YEMEN, 14.XI.1996, 14.46/49.13, Al Ain, Al Mukalla, 150 m, leg. H. Hacker. 2 males with genitalia on slides BÅB 1007X and BÅB 1008X. – 1♀, same data. Genitalia on slide BÅB 1009X. All specimens in coll. ZMHB [Berlin] except one male in coll. BÅB.

Distribution: Yemen (prov. Hadramaul = Hadramawt).

Scythris senecai Bengtsson, 1997

Scythris senecai Bengtsson: *Microlepidoptera of Europe* **2**, Scythrididae: 89.

Examined material: 2♂, YEMEN, 14.XI.1996, 14.46/49.13, Al Ain, Al Mukalla, 150 m, leg. H. Hacker. Genitalia of one male on slide BÅB 1001X. – 1♀, same data. Genitalia on slide BÅB 997X. One male in coll. BÅB, the rest in coll. ZMHB [Berlin].

Distribution: Iran, Libya, Syria and Yemen (prov. Hadramaul = Hadramawt). **New to Yemen**.

Scythris tephrella sp. n.

Holotype: ♂, YEMEN, 14.XI.1996, 14.46/49.13, 150 m, Al Ain, Al Mukalla, leg. H. Hacker. Genitalia on slide BÅB 1058X. In coll. ZMHB [Berlin].

Paratype: 1♂, data as in holotype. Genitalia on slide BÅB 982X. In coll. ZMHB [Berlin] – 2♂, SAUDI ARABIA, SW Arabia, Asir region, Wadi Tihama, 850 m, 23.IV.1979, Amsel leg. Genitalia on slides PdE 3313 and 3317 – 1♂, SAUDI ARABIA, SW Arabia, Wadi Maraba, 142 km N of Jizan, 350 m, 13.IV.1979, Amsel leg. Genitalia on slide PdE 3315. Last three paratypes in coll. MIZT [Torino].

Diagnosis. *Scythris tephrella* **sp. n**. may be mixed up with some pale ashgrey scythridid species with dark markings, in first place *S. nigrogrammella* Bgts. which only can be separated with certainty by dissection of the genitalia. The new species may also be confused with e.g. *S. valgella* Bgts. that on the other hand exhibits a conspicuous whitish streak along the fold; the similar scythridids *S. tessulatella* Rbl. and *S. cuneatella* Bgts. are considerably smaller though with analogous markings in the forewing. Other species with comparable forewing pattern have a browner hue or larger wingspan.

Imago (Fig. 3)**:** Wingspan 12-13 mm. Head, labial palpi and neck-tuft ivory with some slender, fuscous scales. Scape ivory with some fuscous scales and long pecten, flagellum pale brownish with cilia length about half flagellum diameter. Tegulae ivory with a broad stripe of fuscous scales and two very thin, all three stripes parallel to each other. Forewing ivory with several longitudinal, fuscous lines and streaks: in fold a thin line from base to a dark spot in midwing and a similar thin line on subcostal vein; on r_1 and less evident on the other radius veins dark scales as to form indistinct lines; on costa a thin line to 1/3 from base; a small dash above dorsum at 1/3. Fringe fuscous. Hindwing pale grey with brown tinge, especially distally, width 0.8 of forewing; fringe dirty beige or brown beige. Abdomen dorsally greyish beige, ventrally whitish and speckled with fuscous scales; anal tuft ivory.

Male genitalia (Fig. 15–16, regretfully with some clot contamination)**:** Uncus very large, at each side of deep, medial cleft a pair of slender, at tip widened lobes. At base of uncus a posteriorly directed membranous extension, at tip bifurcate and setose. Gnathos a large structure, laterally with lyre-shaped, symmetrical edging, distally fused by a slightly sclerotized plate with a medial peg. Tegumen wide, build up by narrow, bent sclerites. Valvae weakly sclerotized, digitate, broadly merged at base. Aedeagus rather long, slightly sinuate, tapered. Sternum 8 subtrapezoid, long, distally with pair of lateral horns, anterolaterally with long pedunculi; laterally a pair of setose flaps, e.g. as in *S. bagdadiella* Amsel, 1949, a species of which even have two pairs of lateral protrusions. Tergum 8 subtriangular, tip longly drawn out, anterior margin deeply inwardly bent. The genitalia are very similar to those of *S. nigrogrammella* Bgts. (see Bengtsson 2002b: Fig. 29–30) but valvae are more protruding, base of aedeagus is wider and uncus is longer and has bigger distal lobes, tergum 8 has a single extension while in *nigrogrammella* the tip is bifurcate.

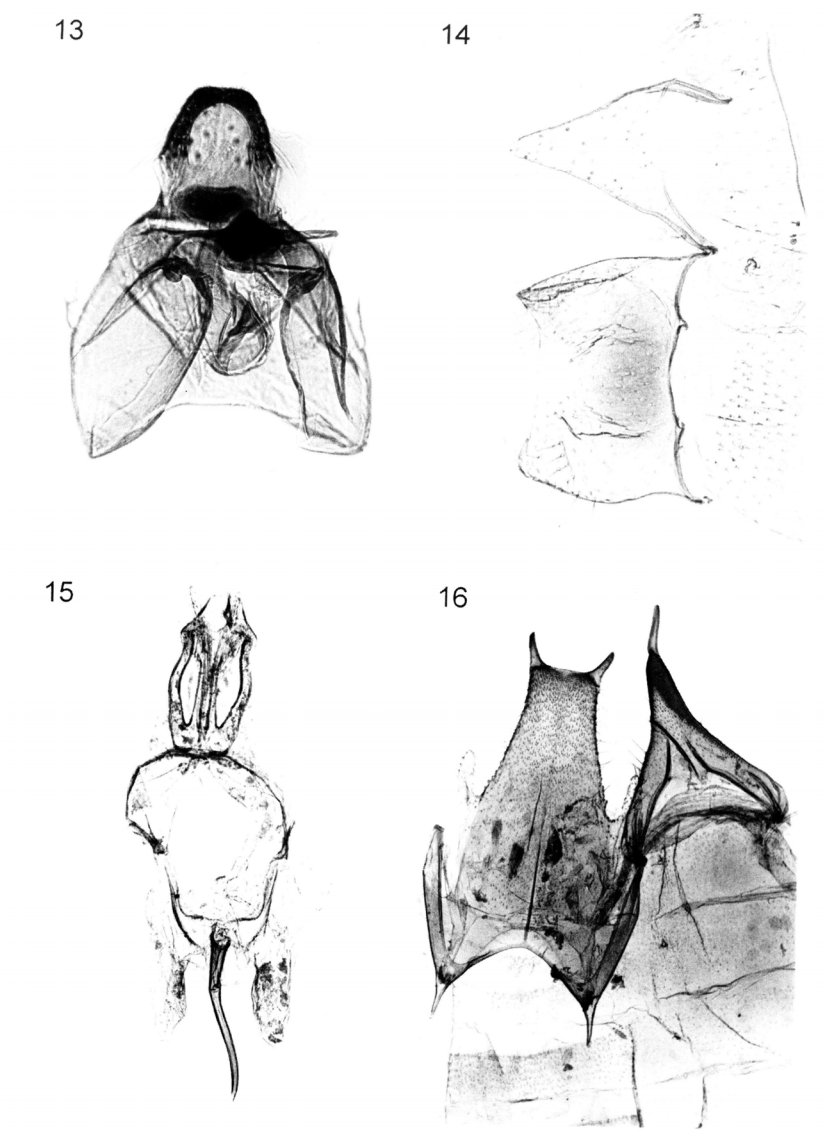
Female genitalia: Unknown.

Biology: Unknown. Imago appears in November.

Distribution: Known from the type locality, Yemen (prov. Hadramaul = Hadramawt) and from Saudi Arabia (SW Arabia).

Etymology: To the naked eye the forewing looks pale ash-greyish (in Greek τέφρα ‘tephra’ = ash).

Note: The structure of the male genitalia indicates *S. tephrella* sp.n. to form a separate species-group together with *S. nigrogrammella* Bgts., also occurring in Yemen.



Figs. 13–16. Male genitalia of *Scythris* spp. **13**.– ***Scythris scyphella*** Bgts., Yemen, 14.XI.1996, 14.46/49.13, Al Ain, Al Mukalla, 150 m, leg. H. Hacker, in coll. ZMHB [Berlin], (Genitalia on slide BÅB 1008X); **14**.– Sternum 8 (left) and tergum 8 (right) of same specimens as in Fig. 13; **15**.– ***Scythris tephrella*** sp. n. Holotype, Yemen, 14.XI.1996, 14.46/49.18, Al Ain, Al Mukalla, 150 m, leg. H. Hacker, in coll. ZMHB [Berlin], (Genitalia on slide BÅB 1008X); **16**.– Sternum 8 (left) and tergum 8 (right) of same specimens as in Fig. 15.

Additional record from the Arabian Peninsula

Scythris (Catascythris) kebirella (Amsel, 1935)

Catascythris kebirella Amsel: *Veröff. dt. Kolon.-u.Übersee-Mus. Bremen* **1**:213.

Examined material: 4 males, UNITED ARAB EMIRATES, Ras al Khaimah, shore dunes, 6.IV.1990, leg. K. Mikkola. Genitalia of one male on slide BÅB 392X. – In coll. NHMH [Helsinki] and (one male) in coll. BÅB.

Distribution: Palaearctic Region: Iran, Israel, Saudi Arabia, United Arab Emirate (**new for this country**); Oriental Region: India; Ethiopic Region: Namibia (Bengtsson 2005).

References

Bengtsson, B. Å. 1997a: Scythridids found by H. Hacker in Pakistan 1988 and India 1992. — *Esperiana, Buchreihe zur Entomologie* **4**[1996]: 467–481.

Bengtsson, B. Å. 1997b: Scythrididae. — In: Huemer, P., Karsholt, O. & Lyneborg, L. (eds.): *Microlepidoptera of Europe* **2**: 1–301.

Bengtsson, B. Å. 1997c: Notes on interesting scythridids in the Zoological Museum, Helsinki, Finland (Lepidoptera, Scythrididae). — *Entomologica Fennica* **8**: 89–102.

Bengtsson, B. Å. 2002a. Scythridids of the Arabian Peninsula, I: Oman (Lepidoptera, Scythrididae). — *Phegea* **30**: 105–118.

Bengtsson, B. Å. 2002b. Scythridids of the Arabian Peninsula, II: Yemen (Lepidoptera, Scythrididae). — *Esperiana* **9**: 61–127.

Bengtsson, B. Å. 2005. Scythrididae. – In: Mey, W. (ed.): The Lepidoptera of the Brandberg Massif in Namibia. Part 1. — *Esperiana*, *Buchreihe zur Entomologie Memoir* **1**: 131–150.

Passerin d'Entrèves, 1986. Lepidoptera: Fam. Scythrididae of Saudi Arabia (Part 1). — *Fauna of Saudi Arabia* **8**: 256–261.

Passerin d'Entrèves, P. & Roggero, A., 2004. Four new species, a new synonymy and some new records of *Scythris* Hübner, [1825] (Gelechioidea: Scythrididae). — *Nota lepidopterologica* **26**(3/4): 153–164.