

## ***Scythris saarelai* sp. n. from southern Spain and further records of *Scythris mariannae* Bengtsson, 1991 with a new synonym (Lepidoptera: Scythrididae)**

**Kari Nupponen & Timo Nupponen**

Nupponen, K. & Nupponen, T. 1999: *Scythris saarelai* sp. n. from southern Spain and further records of *Scythris mariannae* Bengtsson, 1991 with a new synonym (Lepidoptera: Scythrididae). Entomol. Fennica 10: 161–166.

*Scythris saarelai* sp. n. is described from southern Spain. Three males and two females were collected by net in late March and early April 1998 on hot, dry slopes in two different localities. The small, dark moth is difficult to separate from many other scythridids without examining the genitalia.

Three further specimens (2♂♂, 1♀) of *Scythris mariannae* Bengtsson, 1991, a species previously known only by the male holotype, were found in Spain, prov. Malaga. The external appearance of these specimens differs from the habitus of the holotype. However, the male genitalia are identical. The examination of the female genitalia was showed that *Scythris annae* Bengtsson, 1997 syn. n. is a junior synonym of *S. mariannae*.

*Kari Nupponen, Miniatoritie 1 B 9, FIN-02360 Espoo, Finland*

*Timo Nupponen, Riilahdentie 5 D 15, FIN-02360 Espoo, Finland*

*Received 25 May, accepted 20 August 1999*

It is well-known that the western Mediterranean fauna is very rich in the family Scythrididae. During the last 20 years, tens of species have been described from this region. However, the scythridid fauna in southwestern Europe seems have been investigated mainly in the summer (June – August) in spite of good spring collecting results in the north African countries.

On 26.III. - 06.IV.1998, the second author of this article explored southern Spain. Among the collected material there were several interesting species of scythridids, like three specimens of *S. mariannae* Bengtsson, 1991 and a previously unknown species belonging to the *laminella* species-group. We describe the latter taxon here under the name *Scythris saarelai* sp. n.

### ***Scythris saarelai* sp. n.**

*Type material.* Holotype: ♂ (Fig. 1): Spain, prov. Malaga, Ronda 20 km NE, 800 m, 02.IV.1998, leg. T. Nupponen. In coll. T. & K. Nupponen. Paratypes: 1♂, 2♀: Same data as holotype; 1♂: Spain, prov. Malaga, Campillos 3 km S, 400 m, 30.III.1998, leg. T. Nupponen. Genitalia slides: K. Nupponen prep. no. 7/25.IV.1998, 4/10.V.1998, 7/03.I.1999. One further genitalia preparation preserved in glycerol. All paratypes in coll. T. & K. Nupponen.

*Etymology.* The species is dedicated to Mr. Esko Saarela, a Finnish entomologist who decisively helped us in our early stages of studying the microlepidoptera in the 1980's.

*Diagnosis.* *S. saarelai* is easily confused with other dark, small scythridids by the external appearance. It resembles most closely *S. laminella* (Denis & Schiffermüller, 1775) and dark speci-



Fig. 1. Imago of *Scythris saarelai* sp. n. – Up: male (holotype). - Down: male (paratype).

mens of *S. tributella* (Zeller, 1847). The paler scales on the forewing are easily chafed away. The absence of these scales gives an impression of a unicolorous blackish brown appearance in worn specimens. However, strongly curved valvae and a characteristic shape of sternum 8 and tergum 8 in the male genitalia separate this species from others. *S. tributella* has quite a similar male genitalia structure as *S. saarelai*, but it differs from the latter in many details: in *S. saarelai* aedeagus is thinner and much more longer, tegumen cup-shaped, uncus less reduced, valva longer, basally broader and terminally narrower, at tip with only a small flap instead of bird's bill as in *S. tributella*. Examination of the genitalia is essential for safe determination of *S. saarelai*. In male specimens it is possible to get important parts of organs visible by removing the terminal scales of the abdomen.

*Description.* Wingspan 9 - 10 mm. Head, neck tuft, thorax and forewing dark brown with very

faint purplish hue. In apical part of forewing several paler brownish scales, forming an indistinct tornal spot and terminal fascia. Hindwing dark fuscous, paler than forewing. Antenna dark brown. Labial palp brown with numerous paler scales on 1st segment and upper surface of 2nd segment. Collar coloured as thorax, but with several paler brown scales. Abdomen in male dark brown with weak purplish tinge; in female dorsally dark fuscous, ventrally pale yellowish brown, darker at base. Legs dark fuscous, mixed with paler scales.

*Male genitalia* (Fig. 2, Fig. 3). Tegumen cup-shaped. Uncus broad, semicircular process, like extension of tegumen. Gnathos reduced. Aedeagus 0.9X length of valva, curved, tapered. Valva strongly curved, basally extended, apically with short longitudinal flap. Sternum 8 broad with anterior incurvation and two slightly tapered horns; between the base of horns short, rounded extension; in the middle of the plate symmetrically two small, horizontal flaps. Basal portion of tergum 8 broad, shaped like elephant's ears, anterior margin concave; posterior half thick, distally tapered, terminally narrow.

*Female genitalia* (Fig. 4). Sterigma subquadrate, shield-like plate with less sclerotized vertical line at middle; mid-posterior margin subtriangularly extended, incised; anterior margin with V-shaped medial incision; anterior part of



Fig. 2. Male genitalia of *Scythris saarelai* sp. n. (paratype).

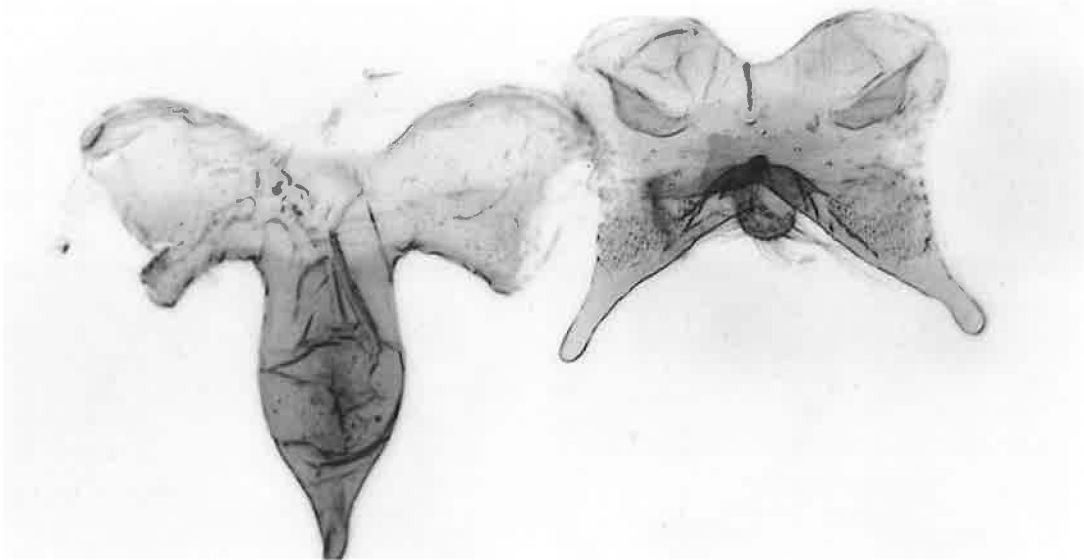


Fig. 3. Tergum 8 (left) and sternum 8 (right) of *Scythris saarelai* sp. n. (paratype).

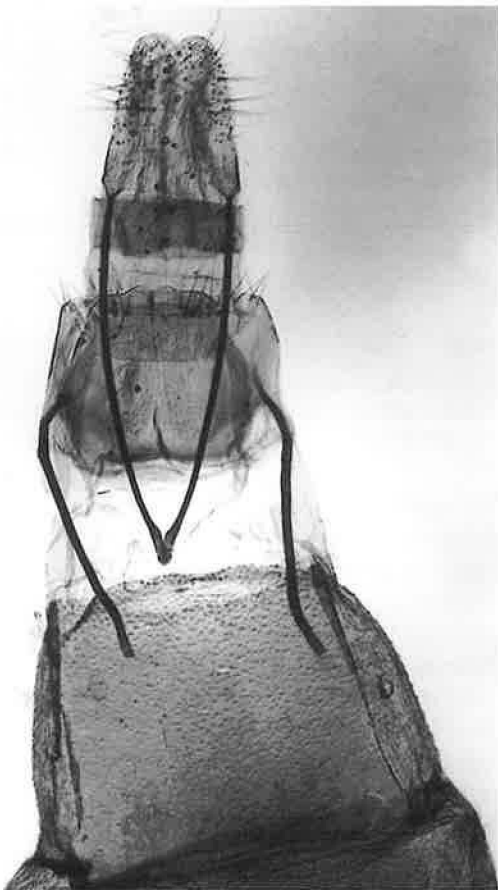


Fig. 4. Female genitalia of *Scythris saarelai* sp. n. (paratype).

lateral margins slightly swollen. Sternum 7 subquadrangular with shallow posterior incision. Apophyses anteriores 0.6 length of apophyses posteriores.

*Bionomy.* Specimens were swept in the afternoon sunshine on hot, dry, open slopes at an elevation of 400-800 m. The lower vegetation was typical for this kind of biotope: *Helianthemum*, *Lotus*, *Scleranthus* etc.. The adults occurred in late March and early April. The biology is unknown.

*Distribution.* The species is known only from prov. Malaga in southern Spain. The two known localities were alike, which may indicate that the species is local, but widely distributed in southern Spain.

*Remark.* There are several small, dark scythridids occurring in the same area simultaneously with *S. saarelai*. In particular a moderately variable *S. ventosella* Chrétien, 1907 occurs in considerable numbers causing determination problems in the field. Therefore the new taxon may have been overlooked.

***Scythris mariannae* Bengtsson, 1991**

*Scythris annae* Bengtsson, 1997 syn.n.

*Material* (Fig. 5). Spain, prov. Malaga, Campillos 3 km S, 400 m, 30.III.1998 1♂, 1♀ in copula, 02.IV.1998 1♂, leg. T. Nupponen. Genitalia slides: K. Nupponen prep. no. 6/25.IV.1998 (♂), 3/10.V.1998 (♀).



Fig. 5. Imago of *Scythris mariannae* Bengtsson. - Up: male. - Down: female.

The description of *S. mariannae* is based on a single male collected in prov. Granada, southern Spain on 19.VI.1989 (Bengtsson 1991). In late March and early April 1998, three further specimens were found in prov. Malaga, about 150 km west of the type locality on a dry slope at an elevation of 400 m. The specimens were swept in the afternoon simultaneously with *S. saarelai*.

The examination of the characteristic female genitalia (Fig. 6) of *S. mariannae* produced a surprising result. The comparison with those of *S. annae* Bengtsson, 1997 was showed that they are identical. *S. annae* was recently described from southern France. The description is based on a single female collected in Ht. Prov, Beauverey on 04.VIII.1985 (Bengtsson 1997). This specimen is smaller (wingspan 9.5 mm) than the holotype of *S. mariannae* and with sharper whitish markings on the forewing. The external appearance of the further Spanish specimens is quite different from both *mariannae* and *annae* holotypes. The forew-

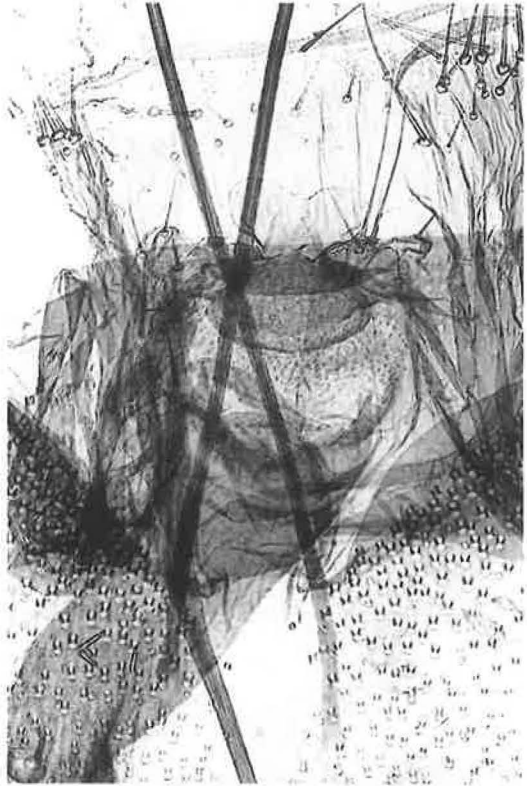


Fig. 6. Female genitalia (sterigma) of *Scythris mariannae* Bengtsson.

ing in all three specimens is unicolorous blackish brown, very faintly glossy and they are also somewhat larger (wingspan 11.5-13 mm). However, the male genitalia are identical with those of the holotype of *S. mariannae*. Thus, *S. mariannae* is habitually a variable species, as the whitish markings on the forewing can be more or less indistinct or even absent. Furthermore, the ground colour of the forewing varies in different tones of dark brown. The external variation of the moths might be more clear between the isolated populations than inside a single population, but this cannot be confirmed until more material is available for study.

An interesting detail in the male genitalia (Fig. 7, Fig. 8) is a long row of thick, sharp spines in the terminal half of the aedeagus (Fig. 9), a feature appearing extremely seldom in the family Scythrididae. Such spines are also present in the aedeagus of the holotype, though not mentioned in the original description. In the genitalia slide of the holotype, the aedeagus is in a difficult position almost hiding the spines. In the photograph published in the description the spines are impossible to be observed.

The female abdomen is dorsally dark fuscous, faintly glossy, ventrally dark fuscous except 6th and 7th sternite and terminal scales yellowish white.

*S. mariannae* seems to be an early species. In addition of our spring records, the holotype has been taken in 19.VI.1989 on higher elevation (1500 m) in the north side of Pico Veleta (Bengtsson 1991). The late record from France may indicate that the species occurs in two generations. However, many scythridids have a long flying period.

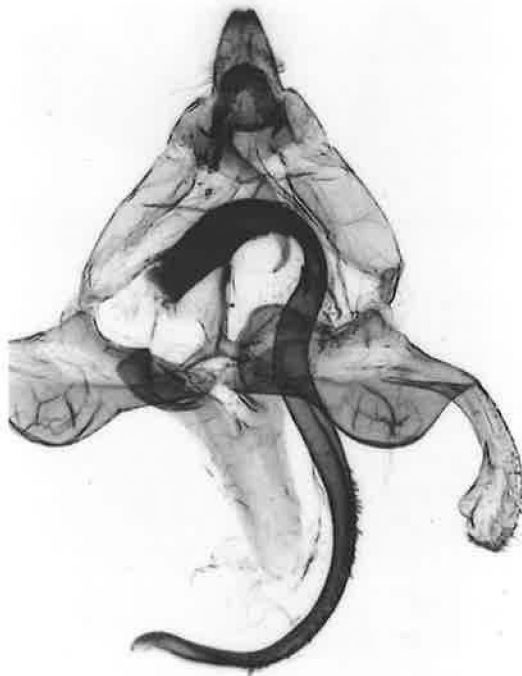


Fig. 7. Male genitalia of *Scythris mariannae* Bengtsson.

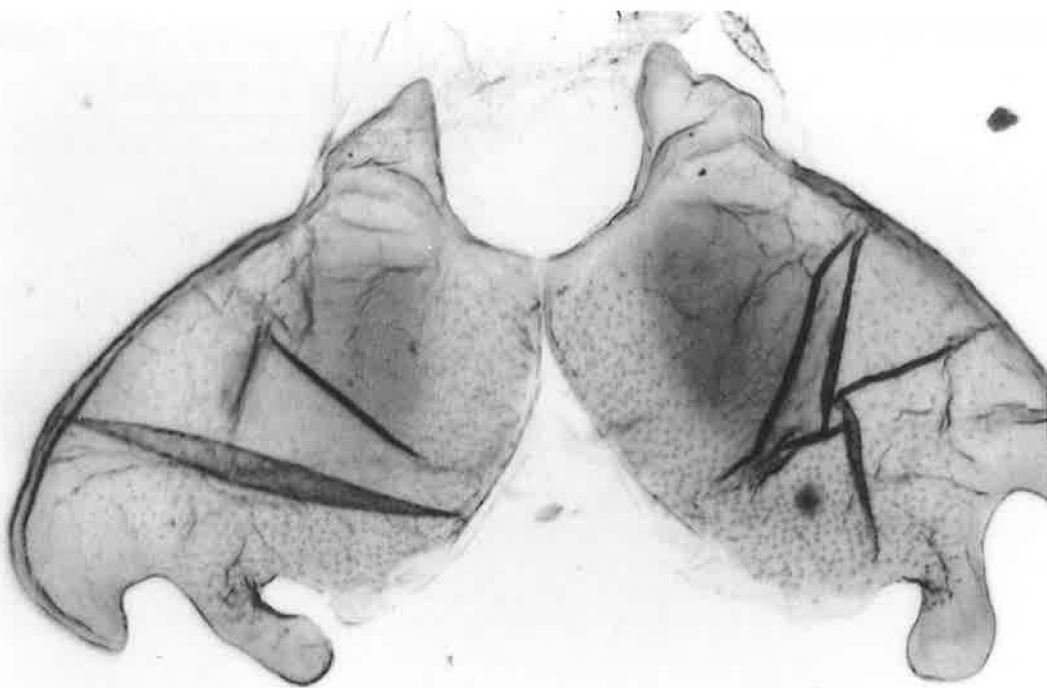


Fig. 8. Sternum 8 of *Scythris mariannae* Bengtsson.

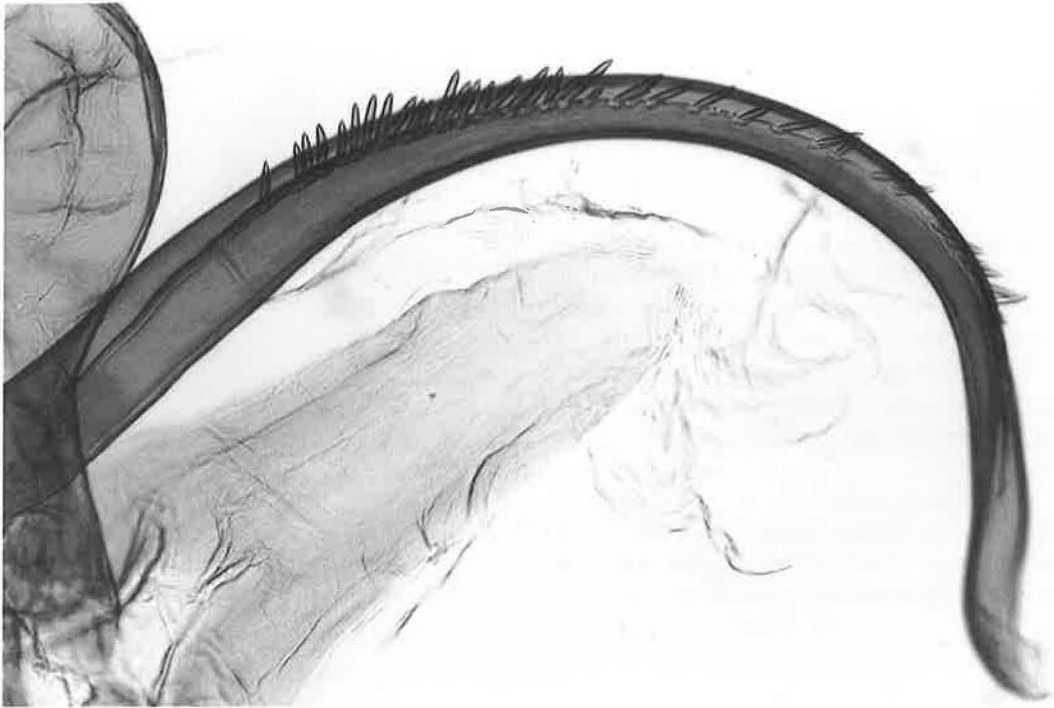


Fig. 9. *Scythris mariannae* Bengtsson. Terminal half of aedeagus.

*Acknowledgements.* We are grateful to Mr. Bengt Å. Bengtsson (Färjestaden, Sweden) for valuable advices and help in determination problems. Our thanks are also due to Mr. Kimmo Silvonen (Espoo, Finland) for his help in processing the imago photographs.

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