

Records of scythridids from Tunisia, with description of two new species (Lepidoptera: Scythrididae)

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A list of 13 species of the family Scythrididae collected during 29.IV.–04.V.2000 in Tunisia is presented. Two new species are described: *Scythris kefensis* sp. n. and *S. spectatorella* sp. n.. Both of them are small, dark moths belonging to the *subfasciata* species-group. *S. aciella* Bengtsson, 1997 and *S. azrouensis* Bengtsson, 1997 are recorded for the first time from Tunisia. Further notes on these and some other taxa are given.

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1. Introduction

During 29.IV.–04.V.2000, I had the opportunity to visit Tunisia to collect insects. The material — mainly microlepidoptera — was collected in the southwestern semidesert region and in the Atlas Mountains, both by artificial light and by netting at daylight. Despite windy weather, several interesting species were discovered. There were several remarkable records among the collected material, especially in the family Scythrididae, including two previously unknown species. The two taxa are described in this paper, and a list of recorded scythridids is presented. The nomenclature and order of species follow that of Bengtsson (1997).

2. List of scythridid species

2.1. *Scythris ventosella* Chretien, 1907

Tunisia, Atlas Mountains, Le Kef 15 km NNE near Nebeur village, rocky slope, 600 m, 1 ♂ 03.V.2000, K. Nupponen leg.

2.2. *Scythris scopolella* (Linnaeus, 1767)

Tunisia, Atlas Mountains, Le Kef 15 km NNE near Nebeur village, rocky slope, 600 m, 2 ♀♀ 03.V.2000, 1 ♂, 1 ♀ 04.V.2000, K. Nupponen leg.

2.3. *Scythris aciella* Bengtsson, 1997

Tunisia, Nefta 6 km W, Sahara semidesert, 50 m, 2 ♂♂ 29.IV.2000, K. Nupponen leg. One genitalia preparation preserved in glycerol.

Remarks. This taxon was previously known only by two male specimens (the type material) from Egypt and Lebanon. The species seems to exhibit variation in forewing markings: Both Tunisian specimens appear to be more mottled than the holotype, the darker one having five dark spots around the fold and a band of dark scales on the termen (Fig. 1). However, such variation also occurs in the type material (Bengtsson, 1997). The Tunisian specimens were collected by artificial light just after dark. The habitat was a semidesert near a salt lake of Schott El Jerid. In the original description of *S. aciella* (Bengtsson 1997: p. 56 and fig. 47) the VIII sternal and tergal plates are



Fig. 1. Imago of *Scythris aciella* Bengtsson, 1997.

mixed up. The taxon might belong to the *canescens*-group instead of the *pascuella*-group, based on its external appearance and details in the male genitalia, such as the shape of sternum VIII and a longitudinal fold of valva. Furthermore, the moth is night-active like most species in the *canescens*-group. New to Tunisia.

2.4. *Scythris dissitella* (Zeller, 1847)

Tunisia, Atlas Mountains, Le Kef 40 km SE near El Ksour village, meadow close to chalk mine, 800 m, 3 ♂♂, 1 ♀ 02.V.2000, 1 ♂, 1 ♀ 04.V.2000, K. Nupponen leg.

2.5. *Scythris articulatella* Chretien, 1915

Tunisia, SW, Nefta 6 km W, Sahara semidesert, 50 m, 1 ♀ 29.IV.2000, K. Nupponen leg. Genitalia preparation preserved in glycerol.

Remarks. The specimen is larger in size (wing-span 14.5 mm) than the specimens mentioned in the available literature. However, the genitalia are identical to those of *articulatella*.

2.6. *Scythris cupellella* Bengtsson, 1997

Tunisia, SW, Nefta 6 km W, Sahara semidesert, 50 m, 3 ♂♂, 1 ♀ 29.IV.2000, K. Nupponen leg.

2.7. *Scythris curllettii* Bengtsson, 1997

Tunisia, SW, Nefta 6 km W, Sahara semidesert, 50 m, 2 ♂♂ 29.IV.2000, K. Nupponen leg.

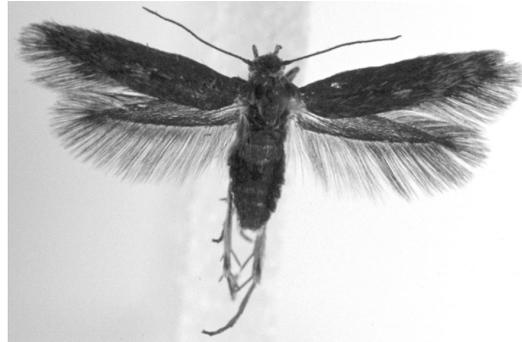


Fig. 2. Imago of *Scythris azrouensis* Bengtsson, 1997.

Tunisia, SW, Gafsa–Tozeur road, Tozeur 50 km NNE, rocky hills, 100 m, 3 ♂♂, 3 ♀♀ 29.IV.2000, 1 ♂ 30.IV.2000, K. Nupponen leg.

Remark. The specimens were flying rapidly very low on a rocky slope before sunset and later came to artificial light.

2.8. *Scythris pediculella* Bengtsson, 1997

Tunisia, SW, Nefta 6 km W, Sahara semidesert, 50 m, 1 ♂ 29.IV.2000, K. Nupponen leg.

2.9. *Scythris tessulatella* Rebel, 1903

Tunisia, SW, Nefta 6 km W, Sahara semidesert, 50 m, 2 ♂♂, 1 ♀ 29.IV.2000, K. Nupponen leg.

2.10. *Scythris azrouensis* Bengtsson, 1997

Tunisia, Atlas Mountains, Le Kef 35 km SSW, near Tajerouine village, rocky slope 800 m, 2 ♂♂ 03.V.2000, K. Nupponen leg. (Fig. 2). Genitalia slide: K. Nupponen prep. no. 1/27.V.2000.

Remarks. The species was previously known only by two specimens (the type material) from Morocco in the western part of the Atlas Mountains. Two further specimens were collected by sweeping on the rocks at 11 a.m. Both of them are more unicolorous than the male holotype. New to Tunisia.

2.11. *Scythris kefensis* sp. n.

Type material. Holotype: ♂ (Fig. 3): Tunisia, At-



Fig. 3. Imago of *Scythris kefensis* sp. n. (male, holotype).

las Mountains, Le Kef, chalk slope 800 m, 03.V.2000, K. Nupponen leg. In coll. T. & K. Nupponen. Paratypes (1 ♂, 1 ♀): 1 ♂ Tunisia, Atlas Mountains, Le Kef–Kairouan road 99–73 km, Haffouz village 15 km NW, rocky slope 600 m, 02.V.2000, K. Nupponen leg. 1 ♀ Tunisia, Atlas Mountains, near Teboursouk village, rocky slope 800 m, 03.V.2000, K. Nupponen leg. (Fig. 4). Genitalia slides: K. Nupponen prep. no. 2/27.V.2000, 3/27.V.2000. Both paratypes in coll. T. & K. Nupponen. The type specimens can be loaned on request from the Finnish Museum of Natural History, University of Helsinki or directly from the author.

Diagnosis. Habitually *S. kefensis* sp. n. can be confused with several other small, dark scythridids, for example *S. subfasciata* (Staudinger, 1880) and *S. levantina* Passerin d'Entrèves & Vives, 1990, but usually the forewing markings are paler. The male genitalia are typical for the *subfasciata*-group, the specific characters being triangular extensions in the terminal tips of uncus and distally widely bifurcate tergum VIII. In the female genitalia, the triangular sterigma is characteristic. In male specimens it is possible to get important parts of organs visible by removing the terminal scales of the abdomen.

Description. Wingspan 9–9.5 mm. Head, tegula and thorax dark brown. Collar brown. Neck tufts pale brown. Antenna dark brown, scape and flagellum mixed with paler scales. Haustellum brown with scattered pale scales. Labial palp: segment I and upper surface of segment II whitish grey, segment III and lower surface of segment II dark brown. Legs: femur whitish grey; tibia



Fig. 4. Imago of *Scythris kefensis* sp. n. (female, paratype).

brown, more or less mixed with paler scales; tarsus dark brown. Abdomen in male dorsally fuscous, ventrally pale fuscous, anal tuft whitish grey; in female dorsally fuscous, ventrally whitish grey. Forewing dark brown, basal half of costal area slightly paler. The following pale cream-coloured markings are present: dash at hind margin before tornus extending just over fold; terminal fascia from costa to termen. Cream-coloured scattered scales occurring also in fold and basally at dorsum. Hindwing dark fuscous.

Male genitalia (Figs. 5–6): Uncus large, roundish plate, posteriorly with widely U-shaped median incision, distal tips triangularly extended. Gnathos with two stout basal arms; terminal portion thick, slightly furrowed, distally tapered, tip slender, bent and pointed. Aedeagus 0.8× length of valva, moderately slender, basally extended, at 0.6 strongly curved, distal 0.4 tapered, tip pointed. Valva digitate, rather broad at base, tip rounded. Sternum VIII subtrapezoid, distally bifurcate, prongs rather thick, slightly diverging; anterior margin with wide, U-shaped median incision and two robust, tapered, digitate processes with small process at tip. Tergum VIII subtriangular, distally bifurcate, prongs long and slender; anterior margin deeply concave; lateral margins sclerotized, anteriorly with rounded process.

Female genitalia (Fig. 7): Sterigma funnelled, posterior margin uneven; around sterigma fine folded membrane, mid-anteriorly with narrow transverse sclerotization. Sternum VII rectangular. Apophyses anteriores 0.6× length of apophyses posteriores.

Bionomy. The type material was swept in the afternoon sunshine on hot, dry, open slopes at an elevation of 600–800 m. All of the three localities



Fig. 5. Male genitalia of *Scythris kefensis* sp. n. (paratype).

were rocky slopes with sparse vegetation. The adults occurred in early May. The biology is unknown.

Distribution. The species is only known from Tunisia, Atlas Mountains around the town of Le Kef.

Etymology. The species name refers to the type locality.

Remark. *S. kefensis* sp. n. belongs to the *subfasciata* species-group.

2.12. *Scythris spectatorella* sp. n.

Type material. Holotype: ♂ (Fig. 8): Tunisia, At-

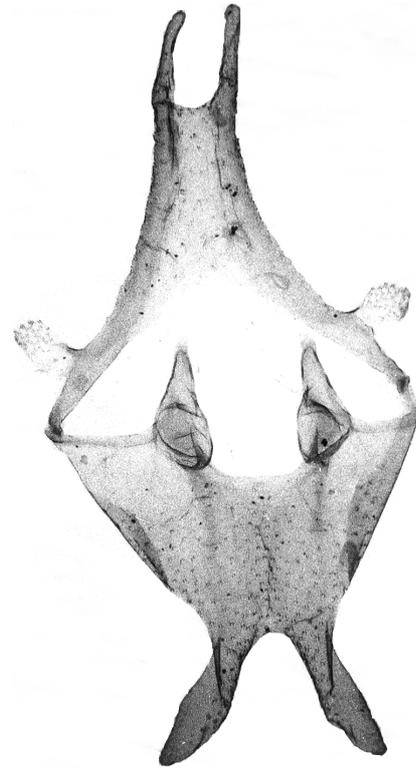


Fig. 6. Tergum VIII (up) and sternum VIII (down) of *Scythris kefensis* sp. n. (paratype).

las Mountains, Le Kef–Kairouan road 99–73 km, Haffouz village 15 km NW, rocky slope 600 m, 02.V.2000, K. Nupponen leg. Genitalia slide: K. Nupponen prep. no. 4/27.V.2000. In coll. T. & K. Nupponen. The type specimen can be loaned on request from the Finnish Museum of Natural History, University of Helsinki or directly from the author.

Diagnosis. Habitually *S. spectatorella* sp. n. may be confused with many other small, dark scythridids. The male genitalia are separated from those of the other species in the *subfasciata*-group by a very long and slender aedeagus and the shape of valvae being narrow at terminal 2/3.

Description. Wingspan 7.5 mm. Head, collar, tegula, antenna and thorax brown. Neck tuft greyish white. Haustellum pale brown, mixed with greyish white scales. Labial palp: segment I basally dirty white, distal 3/4 pale brown; segment II and segment III pale brown. Abdomen pale fuscous. Legs fuscous, femur paler. Forewing dark brown; indistinct blackish brown dash at cell end



Fig. 7. Female genitalia of *Scythris kefensis* sp. n. (paratype).

and another one in apical area. Hindwing pale fuscous, paler than forewing. Underside of wings pale fuscous, fringe darker.

Male genitalia (Figs. 9–10): Uncus sub-rectangular plate, mid-posteriorly with V-shaped indentation. Gnathos with stout basal arms; distal portion basally thick, tapered and slightly furrowed, terminally slender and pointed. Aedeagus 1.2× length of valva, curved 90°, basal half tapered, distal half very slender, tip pointed. Basal part of valva triangular; distal 3/4 slenderly claviform. Tergum VIII subtrapezoid; posterior margin flat, lateral margins sclerotized with roundish process anteriorly. Sternum VIII subtrapezoid, posteriorly bilobed, prongs distally slightly bent, indentation widely U-shaped; anteriorly with two large, tapered, converging



Fig. 8. Imago of *Scythris spectatorella* sp. n. (holotype).

processes.

Female genitalia: Unknown.

Bionomy. The only known specimen was swept on rocks at the beginning of May in the afternoon (2 p.m.) sunshine. The habitat was a very hot, dry, open rocky slope with sparse vegetation at an elevation of 600 m. The biology is unknown.

Distribution. Tunisia (Atlas Mountains). Only known from the type locality.

Etymology. Lat. *spectator* = spectator. The name refers to the history of the discovery of the species. There were several local people and two dozen sheep in the type locality who were carefully checking the collecting process.

Remark. *S. spectatorella* sp. n. belongs to the *subfasciata* species-group.

2.13. *Scythris mus* Walsingham, 1898

Tunisia, SW, Nefta 6 km W, Sahara semidesert, 50 m, 1 ♂, 1 ♀ 29.IV.2000, K. Nupponen leg.

3. Discussion

The white coloured taxa belonging to the *canescens*-group seem to occur only in the semidesert region, being absent in the mountain range. Most of those species are active at night and easily attracted by artificial light, a feature that is not common among scythridids. However, they also fly in the evening sunshine. Unfortunately a storm prevented further studies of their bionomy during this expedition.

The small, dark scythridids occurring on the

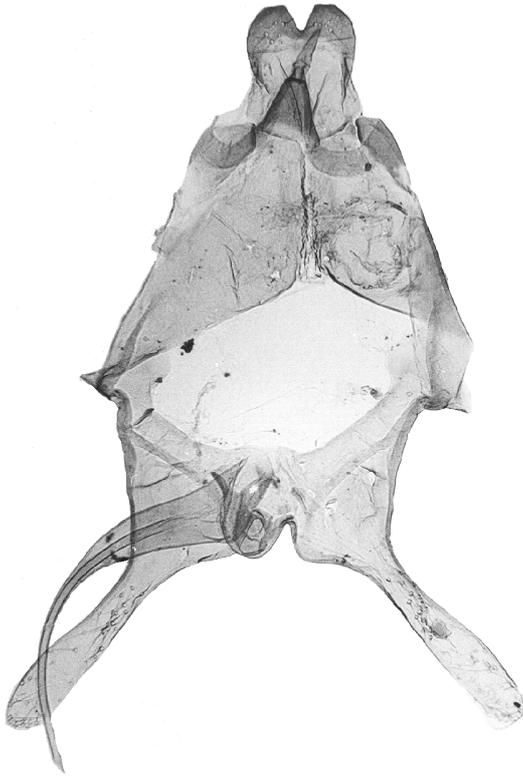


Fig. 9. Male genitalia of *Scythris spectatorella* sp. n. (holotype).

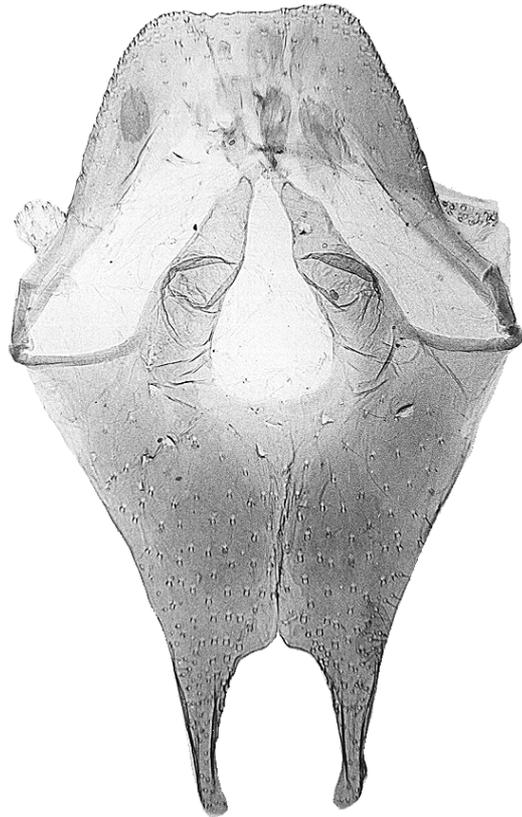


Fig. 10. Tergum VIII (up) and sternum VIII (down) of *Scythris spectatorella* sp. n. (holotype).

rocky slopes or dry steppes are extremely difficult to observe. They are rapid flyers, preferring hot spots where plants are practically absent and easily hide in the ground when disturbed. Traditional collecting methods, like sweeping on stones, are not effective for such moths and produce results only occasionally. Therefore, the scythridid fauna is still poorly known in many regions, for example in the Atlas Mountains, and it is rather easy to find new taxa. Some other collecting techniques might be more effective for obtaining day-active scythridids and may lead to better results.

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References

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