

Notes on the *Scythris punctivittella* species-group, with description of a new species from Morocco (Lepidoptera: Scythrididae)

K. Nupponen & J. Tabell

Abstract

Scythris bengti Nupponen & Tabell, sp. n. is described from Morocco. A pair of the new taxon, belonging to the *punctivittella* species-group, was collected in the High Atlas Mountains in late June, 2016. The external appearance and genitalia of both sexes of the new species are illustrated. The previously unknown male of *S. atlasensis* Bengtsson, 1997 was discovered in the same site near the type locality of the taxon, and its genitalia are illustrated. KEY WORDS: Lepidoptera, Scythrididae, new species, High Atlas Mountains, Morocco.

Notas sobre el grupo de especies de *Scythris punctivittella*, con descripción de una nueva especie de Marruecos (Lepidoptera: Scythrididae)

Resumen

Se describe de Marruecos *Scythris bengti* Nupponen & Tabell, sp. n. Un par del nuevo taxón perteneciente al grupo de especies de *punctivittella*, fue capturado de las montañas del Alto Atlas el pasado junio de 2016. De la nueva especie, se ilustra la apariencia externa y la genitalia de ambos sexos. El hasta ahora desconocido macho de *S. atlasensis* Bengtsson, 1997, fue descubierto en el mismo sitio cerca de la localidad tipo del taxón y se ilustra su genitalia. PALABRAS CLAVE: Lepidoptera, Scythrididae, nueva especie, Alto Atlas, Marruecos.

Introduction

The *Scythris punctivittella* species-group was established by BENGTTSSON (1997), who included eight species in it. Subsequently one further species of the group was described (PASSERIN d'ENTRÈVES & ROGGERO, 2004). Thus, the *punctivittella* group consists of nine species to date, as follows: *Scythris albostrigata* Hannemann, 1962; *S. apicistrigella* (Staudinger, 1871); *S. atlasensis* Bengtsson, 1997; *S. confluens* (Staudinger, 1871); *S. cycladeae* Jäckh, 1978; *S. emichi* (Anker, 1870); *S. landryi* (Passerin d'Entrèves & Roggero, 2004); *S. punctivittella* (Costa, [1836]); *S. trinacriae* Passerin d'Entrèves, 1984. The species are distributed in the Mediterranean range, with a single exception, *S. emichi*, which is known from Central East Europe and Latvia (BENGTTSSON, 1997) along the steppe belt eastwards to South Ural (NUPPONEN *et al.*, 2000) and the Baikal region (NUPPONEN, 2003). Two of the species are known from North Africa: *S. atlasensis* from Morocco, and *S. landryi* from Tunisia.

Material and methods

During an expedition to Morocco in 2016, Jukka Tabell collected a few interesting scythridids. Two of the taxa revealed they belonged to the *punctivittella* species-group. The single male specimen turned out to be *S. atlasensis*, the male of which was previously unknown, and a pair of the other

species is undescribed. The latter taxon is described and illustrated in the present paper, as are the male genitalia of *S. atlasensis*.

Descriptions

Scythris bengti Nupponen & Tabell, sp. n.

Type material. Holotype: ♂ (Fig. 1): Morocco, High Atlas Mts., 31.14290° N 7.92223° W, Al Haouz Prov., by Imlil, 1680 m, 30-VI-2016, J. Tabell leg. Genitalia slide: K. Nupponen prep. no. 1/26-IX-2016. In coll. T. & K. Nupponen. Paratype ♀ (Fig. 2): Idem. Genitalia slide: K. Nupponen prep. no. 2/27-IX-2016. In coll. T. & K. Nupponen.

Diagnosis: Externally *S. bengti* Nupponen & Tabell, sp. n. can be confused with several scythridids with a similar forewing pattern. It most resembles five species of the *punctivittella* species-group, viz. *S. apicistrigella* (Staudinger, 1871), *S. confluens* (Staudinger, 1871), *S. punctivittella* (O. G. Costa, [1836]), *S. trinacriae* Passerin d'Entrèves, 1984, and the North African *S. landryi* Passerin d'Entrèves & Roggero, 2004, but may be separated from those by the oblique dash at the cell end. The male genitalia of *S. bengti* are readily separated from those of the other species of the *punctivittella* group by the distally cut-off valva with concave apical margin, and by the shape of asymmetrical sternum VIII. The female genitalia of *S. bengti* are similar to those of *S. atlasensis* Bengtsson, 1997, but differ by smaller medial sclerotization of the sterigma, wrinkled and spined antrum, and presence of a medioposterior semicircular flap in sternum VII.

Description (Figs. 1-2): Wingspan 13 mm. Head, collar, tegula and thorax dark brown, in male with scattered whitish scales. Neck tuft whitish brown in male, pale brown in female. Antenna dark brown. Haustellum laterally whitish, otherwise brown, paler in female. Labial palp: segment I white in male, pale cream-coloured in female; segments II–III dark brown, more (II) or less (III) mixed with dirty white. Legs dark brown scattered with white, inner surface of femur dirty white. Hindleg tibia with two pairs and midleg tibia with one pair of spurs. Abdomen dorsally dark brown; ventrally in male dirty white mixed with cream and grey scales, in female pale cream-coloured. Forewing dark brown, with faint purplish gloss; white (in male) or pale cream-coloured (in female) streak in fold from base to midwing, and separate oblique dash of same colour at cell end. Hindwing dark brown.

Male genitalia (Figs. 3-4): Uncus subtrapezoid with posterior indentation. Gnathos asymmetrical; basal plate trapezoid and slightly furrowed; distal arm attached laterally to basal plate, a little longer than uncus, bent and evenly tapered, tip pointed. Phallus a very long and slender spiral. Valva moderately long, slightly tapering beyond middle, apically downcurved: tip cut off, rather broad, apical margin concave. Sternum VIII composed of two large and asymmetrical, medio-anteriorly fused plates; one plate roundish, the other one rectangular with sub-oval posterolateral process; between plates a deep median incision; anterior margin concave. Tergum VIII subrectangular, twice wider than high; anterior margin narrowly sclerotized and medially widely concave; posterior margin convex.

Female genitalia (Figs. 5-6): Sterigma consists of three parts: posteriorly a heart-shaped plate; anterior portion bowl-like with elongated posterior corners; at middle an egg-shaped sclerotization. Ostium situated sub-anteriorly at middle. Antrum somewhat sclerotized and distinctly wrinkled, turned 360° at anterior quarter. Sternum VII subrectangular, 0.65 times as high as wide, medioposteriorly with semicircular flap. Apophyses posteriores 1.5 times longer than apophyses anteriores.

Bionomy: The specimens were swept in sunshine in the afternoon. The habitat is a xerothermic montane slope with *Santolina* sp. as a dominant plant (Fig. 10). Immature stages are unknown.

Distribution: Morocco. So far the species is only known from the type locality.

Etymology: The species is named after Bengt Å. Bengtsson, a famous Swedish entomologist, and the author of numerous important articles on Palaearctic and Afrotropical Scythrididae.

Remarks: *Scythris bengti* Nupponen & Tabell sp. n. is assigned to the *punctivittella* species-group. The asymmetrical sternum VIII of *S. bengti* differs considerably from that of the other species of the *punctivittella* group. Despite that, the genitalia of both sexes are typical for the group, as well as the

external appearance of the moth. *S. atlasensis* Bengtsson, 1997 is the closest known relative of *S. bengti*, based on shape of the genitalia of both sexes.

Scythris atlasensis Bengtsson, 1997

Material (Fig. 7): Morocco, High Atlas Mts., 31.14290° N 7.92223° W, Al Haouz Prov., by Imlil, 1680 m, 1 ♂, 30-VI-2016, J. Tabell leg. Genitalia slide: K. Nupponen prep. no. 2/26-IX-2016. In coll. T. & K. Nupponen.

Male genitalia (Figs. 8-9): Uncus subtrapezoid with posterior indentation. Gnathos asymmetrical; basal plate subtriangular and slightly furrowed; distal arm attached laterally to basal plate; basal half stout, distal half tapered and bent 90° downwards, tip pointed. Phallus a very long and slender spiral. Valva rather long and narrow, bent, broadened at apical 0.2, apex dorsally elongated. Sternum VIII subrectangular, composed of two symmetrical and anteromedially fused plates, each of them with rather short and broad posterolateral protrusion. Tergum VIII subtrapezoid, anterior corners elongated.

Distribution: Morocco.

Remarks: The moth came to light at night. The habitat is illustrated in Fig. 10. The description of *S. atlasensis* Bengtsson, 1997 is based on two females, and the male was hitherto unknown. The collecting site of the present male is located only 10 km to the south-west of the type locality. Externally *S. atlasensis* is easy to separate from other species of the *punctivittella* species-group by absence of basal streak in the forewings. The male genitalia of *S. atlasensis* are typical for the group. The distally broadened and dorso-apically extended valvae separates the species from the other known taxa of the *punctivittella* species-group.

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*K. N.
Merenneidontie, 19 D
FI-02320 Espoo
FINLANDIA / FINLAND
E-mail: Kari.Nupponen@kolumbus.fi
<https://orcid.org/0000-0001-8220-6966>

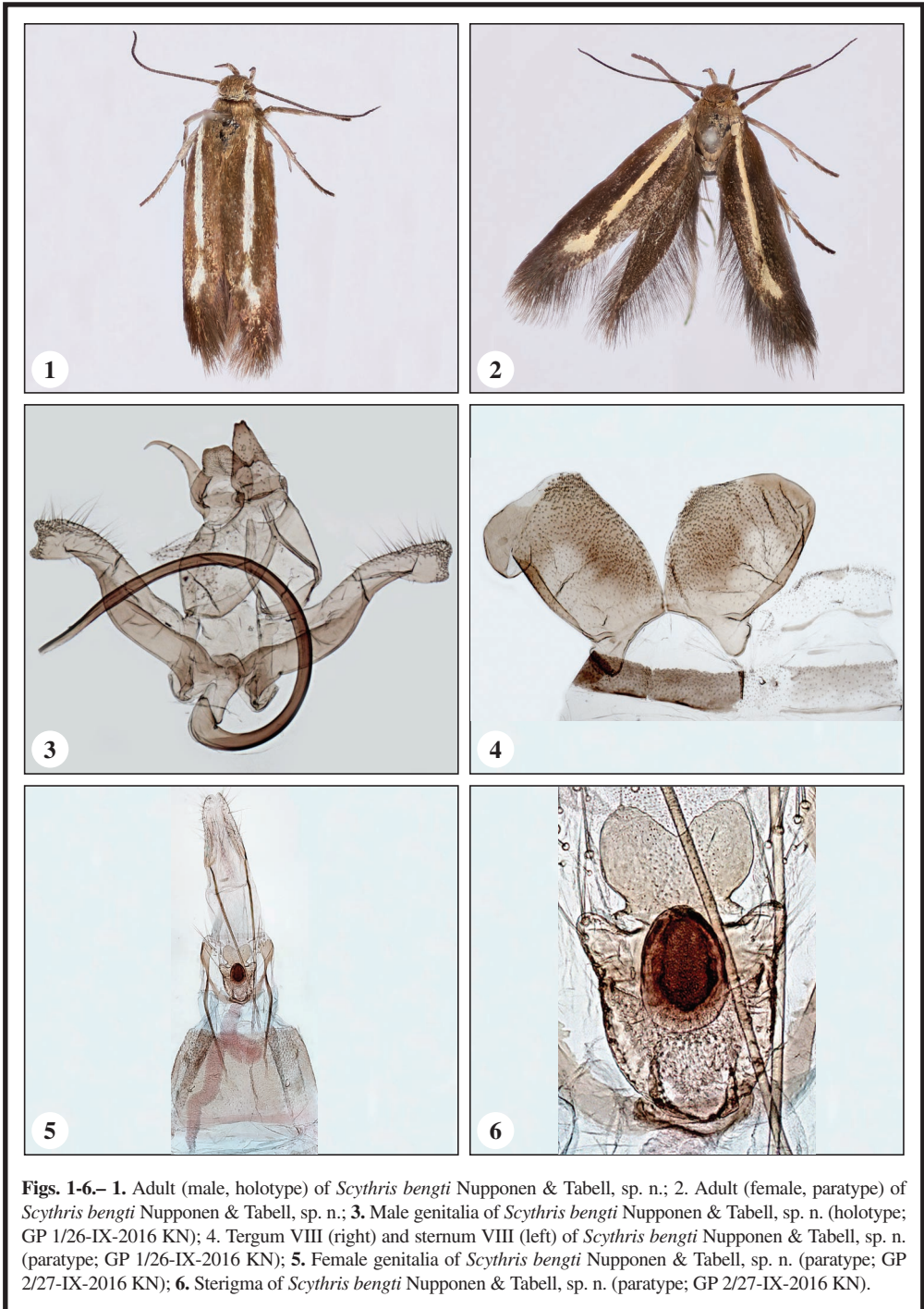
J. T.
Laaksotie 28
FI-19600 Hartola
FINLANDIA / FINLAND
E-mail: jukka.tabell@phnet.fi
<https://orcid.org/0000-0002-3477-5360>

*Autor para la correspondencia / *Corresponding author*

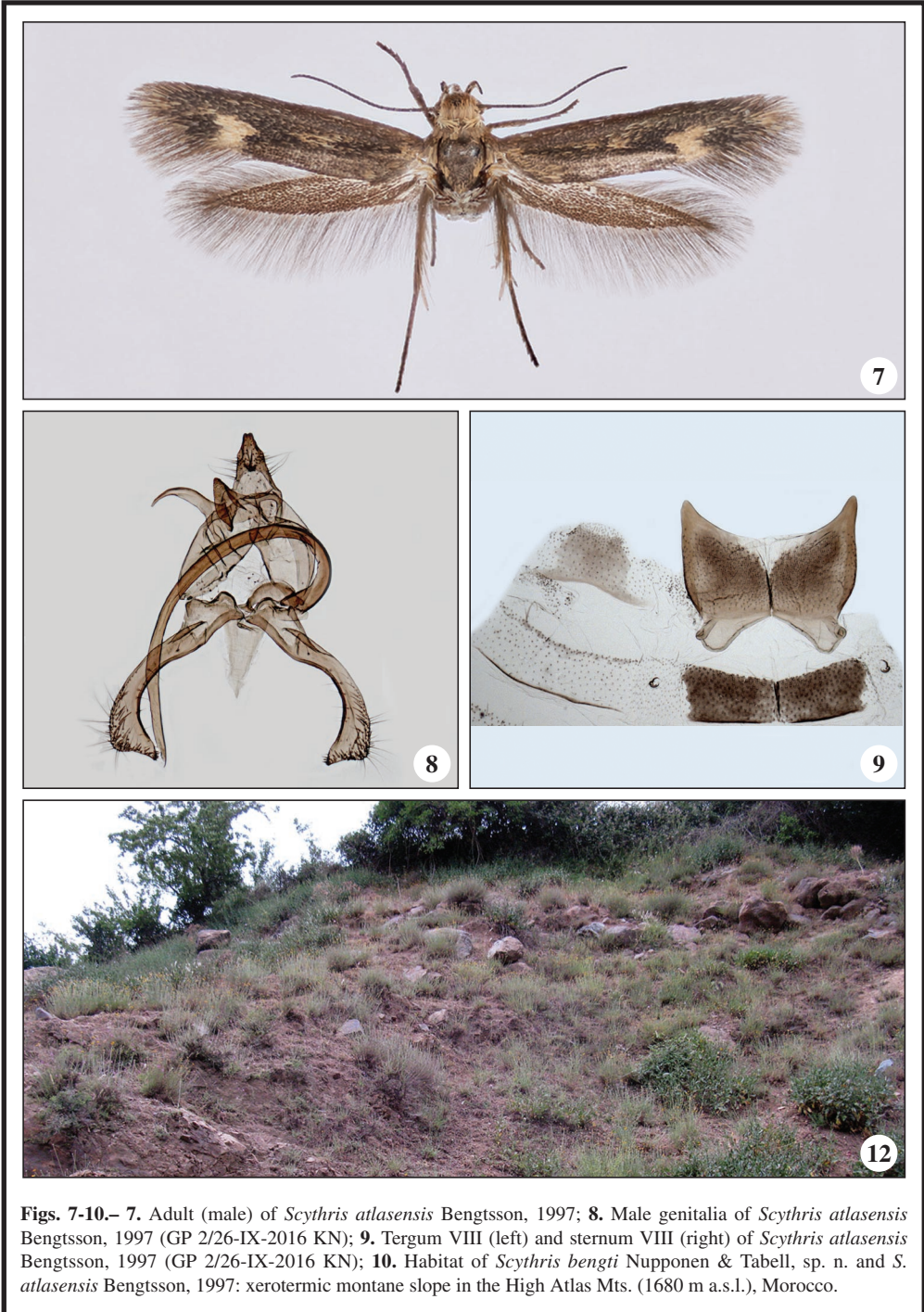
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Figs. 1-6.– 1. Adult (male, holotype) of *Scythris bengti* Nupponen & Tabell, sp. n.; 2. Adult (female, paratype) of *Scythris bengti* Nupponen & Tabell, sp. n.; 3. Male genitalia of *Scythris bengti* Nupponen & Tabell, sp. n. (holotype; GP 1/26-IX-2016 KN); 4. Tergum VIII (right) and sternum VIII (left) of *Scythris bengti* Nupponen & Tabell, sp. n. (paratype; GP 1/26-IX-2016 KN); 5. Female genitalia of *Scythris bengti* Nupponen & Tabell, sp. n. (paratype; GP 2/27-IX-2016 KN); 6. Sterigma of *Scythris bengti* Nupponen & Tabell, sp. n. (paratype; GP 2/27-IX-2016 KN).



Figs. 7-10.– 7. Adult (male) of *Scythris atlasensis* Bengtsson, 1997; 8. Male genitalia of *Scythris atlasensis* Bengtsson, 1997 (GP 2/26-IX-2016 KN); 9. Tergum VIII (left) and sternum VIII (right) of *Scythris atlasensis* Bengtsson, 1997 (GP 2/26-IX-2016 KN); 10. Habitat of *Scythris bengti* Nupponen & Tabell, sp. n. and *S. atlasensis* Bengtsson, 1997: xerothermic montane slope in the High Atlas Mts. (1680 m a.s.l.), Morocco.