

## *Symmoca sparsella* Joannis, 1891 (Gelechioidea, Autostichidae) new to Europe

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**Abstract.** *Symmoca sparsella* Joannis, 1891 (Autostichidae) is reported from the Greek Island of Crete. This represents the first European record of this species. The adult, male genitalia, and the habitat in Crete, where this moth was found, are illustrated.

### Introduction

Symmocinae is the most species-rich of the five subfamilies that make up the family Autostichidae. The current concept of the family was introduced by Hodges (1998), and developed further in the phylogenetic studies by Mutanen et al. (2010) and Kaila et al. (2011). These studies have resulted in the classification applied in the recent version of the website Fauna Europaea (Vives Moreno 2011). Most of the 131 European species of Autostichidae occur in the Mediterranean area (Gozmány 2008; Vives Moreno 2011), 120 of which belong to the subfamily Symmocinae, whereas only 11 species represent the smaller subfamilies Autostichinae, Deocloninae, and Holcopogoninae (Vives Moreno 2011). Symmocinae is most diverse in the drier parts of the Palaearctic region, from the Mediterranean area to Mongolia and southern China (Gozmány 2008). The largest genus of the subfamily, *Symmoca* Hübner, (1825), contains 85 species, 34 of which have been found in Europe (Gozmány 2008; Vives Moreno 2011). The majority of Autostichidae feeds on dead plant material (Gozmány 2008; Kaila et al. 2011). The Palaearctic members of the subfamily were monographed by Gozmány (2008), who treated Symmocinae as the family Symmocidae. In the present article, *Symmoca sparsella* Joannis, 1891 is reported from Europe for the first time.

### Abbreviation

NHMO Natural History Museum, University of Oslo

### *Symmoca sparsella* Joannis, 1891

**Figs 1, 2**

**Material.** Greece, Crete, Chania Province: 1♂, Hora Sfakion [UTM WGS84] 35S KU 4031 9864, 7–13.vi.2009, leg. L. Aarvik (Fig. 1). The genitalia were mounted in euparal on a glass slide numbered NHMO 2018 (Fig. 2). The specimen with the genitalia slide is deposited in NHMO.



**Figs 1–2.** *Symmoca sparsella* Joannis, 1891. 1. The specimen from Crete. Wingspan 10 mm. (Photo: Karsten Sund). 2. Male genitalia.



**Fig. 3.** South coast of Crete near Hora Sfakion from where the specimen of *Symmoca sparsella* was obtained. (Photo: Nini Cecilie Aarvik)

## Discussion

The specimen was attracted to light. The habitat from where the moth was obtained (Fig. 3) can be characterised as garrigue, open vegetation of dwarf evergreen shrubs and herbs. The locality is situated on the south coast of Crete and is just above sea level. Dry and desert-like habitats are typical for numerous species of Symmocinae (Gozmány 2008), and in this respect the locality in Crete is also typical. *Symmoca sparsella* is known from several countries in the Middle East: Syria, Iraq, Lebanon, Israel, Jordan, and Egypt (Gozmány op. cit.).

The south coast of Crete falls into the North African climatic zone, whereas the majority of the island falls into the Mediterranean climatic zone. The south coast thus enjoys significantly more sunny days and higher temperature throughout the year (Wikipedia 2012). It can be expected that the composition of the lepidopteran fauna of the south coast is different from that of the rest of the island.

Externally, *Symmoca sparsella* resembles several other Symmocinae with dull grey-brown forewing and a pattern of dark dots arranged in four transversal rows. In the male genitalia it is easily recognisable by the presence of two rounded processes of the transtilla and a strongly curved sacculus that reaches above the dorsal edge of the valva, as well as the lack of a dorsal process of the valva. The latter structure was termed appendix by Gozmány (op. cit.), where the genitalia of both sexes are figured as well as the adult moth in colour. Based on the appearance of the male genitalia, it appears that the closest relative of *S. sparsella* is *S. huri* (Gozmány, 1963), known from Afghanistan. *S. huri* differs by having a longer saccus and shorter sacculus that does not reach the dorsal edge of the valva (compare figures by Gozmány op. cit.). Externally, *S. huri* differs strongly from *S. sparsella* by the nearly pattern-less forewing.

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### References

- Gozmány, L. 2008. Symmocidae. 558 pp. – *In*: R. Gaedike (ed.), *Microlepidoptera Palaearctica* 13, Goecke & Evers, Keltern.
- Hodges, R.W. 1998. The Gelechioidea, Pp. 131–158. – *In*: N. P. Kristensen (ed.), *Lepidoptera: Moths and butterflies*, Vol. 1, *Handbuch der Zoologie* 35, Walter de Gruyter GmbH. & Co., Berlin & New York.
- Kaila, L., M. Mutanen & T. Nyman 2011. Phylogeny of the mega-diverse Gelechioidea (Lepidoptera): adaptations and determinants of success. – *Molecular Phylogenetics and Evolution* 61: 801–809.
- Mutanen, M., N. Wahlberg & L. Kaila 2010. Comprehensive gene and taxon coverage elucidates radiation in moths and butterflies. – *Proceedings of the Royal Society B* 277: 2839–2848.
- Vives Moreno, A. 2011. Fauna Europaea: Autostichidae. – *In*: O. Karsholt & E. J. van Nieuwerkerken (eds), *Fauna Europaea: Lepidoptera, Moths*, Fauna Europaea, version 2.4, <http://www.faunaeur.org>.
- Wikipedia 2012. <http://en.wikipedia.org/wiki/Crete#Climate>. Accessed 30.v.2012.

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