Revision of the “Lozopera” species group reveals peculiar structures on the male genitalia in moths (Insecta: Lepidoptera: Tortricidae)

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Abstract

The “Lozopera” species group of the genus Aethes Billberg, 1820 comprises at least 26 described valid species distributed in the Palaeartic region. Most of them share similar external morphology and are identified mainly after their genitalia. The genitalia morphology of both sexes is comparatively complex and the taxa of the group are surrounded by numerous taxonomical problems. A thorough study of the genital morphology, aiming to solve some of the problems, revealed the existence of a microscopic seta on the vesica of the male phallus. SEM and light microscopy observations suggest that it is sensillum chaeticum and probably has a (mechano) receptive function. It is present in some species and absent in others, but always located near the gonopore. In some species a large acantha with similar location was found, instead. Apart from the “Lozopera” species group, such a sensillum was observed in other Aethes spp. and in other genera of the tribe Cochylini as well. Such a structure has never been reported on the vesica of a moth.
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