

# Hungarian Microlepidoptera News

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### Biology and distributions of the Hungarian Aethes species, No. 1. *Aethes hartmanniana* (Clerck, 1759) and *Ae. hartmanniana f. piercei* Obraztsov, 1952 (Lepidoptera: Tortricidae)

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**Abstract:** Biological data of the *Aethes hartmanniana* and *Ae. hartmanniana f. piercei* are presented, together with the distributed of each species. The habitats of all the species are described.

**Key words:** Lepidoptera, Tortricidae, Aethes, distribution, biology, habitat, Hungary

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#### Introduction

In the present study the *Aethes* species of Hungary are listed. Tortricidae are yet to be included in the revision of fauna of Hungary. The data of many species lists is vague since the recorders do not examine the genitalia. During the next years, the intention is to examine all the material in the Hungarian Tortricidae collections and to prepare detailed distribution maps for all species.

#### Material and methods

More than 850 collection specimens of Hungarian *Aethes* species have been examined, about 150 dissected and their genitalia analysed. The author has studied the *Aethes* material in public collections in Komló, Pécs, Kaposvár, Zirc, Szombathely, Budapest, Gyöngyös, Vienna, München and some private collections as well. Distribution maps of the species show the hypothetical resident distribution area (grey), combined with localities from which specimens have been examined (black dots). The white ring is references data. Phenology is given mainly on the basis of examined collection data, and data from references are used only as a supplement. Larva foodplants and habitats are the author's own original data, personal communications and taken from the references. The species vertical distribution refers mainly to the analysis of collection data, the author's own original data, and with references data used as additional source. Original data from electronic database of Excel is in the Biological Coll. of Regiografo (H-Komló).

**1. *Aethes hartmanniana*** (CLERCK, 1759) (Fig. 1, 2, 3, 4, 5, 6) [*Phalaena*] *hartmanniana* Clerck, 1759, Icones Ins., pl. 4, fig. 10.

References: ÁCS & SZABÓKY 1993, FAZEKAS 1992, 1993, 1995, 2005, GOZMÁNY 1968, RONKAY & SZABÓKY 1981, SZABÓKY 1999.

Distribution in Palaearctic: from Ural Mountains and Caucasus to Britain. According to KENNEL (1913) in Armenia and Asia Minor.

The distribution area in Hungary: Agárd, Aggtelek, Apátistvánfalva, Balatonfüred, Bátorliget (láp), Belpátfalva, Budapest (Mátyás-hegy), Bükkzsérc, Cserépfalu, Csévharasz, Csopak, Eger (Almár), Egerbakta, Farnos (Reketyés-ér), Fót, Fülöpháza, (kutatóház), Füzér, Gyékényes, Gyöngyös (Sár-

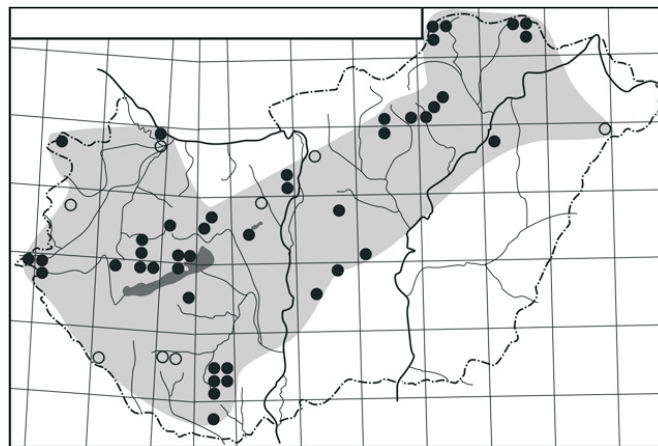
hegy), Győr (Bácsa), Győrzámoly, (Patkányos), Harkány (Tenkes-hegy), Herend, Jászberény, Jósvafő, Kapoly, Kaposfő, Kaposvár, Kárász, Kemence-patak-völgye, Kercaszomor, Kiliánteleg, Királyszállás, Kisvaszar, Komló (Egregyi-völgy), Komló (Zobákpuszt), Mátraháza, Miskolc (Barát-rét), Nagykáta, Nagykőrös, Nemesgulács, Nyirád, Olaszfalu, Óriszentpéter, Öskü, Parád, Pázmánd (Zsidó-hegy), Pécs (Árpád-tető), Pécs (PTE-arboretum), Pécs-Vasas, Pusztaimiske, Rezi, Salföld, Sopron, Szakonyfalu, Szalafő-Alsószer, Szin, Szinpetri, Tabdi, Telkibánya, Érd (Tétényi-fennsík), Tihany, Újszentmargita.

Phenology: Bivoltine. The moth flies from mid-May to mid-June and from early July to mid-August.

Biology: oligophagous. Recorded foodplants are *Scabiosa ochroleuca*, *S. columbaria*, *Succisa pratensis* and *Knautia arvensis*. The larva lives in the rootstock.

Habitat: moist rich fens, eu- and mesotrophic meadows, colline and montane hay meadows, acid grasslands and heaths. Rare and local in marshy country. Sporadic in halophytic and dry open grasslands. Altitude from 90 m to 600 m.

Comments: Widespread in the western and northern parts of Hungary. Frequent on the hills and in mountains of medium height, and avoiding the dry habitats on the plains. A rather variable species: some very dark specimens occur in water-fringing herbaceous communities. *A. hartmanniana* and *Ae. piercei* occur sympatrically in West Hungarian Borderland (FAZEKAS 1992). Further study is needed to improve knowledge about taxonomy and distribution area. For Hungarian morphology and for biology see FAZEKAS (1992).



**Fig. 1.** Distribution of *Aethes hartmanniana* in Hungary  
Examined data: ●  
References data: ○

**2. *Aethes hartmanniana f. piercei* OBRAZTSOV, 1952**

(Fig. 3, 5, 6b)

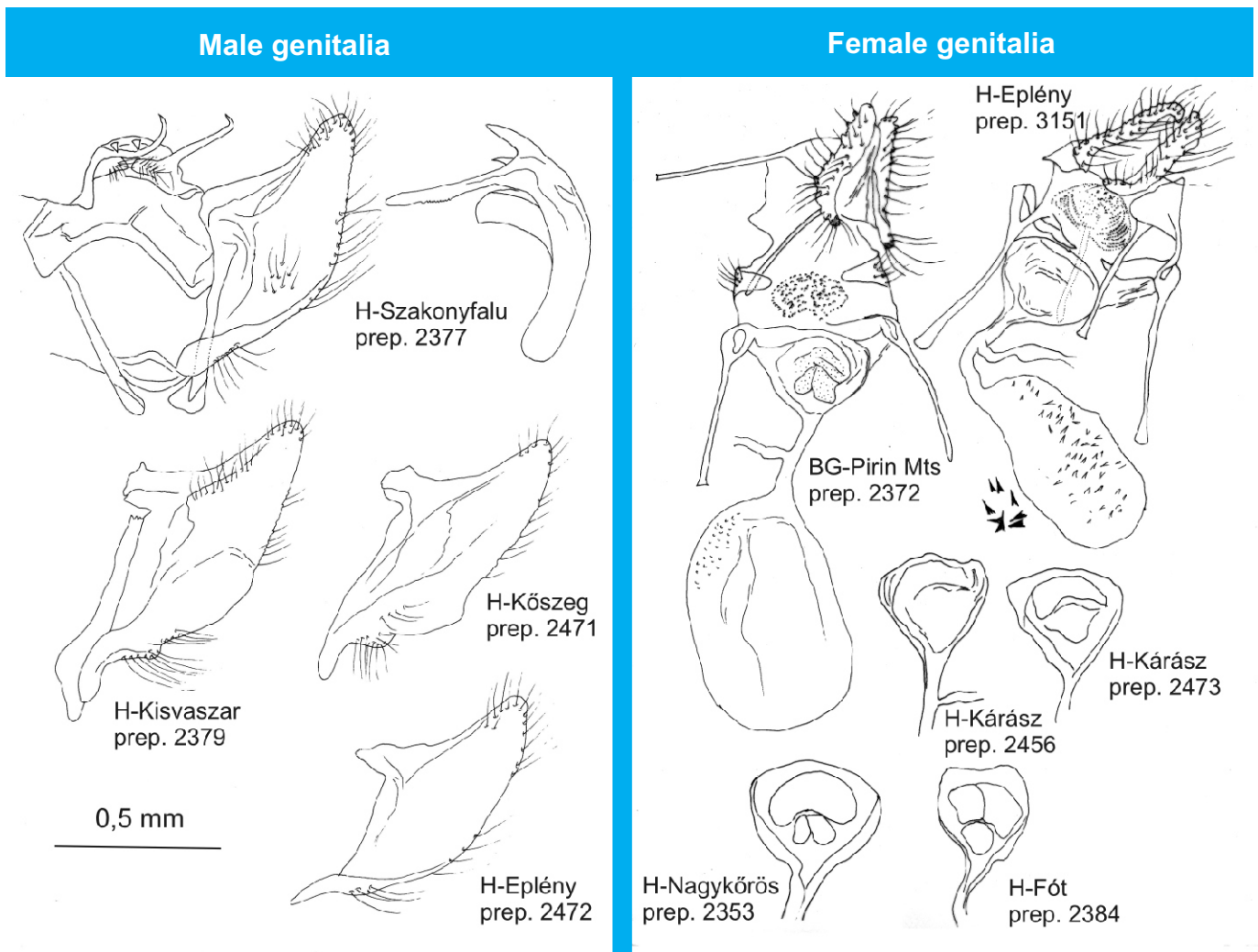
*Aethes piercei* Obraztsov, 1952, Ent. Z. Frankf. Main, 61: 157, fig. 2.

References: BRADLEY et al. 1973, FAZEKAS 1992, 1995, PETRICH 2001, RAZOWSKI 2002, SZABÓKY 1981.

Comments: known distribution in Europe: Austria, Belgium, Czech Republic, France, Germany, Great Britain, Hungary, Ireland, Italy, Netherlands, Spain, Switzerland ([www.faunaeur.org](http://www.faunaeur.org): 8.2.2008). Records from Hungary are unconfirmed (SZABÓKY 1981, PETRICH 2001), and all published specimens refer to *Ae. hartmanniana*. Coloration and shape of markings as in *Ae. hartmanniana*. Male and female genitalia as in *Ae. hartmanniana*. According to BRADLEY et al. (1973), *Ae. piercei* is closely related to *Ae. hartmanniana* and some authors have suggested that it may be no more than an ecological form. RAZOWSKI (2002), states that it is probably a distinct species, but insufficiently known, showing however, only slight differences in facies and male genitalia. The genital characters of female require re-examination on additional material. Nearly 100 specimens from different parts of Europe, which the author has examined, indicate that *Ae. piercei* is not specifically distinct and should be synonymised with *Ae. hartmanniana*. The detailed examination results will be

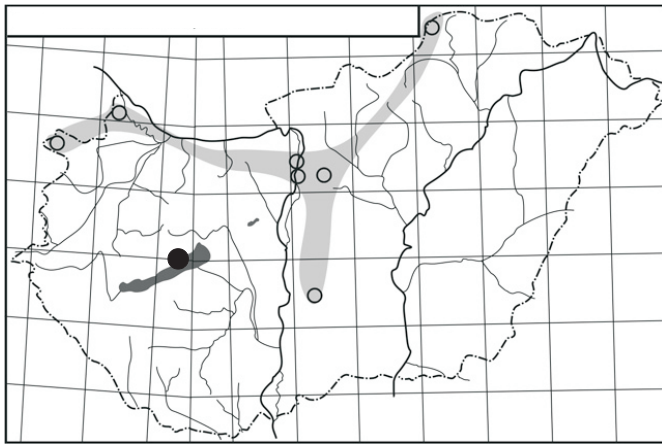
published in a later study. The taxonomic problem of the two species was dealt with already in 1992, in which the following statements were made (FAZEKAS 1992). After FAZEKAS (1992): Following a thorough investigation of several hundred specimens, the author concludes that *piercei*-like examples can be found in all Hungarian populations of *Ae. hartmanniana*. Furthermore, one finds no single specific feature that would support justification for *piercei* as a distinct species. He is therefore of the opinion that the genitalia features given by OBRAZTSOV are insufficient for an incontestable identification. On the contrary, it also increases the already known polytypical picture of the species *Ae. hartmanniana*. In addition to the problems that have arisen over identification, there have also been contradictions in descriptions of larval conditions and foodplants of this species.

Speciation processes in West Palearctic can often be explained by isolation of populations into separate glacial refuges with subsequent inter- and postglacial expansion to the present distribution area. When discussing the European species pair *Ae. hartmanniana* and *Ae. piercei*, the speciation of these comparatively young semispecies evidently happened in the postglacial period.



**Fig. 2.** Male and female genitalia of *Aethes hartmanniana*





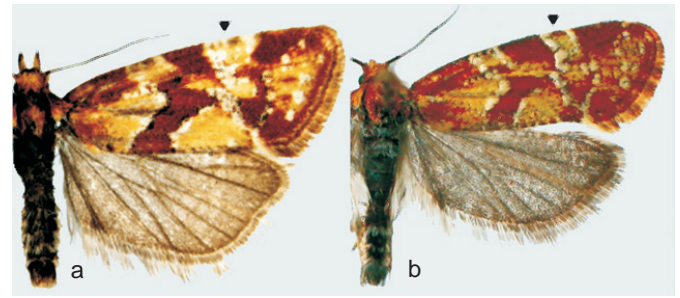
**Fig. 3.** Distribution of *Aethes hartmanniana f. piercei* in Hungary  
Examined data: ●  
References data: ○



**Fig. 4.** Habitat of *Aethes hartmanniana* in SW Hungary: Mecsek Mts. 400 m, Pécs-Vasas



**Fig. 5.** Habitat of *Aethes hartmanniana* and *Ae. hartmanniana f. piercei* in Hungary: Tihany peninsula with Balaton



**Fig. 6.** Adults of *Aethes hartmanniana* (a) and *A. hartmanniana f. piercei* (b)

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