

***Aleurochiton acerinus* Haupt, 1934 (Hemiptera: Aleyrodidae): a whitefly new to Belgium**

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Abstract

The whitefly *Aleurochiton acerinus* Haupt, 1934 was observed for the first time in Belgium. Winter puparia were found on the leaves of *Acer campestre* L. in Hallaar (Province of Antwerpen), in the nature reserve Hageven in Pelt (Province of Limburg) and in the nature reserve Carrière de la Falize in Aywaille (Province of Liège).

Keywords: *Acer campestre*, Aleyrodoidea, Sternorrhyncha

Samenvatting

De witte vlieg *Aleurochiton acerinus* Haupt, 1934 werd voor het eerst in België waargenomen. Winterpuparia werden gevonden op bladeren van *Acer campestre* L. in Hallaar (Provincie Antwerpen), in het natuureservaat het Hageven in Pelt (Provincie Limburg) en in het natuureservaat Carrière de la Falize in Aywaille (Provincie Liège).

Résumé

L'aleurode *Aleurochiton acerinus* Haupt, 1934 a été observée pour la première fois en Belgique. Des puparia d'hiver ont été trouvés sur des feuilles d'*Acer campestre* L. à Hallaar (Province d'Antwerpen), dans la réserve naturelle Hageven à Pelt (Province de Limburg) et dans la Carrière de la Falize, site de grand intérêt biologique, à Aywaille (Province de Liège).

Introduction

Whiteflies (Aleyrodidae) are a small family of insects belonging to the order Hemiptera, which are related to scale insects (Coccoidea) and aphids (Aphidoidea). Thirteen species were already reported from Belgium, including *Aleurochiton aceris* (Modeer, 1778) on *Acer platanoides* L. and *Aleurochiton pseudoplatani* Visnya, 1936 on *Acer pseudoplatanus* L. (LOCK, 2020). Here, *Aleurochiton acerinus* Haupt, 1934 is added to the Belgian fauna.

Material and methods

Since adults can rarely be identified, puparia of *Aleurochiton acerinus* Haupt, 1934 were searched for on the leaves of *Acer campestre* L. Whiteflies can be identified using the key of MARTIN *et al.* (2000), which also contains an excellent introduction to the whiteflies. Pictures of whitefly puparia, including all species occurring in Belgium, are presented in JANSEN (2011) and JANSEN & DEN HARTOG (2020). Material of *A. acerinus* was deposited in the entomological collection of the Royal Belgian Institute of Natural Sciences (I.G. 34.176). Puparia were photographed using a Canon 650D with a Canon MP-E 65mm and a Canon Macro Twin Lite MT-26EX-RT. Geographic locations are presented as GPS coordinates in decimal degrees.



Fig. 1. Winter puparium *Aleurochiton acerinus* Haupt, 1934. © Koen Lock.

Results

Aleurochiton acerinus Haupt, 1934 is monophagous on *Acer campestre* L. and has two generations per year. The winter puparia, which are present from September and overwinter, are more sclerotized and have a thick wax coating, which is absent in summer forms. The winter puparia resemble those of *Aleurochiton aceris* (Modeer, 1778), which lives on *Acer platanoides* L. However, *A. acerinus* is brown under the white wax (Figs 1, 2), whereas *A. aceris* is black. The appearance can vary strongly depending on the amount of wax that is still present (Figs 1, 2). Summer puparia, which are present in July, have a pale and thin cuticle and are more or less translucent and therefore more difficult to find and to identify.

OBSERVATIONS: Hallaar (Province of Antwerpen; 51.085, 4.737), 30.VIII.2020, 5 winter puparia; Pelt, Hageven (Province of Limburg; 51.249, 5.417), 5.IX.2020, hundreds of winter puparia; Hallaar (Province of Antwerpen; 51.085, 4.737), 9.IX.2020, 30 winter puparia; Aywaille, Carrière de la Falize (Province of Liège; 50.485, 5.698), 12.IX.2020, 1 winter puparium.

Discussion

The presence of *Aleurochiton acerinus* Haupt, 1934 was already expected in the Netherlands (JANSEN, 2011) and Belgium (LOCK, 2020). Recently, the species was effectively observed in Baarlo and Valkenburg in the Province of Limburg in the Netherlands (JANSEN & DEN HARTOG, 2020). *A. acerinus* was previously already reported to occur in Austria, Bulgaria, Croatia, the Czech Republic, England, France, Germany, Hungary, Iran, Italia, Poland, Rumania, Serbia and various countries of the former USSR (JANSEN & DEN HARTOG, 2020). The species is more common in southern parts of Europe (MARTIN *et al.*, 2000) and therefore, global warming might have contributed to the ability of *A. acerinus* to survive in the Netherlands (JANSSEN &

DEN HARTOG, 2020). The species might also have benefitted from the frequent planting of *Acer campestre* L. in parks and gardens. However, whiteflies have rarely been studied and therefore, *A. acerinus* might have been already present in Belgium and the Netherlands for a very long time without being detected.

At least one additional whitefly species can still be expected in Belgium: *Siphoninus immaculatus* (Heeger, 1856), which was found outdoors on *Hedera helix* L. in the Netherlands (JANSEN, 2011).



Fig. 2. Winter puparium *Aleurochiton acerinus* Haupt, 1934. © Koen Lock.

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References

- JANSEN M., 2011. - The whiteflies of the Netherlands, including two species new for the Dutch fauna (Hemiptera: Aleyrodidae). *Nederlandse Faunistische Mededelingen*, 36: 69–98.
- JANSEN M.G.M. & DEN HARTOG W., 2020. - First observation of the whitefly *Aleurochiton acerinus* and armoured scale insect *Aspidiotus hedericola* in the Netherlands (Hemiptera). *Entomologische Berichten*, 80(4): 122–126.
- LOCK K., 2020. - The whiteflies of Belgium (Hemiptera: Aleyrodidae). *Bulletin S.R.B.E./K.B.V.E.*, 156: 105–112.
- MARTIN J.H., MIFSUD D. & RAPISARDA C., 2000. - The whiteflies (Hemiptera: Aleyrodidae) of Europe and the Mediterranean region. *Bulletin of Entomological Research*, 90: 407–448.