

***Caloptilia fidella* (Lepidoptera: Gracillariidae), a new leafminer to the Belgian fauna**

Jean-Yves Baugnée & Willy De Prins

Résumé. *Caloptilia fidella* (Lepidoptera: Gracillariidae), une nouvelle espèce mineuse pour la faune belge

Le 6 novembre 2009, plusieurs mines de *Caloptilia fidella* (Reutti, 1853) (Lepidoptera: Gracillariidae) ont été trouvées sur *Humulus lupulus* L. (Cannabaceae) en bordure de la réserve naturelle de l'Ile aux Corsaires à Angleur (province de Liège). C'est la première fois que cette espèce est signalée en Belgique, en marge nord-ouest de son aire de dispersion. Les informations relatives à la biologie et à la répartition du papillon sont résumées.

Samenvatting. *Caloptilia fidella* (Lepidoptera: Gracillariidae), een nieuwe bladmineerder voor de Belgische fauna

Op 6 november 2009 werden enkele bladmineerders van *Caloptilia fidella* (Reutti, 1853) (Lepidoptera: Gracillariidae) op *Humulus lupulus* L. (Cannabaceae) gevonden langs het natuureservaat "Ile aux Corsaires" te Angleur (provincie Luik). Het is de eerste maal dat deze soort uit België wordt vermeld. Details over de levenswijze en de verspreiding worden gegeven.

Key words: *Caloptilia fidella* – Lepidoptera – Gracillariidae – Belgium – Faunistics – *Humulus*.

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On 6 November 2009 some leaf mines of *Caloptilia fidella* (Reutti, 1853) were found on *Humulus lupulus* L. (Cannabaceae) at the edge of the nature reserve "Ile aux Corsaires" at Angleur (province of Liège). It is the first record of the moth for Belgium and that increases the number of Belgian Gracillariidae to 98 species (De Prins & De Prins 2009, Buszko 2009, De Prins & Steeman 2009).

Caloptilia fidella is a West-Palaearctic species which mainly occurs in Central, South and East Europe. It was previously recorded from Austria, Bulgaria, Croatia, Czech Republic, France (incl. Corsica), Germany, Hungary, Italy, Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Switzerland, Turkey, Turkmenistan, Ukraine (De Prins & De Prins 2009, Buszko 2009). This species was also more recently reported from Portugal in 2006 (Corley *et al.* 2007) and from the Netherlands in 2009 in several places from southern Limburg (Schreurs *et al.* 2009). The moth is usually regarded as a rare species, as in Germany where it is known only from Lower Saxony, Bavaria and Baden-Württemberg (Gaedike & Heinicke 1999, Gaedike *et al.* 2003). The Dutch and Belgian records now appear to be located on the north-western margin of the range of *C. fidella*.

During its larval stage *C. fidella* is a monophagous leafminer on common hop *Humulus lupulus* (see Ellis 2007). The young larva causes a small white

triangular mine in the angle of leaf veins. Later it lives and pupates within a rolled leaf margin on the host plant (figs. 1–2). The pupa is described and keyed by Patočka & Zach (1995). There are two annual generations with larvae mainly occurring in July and September; the adults hibernate (Hering 1957). Predators and parasites of *C. fidella* are almost unknown. The parasitoid wasp *Sympiesis dolichogaster* Ashmead, 1888 (Hymenoptera: Eulophidae) has been mentioned by Fulmek in 1962 (in De Prins & De Prins 2009).



Figs. 1–2. *Caloptilia fidella* (Reutti, 1853), Belgium, Liège, Angleur, 06.xi.2009, old mines on *Humulus lupulus*, enclosure of the nature reserve "Ile aux Corsaires", leg. and photos J.-Y. Baugnée.

Few leafminers are recorded on *Humulus* in N-W Europe. Among Belgian moths, the Cosmopterigidae *Cosmopterix zieglerella* (Hübner, 1810) was hitherto the only regular miner known on this plant (Ellis 2007, De Prins & Steeman 2009). In comparison with this species the mine of *C. fidella* however is very distinct and easily recognizable (see related beautiful pictures on Lepiforum).

In Belgium *C. fidella* is probably a new arrival but as many small much species it is probably overlooked. The foodplant of the caterpillar is common throughout the country; however, recent investigations conducted by the first author in more than thirty localities of the provinces of Namur, Hainaut, Liège and Luxembourg did not produce any positive results.

References

- Buszko, J. 2009. *Fauna Europaea: Gracillariidae*. – In: Karsholt, O. & van Nieukerken, E. J. (eds), *Lepidoptera, Moths. Fauna Europaea, version 2*. — www.faunaeur.org [accessed on 19 December 2009].
- Corley, M. F. V., Marabuto, E. & Pires, P. 2007. New Lepidoptera for the fauna of Portugal (Insecta: Lepidoptera). — *Shilap, Revista de Lepidopterologia* **35** (139): 321–334.
- De Prins, J. & De Prins, W. 2009. *Global Taxonomic Database of Gracillariidae (Lepidoptera)*. — gc.bebif.be [accessed 28 December 2009].

- De Prins, W. & Steeman, C. 2009. Catalogue of the Lepidoptera of Belgium. – www.phegea.org [accessed on 19 December 2009].
- Ellis, W. N. 2007. *Bladmineerders van Europa/Leafminers of Europe*. — www.bladmineerders.nl [accessed on 19 December 2009].
- Gaedike, R. & Heinicke, W. 1999. Verzeichnis der Schmetterlinge Deutschlands. Entomofauna Germanica 3. — *Entomologische Nachrichten und Berichte, Beiheft* **5**: 1–216.
- Gaedike, R., Graf, F., Kaiser, C., Landeck, I., Leutsch, H., Nuss, M., Stübner, A. & Wauer, S. 2003. Aktuelle Daten zur Kleinschmetterlingsfauna von Sachsen mit Hinweisen zu anderen Bundesländern (Lep.) IV. — *Entomologische Nachrichten und Berichte* **47**: 77–80.
- Hering, M. 1957. *Bestimmungstabellen der Blattminen von Europa: einschliesslich des Mittelmeerbeckens und der Kanarischen Inseln*. — W. Junk, 's Gravenhage, II: 651–1185.
- Lepiforum e.V., 2009. *Bestimmungshilfe für die in Europa nachgewiesenen Schmetterlingsarten*. — www.lepiforum.de [accessed on 20 December 2009].
- Patočka, J. & Zach, P. 1995. The pupae of the central European *Caloptilia* (Lepidoptera: Gracillariidae). — *European Journal of Entomology* **92**: 483–496.
- Schreurs, A., van Stiphout, M. & Muus, T. 2009. *Caloptilia fidella*, de hopstelmtot, nieuw in Nederland. — www.microlepidoptera.nl/nieuws/23.php [accessed on 8 January 2010].
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