

New observations of *Pleurota aristella* larvae (Lepidoptera: Oecophoridae)

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Abstract. Larvae of *Pleurota aristella* (Linnaeus, 1767) (Oecophoridae) are polyphagous on different kinds of herbaceous plants and are rarely recorded. In this article, two recent observations in Belgium and France are described and illustrated, both on host plants previously unrecorded in the literature. These observations are compared with the workings of some other insects that feed in a similar way.

Samenvatting. Rupsen van *Pleurota aristella* (Linnaeus, 1767) (Oecophoridae) voeden zich polyfaag op verschillende kruidachtige planten en worden zelden waargenomen. Dit artikel beschrijft twee recente observaties uit België en Frankrijk, allebei op plantensoorten die nog niet als voedselplant werden vermeld in de literatuur. Een vergelijking wordt gemaakt met enkele andere insecten die zich in gelijkaardige omstandigheden voeden.

Résumé. Les chenilles de *Pleurota aristella* (Linnaeus, 1767) (Oecophoridae) se nourrissent de manière polyphage sur plusieurs plantes herbacées et sont rarement observées. Cet article décrit deux observations récentes en Belgique et en France, toutes deux sur des espèces végétales qui n'ont pas encore été signalées comme plantes hôtes dans la littérature. Une comparaison est faite avec d'autres insectes qui se nourrissent dans des circonstances similaires.

Key words: *Pleurota aristella* — Oecophoridae — Belgium — Bionomics — France.

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Introduction

Pleurota aristella (Linnaeus, 1767) (Oecophoridae) (Fig. 1) is widespread in southern, central and eastern Europe (Lvovski 2013) up to parts of the Near East (Tokár *et al.* 2005). In warm regions it can be quite abundant. Palm (1989) states that Rochefort (NA) is the most northern place where *P. aristella* has been found.

Within its distribution range numerous subspecies (Back 1973) and aberrations have been described, but the differences in habitus and genitalia between them are probably not convincing enough to separate them as subspecies (Tokár *et al.* 2005).

Several host plants from different families are mentioned in literature: *Clinopodium* (*Calamintha*) *nepeta*, *Salvia*, *Thymus serpyllum*, *Achillea millefolium*, *Inula*, *Senecio*, *Anthyllis*, *Helianthemum* (Tokár *et al.* 2005) and adult moths were observed flying around *Tanacetum vulgare*, *Carlina vulgare* and *Salvia* (Back 1973). The larva lives in a silken tube under (Schütze 1931) or at the base of the host plant (Tokár *et al.* 2005). Illustrations of the immature stages of this species are scarce.

Observations on *Hippocrepis comosa* and *Plantago lanceolata*

On 27 April 2021, stems of a *Hippocrepis comosa* plant (Fig. 2), growing on a sun exposed rock in the Nature Reserve 'Belvédère' in Rochefort (NA), were turned over to look for Lepidoptera larvae. On the underside of the biggest stems a distinct silken tube was found in which soil particles were incorporated. Within this tube an unknown larva was concealed (Fig. 3). The larva was collected, and an adult *Pleurota aristella* emerged on 20 June 2021.

Another adult *P. aristella* was reared from a larva found on 22 May within a partially underground silken tube near the root of a *Plantago lanceolata* plant growing

on a piece of fallow land in Fabrègues (Departement Hérault, France) (Fig. 4–6).

The full-grown larva of *P. aristella* (Fig. 3–5) has a brown head with darker spots. The prothoracic plate is light brown, semi-translucent with blackish markings laterally and posteriorly. The abdomen is marbled with white, beige and orange and has several longitudinal stripes. Two dorsal rows of dark pinaculae, those on the thoracal segments significantly bigger with extra spots laterally. Anal plate greyish.

In breeding conditions, pupation took place in a firm white silken cocoon amongst ground debris and mosses (Fig. 7). The pupa does not protrude from the cocoon before emerging (Fig. 8).

Similar feeding signs from other insects

Other insects can occur on both mentioned hostplants and some of them also live in silken tubes. On *H. comosa* larvae of *Synopacma patruella* (Mann, 1857) can be found in tunnel-like webs amongst the host plant, on the underside of the leaves or at the base of the plant. Larvae of this species however are much smaller than those of *P. aristella* and have a remarkable red abdominal colour (Fig. 9). *S. patruella* is very rare in Belgium and only occurs in a few nature reserves on calcareous soil (Waarnemingen.be 2021). Schütze (1931) also mentions *Eana penziana* (Thunberg, 1791), not yet recorded from Belgium, feeding in similar conditions.

During the search on *Plantago lanceolata* in southern France a lot of webspinners (Embioptera sp.) were found within webs amongst the roots and root crown (Fig. 10). These tunnels are much paler than those of *P. aristella*, closely resembling white spider silk. Larvae of *Scoparia pyralella* ([Denis & Schiffermüller], 1775) have also been observed living within slight webs amongst dead leaves underneath *P. lanceolata* plants (Heckford 2011).



Fig. 1. *Pleurota aristella* e.l. 20.vi.2021, bred from larva on *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 1. *Pleurota aristella* e.l. 20.vi.2021, gekweekt van rups op *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 2. *Hippocrepis comosa* with larva of *Pleurota aristella* (not visible), Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 2. *Hippocrepis comosa* met rups van *Pleurota aristella* (niet zichtbaar), Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 3. *Pleurota aristella*, larva in silken tube under stems of *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 3. *Pleurota aristella*, rups in zijden tunnel onder stengels van *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 4. *Pleurota aristella*, silken tube with larva on root of *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

Fig. 4. *Pleurota aristella*, zijden tunnel met rups tegen wortel van *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

Fig. 5. *Pleurota aristella*, larva removed from silken tube on root of *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

Fig. 5. *Pleurota aristella*, rups verwijderd uit zijden tunnel tegen wortel van *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

Fig. 6. *Pleurota aristella* e.l. 22.vi.2021, bred from larva on *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

Fig. 6. *Pleurota aristella* e.l. 22.vi.2021, gekweekt van rups op *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.



Fig. 7. *Pleurota aristella*, cocoon on 20.vi.2021, bred from larva on *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 7. *Pleurota aristella*, cocon op 20.vi.2021, gekweekt van rups op *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 8. *Pleurota aristella*, exuvium on 20.vi.2021, bred from larva on *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 8. *Pleurota aristella*, exuvium op 20.vi.2021, gekweekt van rups op *Hippocrepis comosa*, Rochefort (NA), 27.iv.2021. © Ruben Meert.

Fig. 9. *Syncopacma patruella*, larva removed from silken tube under stems of *Hippocrepis comosa*, Dinant (NA), 27.iv.2021. © Ruben Meert.

Fig. 9. *Syncopacma patruella*, rups verwijderd uit zijden tunnels onder stengels van *Hippocrepis comosa*, Dinant (NA), 27.iv.2021. © Ruben Meert.

Fig. 10. *Embioptera* sp. removed from silken web on root crown of *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

Fig. 10. *Embioptera* sp. verwijderd uit zijden web aan wortelkroon van *Plantago lanceolata*, Fabrègues, France, 22.v.2021. © Ruben Meert.

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