

# Two additional records of *Bohemannia auriciliella* from The Netherlands (Lepidoptera: Nepticulidae)

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**Abstract:** *Bohemannia auriciliella* belongs to the rarest Lepidoptera of Europe. Hitherto only five records have been published: one from France, two from England and also two from The Netherlands. There are now two more findings from The Netherlands: one specimen was captured in the Mariapeel (near Helenaveen, province of Limburg) on 9 July 1988, the other at Twello (province of Gelderland) on 10 July 1996. All records refer to adults. The foodplant is not known with certainty and the larva has never been observed. Morphological characters, geographical distribution and bionomics are discussed.

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## Introduction

From a biogeographical point of view The Netherlands has more interesting components than is generally understood, and this certainly applies to Microlepidoptera. Black swans such as *Phyllonorycter irmella* (Palm), of which no more than two specimens are known (one from Sweden and one from The Netherlands) (Kuchlein & Langohr, 1998), and *Monochroa moyses* Uffen of which populations occur in salt-marshes in England and The Netherlands only (Kuchlein, 1993) underline this statement. *Bohemannia auriciliella* (De Joannis) certainly belongs to this category. According to literature, only five specimens of this species are known thus far: one from France (De Joannis, 1908), two from England (Johansson et al., 1990), and two from The Netherlands (Kuchlein, 1993). We collected two more specimens of *B. auriciliella* at widely separated localities in The Netherlands. These new findings are a good reason to pay some attention to this obscure species.

## Identification

At first sight *Bohemannia auriciliella* resembles a *Stigmella* with fuscous forewings and a metallic silverish fascia (fig. 1). Yet, *B. auriciliella* has two external characteristics by which it can readily be distinguished from other nepticulids. Firstly, the scape of the antennae is not unicolorous, but silvery white with a greyish distal edge (fig. 2). Secondly, the antenna is longer than in most other nepticulids: it extends to at least about three fourth of the costa of the forewing, reaching beyond the fascia (fig. 1). Among the Nepticulidae *B. auriciliella* belongs to the medium-sized species (wingspan in male 6.0 mm, in female 6.0-6.9 mm). The adult is described and figured by Emmet (1974) and by Johansson et al. (1990).

Distinctive characters of the male genitalia (fig. 3-4) are the rounded tegumen not forming a pseuduncus, the oval vinculum and the absence of a dorsal process of the valva. In the female genitalia (fig. 5) the unsclerotized vestibulum and the absence of pectinations and signa in the corpus bursae are characteristic. The male genitalia are described by Emmet (1974) and by Johansson et al. (1990). In the

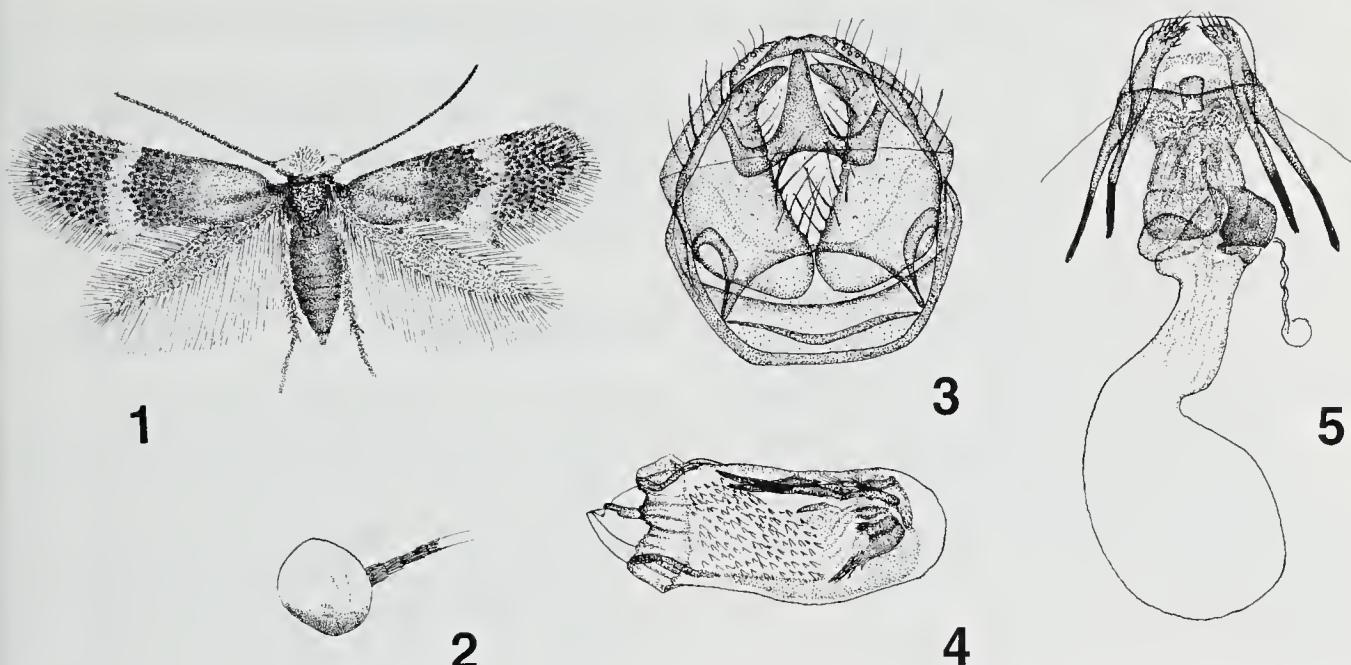


Fig. 1-5. *Bohemannia auriciliella*. 1, female; 2, proximal part of antenna with scapus; 3, male genitalia; 4, aedeagus; 5, female genitalia (3-5 redrawn after Johansson et al., 1990).

latter paper also the female genitalia are described.

### Geographical distribution

The localities of *Bohemannia auriciliella* are restricted to North-West Europe. The French specimen was found near Vannes (dépt. Morbihan, Brittany) circa 1900, and was described as *Nepticula auriciliella* (De Joannis, 1908). The second specimen was captured in The Netherlands near Hatert (province of Gelderland) in 1931, but remained unidentified for fifty years (Van Nieukerken, 1984). In the meantime *Bohemannia auriciliella* was discovered in England, where a male was taken near East Blean (Kent) in 1973. Emmet (1974) described it as a new species, *Ectoedemia bradfordi*. A second British specimen, discovered in a Danish collection, originates from Southampton, and was collected already in 1937.

Meanwhile it was recognized, that the French and British specimens belong to the same species, thus downgrading *Ectoedemia bradfordi* to a junior synonym of *auriciliella*, now in the genus *Bohemannia* (Van Nieukerken, 1986). Subsequently Mr G. R. Langohr captured the fifth specimen at Meinweg (The

Netherlands, province of Limburg) on 9 July 1988 (Kuchlein, 1993).

To this small series of published records, two new Dutch findings of *B. auriciliella* are added: a female taken by J. H. Kuchlein in the Mariapeel (near Helenaveen, province of Limburg) on 17 June 1988, and a male, captured by J. B. Wolschrijn at Twello (province of Gelderland) on 10 July 1996. The Dutch localities are shown in figure 6.

The available data suggest that *B. auriciliella* belongs to the small group of endemic species, found in North-West Europe.

### Bionomics

The immature stages of *Bohemannia auriciliella* are not known. The specimen from Kent was captured running over a leaf of a wild service tree (*Sorbus torminalis* (L.) Crantz), but because it was a male, this fact is hardly an indication for the larval food (Emmet, 1974). The specimen from Meinweg was swept from birch. More significant is the note on the label of the British specimen, found in 1937, but identified fifty years later: "l birch", which indicates that the moth was reared ex larva from birch (Van Nieukerken, 1986). However, nothing more is known about this successful

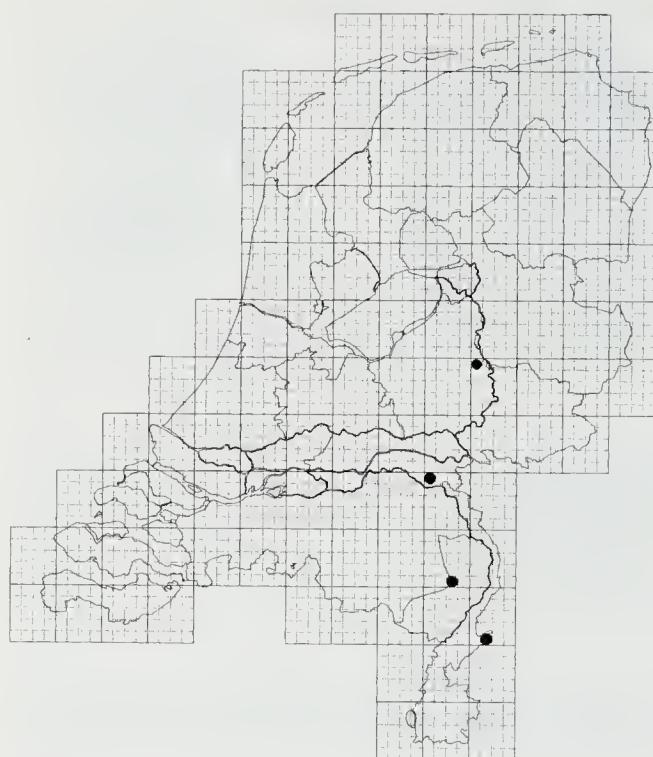


Fig. 6. Distribution of *Bohemannia auriciliella* in The Netherlands.

breeding, because its importance was not recognized at the time.

So far the facts, for the rest we have only assumptions on its life history. Emmet (1974) suggested that the larva is a canopy feeder, occurring in leaves too high for the collector's eye. Van Nieukerken (1986) mentions buds and petioles as possibilities, but it cannot be excluded that the larva is a bark-feeder. Anyhow, time will show us the truth.

The moth appears to be active at daytime, but also flies at dark: the specimens of Mariapeel and Twello came to light. Most probably *B. auriciliella* produces one generation per year, the moths having been captured between 17 June and 10 July.

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