



## A new species of *Absconditella* from western and central Europe with a key to the European members

PIETER P.G. VAN DEN BOOM<sup>1</sup>, A. MAARTEN BRAND<sup>2</sup> & AVE SUIJA<sup>3</sup>

<sup>1</sup> Arafura 16, NL-5691 JA Son, the Netherlands. E-mail: [pvdboom@kpnmail.nl](mailto:pvdboom@kpnmail.nl)

<sup>2</sup> Klipperwerf 5, NL-2317 DX Leiden, the Netherlands. E-mail: [a.maartenbrand@gmail.com](mailto:a.maartenbrand@gmail.com)

<sup>3</sup> Institute of the Ecology and Earth Sciences, University of Tartu, 40 Lai street, EE-51005, Tartu, Estonia. E-mail: [ave.suija@ut.ee](mailto:ave.suija@ut.ee)

### Abstract

A revision of the genus *Absconditella* in the Netherlands resulted in the discovery of a new species—*A. rubra*. A formal description is given as well as notes on other *Absconditella* species mainly from the Netherlands. It is the first known real epiphytic species of the genus *Absconditella* s.l. in Europe. A key to the ten known *Absconditella* species in Europe is provided.

**Key words:** European species, DNA barcode, identification key, Ostropales

### Introduction

The lichen genus *Absconditella* Vězda (Ostropales, Lecanoromycetes) is characterised by gyalectoid apothecia with a non-amyloid hymenium, without a dark pigment and thalli containing green algae as photobionts. According to Vězda (1965), paraphyses in the genus should be non-septate, but we found that septa are clearly present but probably somewhat diffuse in water and not so clear for example as in the genus *Gyalidea*. Coppins (2009) stated that the genus is lichenized with chlorococcoid algae, but we have seen a weakly lichenized thallus, which is often associated with free living algae from different genera such as *Coccomyxa*-like, often mixed with *Cystococcus*-like algae. This phenomenon needs further study. The apothecia in *Absconditella* have a cupular excipulum, thinner at the underside and wider in lateral side. In the margin, the hyphae are mainly circular, so that the upper side of the ascomata is small and the disc concave, with convergent asci and paraphyses, but in sections the coherence of asci and paraphyses is lost. European species of *Absconditella* s.l. are mostly associated with algal films or found on bryophytes, lignum, plant debris, soil, rock or rarely epiphytic.

The recent phylogenetic analyses include genus *Absconditella* in Stictidaceae in Ostropomycetidae, Lecanoromycetes (Baloch *et al.* 2009; Aptroot *et al.* 2014; Miadlikowska *et al.* 2014). In all these analyses, there is a clear indication that the genus is heterogenous despite of using only sequences from three specimens. As an example, according to Aptroot *et al.* (2014) the type of the genus—*A. sphagnum* is sister to the perithecioid *Geisleria* while *A. lignicola* Vězda & Pišút forms a distinct lineage basal to the mainly saprotrophic *Cryptodiscus*. Therefore there is a need for proper phylogenetic analysis which without doubts will lead to changes in the genus concept. However, scarcity of recent collections probably due to the size of ascomata and growing on unusual substrates (decayed *Sphagnum* or lignum, plant debris, acid soil) are the main reasons why such work has not yet been done. For this reason we are forced to use an artificial genus concept.

The checklist of the Netherlands includes five species, namely *Absconditella delutula* (Nyl.) Coppins & H. Kiliass, *A. fossarum* Vězda & Pišút, *A. pauxilla* Vězda & Vivant, *A. sphagnum* Vězda & Poelt and *A. trivialis* (Willey ex Tuck.) Vězda. They have all been collected rather rarely in the country. Recently, two species have been mentioned with notes in van den Boom & van den Boom (2009): *Absconditella* aff. *lignicola* Vězda & Pišút and *A. sphagnum*. The former has widely fusiform, 3-septate ascospores with dimensions of 12–18 × 4–5 µm. For comparison, the dimensions of ascospores in the literature is 10–15 × 4.5–6.5 µm. More collections are needed for a closer study. The latter has been found on wood of fallen trunks or stumps and has broadly fusiform 1(–2)-septate ascospores with