Absconditella fossarum and A. sphagnorum (Lichenes, Stictidaceae) in NW Poland

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The paper presents Absconditella fossarum, a species new to Poland, found on sands in the Noteć river valley and A. sphagnorum from the new stands found on peated shore of pure, forest lakes in the Tuchola Forest (Bory Tucholskie) region.

Key words: Absconditella, ephemeral lichenes, threatened lichens

INTRODUCTION

The genus Absconditella was distinguished by Vězda (1965) on the basis of algal component during the revision of material counted earlier among Gyrolepta and Dimerella. The species of this genus are inconspicuous and ephemeral and are rarely collected. They are distinguished from Gyrolepta Ach. and Dimerella Trevis by the absence of Trentepohlia as photobiont, and from Bryophagus gleocapsa Nitsche et Arnold [=Gyrolepta gleocapsa (Arnold) Zahlbr.] by thicker ascus apex and K/I - hymenium (Coppins 1994). Their photobionts are chlorococcoid algae. The thalli of Absconditella genus are difficult to distinguish and separate from filmous and gelatinous, when moist, algal cover, but the apothecia formed upon them are usually distinctly standing in contrast with algae green colour. At the initial development stage apothecia are immersed in lichen thalli or in algal medium, however later they are elevated upon the surface. Asci are cylindrical to cylindrical - clavate, 8 - spored. Ascospores - colourless, thin - walled, 1 - to 3 (-5) septate.

The species of the genus described have negative chemical reactions: Pd-, K-, KC-, C- and UV-. Hymenium I- or I+ yellowish, K/I- (Coppins 1994).

The previous data concerning the occurrence of genus Absconditella species in Poland are scarce and refer mainly to the south area of Poland. Bielczyk and Kiszka (2001) found three species of this genus in Poland: Absconditella lignicola Vězda et Pišut, A. delutula (Nyl.) Coppins et H. Kilias and A. sphagnorum Vězda et
Poelt. Only the first one of those species has been known already from the stands not only in the south, but also in the north part of our country.

MATERIAL AND METHODS

The collected material was deposited in the herbarium of the Department of Taxonomy and Plant Geography of Nicholas Copernicus University in Toruń (TRN). During its microscoping determination the parameters of morphological and anatomical structure of fruitbodies were measured. The reaction towards I and K/I, and other chemicals commonly used during lichenes determination, were checked. In parenthesis the location according to ATPOL grid square was given (Zajác 1978).

DESCRIPTION OF SPECIES

*Absconditella fossarum* Vězda et Pišut
Nova Hedwigia 40: 342. 1984

Thallus inconspicuous, intermixed with algal films. Photobiont chlorococcoid. Apothecia scattered, globose to deeply urceolate, to 0.15 mm wide, 0.1 - 0.15 mm high, red-orange to red-brownish, with basal part immersed in sandy, humic soil.

Fig. 1. *Absconditella fossarum* Vězda et Pišút: a - vertical section through apothecia; b - ascospores; c - asci and paraphyses; (original). Scale bars: a - 150 µm; b - 10 µm; c - 20 µm.
Excipulum red-brownish, ca 20-25 μm wide, formed of parallel hyphae. Subhymenium about 10 μm high with unclear structure. Hymenium about 90 μm high. Hamatheciun of paraphyses that are slender, 0.5-0.8 μm wide, indistinctly septate, simple or rarely with a few dichotomous branches, irregularly swollen at apices, glue together with jelly, single or very rarely dichotomously branched. Ascii cylindrical, mature about 7-8 μm wide, thin-walled, in the upper part with strongly or weakly (after spores maturation) dome-like thickened wall, 8-spored. Ascospores thin-walled, 3-septate, 12-14 x 4-4.5 μm. (Fig.1)

The species was found in the gravel-pit in Paterek place, S from Nakló by the Notěc River (ATPOL grid square CC23). Rather numerous apothecia occurred there on the sand among the scales of the genus Cladonia, 11.10.1995 (leg. M. Ceynowa-Gieldon).

So far it has been known from a few specimens found in Slovakia area (Vězda and Pišút 1984) and from the Netherlands (Aptroot et al. 1999).

Absconditella celata, the species most similar to A. fossarurn, has smaller apothecia (mature bowl-like) and grows on organic substratum of Sphagnum and mouldering wood (Döbbeler and Poelt 1977).

**Absconditella sphagnorunm** Vězda 1965
Preslia 37: 242.1965

The species forms green-grey or olivaceous-black thallus on Sphagnum moss and numerous but very small apothecia. Its thallus is thin, effuse, usually intermixed with algal films, sometimes invisible. The phycobiont is chlorococcoid. Algae colonies, scattered within hyphae often fill up Sphagnum empty cells (hyaline cells) and do not form clearly isolated lichen thallus. Hyphae rarely entwine round algal cells. Beside symbiotic alga, gelatinous alga film of Gloeocystis genus often occurs as epiphyte. Apothecia 0.2-0.4 x 0.12-0.2 mm, occurring on the surface of Sphagnum dead parts. Those fruiting bodies have pale white-yellow true exciple up to 50 μm wide; disc-concave, yellowish to pinkish; hymenium hyaline 60-75 μm high; paraphyses numerous, without septa, apically swollen, often clavate; asci clavate to cylindrical 60-75 x 6.5-7.5 μm, apically swollen; ascospores 10-12 x 4-5 μm, elongated-ovate or shortly fusiform with 1 septum, usually arranged diagonally within asci. (Fig. 2).

Localities (leg. M. Ceynowa-Gieldon):
- on the Piccki Duże Lake, near Laska village (ATPOL grid square CD33), together with Epigloea soleiformis and Placynthiella uliginosa, 5.10.2001;
- on the Czarne Lake, near Laska village, together with Omphalina umbellifera, (CD33), 6.10.2001;
- on the Moczadło Lake, near Męciak, (CB43), 15.09.2001;
- on the Gluche Lake, in the area of the „Bory Tucholskie” National Park (CB44), together with Epigloea bactrospora, 13.09.2001.

The lakes mentioned above are located on sand area, within pine woods (Fig. 3). Their shores are weakly peated. Numerous peat-bog plants, including mosses of Sphagnum genus, on which Absconditella sphagnorunm was found, grow there on sand. The species was found in unshaded places, within narrow near-shore zone, between
water table and pinewood, mainly on *Sphagnum palustre*. It is often accompanied by *Botrydina* and *Placyniella uliginosa* vegetative thalli.

Taking into account the kind of habitat occupied one can expect wider distribution of *Absconditella sphagnorum* in Poland. However, finding of this species stands is not easy. They should be sought during autumn.

So far in Poland this species has been noted only in the Podhale region (Bielczyk and Kiszka 2001).

In Europe, it was found in Sweden and Norway (Vězda 1965; Santesson 1993), in Finland (Vitikainen et al. 1997) and Netherlands (Aptroot et al. 1999), in Germany (Vězda 1965; Wirth 1995), in Austria (Türk and Hafellner 1999), CE Scotland (Coppins 1994) and in the Czech Republic and Slovakia (according to Bielczyk and Kiszka 2001).
REFERENCES


Absconditella fossarum and A. sphagnorum (Lichenes, Stictidaceae) in północno-zachodniej Polsce

Streszczenie

Nowy dla Polski gatunek – Absconditella fossarum stwierdzono w materiale zebranym w żwirowej położonej w miejscowości Paterek na południe od Nakła nad Notecią. Drobne, pomarańczowo-czerwone apotecia tego gatunku zauważono wśród łusek rodzaju Cladonia, na piasku pokrytym cienką powłoką głonów. Budowa ich, przedstawiona na rysunku 1, nie różni się od opisu gatunku wyróżnionego na terenie Słowacji.

Drugim gatunkiem - Absconditella sphagnorum stwierdzono na 4 stanowiskach położonych w rejonie Borów Tucholskich, na brzegach jezior lobeliowanych. Siedliskiem jego są torfowce (Sphagnum). Dotychczas w Polsce notowano go jedynie na Podhalu.