

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 *Gyalecta* and *Dimerella*. The species of this genus are inconspicuous and ephemeral and are rarely collected. They are distinguished from *Gyalecta* Ach. and *Dimerella* Trevis by the absence of *Trentepohlia* as photobiont, and from *Bryophagus gleocapsa* Nitsche et Arnold [= *Gyalecta 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. Kiliias 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 (Zajac 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.

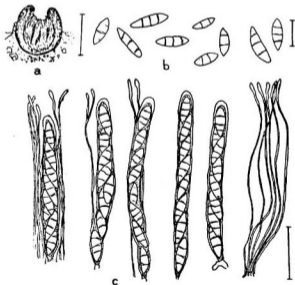


Fig. 1. *Absconditella fossarum* Vězda et Pišut: a - vertical section through apothecia; b - ascospores; c - asci and paraphyses; (original). Scale bars: a - 150 µm; b - 10 µm; c - 20 µm.

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. Hamatecium 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. Asci 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 Naklo by the Notec 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. fossarum*, has smaller apothecia (mature bowl-like) and grows on organic substratum of *Sphagnum* and mouldering wood (Döbbeler and Poelt 1977).

Absconditella sphagnum 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 *Gleocystis* 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 Duze 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 Męcikał, (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 sandr area, within pine woods (Fig. 3). Their shores are weakly peated. Numerous peat-bog plants, including mosses of *Sphagnum* genus, on which *Absconditella sphagnum* was found, grow there on sand. The species was found in unshaded places, within narrow near-shore zone, between

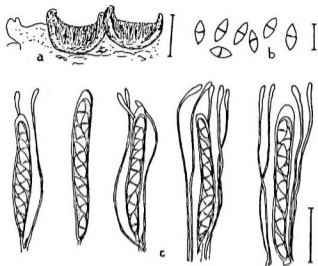


Fig. 2. *Absconditella sphagnum* Vězda: a – vertical section through apothecia; b – ascospores; c – asci and paraphyses; (original). Scale bars: a = 150 µm; b = 10 µm; c = 20 µm.

water table and pinewood, mainly on *Sphagnum palustre*. It is often accompanied by „*Botrydina*” and *Placynitiella uliginosa* vegetative thalli.

Taking into account the kind of habitat occupied one can expect wider distribution of *Absconditella sphagnum* 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 Haffellner 1999), CE Scotland (Coppins 1994) and in the Czech Republic and Slovakia (according to Bielczyk and Kiszka 2001).

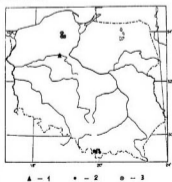


Fig. 3. Distribution of *Absconditella fossarium* Vězda et Pišút (1) and *A. sphagnum* Vězda (2;3) in Poland 2 – acc. to Bielczyk and Kiszka 2001; 3 – new localities.

REFERENCES

- Aptroot A., Herk C. M. van, Sparrius L. B., Boom P. P. G. van den 1999. Checklist van de Nederlandse Korstmossen en Lichenicole Fungi. *Buxbaumia* 50 (1): 4-64.
- Bielczyk U., Kiszka J. 2001. The genus *Absconditella* (Stictidaceae, Ascomycota lichenisati) in Poland. *Pol. Bot.* 46(2): 175-181.
- Coppins B. J. 1994. *Absconditella* Vězda (1965). (In:) O. W. Purvis, B. J. Coppins, D. L. Hawksworth, P. W. James, D. M. Moore (eds) *The lichen flora of Great Britain and Ireland*. Natural History Museum Publications in association with The British Lichen Society. London: 57-58.
- Döbbele P., Poelt J. 1977. *Absconditella celata* spec. nov., eine Flechtenart aus Lappland. *Herzogia* 4: 363-366.
- Santesson R. 1993. *The lichens and lichenicolous fungi of Sweden and Norway*. SBT-förlaget, Lund.
- Türk R., Hafellner J. 1999. Rote Liste gefährdeter Flechten (Lichens) Österreichs. 2. Fassung. (In:) H. Niklfeld (ed.) *Rote Listen gefährdeter Pflanzen Österreichs*. 2. Auflage. Grüne Reihe des Bundesministeriums für Umwelt, Jugend und Familie, Graz: Austria Medien Service 10: 187-228.
- Vitikainen O., Ahti T., Kuusinen M., Lommi S., Uvinen T. 1997. Checklist of lichens and allied fungi of Finland. *Norrlinia* 6: 1-123.
- Vězda A. 1965. Flechtensystematische Studien II. *Absconditella*, ein neue Flechtengattung. *Preslia* 37: 237-245.
- Vězda A., Pišút I. 1984. Zwei neue Arten der Flechtengattung *Absconditella* (lichenisierte Stictidaceae, Ostropales) in der Tschechoslowakei. *Nova Hedwigia* 40: 341-346.
- Wirth V. 1995. *Die Flechten Baden-Württembergs*. 1. E. Ulmer, Stuttgart.
- Zajac A. 1978. Atlas distribution of vascular plants in Poland ATPOL. *Taxon* 27: 481-484.

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w północno-zachodniej Polsce

Streszczenie

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

Dруги gatunek - *Absconditella sphagnum* stwierdzono na 4 stanowiskach położonych w rejonie Borów Tucholskich, na brzegach jezior lobeliowych. Siedliskiem jego są torfowce (*Sphagnum*). Dotychczas w Polsce notowano go jedynie na Podhalu.