

Contribution to the knowledge of some poorly known lichens in Poland. I. The genus *Absoconditella*

Paweł Czarnota¹ & Martin Kukwa²

¹Scientific Laboratory of the Gorce National Park, Poręba Wielka 590, PL–34–735 Niedźwiedź, Poland

E-mail: pawczarnota@poczta.onet.pl

²Department of Plant Taxonomy and Nature Protection, Gdansk University, Al. Legionów 9, PL–80–441 Gdańsk, Poland

E-mail: dokmak@univ.gda.pl

Abstract: Data on the poorly known lichen genus *Absoconditella* in Poland are presented. *A. pauxilla* is reported as new to the country. New collections of the rare in Central Europe *A. delutula* and *A. sphagnorum* are provided. Additionally, new records of the very much overlooked *A. lignicola* are presented from many regions of Poland. Taxonomic remarks, known world distribution and habitat preferences for the species are included.

Kokkuvõte: Panus Poola vähemtuntud samblike tundmisse. I. Perekond *Absoconditella*.

Esitatakse andmed halvasti tuntud samblikuperekonna *Absoconditella* kohta Poolas. *A. pauxilla* leid on maale uus. Teatatakse Kesk-Euroopas haruldaste liikide *A. delutula* ja *A. sphagnorum* uutest leidudest. Esitatakse ka sageli märkamata jäänud *A. lignicola* uued teated paljudest Poola piirkondadest. Lisatud on taksonoomilised märkused, liikide kasvukohtade ja leviku andmed maailmas.

INTRODUCTION

The lichen genus *Absoconditella* Vězda comprises eight species in Europe, but since its description by Vězda (1965), they have been reported only rather sporadically in Central Europe, e.g. *A. annexa* (Arnold) Vězda by Vězda (1965), *A. fossarum* Vězda & Pišut by Vězda and Pišut (1984), *A. celata* Döbbele & Poelt and *A. pauxilla* Vězda & Vivant by Palice (1999), *A. delutula* (Nyl.) Coppins & Kiliass by Kocourková-Horáková (1998) and *A. sphagnorum* Vězda & Poelt by Guttová and Palice (1999). Only *A. lignicola* Vězda & Pišut was noted quite commonly. As it turned out later, most of the species appeared to be overlooked in the field owing to a very inconspicuous habit and mostly pioneer and ephemeral character of the species (e.g. Palice et al., 2006).

The first review of the genus *Absoconditella* in Poland was presented by Bielczyk and Kiszka (2001) and included three taxa, *A. delutula*, *A. lignicola* and *A. sphagnorum*. The commonest, *A. lignicola*, was reported at that time mostly from the mountainous southern part of Poland, but also with three lowland localities from NE Poland. The remaining species seemed to be rare: *A. delutula* was found only once in Eastern Carpathians, whereas *A. sphagnorum* seemed to be confined to the post-glacial, large intermountain peat-bog in the Kotlina Orawsko-Nowotarska

basin. Later, *A. celata* was discovered in the Bieszczady Mts (Bielczyk & Kiszka, 2002), and *A. fossarum* was collected from northern part of the country (Ceynowa-Giełdon, 2003), both being additions to the Polish checklist. Ceynowa-Giełdon (2003) reported a few further findings of *A. sphagnorum* from northern Poland, and some new collections of *A. lignicola* have also been published, although from only very few regions (see below, Fig. 1, and Fałtynowicz, 2003 and literature cited therein).

During our studies we have found several new records of *Absoconditella* species from Poland. It appears that *A. lignicola* is much more common and widespread in Poland than previously reported. We also discovered new localities of the rare *A. delutula* and *A. sphagnorum*. Additionally, we found *A. pauxilla* Vězda & Vivant, a species hitherto unreported from Poland. This paper presents all new data concerning of *Absoconditella* from Poland, and contributes to its known distribution in Central Europe.

This work is the first part of a larger series, which will present new data of some poorly known and overlooked taxa in Poland, especially those that are rarely found in Central Europe as well.

MATERIALS AND METHODS

All specimens examined are kept in following herbaria: BDPA, GPN, Hb. Kolanko, KRAM, KTC, LOD, OPUN, UGDA and WRSL. Apothecia were sectioned with a razor blade, and mounted in water. All examined localities are mapped according to the modified ATPOL grid square system (Cieśliński & Fałtynowicz, 1993; see also Kukwa et al., 2002).

A key for all known European taxa is presented by Bielczyk and Kiszka (2001).

THE SPECIES

Absconditella delutula (Nyl.) Coppins & Kilius

In Poland *A. delutula* was reported from only one locality in the Western Carpathians, but Bielczyk and Kiszka (2001) suggested it should be more common. Two additional records were mentioned by Fałtynowicz (2003) and Bielczyk (2003), but locality details have not been published until now (one record made by the first author is included in this paper). Here we present two additional records, thus confirming the opinion of Bielczyk and Kiszka (2001) on its higher frequency in the Western Carpathians. Interestingly, the species was also once discovered in a lowland area of SW Poland (see Fałtynowicz, 2003). We found the species also twice in northern Poland. Considering all data, the species seems to be widespread in the country, but rare elsewhere, similar to its status in the British Isles (Woods & Coppins, 2003).

The new mountain collections were made on siliceous sandstone pebbles in shady, forested localities, but not only in the vicinity of streams as in the case of its first Polish locality (Bielczyk & Kiszka, 2001). Based on recent spring explorations of selected parts of the Western Carpathians we believe that *A. delutula* is an ephemeral, pioneer and short-lived epilithic lichen, locally even quite common. It is usually a single colonizer of rocky substrata or sometimes found in an association with *Micarea lithinella* (Nyl.) Hedl., non-lichenized algae or young thalli of *Trapelia coarctata* (Sm.) M. Choisy. In northern Poland the species has been found on the ground and on wood, similar to those findings reported for example from Sweden (Santesson et al., 2004) and Great Britain (Coppins, 1992). As we have not seen the specimen of *A. delutula* recently

reported from Iława Lakeland in northern Poland (Jando, 2004), the record is considered as unconfirmed and provisionally doubtful.

Absconditella sphagnorum can be misinterpreted as *A. delutula*. Both taxa have 1-septate ascospores, but predominantly they are distinguished by the dimensions of apothecia (e.g. Coppins, 1992; Bielczyk & Kiszka, 2001). However, as the epixylic form of *A. sphagnorum* often produces smaller ascomata than its typical, epibryophytic representatives (for example Czarnota 5129, see below), some anatomical differences in thickness and degree of elevation of the excipulum can be helpful in the discrimination. *A. sphagnorum* has a stout, to 50 µm wide excipulum in the upper part, thus protruding distinctly above apothecial disc, while *A. delutula* has a narrower, to 30 µm wide excipulum, not so sharply delimited from the disc. In contrast to the dimensions of the margin, the ascospores of *A. sphagnorum* are smaller, being mainly 2.5–4.0 µm wide, while those of *A. delutula* are mostly 3.5–5.0 µm wide.

Absconditella delutula is a rarely reported species elsewhere, but probably very widely distributed. It is mostly known from Europe, being sparsely recorded from e.g. Belgium (Sérusiaux et al., 2006), Fennoscandia (Santesson et al., 2004), British Isles (Coppins, 1992; Fox, 2004), Germany (e.g. Scholz, 2000; Cezanne et al., 2002; Otte & Rätzl, 2004) the Netherlands (Aptroot et al., 2004) and Ukrainian, as well as Slovak Eastern Carpathians (Khodosovtsev & Postoyalkin, 2006; Piśut et al., 2007). The species is also known from Greenland (Kristinsson et al., 2006), Vietnam (Aptroot & Sparrius, 2006) and Australia, including Tasmania (Hafellner et al., 1989; Kantvilas, 2005).

Specimens examined. [Ac-38] – Wybrzeże Słowińskie coast, ‘Bielawa’ nature reserve, 54°47.666’N/18°14.032’E, the ground in plant communities covering burnt places, 27.09.2006, leg. R. Markowski (UGDA); [Bf-68] – Biebrza Valley, Biebrzański National Park, forest sections Nos 144 and 145, near Grzędę settlement, on wood within *Betuletum pubescentis*, 15.09.2005, leg. E. Bylińska, M. Kukwa, M. Seaward (Hb. Kolanko); [Ge-00] – Western Beskidy Mts, Beskid Wyspowy Mts, S slope of Lubomir Mt., 49°45’16”N/20°03’07”E, on sandstone pebbles, 09.04.2007, leg. P. Czarnota 5136 (GPN, dupl. UGDA-L-14634); [Ge-10] – Western Beskidy Mts, Gorce Mts, 0.5 km S of Poręba Górna-Jasionów settlement, 49°35’01”N/20°02’13”E, on sandstone pebbles, 8.04.2007, leg. P. Czarnota 5137 (GPN); [Ge-11] – Gorce Mts, above Rzeki-Cerkowe settlement,

on sandstone rocks, 7.05.2003, leg. P. Czarnota 3234 (GNP); **[Ge-12]** – Beskid Wyspowy Mts, W slope of Modyń Mt., 49°37'30"N/20°22'40"E, alt. 850 m, on sandstone pebble, 2.07.2005, leg. P. Czarnota 5014 (GPN).

Additional specimen examined. Czech Republic, CHKO Łužické Hory ca 0.5 km W of Studeny village, 50°50.60'/14°27.16'E, on sandstone boulders near stream in broad-leaf forest, 26.03.2003, leg. P. Czarnota 3320 (GPN).

***Absconditella lignicola* Vězda & Pišút**

This species is widespread in temperate regions of the Northern Hemisphere (Bielczyk & Kiszka, 2001 and literature cited therein). In Poland it has started to be reported for last ca 10 years. Some of the records were based on old herbarium findings, and these showed that the species should have been listed from Poland 50 years ago (Bielczyk & Kiszka, 2001).

At first, *A. lignicola* was mostly known from the Carpathians with a few additional records in NE Poland (see e.g. Fałtynowicz, 2003). Elsewhere the species seemed to be rare, despite it being found also in several localities in central Poland (Czyżewska, 2003a; Łubek, 2003). For that reason *A. lignicola* was included in some regional red lists of lichens in category NT (Near Threatened) as in the case of Opole and Upper Silesia

Regions (Kiszka & Leśniński, 2003) or in DD (Data Deficient) as in Pilicka Forest (Czyżewska, 2003b) and Góry Świętokrzyskie Mts (Cieśliński & Łubek, 2003). Later, the species was reported by Hachułka (2005), Kubiak (2005), Kukwa (2007) and Kukwa and Jabłońska (2007). The list of examined specimens presented below includes only those that have never been reported before, but the distribution map of *A. lignicola* in Poland (Fig. 1) is based on all its known records.

The new data presented here concurs with the results of investigations from several other European countries [e.g. in the Czech Republic (Palice, 1999)] that *A. lignicola* is not rare, but a typical ephemeral, epixylic pioneer colonizer, widespread throughout Poland, and locally even very common. In the Karkonosze Mts, for example, it has recently been recorded almost twenty times (Staniaszek-Kik, pers. comm.; see also selected specimens examined below). It has a broad ecological amplitude and grows both in natural forests (e.g. quite commonly in different ancient stands of the Białowieża Forest or upper montane spruce forest in the Carpathians), as well as in completely artificial coniferous monocultures or other heavily managed woodlands. It seems to occur in almost every type of older forest where some decaying wood is laying. Lisická (2006) went further and included *A. lignicola* into the small group of toxitolerant species (together with e.g. *Fellhanera subtilis* and *Hypocenomyce caradocensis*).

Selected specimens examined (all specimens on wood). **[Ad-80]** – Pobrzeże Kaszubskie coastland, Gdańsk Oliwa town, Źródlińska w Dolinie Ewy' nature reserve, 54°25'N/18°32'E, 22.08.2002, leg. M. Zakrzewska (UGDA-L-9290); **[Bc-56]** – Bory Tucholskie Forest, Ustronie forest district, forest section No. 23j, 16.08.2002, leg. P. Czarnota 3103 (GPN); *ibid.*, Dąbki forest district, forest section No. 481, 15.08.2002, leg. P. Czarnota 3065 (GPN); **[Bc-65]** – Bory Tucholskie Forest, Biała forest district, forest section No. 129, 16.08.2002, leg. P. Czarnota 3081 (GPN); **[Bd-79]** – Wzgórza Dylewskie Landscape Park, forest section No. 100j, 13 Sept. 2002, leg. P. Czarnota (GPN 3235); **[Be-37]** – Pojezierze Mrągowskie lakeland, by NW part of Kiersztanowskie Lake, 53°57'03"N/21°13'47"E, 4.07.2006, leg. M. Kukwa 5257 (UGDA); **[Cg-45]** – Białowieża Primeval Forest, Browsk forest division, forest section No. 153, 13.06.1999, leg. K. Czyżewska (LOD-L-11120, together with *Micarea micrococca*); **[Cg-55]** – Białowieża Primeval Forest, Białowieżski National Park, forest section No. 340A, 12.08.2002, leg. P. Czarnota 2944 & 2967 (GPN); *ibid.*, forest section No. 342A, 2.05.2004, leg. M. Kukwa 3229

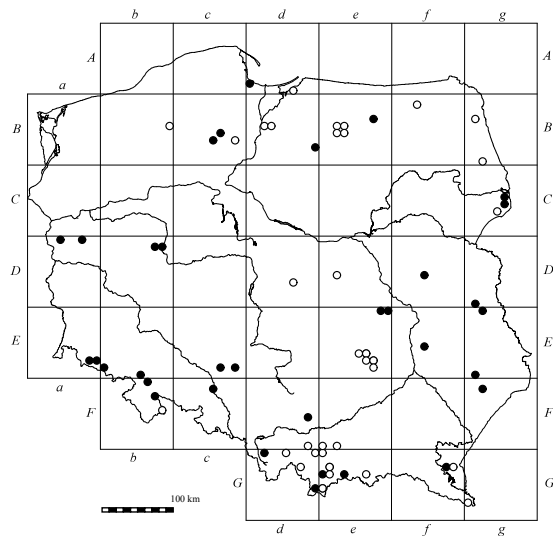


Fig. 1. Known distribution of *Absconditella lignicola* in Poland; O – localities reported prior to this publication, ● – new findings.

(UGDA-L-10233); *ibid.*, forest section No. 399B, 52°43'22"N/23°51'11"E, 2.05.2004, leg. M. Kukwa 3243 & 3249 (UGDA-L-10247 & 12711), 10.05.2006, leg. P. Czarnota 5027 (GPN); **[Cg-64]** – Białowieża Primeval Forest, vicinity of Topiło village, forest section No. 599, 52°38'40"N/23°38'02"E, 12.05.2006, leg. M. Kukwa 5097 (UGDA); NE of Topiło village, forest section No. 599B, 52°38'36"N/23°38'04"E, 12.05.2006, leg. P. Czarnota 5019 (GPN); Białowieża forest division, forest section No. 671, 52°37'16"N/23°43'24"E, 13.05.2006, leg. P. Czarnota 5102 (GPN); **[Da-04]** – Puszcza Rzepińska Forest, ca 4 km S of Rzepin town, 52°18'03"N/14°46'37"E, 8.04.2006, leg. P. Czarnota 4844 (GPN); **[Da-07]** – Puszcza Rzepińska Forest, close the border of 'Pawski Ług' nature reserve, 52°18'44"N/15°15'27"E, 8.04.2006, leg. P. Czarnota 4801 (GPN); **[Db-17]** – Wielkopolski National Park, 'Grabina' nature reserve, near Góreckie Lake, 19.05.2004, leg. P. Czarnota 3902 (GPN); **[Db-18]** – Wielkopolski National Park, Wiry forest district, forest section No. 42, 52°17'56"N/16°49'36"E, 19.05.2004, leg. P. Czarnota 3904 (GPN); *ibid.*, forest section no 46f, 52°17'54"N/16°49'36"E, 19.05.2004, leg. P. Czarnota 3908 (GPN); **[Df-54]** – Równina Łukowska plain, near 'Jata' nature reserve, 51°57'11"N/22°11'53"E, 21.06.2005, leg. P. Czarnota 4662 (GPN); **[Dg-91]** – Równina Łęczyńsko-Włodawska plain, Lasy Parczewskie Wood, ca 2 km NE of Stary Orzechów village, 51°30'14"N/23°02'53"E, alt. 180 m, 27.10.2004, leg. P. Czarnota 4218 (GPN); **[Ea-78]** – Pogórze Karkonoskie foothills, near Michałowice village, 50°50.325'N/15°35.430'E, alt. 620 m, 27.09.2003, leg. M. Staniaszek-Kik (WRSL); Western Sudetes, Karkonoski National Park, vicinity of Wodospad Szklarki waterfall, 50°49.922'N/15°33.575'E, alt. 540 m, 26.07.2003, leg. M. Staniaszek-Kik (WRSL); Dolne Gawry area, 50°48.444'N/15°33.991'E, alt. 710 m, 23.07.2004, leg. M. Staniaszek-Kik (WRSL); **[Ea-79]** – Karkonosze Mts, Karkonoski National Park, valley of Sopot stream, 50°48.196'N/15°37.267'E, alt. 700 m, 13.07.2004, leg. M. Staniaszek-Kik (WRSL); Hojnik Mt., vicinity of Zbójeckie Skąły outcrops, 50°50.211'N/15°38.858'E, alt. 520 m, 25.07.2003, leg. M. Staniaszek-Kik (WRSL); Leśniak Mt. near Jagniatków village, 50°48.223'N/15°36.478'E, alt. ca 820 m, 13.08.2003, leg. M. Staniaszek-Kik (WRSL); **[Eb-80]** – Karkonosze Mts, Karkonoski National Park, N slope of Czarna Kopa Mt., 50°44.878'N/15°46.465'E, alt. 1120 m, 1.09.2003, leg. M. Staniaszek-Kik (WRSL); Kowary Górne settlement, 50°46.750'N/15°50.573'E, alt. 570 m, 4.09.2003, leg. M. Staniaszek-Kik (WRSL); Łomnicza Valley, 50°45.379'N/15°45.462'E, alt. 740 m, 27.07.2004, leg. M. Staniaszek-Kik (WRSL); **[Eb-95]** – Middle Sudetes, Góry Sowie Mts, S slope of Wielka Sowa Mt. above Sokolec village, 50°39'55"N/16°29'30"E, alt. 700 m, 21.04.2005, leg. P. Czarnota 4693 (GPN); **[Ec-86]** – Równina Opolska plain, Turawa forest division, forest section No. 70h, 22.08.2003, leg. M. Marzec (UGDA-L-9026); **[Ec-88]** – Wyzyna Woźnicko-Wieluńska upland, Próg Woźnicki hummock, 7 km

S of Olesno town, 50°48'38"N/18°24'31"E, alt. 260 m, 4.07.2005, leg. P. Czarnota 4516 (GPN); **[Ee-66]** – Góry Świętokrzyskie Mts, Świętokrzyski National Park, 'Czarny Las' nature reserve, forest section No. 42, 16.07.2001, leg. A. Donica (KTC); **[Ee-77]** – Góry Świętokrzyskie Mts, Świętokrzyski National Park, S slope of Łysa Góra Mt., 50°51'36"N/21°02'43"E, alt. 580 m, 6.05.2004, leg. P. Czarnota 3829 (GPN); **[Ef-54]** – Wzniesienia Urzędowskie hills, between Urzędów and Dzierzkowice villages, alt. 200 m, 19.05.2003, leg. P. Czarnota 4194 (GPN); **[Eg-02]** – Poleski National Park, Kochanowski forest district, forest section No. 192 b, 51°25'37"N/23°10'51"E, 27.04.2004, leg. P. Czarnota 3870 (GPN); **[Eg-91]** – Middle Roztocze, Roztoczański National Park, Stogi forest district, forest section No. 178, 50°35'42"N/23°04'42"E, alt. 250 m, 28.04.2004, leg. P. Czarnota 3896 (GPN); S of Zwierzyniec village, 'Bukowa Góra' nature reserve, 50°35'47"N/22°57'48"E, alt. ca 280 m, 30.04.2006, leg. M. Kukwa 5036a (UGDA); **[Fb-06]** – Góry Sowie Mts, S slope of Chochół Wielki Mt., ca 1.5 km NW of Srebrna Góra village, 50°34.43'N/16°37.85'E, 22.04.2004, leg. P. Czarnota 4149 & 4146 (GPN) and M. Kukwa 3115 (UGDA-L-10301); **[Fb-27]** – Eastern Sudetes, Góry Złote Mts, ca 1.5 km S of Złoty Potok town, 50°26'20"N/16°51'18"E, alt. 450 m, 19.04.2005, leg. P. Czarnota 4463 (GPN); **[Fc-15]** – Równina Niemodlińska plain, Bory Niemodlińskiej Forest, W of Gwoździce village, 50°30'34"N/17°54'54"E, alt. 130 m, decaying pine log, 23.04.2005, leg. P. Czarnota 4460 (GPN); **[Fd-58]** – Ojcowski National Park, Saspowska Valley, near Jaskinia Łokietka karst cave, 50°12.04'N/16°49.12'E, alt. 340 m, 15.04.2004, leg. P. Czarnota 4139 (GPN); **[Fg-12]** – Puszcza Solska Forest, Kalina forest district, 'Czartowe Pole' nature reserve, 50°26'25"N/23°06'30"E, alt. ca 250 m, 28.10.2004, leg. P. Czarnota 4231 (GPN); **[Gd-02]** – Western Beskidy Mts, Beskid Śląski Mts, valley of Wapienica stream, S of Bielsko-Biała town, decaying wood, 26 Apr. 2000, leg. G. Leśniński (OPUN); **[Gd-59]** – West Tatra Mts, Tatra National Park, forest section No. 209f, Dolina Strażyńska valley, 28.06.2002, leg. P. Czarnota 2827 (GPN); **[Ge-21]** – Western Beskidy Mts, Gorce Mts, Gorce National Park, Kamienica Valley, alt. 800 m, stump, leg. K. Glanc (KRAM); *ibid.*, valley of Jaszczę Duże stream, N slope of Borsuczyny Mt, alt. 1020 m, leg. K. Glanc (KRAM); **[Ge-30]** – Kotlina Nowotarska basin, 'Bór na Czerwonem' nature reserve, 49°27.84'N/20°02.35'E, alt. 620 m, wood of pine log, 4.06.2003, leg. P. Czarnota 4186 (GPN); **[Ge-33]** – Pieniny Mts, Pieniński National Park, valley of Ociemny stream, 49°25'46"N/20°25'41"E, alt. ca 600 m, decaying stump, 13.05.2004, leg. P. Czarnota 3841 (GPN); **[Ge-50]** – Rów Podtatrzański depression, near Małe Ciche village, Pańszczykowa Polana glade, 49°17'30"N/20°03'35"E, alt. 925 m, 16.06.2004, leg. Ł. Śliwa 2308 (KRAM, together with *Micarea prasina*); **[Gf-27]** – Góry Sanocko-Turczańskie Mts, the main ridge of Góry Słonne Mts, 29.05.1990, leg. J. Kiszka (BDPA, together with *Micarea prasina*).

***Absconditella pauxilla* Vězda & Vivant**

This species is here reported as new to Poland. It is a rare lichen throughout Europe, and so far in Central Europe it has been reported only by Palice (1999). Earlier the species was known only from few regions, e.g. Great Britain (Coppins, 1992; Woods & Coppins, 2003), Ireland (Seaward, 1994; Fox, 2004), French Pyrenees, the Netherlands (Palice, 1999; Aptroot et al., 2004) and Sweden (Santesson et al., 2004). It is known also from Africa (Madeira) (Pišút, 2004). Considering the so-far known distribution of *A. pauxilla*, the Polish finds extend its known geographic range to the East and confirm its occurrence in the Baltic region.

Absconditella pauxilla occupies decaying bryophytes or wood in humid niches, e.g. in peat bogs (as like in Polish cases). In Scotland it was thought to be confined to the native pinewoods of the Scottish Highlands (Coppins & Coppins, 2006), but has since been found in southern Scotland on old *Juniperus* stems (Coppins, pers. comm.) and in a conifer plantation on an attached dead twig of *Picea sitchensis* (Coppins 2007).

The Polish specimens are rather small with very few apothecia, and many of them were immature, however, in some the typical acicular ascospores were found.

Specimens examined. [Ac-86] – Pojezierze Kaszubskie lakeland, ‘Staniszewskie Błoto’ nature reserve, forest section No. 209, *Vaccinio uliginosi-Pinetum*, wood, 27.09.1983, leg. W. Fałtynowicz (GPN 3175); ‘Kurze Grzędy’ nature reserve, forest section No. 102d, *Vaccinio uliginosi-Betuletum pubescentis*, bark of stump, 26.05.2005, leg. M. Kukwa 4157 (UGDA).

***Absconditella sphagnorum* Vězda & Poelt**

This species has been found in many places throughout Europe and is also known from North America (Coppins, 1992; Harris, 2004). So far it has been reported mostly from Sweden and Finland (Santesson et al., 2004), lowland peat-bogs in northern Ladoga region in Russian Karelia (Alstrup et al., 2005), Estonia (Aptroot et al., 2005), N Poland (Ceynowa-Giełdoń, 2003), NE Germany (Scholz 2000), as well as in Central Europe in bogs in the Polish Tatra region (Bielczyk & Kiszka, 2001), Slovak Central Western Carpathians (Guttová & Palice, 1999), Šumava Mts (Palice, 1999) and the Alps (Hafellner & Türk, 2001; Wirth, 1995). However, there are

also localities known from western, hyperoceanic part of Europe (e.g. Santesson et al., 2004; Aptroot et al., 2004), including British Isles (Coppins, 1992, 1999). Possibly it may be found more frequently in large peat-bogs in the cooler zone of the Holarctic.

Decaying bryophytes (mainly *Sphagnum*) are preferred by *A. sphagnorum* as the main substratum, however, as Polish gatherings presented here show, sometimes the species grows also on wood of decaying stumps or logs, but within bog pine forest. Until now several Polish collections of *A. sphagnorum* were reported from only two regions of the country, a large inter-Carpathian peat-bog confined to the Kotlina Orawsko-Nowotarska basin (Bielczyk & Kiszka, 2001; Bielczyk & Betleja, 2003) and from the Bory Tucholskie Forest (Ceynowa-Giełdon, 2003; see distribution map included therein). The new localities presented here extend northwards the known Polish geographic range and also further to the East including the former large post-glacial basin between Vistula River and San River.

Because of its 1-septate ascospores, similar to those of *A. delutula*, lignicolous collections of both species may be confused; for differences see under *A. delutula*.

Specimens examined. [Ac-75] – Pojezierze Kaszubskie lakeland, W of Linia village, Białe Błoto peat bog, 54°28'49"N/17°53'17"E, on *Sphagnum* and *Polytrichum* on hummocks, 04.11.2004, leg. M. Kukwa 3624 (UGDA-L-11359); **[Ac-86]** – Pojezierze Kaszubskie lakeland, ‘Kurze Grzędy’ nature reserve, forest section No. 135h, wood in bog pine forest, 27.05.2005, leg. M. Kukwa 4211 (UGDA); **[Bc-26]** – Bory Tucholskie Forest, 0.5 km NE of Lipa village at E shore of Wdzydze Lake, by tourist track, 53°59'31"N/17°56'36"E, wood of pine in pine forest, 13.10.2006, leg. P. Czarnota 5129 (GPN); **[Ef-97]** – Kotlina Sandomierska basin, Równina Biłgorajska plain, Lasy Janowskie Landscape Park, Porytowe Wzgórze, ca 2.5 km S of Flisy village, 50°37.80'N/22°27.99'E, alt. ca 220 m, wood of pine in local bog pine forest, 10.10.2003, leg. P. Czarnota 3448 (GPN).

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