

New or interesting records of lichenicolous fungi from Poland VI

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Abstract: KUKWA, M. & JABŁOŃSKA, A. 2008. New or interesting records of lichenicolous fungi from Poland VI. – *Herzogia* 21: 167–179.

Records of 48 species of lichenicolous fungi and lichens are presented, two of which, *Graphium aphthosae* and *Marchandiomyces aurantiacus*, are new to the Carpathians and three, *Pronectria xanthoriae*, *Refractohilum pluriseptatum* and *Tremella candelariellae*, are new to Poland. A myxomycete, *Badhamia* aff. *panicea*, is reported for the first time from lichens. *Lecanora hagenii* is a new host for *Lichenodiplis lecanorae*, *Trapeliopsis granulosa* for *Taeniolella trapeliopseos*, and *Xanthoparmelia conspersa* for *Lichenocodium lecanorae*. *Endococcus propinquus* is reported as new to Svalbard.

Zusammenfassung: KUKWA, M. & JABŁOŃSKA, A. 2008. Neue oder interessante Funde lichenicoler Pilze aus Polen VI. – *Herzogia* 21: 167–179.

Funde von 48 lichenicolen Pilzen und Flechten werden vorgestellt. *Graphium aphthosae* und *Marchandiomyces aurantiacus* sind neu für die Karpaten, *Pronectria xanthoriae*, *Refractohilum pluriseptatum* und *Tremella candelariellae* sind neu für Polen. Der Schleimpilz *Badhamia* aff. *panicea* wird erstmals auf Flechten beobachtet. *Lecanora hagenii* ist ein neuer Wirt für *Lichenodiplis lecanorae*, *Trapeliopsis granulosa* für *Taeniolella trapeliopseos* und *Xanthoparmelia conspersa* für *Lichenocodium lecanorae*. *Endococcus propinquus* ist ein Neufund für Spitzbergen.

Key words: Ascomycota, Basidiomycota, mitosporic fungi, Myxomycota, biodiversity.

Introduction

This study, the sixth in a series presenting distributional data on lichenicolous fungi in Poland (see KUKWA et al. 2002, KUKWA 2004, 2005, KUKWA & CZARNOŃSKA 2006, KUKWA & KOWALEWSKA 2007), presents localities for 48 taxa, two of them new to the Carpathians and three new to Poland.

Material and methods

Specimens were identified by the authors with the aid of the following literature: ALSTRUP & HAWKSWORTH (1990), CALATAYUD et al. (2002), CLAUZADE et al. (1989), COLE & HAWKSWORTH (2004), DIEDERICH (1990, 1996), DIEDERICH & ETAYO (2000), ETAYO & DIEDERICH (1996), HAFELLNER (1989, 1994), HAWKSWORTH (1979, 1981, 1983), HAWKSWORTH & COLE (2002, 2004), IHLEN & WEDIN (2007), KUKWA & DIEDERICH (2005), LOWEN & DIEDERICH (1990), ROUX & TRIEBEL (1994), SÉRUSIAUX et al. (1999), TIBELL (1999), TRIEBEL (1989), TRIEBEL & CÁCERES (2004) and ZHURBENKO & ALSTRUP (2004). Representative material has been deposited in the lichen herbaria BILAS, GPN, UGDA, KRAM, KRA and POZ.

All examined localities are provided with geographical coordinates based on the ATPOL grid square system, as in KUKWA et al. (2002), KUKWA (2004, 2005) and KUKWA & CZARNOTA (2006) (Fig. 1).

The species

Abrothallus caerulescens Kotte

Fourth locality in Poland (see KUKWA & KOWALEWSKA 2007 and literature cited therein), and only the second lowland record.

Host – *Xanthoparmelia* sp. (thallus).

SPECIMEN EXAMINED. [Be-06] – Węsiory village, Kamienne Kręgi Nature Reserve, 54°13'00"N/17°50'21"E, on stone, 16.06.2006, M. Kukwa 5201 (UGDA-L-12991).

Arthonia galactinaria Leight.

It appears to be rather common in Poland, but greatly under-recorded (KUKWA 2005).

Hosts – *Lecanora albescens*, *L. dispersa*, *L. hagenii*, *L. semipallida* (in all cases on apothecia).

SPECIMENS EXAMINED (in all cases the host species occurs on concrete). [Ad-80] – Gdańsk Przymorze town, near the junction of Jana Pawła II and Czarny Dwór Streets, 54°24'32"N/18°36'52"E, on *L. dispersa*, 12.03.2006, M. Kukwa 4923 (UGDA-L-12677); [Ad-51] – Helskie Wydmy Nature Reserve, forest sections nos 252/253, 54°39'12"N/18°46'10"E, on *L. dispersa* s.lat., 15.10.2006, M. Kukwa 5334 (UGDA-L-13592); c. 1 km ESE of Hel town, 54°36'04"N/18°48'50"E, on *L. hagenii* and *L. dispersa*, 06.02.2007, M. Kukwa 5491 & 5492 (UGDA, KRAM); [Ad-82] – Sobieszewska Island, c. 2 km N Gdańsk Świbno town, 54°20'35"N/18°56'10"E, on *L. dispersa* s.lat., 08.06.2006, M. Kukwa 5168 (UGDA-L-13405); [Bd-33] – Sztumska Wieś village, 53°53'51"N/19°00'47"E, on *L. semipallida*, 09.04.2007, M. Kukwa 5525 (UGDA); [Bd-42] – Ryjewo village, 53°50'43"N/18°57'55"E, on *L. hagenii*, 24.09.2006, M. Kukwa 5310 (UGDA-L-13029); [Bd-43] – N part of Nowa Wieś village, on *L. dispersa*, 53°52'30"N/19°00'15"E, 25.09.2005, M. Kukwa 4612 (UGDA-L-12420); [Be-27] – c. 1.5 km SE of Widryny village, 53°57'37"N/21°10'38"E, on *L. albescens* and *L. dispersa* s.lat., 02.07.2006, M. Kukwa 5234 (UGDA-L-13778); Widryny village, 53°58'21"11"E, on *L. cf. albescens*, 02.07.2006, M. Kukwa 5233 (UGDA-L-13777).

Athelia arachnoidea (Berk.) Jül.

Hosts – *Bacidina* aff. *neosquamulosa* (thallus), *Lecanora conizaeoides* (apothecia and thallus), *Physcia tenella* (thallus), *Scoliciosporum chlorococcum* (thallus), *Xanthomendoza fallax* (thallus), *Xanthoria* sp. (thallus).

SPECIMENS EXAMINED. [Ad-82] – Sobieszewska Island, 1.5 km N of Świbno, by River Vistula, 54°20'42"N/18°56'23"E, on *Bacidina* aff. *neosquamulosa* and *Physcia tenella* growing on willow, 08.06.2006, M. Kukwa 5172 (UGDA-L-13409); [Eg-90] – vicinity of Sochy village, 50°34'51"N/22°57'43"E, on *Lecanora conizaeoides* growing on pine, 30.04.2006, M. Kukwa 5041 (UGDA); [Ge-31] – Dębno village, 49°28'04"N/20°12'53"E, on *Xanthomendoza fallax* growing on ash, 26.09.2007, M. Kukwa 5936 (UGDA); Przełom Białki pod Krempachami Nature Reserve, 49°25'45"N/20°07'43"E, on *L. conizaeoides*, *Scoliciosporum chlorococcum* and *Xanthoria* sp. growing on willow, 26.09.2007, P. Czarnota (UGDA).

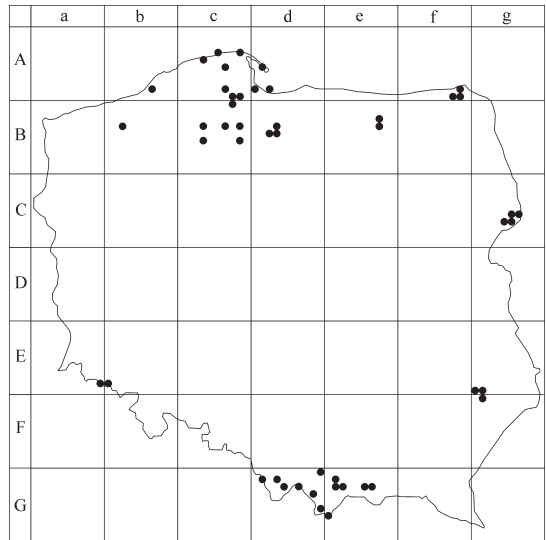
Badhamia aff. *panicea* (Fr.) Rostaf.

This myxomycete is reported for the first time as facultatively growing on lichens. The specimen was somewhat prematurely dried and not all the characters were well developed (G. Adamonytė, pers. comm.).

Host – *Parmelia sulcata* (thallus).

SPECIMEN EXAMINED. [Bc-38] – Wirty village, Dendrological Park, 53°54'N/18°23'E, on *Ailanthus altissima*, 11.06.2004, M. Kukwa 3283 (UGDA-L-11322, BILAS).

Fig. 1: Localities of the species in Poland given in ATPOL grid square system.



Cercidospora epipolytrapa (Mudd) Arnold

Very rarely reported from Poland, but probably overlooked, especially in mountains (KUKWA & KOWALEWSKA 2007).

Host – *Lecanora polytrapa* (apothecia).

SPECIMEN EXAMINED. [Ge-32] – Gorcze Mts, Wdżar Mt., 49°27'17"N/20°19'09"E, on rock, 26.09.2007, M. Kukwa 5942, A. Flakus, P. Czarnota (UGDA).

Clypeococcum cetrariae Hafellner

So far reported from only five localities in Poland (KUKWA 2005, KUKWA & CZARNOTA 2006).

Host – *Cetraria islandica* (thallus).

SPECIMENS EXAMINED. [Ad-51] – Helskie Wydmy Nature Reserve, forest section no. 257, 54°40'00"N/18°45'02"E, on sandy soil, 16.10.2006, M. Kukwa 5385 (UGDA); [Ad-82] – Sobieszewska Island, Gdańsk Świbno town, forest section no. 173g, 54°20'28"N/18°55'46"E, on soil, 05.07.2006, R. Afranowicz, R. Markowski, K. Żółko s.n. (UGDA-L-14128).

Clypeococcum hypocenomycis D.Hawksw.

Common lichenicolous fungus, especially when the host species grows on pine trees.

Host – *Hypocenomyce scalaris* (thallus).

SPECIMENS EXAMINED. [Ab-86] – 1.5 km NW of Słowino village, Słowińskie Błota Nature Reserve, 54°22'03"N/16°29'35"E, on pine, 08.2005, J. Herbich, M. Herbichowa s.n. (UGDA-L-11839); [Ad-51] – Helskie Wydmy Nature Reserve, forest section no. 255, 54°39'34"N/18°45'35"E, on pine, 16.10.2006, M. Kukwa 5401a (UGDA); [Bc-33] – Laska forest division, forest section no. 74a, 53°56'17"N/17°31'31"E, on birch, 24.10.1979, W. Fałtynowicz s.n. (UGDA-L-1353, specimen of *Ochrolechia microstictoides*); [Bc-53] – N of Charzykowy village, 53°45'02"N/17°30'55"E, on birch, 11.02.2006, M. Kukwa 4821 (UGDA-L-12304); [Be-27] – 0.5 km E of Szpigłówka village, 53°57'19"N/21°11'15"E, on chestnut, 02.07.2006, M. Kukwa 5239 (UGDA-L-13784); Grzybowo forest division, forest section no. 107, 53°57'15"N/21°13'01"E, on spruce, 05.07.2006, M. Kukwa 5260 (UGDA-L-13813); [Cg-64] – Michnówka Nature Reserve, forest section no. 572A, 52°39'10"N/23°38'32"E, on pine and wood, 12.05.2006, M. Kukwa 5107a & 5109a (UGDA); [Eb-80] – Karkonosze Mts, c. 0.25 km W of Krucze Skały rocks, 50°46'13"N/15°46'08"E, on birch, 07.09.2001, M. Kukwa 1201 (UGDA-L-13137); [Eg-91] – S of Zwierzyniec village, on the way to Bukowa Góra hill, 50°36'07"N/22°57'58"E, on pine, 30.04.2006, M. Kukwa 5035 (UGDA); [Gd-38] – Baligówka settlement, near Pieklielnik village, 49°27'42"N/19°48'10"E, on pine, 26.09.2007, M. Kukwa 5928 (UGDA).

Corticifraga fuckelii (Rehm) D.Hawksw. & R.Sant.

Host – *Peltigera didactyla* (thallus).

SPECIMEN EXAMINED. [Bc-07] – Szymbark village, 54°13'04"N/18°05'38"E, on soil, 17.02.2007, M. Kukwa 5505 (UGDA, KRAM).

Endococcus propinquus (Körb.) D.Hawksw.

The characteristics of the specimens cited below match the description given by SÉRUSIAUX et al. (1999). The species differs from specimens referred to as *E. aff. propinquus* by its dark brown, thick-walled and visually wider and broader ascospores, which are never verruculose and have septa with dark lamellae (SÉRUSIAUX et al. 1999).

In the examined material we came across a specimen of *E. propinquus* which is new to Svalbard.

Host – *Porpidia tuberculosa* (thallus).

SPECIMENS EXAMINED. [Bb-32] – Krepa village near Białogard town, 53°53'58"N/15°51'44"E, on stone, 17.10.1987, W. Fałynowicz, J. Miądlukowska (UGDA-L-14238). Babia Góra massive, no precise locality, on rocks, s.dat., J. Nowak (KRAM-L-1195, specimen of *P. tuberculosa*).

ADDITIONAL SPECIMEN EXAMINED. Svalbard, Rålstoranda, Låkpynnten, on *Porpidia cinereoatra* growing on rocks, 12.08.1957, A. Środoń (KRAM-L-43527, specimen of *P. cinereoatra*).

Endococcus aff. propinquus

The specimens cited below belong to an undescribed species tentatively characterized by SÉRUSIAUX et al. (1999) and previously discussed by KUKWA & CZARNOTA (2006).

Hosts – *Porpidia aff. macrocarpa*, *P. nigrocruenta*, *Porpidia* sp. (thallus).

SPECIMENS EXAMINED. [Eb-80] – Karkonosze Mts, Karkonoski National Park, Dolina Łomniczki valley, 50°45'24"N/15°45'28"E, alt. 700 m, on *Porpidia* sp. growing on rock, 01.05.2007, M. Kukwa 5549 (UGDA). [Gd-24] – Beskid Żywiecki Mts, Hala Lipowska pass, 49°31'56"N/19°12'32"E, on *P. nigrocruenta* growing on rock, 06.09.1964, J. Nowak (KRAM-L-14815, specimen of *P. nigrocruenta*). [Gd-26] – Babia Góra Massive, between Kościółki and Diablak Mt, 49°33'45"N/19°32'17"E, on *P. aff. macrocarpa* growing on sandstone, 08.09.1967, J. Nowak (KRAM-L-1340) (specimen of *P. aff. macrocarpa*).

Epicladonia sandstedei (Zopf) D.Hawksw.

Probably fairly common in Poland (see KUKWA & KOWALEWSKA 2007 and literature cited therein).

Host – *Cladonia* sp. (squamules).

SPECIMEN EXAMINED. [Cg-65] – Równina Bielska, Białowieża Primeval Forest, forest section no. 426, Żebra Żubra trail, 52°42'37"N/23°48'28"E, on bark of stump, 03.05.2004, M. Kukwa 3252 (UGDA-L-12714).

Graphium aphthosae Alstrup & D.Hawksw.

New to the Carpathians and southern Poland. Previously reported from only two localities in the northern part of Poland (KUKWA & ADAMSKA 2006).

Host – *Peltigera leucophlebia* (thallus).

SPECIMEN EXAMINED. [Ge-60] – High Tatra Mts, Ciemnosmreczyńska Przełęczka, 49°11'21"N/20°02'59"E, alt. 2115 m, on ground, 08.2007, A. Flakus 9993 (UGDA).

Illosporopsis christiansenii (B.L.Brady & D.Hawksw.) D.Hawksw.

Hosts – *Bacidina aff. neosquamulosa*, *Physcia* sp., *Xanthoria parietina* (in all cases on thallus).

SPECIMENS EXAMINED. [**Ad-82**] – Sobieszewska Island, 1.5 km N of Świbno, 54°20'42"N/18°56'23"E, on *Bacidina* aff. *neosquamulosa* growing on riverside willow, 08.06.2006, M. Kukwa 5172 (UGDA, specimen of *Athelia arachnoidea*); [**Af-88**] – S of Smolniki village, between Jaczno and Kojle Lakes, 54°16'55"N/22°53'02"E, on *Xanthoria parietina* growing on branch of poplar, 11.07.2007, M. Kukwa s.n. (UGDA); [**Eg-91**] – 0.5 km NW of Guciów village, 50°35'25"N/23°03'38"E, on *Physcia* sp. growing on poplar, 01.05.2006, M. Kukwa 5063 (UGDA).

Illosporium carneum Fr.

Host – *Peltigera extenuata* (thallus).

SPECIMENS EXAMINED. [**Bc-58**] – Błędno, c. 100 m E of bridge on River Wda, 53°42'09"N/18°21'00"E, on soil, 18.07.2002, M. Kukwa 1605 (UGDA-L-14084); [**Bd-43**] – c. 1 km NE of Mątki village, 53°51'30"N/19°00'57"E, on soil, 17.03.2001, M. Kukwa 91 (UGDA-L-12511).

Intralichen christiansenii (D.Hawksw.) D.Hawksw. & M.S.Cole

Probably very common in Poland, but greatly overlooked (see FAŁTYNOWICZ 2003, KUKWA & CZARNOTA 2006).

Hosts – *Candelariella aurella*, *Lecanora dispersa* s.lat., *L. semipallida* (in all cases in apothecia).

SPECIMENS EXAMINED. [**Ac-56**] – c. 2 km NE of Łęczyce village, on *Candelariella aurella* and *Lecanora dispersa* s.lat. growing on concrete, 10.03.2001, M. Kukwa 74 (UGDA-L-7920); [**Ad-82**] – Sobieszewska Island, c. 2 km N Gdańsk Świbno, 54°20'35"N/18°56'10"E, on *C. aurella* growing on concrete, 08.06.2006, M. Kukwa 5169 (UGDA-L-13406); [**Eg-91**] – NE of Zwierzyniec village, Tartaczna Góra hill, 50°36'52"N/22°59'15"E, on *L. semipallida* growing on concrete, 29.04.2006, M. Kukwa 5033a (UGDA).

Licea parasitica (Zukal) Martin

A myxomycete commonly growing on epiphytic lichens rarely reported from Poland (DROZDOWICZ et al. 2003, KUKWA 2004, 2005, KUKWA & CZARNOTA 2006).

Host – *Physcia* cf. *tenella* (thallus).

SPECIMEN EXAMINED. [**Gd-38**] – Vicinity of Baligówka settlement, near Piekienik village, 49°27'57"N/19°48'31"E, on dead poplar, 26.09.2007, M. Kukwa 5930 (UGDA).

Lichenochora weillii (Werner) Hafellner & R.Sant.

Previously reported from five localities in Poland (KUKWA 2004, 2005).

Host – *Physconia enteroxantha* (thallus).

SPECIMENS EXAMINED. [**Af-98**] – Łopuchowo village, 54°14'14"N/22°50'22"E, on ash, 11.07.2007, M. Kukwa 5789 (UGDA); [**Be-27**] – Łęczany village, 53°58'11"N/21°08'31"E, on maple, 06.07.2006, M. Kukwa 5274 (UGDA-L-13829, KRAM).

Lichenocodium erodens M.S.Christ. & D.Hawksw.

Hosts – *Lecanora conizaeoides* (apothecia and thallus), *Hypocenomyce scalaris* (thallus), *Hypogymnia physodes* (thallus).

SPECIMENS EXAMINED. [**Bc-06**] – by Kniewo Lake, 54°12'59"N/18°04'10"E, on *Lecanora conizaeoides* growing on pine, 17.02.2007, M. Kukwa 5510 (UGDA); [**Bc-36**] – Kręgi Kamienne Nature Reserve, near Odry village, 53°54'04"N/17°59'43"E, on *Hypogymnia physodes* growing on pine, 27.09.2001, M. Kukwa 1247 (UGDA-L-12138); [**Cg-64**] – Michnówka Nature Reserve, forest section no. 572A, 52°39'10"N/23°38'32"E, on *Hypocenomyce scalaris* growing on birch, 12.05.2006, M. Kukwa 5113 (UGDA).

Lichenocodium lecanorae (Jaap) D.Hawksw.

Mainly reported in Poland from apothecia of *Lecanora conizaeoides*, very rarely on other lichens (e.g. KUKWA 2005, KUKWA & CZARNOTA 2006). *Xanthoparmelia conspersa* is a new host.

Hosts – *Lecanora carpinea* (apothecia), *L. conizaeoides* (apothecia), *Xanthoparmelia conspersa* (apothecia).

SPECIMENS EXAMINED (unless otherwise stated, growing on *L. conizaeoides*). [**Ac-38**] – Bielawa Nature Reserve, 54°47'39"N/18°13'44"E & 54°47'41"N/18°14'26"E, on pine and wood, 05.03.2006, M. Kukwa 4850 & 4884 (UGDA-L-13044 & 13086); [**Af-97**] – S of Szeszupka village, on *Xanthoparmelia conspersa* growing on stone, 06.07.2007, M. Kukwa 5766 (UGDA); [**Bc-06**] – by Kniewo Lake, 54°12'59"N/18°04'10"E, on pine, 17.02.2007, M. Kukwa 5511 (UGDA); [**Bc-53**] – N of Charzykowy village, 53°45'02"N/17°30'55"E, on twigs of birch, 11.02.2006, M. Kukwa 4824 (UGDA-L-12308); [**Bc-53**] – Stary Młyn village, 53°45'26"N/17°30'55"E, on *L. carpinea* growing on maple, 11.02.2006, M. Kukwa 4833 (UGDA-L-12322); [**Be-27**] – 0.5 km E of Szpigłówka village, 53°57'19"N/21°11'15"E, on chestnut, 02.07.2006, M. Kukwa 5239b (UGDA-L-13786); [**Be-37**] – by NW part of Kiersztanowskie Lake, 53°57'03"N/21°13'47"E, on birch, 03.07.2006, M. Kukwa 5244 (UGDA-L-13792); [**Eb-80**] – Karkonosze Mts, c. 0.5 km SW of Karpacz Wilcza Poreba town, on *Larix decidua*, 07.09.2001, M. Kukwa 1151 (UGDA-L-13131); [**Eg-90**] – vicinity of Sochy village, 50°34'51"N/22°57'43"E, on pine, 30.04.2006, M. Kukwa 5040 (UGDA); [**Gd-38**] – vicinity of Baligówka settlement, near Piekelnik village, 49°27'57"N/19°48'31"E, on pine, 26.09.2007, M. Kukwa 5929 (UGDA).

Lichenocodium pyxidatae (Oudem.) Petr. & Syd.

Although previously thought to be rare in Poland, it has possibly been greatly overlooked (see KUKWA & KOWALEWSKA 2007).

Host – *Cladonia* sp. (podetia).

SPECIMEN EXAMINED. [**Ac-38**] – SW part of Bielawa Nature Reserve, 54°47'19"N/18°14'04"E, on birch, 11.08.2006, M. Kukwa 5285 (UGDA).

Lichenocodium usneae (Anzi) D.Hawksw.

Previously reported from only one locality in Poland (KUKWA 2004).

Host – *Ramalina fraxinea* (thallus).

SPECIMEN EXAMINED. [**Bc-53**] – Stary Młyn village, 53°45'26"N/17°30'55"E, on poplar, 11.02.2006, M. Kukwa 4832 (UGDA-L-12321).

Lichenocodium xanthoriae M.S.Christ.

Quite common in Poland, at least in some regions, being confined to rather open habitats with a relatively high humidity. The record from Guciów village is the first from the southern part of the country.

Hosts – *Xanthoria parietina*, *X. polycarpa* (apothecia only).

SPECIMENS EXAMINED (unless otherwise stated, growing on *X. polycarpa*). [**Ad-82**] – Sobieszewska Island, c. 2 km N Gdańsk Świbno town, 54°20'35"N/18°56'10"E, on *X. parietina* growing on concrete, 08.06.2006, M. Kukwa 5170 (UGDA-L-13407); [**Af-97**] – Szeszupka village, 54°13'35"N/2°49'47"E, on ash, 01.05.2001, M. Kukwa 696 (UGDA-L-14082); 0.5 km NNW of Turtul settlement, left bank of Czarna Hacza river valley, 54°13'26"N/22°48'36"E, on willow, 08.07.2006, M. Kukwa 5771 (UGDA); NNW of Turtul settlement, right bank of Czarna Hacza river valley, 54°13'28"N/22°48'20"E, on willow, 09.07.2006, M. Kukwa 5776 (UGDA); [**Af-98**] – Głazowisko Rutka projected Nature Reserve, 54°13'17"N/22°50'38"E, on poplar, 04.05.2001, M. Kukwa 717 (UGDA-L-14083); [**Bd-33**] – c. 1 km N of Nowa Wieś village, 53°52'57"N/19°00'40"E, on twigs of ash, 15.04.2001, M. Kukwa 617 (UGDA); [**Be-27**] – c. 1.5 km SE of Widryny village, 53°57'37"N/21°10'38"E, on twigs of ash, 02.07.2006, M. Kukwa 5235 (UGDA-L-13779); [**Eg-91**] – Guciów village, 50°34'50"N/23°05'10"E, on twigs of apple tree, 01.05.2006, M. Kukwa 5069 (UGDA).

***Lichenodiplis lecanorae* (Vouaux) Dyko & D.Hawksw.**

Lecanora hagenii appears to be a new host for the species.

Hosts – *Lecanora hagenii*, *L. saligna* (only apothecia).

SPECIMENS EXAMINED. [Ac-38] – Bielawa nature reserve, 54°47'47"N/18°13'42"E, on *L. hagenii* growing on aspen, 05.03.2006, M. Kukwa 4916 (UGDA, specimen of *L. hagenii*); [Ad-51] – Helskie Wydmy nature reserve, forest sections No. 252a, 54°39'268"N/18°46.433"E, on *L. saligna* on branch of poplar, 15.10.2006, M. Kukwa 5353a (UGDA, specimen of *L. saligna*); [Bd-42] – between Brachlewo and Ryjewo villages, 53°49'05"N/18°58'15"E, forest section No. 237, on *L. saligna* on wood, 23.09.1996, M. Kukwa s.n. (UGDA-L-10159).

***Lichenostigma elongata* Nav.-Ros. & Hafellner**

Third record from Poland, from where it was previously reported by NAVARRO-ROSINÉS & HAFELLNER (1996) and KUKWA & CZARNOTA (2006).

Host – *Lobothallia radiosa* (apothecia and thallus).

SPECIMEN EXAMINED. [Ge-31] – Przelom Białki pod Krempachami nature reserve, 49°25'45"N/20°07'43"E, on limestone, 26.09.2007, M. Kukwa 5940 (UGDA, KRAM).

***Marchandiomyces aurantiacus* (Lasch) Diederich & Etayo**

New to the Carpathians and southern Poland. So far reported only from four localities (see KUKWA & CZARNOTA 2006) in Poland, but probably very common locally (e.g. in NE).

Hosts – *Candelariella xanthostigma* (thallus), *Lecanora* sp. (apothecia and thallus), *Physcia tenella* (thallus).

SPECIMENS EXAMINED. [Ad-51] – Helskie Wydmy Nature Reserve, forest section no. 253a, 54°39'24"N/18°46'27"E, on *Lecanora* sp. growing on aspen, 15.10.2006, M. Kukwa 5371a (UGDA); [Af-97] – between Turtul settlement and Głazowisko Bachanowskie Nature Reserve, 54°13'57"N/22°47'39"E, on *Physcia tenella* growing on willow, 09.07.2006, M. Kukwa 5775 (UGDA); [Af-98] – Lopuchowo village, 54°14'14"N/22°50'22"E, on *Ph. tenella* growing on ash, 11.07.2007, M. Kukwa 5787 & 5788 (UGDA); Wodzilki village, 54°14'24"N/22°50'23"E, on *Ph. tenella* growing on ash and twigs of *Prunus* cf. *cerasifera*, 11.07.2007, M. Kukwa 5785 & 5786 (UGDA); [Ge-31] – Dębno village, 49°28'04"N/20°12'53"E, on *Candelariella xanthostigma* growing on ash, 26.09.2007, M. Kukwa 5937.

***Microcalicium disseminatum* (Ach.) Vain.**

The specimens support numerous apothecia.

Host – *Chaenotheca trichialis* (thallus).

SPECIMENS EXAMINED. [Cg-55] – Białowiecki National Park, forest section no. 370C, 52°43'N/23°51'E, on oak, 10.05.2006, M. Kukwa 5076 (UGDA); [Cg-56] – Białowiecki National Park, forest section no. 373C, 52°43'N/23°53'E, on oak, 28.03.2001, M. Kukwa 343b (UGDA).

***Monodictys epilepraria* Kukwa & Diederich**

Fairly common in Poland, but virtually absent in quite polluted areas, even if the host lichens are very common; therefore it would appear that the occurrence of *M. epilepraria* is limited by air pollution.

Hosts – *Lepraria elobata*, *L. incana*, *L. lobificans*, *L. sp.* (thallus).

SPECIMENS EXAMINED. [Ac-97] – Zamkowa Góra Nature Reserve near Kartuzy town, c. 0.5 km NW of Ciche Lake, 54°19'04"N/18°10'2"E, on *Lepraria* sp. and *L. lobificans* growing on beech, 13.08.1974, Z. Tobolewski s.n. (POZ, specimen of *Ochrolechia subviridis*); [Be-27] – Grzybowo forest division, forest section no. 107, 53°57'15"N/21°13'01"E, on *L. lobificans* growing on oak, 05.07.2006, M. Kukwa 5261 (UGDA-L-13814, specimen of *Vouauxiella lichenicola*); ibidem, M. Kukwa 5264a (UGDA-L-13819); [Be-37] – by NW part of Kiersztanowskie Lake, 53°57'03"N/21°13'47"E, on *L. incana* growing on ash, 03.07.2006, M. Kukwa 5243 & 5251 (UGDA-L-13791).

& 13801); [Cg-55] – Białowiecki National Park, forest section no. 340B, 52°44'18"N/23°49'42"E, on *L. incana* growing on black alder, 13.05.2006, M. Kukwa 5124b (UGDA); [Cg-64] – vicinity of Topilo village, forest section no. 599, 52°38'40"N/23°38'02"E, on *L. elobata* and *L. incana* growing on hornbeam, 12.05.2006, M. Kukwa 5100 (UGDA); Michnówka nature reserve, forest section no. 571B, 52°39'07"N/23°38'17"E, on *L. lobificans* growing on oak, 12.05.2006, M. Kukwa 5102 (UGDA); [Fg-01] – Roztoczański National Park, between Florianka and Zwierzyniec villages, 50°35'03"N/22°58'54"E, on *L. cf. incana* growing on black alder, 30.04.2006, M. Kukwa 5060 (UGDA); [Gd-13] – Beskid Śląski Mts, by Malinowska Skała Mt., 49°39'47"N/19°02'17"E, on *L. lobificans* growing on beech, 25.05.1956, T. Sulma s.n. (UGDA-L-14158); [Ge-21] – Gorczański National Park, below Kopieniec Mt., on *L. sp.* growing on beech, 12.05.1992, P. Czarnota s.n. (GPN 191/94, specimen of *Pertusaria hemisphaerica*).

Muellerella erratica (A.Massal.) Hafellner & V.John

Previously known only from pre-1912 records in Poland [see FAŁTYNOWICZ 2003 and literature cited therein; sub *M. pygmaea* (Körb.) D.Hawksw. var. *athallina* (Müll.Arg.) Triebel].

Ascospores and perithecia in one specimen (Kukwa 5553) are slightly larger (spores 8–9.5 × 3.8–4.5 μm, perithecia up to 300 μm in diam.) than reported by TRIEBEL (1989: spores up to 8(–8.5) μm long, perithecia up to 200(–250) μm in diam.), but all other characters agree with the description of the species.

Hosts – *Lecidea cf. confluens*, *Porpidia* sp. (in all cases on thallus).

SPECIMENS EXAMINED. [Ea-89] – Karkonosze Mts, Karkonoski National Park, Dolina Łomniczki valley, above Schronisko nad Łomniczką tourist house, 50°44'44"N/15°44'12"E, alt. 1000 m, on *Porpidia* sp. growing on rock, 01.05.2007, M. Kukwa 5550 (UGDA); Kocioł Łomniczki, 50°45'24"N/15°45'28"E, alt. 1200 m, boulder scree, on *Lecidea cf. confluens* growing on rock, 01.05.2007, M. Kukwa 5551 (UGDA); W slope of Śnieżka Mt., 50°44'13"N/15°43'58"E, alt. 1430 m, on *Lecidea cf. confluens* growing on rock, 02.05.2007, M. Kukwa 5553 (UGDA).

Muellerella ventosicola (Mudd) D.Hawksw.

This is the fourth locality in Poland, the first three from differently orientated slopes of Śnieżka Mt. (see KUKWA 2005, KUKWA & CZARNOTA 2006).

Host – *Rhizocarpon geographicum* (thallus).

SPECIMEN EXAMINED. [Ea-89] – Karkonosze Mts, Karkonoski National Park, W slope of Śnieżka Mt., near the border with the Czech Republic, 50°44'13"N/15°43'58"E, alt. 1430 m, on rock, 02.05.2007, M. Kukwa 5552 (UGDA).

Pezizella epithallina (W.Phillips & Plawr.) Sacc.

Third locality in Poland (KOWALEWSKA & KUKWA 2003).

Host – *Peltigera didactyla* (thallus).

SPECIMEN EXAMINED. [Be-07] – Szymbark village, 54°13'04"N/18°05'38"E, on soil, 17.02.2007, M. Kukwa 5506 (UGDA).

Phaeospora peltigericola D.Hawksw.

Second locality in Poland (see FAŁTYNOWICZ 2003 and literature cited therein).

Host – *Peltigera leucophlebia* (thallus and cephalodia).

SPECIMEN EXAMINED. [Ge-60] – High Tatra Mts, Ciemnosmreczyńska Przełęczka, 49°11'21"N/20°02'59"E, 2115 m, on ground, 08.2007, A. Flakus 9992 (UGDA).

Phoma cytospora (Vouaux) D. Hawksw.

Host – *Parmelia sulcata*

SPECIMEN EXAMINED. [Cg-64] – Topilo village, 52°38'12"N/23°37'24"E, on willow, 12.05.2006, M. Kukwa 5083 (UGDA).

Pronectria robergei (Mont. & Desm.) Lowen

Host – *Peltigera didactyla* (thallus).

SPECIMEN EXAMINED. [Ad–82] – Mewia Łacha Nature Reserve, left bank of River Vistula, 54°19'N/18°55'E, on sandy soil, 28.10.1999, K. Jando, M. Kukwa s.n. (UGDA-L–13379).

Pronectria xanthoriae Lowen & Diederich

New to Poland. It appears to be very rare in the country, as it has been searched for by the first author since 1999.

Host – *Xanthoria parietina* (apothecia and thallus).

SPECIMEN EXAMINED. [Af–98] – Szurpity village, 54°13'09"N/22°52'40"E, on *Sambucus nigra*, 06.07.2007, M. Kukwa 5768 (UGDA, KRAM).

Refractohilum peltigerae (Keissler) D.Hawksw.

Rarely reported from Poland (see FAŁTYNOWICZ 2003 and literature cited therein, KUKWA 2005).

Hosts – *Peltigera didactyla*, *P. extenuata* (in all cases on thallus).

SPECIMENS EXAMINED. [Ad–51] – Helskie Wydmy Nature Reserve, forest section no. 253a, 54°39'24"N/18°46'27"E, on mossy sand, 15.10.2006, M. Kukwa 5367a (UGDA); [Be–58] – Błędno village, 53°42'09.1"N/18°21'00.1"E, on soil, 18.07.2002, M. Kukwa 1606 (UGDA-L–14085, KRAM).

Refractohilum pluriseptatum Etayo & Cl.Roux

New to Poland.

Host – *Pachyphiale* cf. *agicola* (sterile thallus).

SPECIMEN EXAMINED. [Cg–65] – Białowieża village, 52°42'N/23'52"E, on lime, 26.03.2001, M. Kukwa 138 (UGDA).

Sphaerellothecium propinquellum (Nyl.) Cl.Roux & Triebel

Infrequently found in Poland, but probably under-recorded. The Florianka village record is the first in the south-eastern part of the country.

Host – *Lecanora carpinea* (apothecia).

SPECIMENS EXAMINED. [Be–27] – 0.5 km E of Szpigłówka village, 53°57'19"N/21°11'15"E, on ash, 02.07.2006, M. Kukwa 5241a (UGDA-L–13789); [Fg–01] – Florianka village, 50°33'11"N/22°58'57"E, on ash, 30.04.2006, M. Kukwa 5053 (UGDA).

Stigmatidium fuscatae (Arnold) R.Sant.

Previously known only from two localities in Poland (KUKWA 2005). The record from Karkonosze Mts is the first from the Polish part of the Sudety Mts.

Host – *Acarospora fuscata* (thallus).

SPECIMEN EXAMINED. [Ea–89] – Karkonosze Mts, Karkonoski National Park, by the Kotki rock, on rock, 01.05.2002, M. Kukwa 1514 (UGDA-L–13138); [Ge–32] – Gorce Mts, Wdżar Mt., 49°27'17"N/20°19'09"E, on rock, 26.09.2007, M. Kukwa 5941, A. Flakus, P. Czarnota (UGDA).

Szygospora physciacearum Diederich

Host – *Physcia stellaris* (thallus and apothecial margin), *Ph. tenella* (thallus).

SPECIMENS EXAMINED. [Af–88] – S of Smolniki village, between Jaczno and Kojle Lakes, 54°16'55"N/22°53'02"E, on *Ph. tenella* growing on poplar, 11.07.2007, M. Kukwa 5790 (UGDA); [Af–97] – between Turtul settlement and Bachanowo village, left bank of Czarna Hacza river valley, 54°13'41"N/22°48'21"E, on *Ph. stellaris* and *Ph. tenella*

growing on willow, 09.07.2006, M. Kukwa 5777 (UGDA); [Af-98] – Wodzilki village, 54°14'24"N/22°50'23"E, on *Ph. tenella* growing on ash, 11.07.2007, M. Kukwa 5785a (UGDA); [Cg-55] – Białowiecki National Park, forest section no. 314D, 52°44'18"N/23°49'42"E, on *Ph. tenella* growing on twigs of poplar, 13.05.2006, M. Kukwa 5126 (UGDA).

Taeniolella trapeliopseos Diederich

Previously known only from one locality in Poland (KUKWA & CZARNOTA 2006). *Trapeliopsis granulosa* is a new host for the species.

In one specimen (Kukwa 5381) some conidia were slightly longer (18–20 µm) than previously reported, and some were also 3-septate (usually with 1–2 septa). However, as the species has only been found occasionally, its variability may be larger than in the original description.

Host – *Trapeliopsis flexuosa*, *T. granulosa* (thallus).

SPECIMENS EXAMINED. [Ad-51] – Helskie Wydmy Nature Reserve, forest sections nos 255/256, 54°39'30"N/18°46'01"E, on *T. flexuosa* growing on wood, 15.10.2006, M. Kukwa 5381 (UGDA); ibidem, forest section no. 255, 54°39'34"N/18°45'35"E, on *T. granulosa* growing on wood, 16.10.2006, M. Kukwa 5400a (UGDA).

Taeniolella beschiana Diederich

Probably the commonest lichenicolous fungus growing on *Cladonia* in Poland (see KUKWA & KOWALEWSKA 2007), but it is rarely reported from the mountainous part of the country.

Hosts – *Cladonia chlorophaea* s.lat. (podetia and squamules), *C. sp.* (squamules).

SPECIMENS EXAMINED. [Ad-82] – Sobieszewska Island, vicinity of Sobieszewo town, forest section no. 167, 54°21'10"N/18°49'52"E, on *C. chlorophaea* s.lat. growing on soil, 05.07.2006, R. Afranowicz, R. Markowski, K. Żółkoś s.n. (UGDA-L-14130); [Ge-36] – Beskid Sądecki Mts, Szczawniczek stream valley, alt. 610 m, c. 49°23'45"N/20°53'20"E, on *C. sp.* growing on soil, 11.07.1989, L. Śliwa s.n. (KRA, specimen of *C. chlorophaea* s.lat.).

Taeniolella punctata M.S.Christ. & D.Hawksw.

Only occasionally reported from Poland (KUKWA & CZARNOTA 2006 and literature cited therein), but very common in humid and rather well preserved forests.

Host – *Graphis scripta* (thallus).

SPECIMENS EXAMINED. [Be-37] – by NW part of Kiersztanowskie Lake, 53°57'03"N/21°13'47"E, on ash, 03.07.2006, M. Kukwa 5252 (UGDA-L-13802, KRAM); [Cg-55] – Białowiecki National Park, forest section no. 340C, 52°44'33"N/23°50'18"E, on lime, 13.05.2006, M. Kukwa 5130 (UGDA).

Tremella candelariellae Diederich & Etayo

New to Poland. Previously known only from Luxembourg, Spain (DIEDERICH 1996) and North America (ESSLINGER 2007).

Host – *Candelariella xanthostigma* (thallus).

SPECIMEN EXAMINED. [Cg-65] – Białowieża village, 52°42'N/23°52'E, on ash, 26.03.2001, M. Kukwa 147 (UGDA).

Tremella cladoniae Diederich & M.S.Christ.

Rare, being only reported from southern Poland (FAŁTYNOWICZ 2003 and literature cited therein, KUKWA & KOWALEWSKA 2007).

Host – *Cladonia fimbriata* (podetia).

SPECIMEN EXAMINED. [Ge-35] – Beskid Sądecki Mts, Kosarzyska, dolina potoku Czercz, 49°25'N/20'40'E, alt. 500 m, on wood, 13.09.1965, M. Olech (KRA, specimen of *Cladonia fimbriata*).

Tremella hypogymniae Diederich & M.S.Christ.Host – *Hypogymnia physodes* (thallus).

SPECIMENS EXAMINED. [**Ac-86**] – Bilowo gamekeeper's cottage, 54°19'N/18°09'E, on beech, 13.05.1959, T. Sulma s.n. (UGDA-L-12158, specimen of *Ochrolechia androgyna* C); [**Ac-98**] – Borowo village, SSW of Sitno Lake, 54°19'16"N/18°17'26"E, on lime, 20.08.1963, T. Sulma s.n. (UGDA-L-14172); [**Gd-11**] – Beskid Śląski Mts, Dolina Dziechcinki valley, 49°38'10"N/18°50'55"E, on rowan, 18.08.1956, T. Sulma s.n. (UGDA-L-14178); [**Gd-59**] – Tatrzy Zachodnie Mts, Dolina Koryciska Wielkie valley, c. 49°16'10"N/19°48'35"E, on coniferous tree, 28.08.1957, T. Sulma s.n. (UGDA-L-12769).

Unguiculariopsis thallophila (P.Karst.) W.Y.Zhuang

Second locality in Poland (KUKWA & CZARNOTA 2006).

Host – *Lecanora chlarotera* (thallus, margin and disc of apothecia).

SPECIMEN EXAMINED. [**Be-06**] – between Golubie and Krzeszna villages, 54°13'27"N/18°03'49"E, on poplar, 17.02.2007, M. Kukwa 5517 (UGDA, KRAM).

Vouauxiella lichenicola (Linds.) Petr. & Syd.Hosts – *Lecanora argentata*, *L. carpinea*, *L. chlarotera* (on apothecia, rarely partly on thallus).

SPECIMENS EXAMINED. [**Ac-35**] – Szklana Huta settlement, 54°47'56"N/17°53'03"E, on *L. chlarotera* growing on beech, 13.09.1957, T. Sulma s.n. (UGDA-L-13490); [**Ac-43**] – Gać (Gace) village, by Lebsko Lake, 54°41'54"N/17°26'30"E, on *L. carpinea* on ash, 11.06.1962, T. Sulma s.n. (UGDA-L-13988); [**Be-53**] – Stary Młyn village, 53°45'26"N/17°30'55"E, on *L. chlarotera* growing on *Populus nigra*, 11.02.2006, M. Kukwa 4829b (UGDA-L-12316); [**Be-27**] – 0.5 km E of Szpiłgówka village, 53°57'19"N/21°11'15"E, on *L. chlarotera* growing on ash, 02.07.2006, M. Kukwa 5241 (UGDA-L-13788); c. 1.5 km SE of Widryny village, 53°57'37"N/21°10'38"E, on *L. chlarotera* growing on ash, 02.07.2006, M. Kukwa 5236 (UGDA-L-13781); Grzybowo forest division, forest section no. 107, 53°57'15"N/21°13'01"E, on *L. argentata* growing on oak, 05.07.2006, M. Kukwa 5261 (UGDA-L-13814); [**Gd-09**] – Beskid Makowski Mts, Pcim town, Muniaki village, 495 m, 49°45'25"N/19°56'40"E, on *L. cf. argentata* growing on ash, 15.06.1966, J. Nowak s.n. (KRAM-L-29970, specimen of *Ochrolechia turneri*).

Vouauxiomyces santessonii D. Hawksw.

First record in southern Poland. Previously known only from four localities in the northern part of the country (CZYŻEWSKA et al. 2005, KUKWA & CZARNOTA 2006).

Host – *Platismatia glauca* (thallus).

SPECIMEN EXAMINED. [**Gd-59**] – Tatrzy Zachodnie, Dolina Koryciska Wielkie valley, near Dolina Chochołowska valley, 49°16'10"N/19°48'35"E, on coniferous tree, 28.08.1957, T. Sulma s.n. (UGDA-L-12768).

Xanthoricola physciae (Kalchbr.) D.Hawksw.Host – *Xanthoria parietina* (apothecia).

SPECIMENS EXAMINED. [**Ac-56**] – c. 1 km SE of Świetlino village, on aspen, 07.04.2001, M. Kukwa 570 (UGDA); [**Ad-51**] – Helskie Wydmy nature reserve, forest section no. 252a, 54°39'26"N/18°46'43"E and forest section no. 253a, 54°39'24"N/18°46'27"E, on twigs of poplars, 15.10.2006, M. Kukwa 5357 & 5369 (UGDA); [**Bd-33**] – c. 1 km N of Nowa Wieś village, 53°52'57"N/19°00'40"E, on twigs of willow, 15.04.2001, M. Kukwa 616 (UGDA); [**Be-27**] – Szpiłgówka village, 53°57'15"N/21°10'54"E, on ash, 02.07.2006, M. Kukwa 5237 (UGDA-L-13782); [**Cg-64**] – Topilo village, 52°38'12"N/23°37'24"E, on twigs of ash, 12.05.2006, M. Kukwa 5080 (UGDA).

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