

## SOME PHYTOPATHOGENIC FUNGI RARE OR NEW TO POLAND

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**Abstract:** The phytopathogenic fungi *Alternaria eryngii* (Pers.: Fr.) S. Hughes & E. G. Simmons, *Ascochyta aristolochiae* Sacc., *Passalora avicularis* (G. Winter) Crous, U. Braun & Morris and *Ramularia jaapiana* (Magnus) U. Braun are new to Poland. In addition, nine species are reported on hosts that are new to Poland, and four rare taxa are listed from new localities. All fungi are briefly discussed and some are described and illustrated.

**Key words:** *Alternaria*, *Ascochyta*, *Cercospora*, *Coniothyrium*, *Entyloma*, *Marssonina*, *Mycocentrospora*, *Passalora*, *Pestalotiella*, *Ramularia*, Ustilaginomycetes, anamorphic fungi, host range, distribution in Poland

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### INTRODUCTION

A few years ago the first author collected a number of phytoparasitic fungi in southern Poland. They were examined by the second author, who found that some rare and unusual species were among them, for example *Discosia lysimachiae* Vanev and *D. vincae* Vanev, which are published in a separate work (Wólczńska *et al.* 2004). In this paper, four other species from this collection and nine fungus/host combinations are reported as new to Poland, and four rare species are recorded from new localities.

Descriptions of the morphology, based on examination of the present collections, are given only for the species new to Poland. The taxonomy and nomenclature of the fungi are based on recent monographs and publications, including Brandenburger (1985), Vánky (1994), Braun (1995a, 1998), Ellis and Ellis (1997), Meľnik (2000), and Sałata (2002). The nomenclature of host plants follows Mirek *et al.* (2002). The herbarium specimens are housed in KRAM (W. Szafer Institute of Botany, Polish Academy of Sciences, Kraków, Poland) and duplicates are preserved at LBLM (Maria Curie-Skłodowska University, Lublin, Poland). Two asterisks (\*\*) are given for species new to Poland, and one asterisk (\*) is used for fungus/host combinations new to Poland.

### LIST OF SPECIES

#### USTILAGINOMYCETES

\**Entyloma serotinum* J. Schroet.

SPECIMEN EXAMINED. On *Borago officinalis* L.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 24 Sept. 1998, leg. M. Piątek (KRAM F-53477, LBLM 8411).

NOTES. This smut fungus is common in Poland on *Symphytum officinale* L., but rare on *Pulmonaria officinalis* L., *Symphytum cordatum* Waldst. & Kit. ex Willd. and *Symphytum tuberosum* L. (Kochman & Majewski 1973). For a long time, *Entyloma* de Bary on *Borago officinalis* was considered an independent species, *Entyloma boraginis* Cif., but Vánky (1985, 1994) reduced this name to synonymy with *Entyloma serotinum*. Vánky also considers all collections of *E. serotinum* on *Pulmonaria* L. doubtful, since either they belong to *Ramularia cylindroides* Sacc. or the hosts are misidentified, so that the Polish record on *Pulmonaria officinalis* (see Kochman & Majewski 1973) must also be considered uncertain. *Entyloma serotinum* was recently redescribed and illustrated by Vánky (1994).

## ANAMORPHIC FUNGI

\*\**Alternaria eryngii* (Pers.: Fr.) S. Hughes & E. G. Simmons

Leaf spots circular or elliptical, brownish or brown-violet, 1–3 mm wide; conidiophores dark, 26–40(–68) × 5–8 μm; conidia dark, clavate, multicellular, dictyosporous, 70–120 × 10–16 μm.

SPECIMEN EXAMINED. On *Eryngium ×oliverianum* Delar.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 15 July 1998, leg. M. Piątek (KRAM F-53480, LBLM 8410).

NOTES. *Alternaria eryngii* has been redescribed, illustrated and discussed by Simmons (1995). This is the first record of this species from Poland.

\*\**Ascochyta aristolochiae* Sacc.

Leaf spots circular, brown with lighter center, 8–15 mm diam.; pycnidia on both sides of leaves, usually scattered in the central part of spots, 90–200 μm diam.; conidia cylindrical, rounded

at both ends, bi- or rarely unicellular, septum central or subcentral, sometimes constricted, 6–19 × 2.0–2.5 μm (Fig. 1).

SPECIMEN EXAMINED. On *Asarum europaeum* L.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 15 July 1998, leg. M. Piątek (KRAM F-53475, LBLM 8406).

NOTES. This is a rare species known from Germany, Italy and the Ukraine in Europe and from the U.S.A. in North America. It was recently redescribed by Meľnik (2000) and Sałata (2002). This is the first record of this species from Poland.

*Ascochyta atriplicis* Died.

SPECIMEN EXAMINED. On *Atriplex prostrata* Boucher ex DC.: POLAND. KOTLINA SANDOMIERSKA BASIN. Łęzkowice, near Bochnia, saline site, 25 June 2001, leg. M. Piątek (KRAM F-53484, LBLM 8409).

NOTES. On this host the fungus was previously reported from Ciechocinek (Sałata 2002). It was recently redescribed by Meľnik (2000) and Sałata (2002).

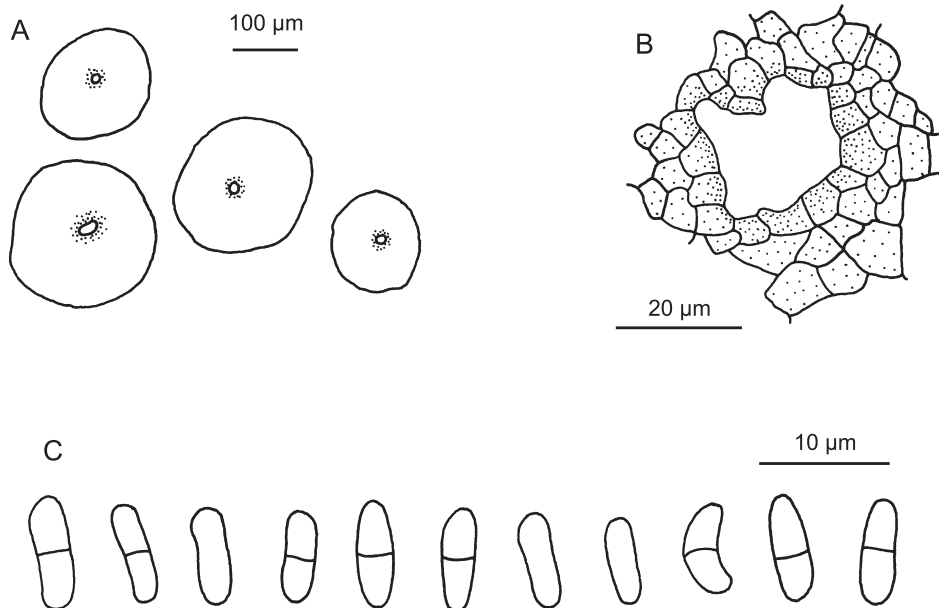


Fig. 1. *Ascochyta aristolochiae* Sacc. on *Asarum europaeum* L.: A – pycnidia, B – porus, C – conidia.

**\**Ascochyta boraginis*** I. E. Brezhnev

SPECIMEN EXAMINED. On *Omphalodes verna* Moench: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 15 July 1998, leg. M. Piątek (KRAM F-53482, LBLM 8417).

NOTES. In Poland this fungus was recorded on *Symphytum officinale* from Roztoki near Jasło (Sałata 2002). *Omphalodes verna* is a new host for *Ascochyta boraginis* in Poland and worldwide. It was recently redescribed by Meřnik (2000) and Sałata (2002).

**\**Ascochyta caraganae*** (Vestergr.) Meřnik

SPECIMEN EXAMINED. On *Caragana frutex* (L.) K. Koch: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 15 July 1998, leg. M. Piątek (KRAM F-53495).

NOTES. *Ascochyta caraganae* was previously found on *Caragana arborescens* Lam. in the Botanical Garden in Lublin (Sałata 2002). It was recently redescribed by Meřnik (2000) and Sałata (2002).

**\**Ascochyta dolomitica*** Kabát & Bubák

SPECIMENS EXAMINED. On *Clematis integrifolia* L.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 31 Aug. 1998, leg. M. Piątek (KRAM F-53481, LBLM 8401). On *Hepatica nobilis* Schreb.: POLAND. WYŻYNA ŚLĄSKA UPLAND. Jaworzno-Szczakowa, Ciężkowice, deciduous forest, 8 July 1998, leg. M. Piątek (KRAM F-53491, LBLM 8412).

NOTES. Previously this fungus has been reported on *Hepatica nobilis* Schreb. in the vicinity of Piła, Zagrody near Kielce, Ojcowski National Park and Kazimierz Dolny (Sałata 2002). It was recently redescribed by Meřnik (2000) and Sałata (2002).

**\**Ascochyta daronici*** Allesch.

SPECIMEN EXAMINED. On *Hieracium polonicum* Błocki: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 31 Aug. 1998, leg. M. Piątek (KRAM F-53483, LBLM 8405).

NOTES. *Ascochyta daronici* has previously been reported on *Homogyne alpina* (L.) Cass.

in the Tatra Mts, and on *Taraxacum officinale* F. H. Wigg. from Radom (Sałata 2002) and the Słowiński National Park (Adamska 2001). It was recently redescribed by Meřnik (2000) and Sałata (2002).

**\**Cercospora primulae*** Allesch.

SPECIMEN EXAMINED. On *Primula vulgaris* Huds.: POLAND. WESTERN CARPATHIANS. Łęki Górne, ca 16 km SE of center of Tarnów, manor park, 11 Aug. 1998, leg. M. Piątek (KRAM F-53486).

NOTES. *Cercospora primulae* has previously been reported on *Primula elatior* (L.) Hill from the Pieniny National Park (Kućmierz 1976a, b, 1977; Scheuer & Chlebicki 1997) and Jakubowice near Kudowa (Starmachowa & Kućmierz 1967). *Cercospora primulae* was recently redescribed and illustrated by Braun (1995a).

***Coniothyrium hellebori*** Cooke & Masee

SPECIMEN EXAMINED. On *Helleborus niger* L.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 31 Aug. 1998, leg. M. Piątek (KRAM F-53485, LBLM 8402).

NOTES. This species has been reported only from the Botanical Garden at Bydgoszcz where it was present also on *Helleborus niger* (Michalski 1965). It was briefly redescribed by Ellis and Ellis (1997).

**\**Hainesia lythri*** (Desm.) Höhn.

SPECIMEN EXAMINED. On *Cotinus coggygria* Scop.: POLAND. KOTLINA SANDOMIERSKA BASIN. Breń Podborze, ca 23 km N from center of Tarnów, manor park, 19 Aug. 1998, leg. M. Piątek (KRAM F-53474, LBLM 8407).

NOTES. Brief information on the occurrence of *Hainesia lythri* in Poland on fruits of *Fragaria ×anayasa* Duchesne ‘Redgauntlet’ was published on the web site of the Polish conference on orchard plant protection (Gołębniak & Jarosz 2003). Chlebicki (1989) found an enigmatic fungus on branches of *Acer pseudoplatanus* L. with microconidia similar to those of *Hainesia feurichii* Bubák. This author discussed this fungus in detail, but stated that a final conclusion on its taxonomical

status requires further studies. A detailed description and an illustration of *Hainesia lythri* were given by Palm (1991).

***Marssonina daphnes* (Desm. & Rob.) Magnus**

**SPECIMEN EXAMINED.** On *Daphne mezereum* L.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 15 July 1998, leg. M. Piątek (KRAM F-53478, LBLM 8404).

**NOTES.** *Marssonina daphnes* has previously been reported only from the vicinity of Puławy, where it also parasitized *Daphne mezereum* (Jankowska-Barbacka 1931). It was redescribed and illustrated by Ellis and Ellis (1997).

**\**Mycocentrospora acerina* (Hartig) Deighton**

**SPECIMEN EXAMINED.** On *Viola sylvestris* Lam.: POLAND. KOTLINA SANDOMIERSKA BASIN. Tarnów, Ogród Strzelecki, at J. Słowackiego street, city park, 6 June 1998, leg. M. Piątek (KRAM F-53479, LBLM 8416).

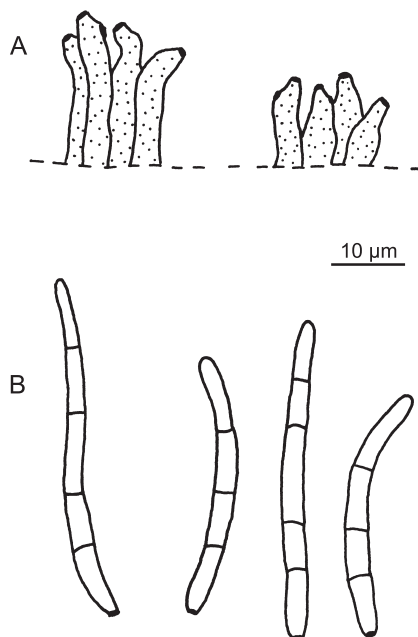
**NOTES.** *Mycocentrospora acerina* has previously been reported on *Acer platanoides* L. from Puławy (Jankowska-Barbacka 1931) and on *Impatiens parviflora* DC. from Iwonicz Zdrój (Wołczańska 1998). This species was recently redescribed by Braun (1995a) and Wołczańska (1998).

**\*\**Passalora avicularis* (G. Winter) Crous, U. Braun & Morris**

Leaf spots small, circular to elliptical, light brown with narrow darker border, delicate caespituli of conidiophores visible on both sides of leaves; conidiophores dark, 8–18 × 3 μm; conidia at first hyaline, later olivaceous, obclavate, 3–7-septate, 32–72 × 2.5–3.0 μm (Fig. 2).

**SPECIMEN EXAMINED.** On *Polygonum aviculare* L.: POLAND. KOTLINA SANDOMIERSKA BASIN. Bolesław, ca 30 km NW from center of Tarnów, manor park, 21 Aug. 1998, leg. M. Piątek (KRAM F-53473, LBLM 8415).

**NOTES.** This species is known from Europe, the Caucasus (Azerbaijan, Georgia), Africa (Somalia, South Africa), Asia (Bangladesh, China incl. Taiwan, India, Kirghizia, Korea, Myanmar), North



**Fig. 2.** *Passalora avicularis* (G. Winter) Crous, U. Braun & Morris in *Polygonum aviculare* L.: A – conidiophores, B – conidia.

America and South America (Venezuela) (Crous & Braun 2003; Farr *et al.* 2003). This is the first record of this species from Poland.

***Passalora campi-silii* (Speg.) U. Braun**

**SPECIMEN EXAMINED.** On *Impatiens noli-tangere* L.: POLAND. WESTERN CARPATHIANS. Łęki Górne, ca 16 km SE from the center of Tarnów, manor park, 11 Aug. 1998, leg. M. Piątek (KRAM F-53489, LBLM 8403).

**NOTES.** This species has been reported on *Impatiens noli-tangere* from the vicinity of Kłodawa (Ludwig 1891), the vicinity of Puławy (Konopacka 1924), and the Białowieża National Park (Mułenko & Chlebicki 1992; Mułenko 1996a, b). *Passalora campi-silii* was redescribed and illustrated by Braun (1995b).

**\**Pestalotiella subsessilis* Sacc. & Ellis**

**SPECIMENS EXAMINED.** On *Geranium sanguineum* L.: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 31 Aug. 1998, leg. M. Piątek (KRAM

F-53493, LBLM 8413). On *Geranium pratense* L.: POLAND. WESTERN CARPATHIANS. Łęki Górne, ca 16 km SE from center of Tarnów, manor park, 11 Aug. 1998, leg. M. Piątek (KRAM F-53490, LBLM 8418); KOTLINA SANDOMIERSKA BASIN. Bolesław, ca 30 km NW from center of Tarnów, manor park, 21 Aug. 1998, leg. M. Piątek (KRAM F-53476, LBLM 8414).

NOTES. The two earlier collections of this fungus from Poland are from Bania near Janów Lubelski on *Geranium pusillum* Burm. f. ex L. (Romaszewska-Sałata *et al.* 1997) and from Dołgie Duże in the Słowiński National Park on *Geranium palustre* L. (Adamska 2001). A description of *Pestalotiella subsessilis* was given by Romaszewska-Sałata *et al.* (1997).

**\*\**Ramularia jaapiana*** (Magnus) U. Braun

Leaf spots circular, brownish with lighter center, single or confluent; delicate caespituli of conidiophores visible on both sides of leaves; conidiophores in fascicles, emerging from stomata, 8–44 × 2–3 μm, hyaline; conidia formed singly, cylindrical, 1–3-septate, 22.0–48.0 × 2.0–2.5 μm [according to Braun (1998) in short chains].

SPECIMEN EXAMINED. On *Limonium gmelinii* Kuntze: POLAND. BRAMA KRAKOWSKA GATE. Kraków, Botanical Garden, 15 July 1998, leg. M. Piątek (KRAM F-53472, LBLM 8408).

NOTES. *Ramularia jaapiana* is known from Europe, Central Asia and the Caucasus (Braun 1998). This is the first record of this species from Poland. It was recently redescribed and illustrated by Braun (1998).

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