

Preliminary list of cercosporoid fungi from Poland

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Abstract – A comprehensive checklist of cercosporoid hyphomycete species of 67 species now known from Poland is presented. The complete annotated list covers 32 *Cercospora*, 31 *Passalora*, two *Stenella* and two *Pseudocercospora* species.

Key words – mitosporic fungi, hyphomycetes

Introduction

Cercospora and allied genera are anamorphs of the ascomycetous genus *Mycosphaerella* Johanson (e.g., Braun & Melnik 1997, Kim & Shin 1998, Crous & Braun 2003). Since *Cercospora* was established by Fresenius (1863), the number of species assigned to this genus increased rapidly, followed by a significant expansion of its generic concept, including numerous *Passalora*-like fungi (Braun & Melnik 1997).

The first worldwide monograph of *Cercospora* Fresen. s. lat. was published by Chupp (1954). Later, Deighton (e.g., 1967, 1976), Braun (1995), Braun & Melnik (1997) and other authors narrowed the generic concept of *Cercospora* s. lat. and divided it into smaller units. Recently Crous & Braun (2003) recognized four true cercosporoid genera, viz. *Cercospora*, *Pseudocercospora* Speg., *Passalora* Fr. and *Stenella* Syd., and several other morphologically similar genera, based on molecular sequence analyses and a reassessment of morphological characters.

First reports of cercosporoid fungi collected in Poland date back to the late 19th-century, when Hennings (1892), Schroeter (1892, 1897) and Hellwig (1897) listed various fungal species found in the vicinity of the town of Świecie, in Lower Silesia, in the Sudeten Mts., and in the vicinity of the town of Września near Poznań, respectively. First studies in the 20th century, for example by Garbowski (1929, 1932, 1935), Garbowski & Juraszkówna (1933) and Leszczenko (1937), predominantly contained data on parasites of crop and ornamental plants. First records of cercosporoid fungi found in natural plant communities were published from the Tatra National Park (Starmachowa 1963), followed by collections from the Ojców and Pieniny National Parks (e.g. Kućmierz 1973, 1976b, 1977b), the Poleski and Białowieża National Parks (e.g. Mułenko 1988-1989, 1994a, b, 1996a), and recently from the Słowiński National Park (Adamska 2001). Studies by Danilkiewicz (1987, 1987-1990) conducted in the

left-bank valley of the central Bug river provided valuable information on parasitic fungi in riparian communities.

Materials and methods

The list of cercosporoid fungi was compiled using reports available in the literature. The species listed were usually recorded on living plant organs. *Cercospora* sp. collected on honeydew of *Abies* sp. represents an exception and is somewhat rather doubtful.

The fungal nomenclature and taxonomy follows Crous & Braun (2003). Species names used in the original publications, which deviate from those in the latter publication, are cited as synonyms. The host plant nomenclature follows Mirek et al. (2002).

Results

A list containing 32 species of the genus *Cercospora*, 31 species of *Passalora* and two species of *Pseudocercospora* as well as *Stenella* is given below. *Cercospora* species were collected on 46 host plants belonging to 33 genera and 17 families of both classes of the *Magnoliophyta* (*Magnoliopsida*, *Liliopsida*). The highest amounts of cercosporoid parasites were recorded on representatives of the *Fabaceae* (nine species), *Brassicaceae* (six), and *Violaceae* (four). *Passalora* species were collected on 92 host plants belonging to 58 genera and 19 families, including the *Poaceae* (with 25 species), *Apiaceae* (with 14 species), *Rosaceae* (with seven species), *Onagraceae* (with six species), *Chenopodiaceae* and *Rubiaceae* (with four species in each case), which represent the host plant families with most cercosporoid species. Only two species of *Stenella* and *Pseudocercospora*, respectively, are known from Poland, viz., *S. lythri* on *Lythrum salicaria* L., *S. subsanguinea* on *Maianthemum bifolium* (L.) F.W. Schmidt, *P. geicola* on *Geum montanum* L. and *P. opuli* on *Viburnum opulus* L.

The checklist includes the following *Cercospora* species recorded from Poland: *C. apii* Fresen., *C. armoraciae* Sacc., *C. barbareae* (Sacc.) Chupp, *C. beticola* Sacc., *C. cardamines* Losa (*cardaminae*), *C. carotae* (Pass.) Kazn. & Siemaszko, *C. curvata* (Rabenh. & A. Braun) Wollenw., *C. depazeoides* (Desm.) Sacc., *C. euphrasiae* Ondřej, *C. kabatiana* Allesch. ex Lindau, *C. lycii* Ellis & Halst., *C. maianthemii* Fuckel, *C. medicaginis* Ellis & Everh., *C. meliloti* Oudem., *C. mercurialis* Pass., *C. nasturtii* Pass., *C. olivascens* Sacc., *C. ononidis* (Auersw.) Höhn., *C. pantoleuca* Sacc., *C. paridis* Erikss., *C. physalidis* Ellis, *C. pietrenii* Dominik, *C. plantaginis* Sacc., *C. radiata* Fuckel, *C. senecionis* Ellis & Everh., *C. setariae* G.F. Atk., *C. tragopogonis* Ellis & Everh., *C. violae* Sacc., *C. violae-sylvaticae* Oudem., *C. zebrina* Pass., *C. zonata* G. Winter.

The genus *Passalora* is represently by *P. actaeae* (Ellis & Holw.) U. Braun & Crous, *P. ariae* (Fuckel) U. Braun & Crous, *P. avicularis* (G. Winter) Crous et al., *P. bacilligera* (Mont. & Fr.) Mont. & Fr., *P. bellynckii* (Westend.) U. Braun, *P. bupleuri* (Pass.) U. Braun, *P. campi-silii* (Speg.) U. Braun, *P. carlinae* (Sacc.) U. Braun & Crous, *P. circumscissa*

(Sacc.) U. Braun, *P. comari* (Peck) U. Braun, *P. concors* (Casp.) U. Braun & Crous, *P. depressa* (Berk. & Broome) Sacc., *P. dissiliens* (Duby) U. Braun & Crous, *P. dubia* (Riess) U. Braun, *P. ferruginea* (Fuckel) U. Braun & Crous, *P. fulva* (Cooke) U. Braun & Crous, *P. galii* (Ellis & Holw.) Arx, *P. graminis* (Fuckel) Höhn., *P. malkoffii* (Bubák) U. Braun, *P. heterospora* (Höhn.) Höhn., *P. microsora* (Sacc.) U. Braun, *P. microsperma* Fuckel, *P. minutissima* (Desm.) U. Braun & Crous, *P. montana* (Speg.) U. Braun & Crous, *P. murina* (Ellis & Kellerm.) U. Braun & Crous, *P. punctum* (Lacroix) S. Petzoldt (*puncta*), *P. rhamnii* (Fuckel) U. Braun, *P. ribis-rubri* (S_vul. & Sandu) U. Braun, *P. rosicola* (Pass.) U. Braun, *P. scandicearum* (Magnus) U. Braun & Crous and *P. vexans* (C. Massal.) U. Braun & Crous.

Pseudocercospora opuli (Höhn.) U. Braun & Crous, *P. geicola* U. Braun, *Stenella lythri* (Westend.) J.L. Mulder and *S. subsanguinea* (Ellis & Everh.) U. Braun complete the list of cercosporoid species recorded from Poland.

List of the species

Cercospora Fresen.:

- ***apii*** Fresen., s. lat.

Host(s): *Anethum graveolens* L., *Anethum* sp., *Apium graveolens* L., *Daucus carota* L.
Ref.: Hellwig (1897); Garbowski & Juraszkówna (1933); Garbowski (1935); Dominik (1936); Michalski (1965); Madej (1974).

- ***armoraciae*** Sacc.

Host(s): *Armoracia rusticana* P. Gaertn., B. Mey. & Scherb.
Ref.: Hellwig (1897); Laubert (1921); Moesz (1926); Garbowski (1935); Dominik (1936); Leszczenko (1937); Zaleski & Madej (1964); Madej (1969, 1974); Michalski (1982-1986); Mułenko (1988-1989).

- ***barbareae*** (Sacc.) Chupp

≡ *Cercospora nasturtii* Pass. subsp. *barbareae* Sacc.

Host(s): *Barbarea vulgaris* R. Br.

Ref.: Michalski (1959).

- ***beticola*** Sacc.

= *Fusarium betae* (Desm.) Sacc.

Host(s): *Beta vulgaris* L. (many subspecies, varieties and forms), *Chenopodium album* L.
Ref.: Chełchowski 1902; Namysłowski (1906, 1909, 1910b, 1914); Waśniewski (1911); Wodziczko (1911); Trzebiński et al. (1916), Trzebiński (1918); Moesz (1920, 1926); Konopacka (1924); Wróblewski (1925); Zweigbaumówna (1925); Kuryłło (1927, 1929); Garbowski (1929, 1932, 1935); Garbowski & Juraszkówna (1933); Dominik (1936); Kossobudzka (1936); Stec-Rouppertowa (1936), (1939); Leszczenko (1937); Ruskowski et al. (1938); Michalski (1959, 1965, 1982-1986); Michno-Zatorska (1959); Narkiewicz-Jodko (1959); Piekarczyk & Studziński (1959); Zaleski & Madej (1964); Madej (1969, 1974); Osińska (1970); Kućmierz (1971, 1973, 1976b, 1977b, 1978); Kućmierz & Gondek (1978); Danilkiewicz (1987).

- ***cardamines*** Losa (*cardaminae*)

Host(s): *Cardamine amara* L.

Ref.: Mułenko (1994a, 1996a); Faliński & Mułenko (1997).

- **carotae** (Pass.) Kazn. & Siemaszko

≡ *Cercospora apii* var. *carotae* Pass.

Host(s): *Daucus carota* L., *Daucus* sp.

Ref.: Siemaszko (1929); Garbowski & Juraszkówna (1933); Garbowski (1935); Leszczenko (1937); Zaleski & Madej (1964); Kućmierz (1971, 1973, 1976b, 1977a, 1978); Kućmierz & Gondek (1978); Michalski (1982-1986).

- **curvata** (Rabenh. & A. Braun) Wollenw.

= *Septoria curvata* (Rabenh. & A. Braun) Sacc. = *Fusarium vogelii* Henn.

Host(s): *Robinia pseudacacia* L.

Ref.: Zaleski et al. 1948; Michalski 1967.

NOTES: The species is doubtful and excluded, the name does not refer to true species of *Cercospora* s. str. (Chupp 1954, Crous & Braun 2003).

- **depazeoides** (Desm.) Sacc.

Host(s): *Sambucus nigra* L., *S. racemosa* L.

Ref.: Namysłowski (1909, 1910a, b, 1914); Wróblewski (1925); Garbowski (1929); Jankowska-Barbacka (1931); Zaleski et al. (1948); Michalski (1959); Starmachowa & Kućmierz (1967); Madej (1968, 1974); Kućmierz (1976b, 1977b); Danilkiewicz (1982-1984, 1987-1990); Mułenko (1988-1989); Mułenko & Wojdyło (2002).

NOTES: The data of Danilkiewicz (1987-1990) referred to as *Ramularia sambucina* Saccardo were included here after checking the herbarium specimen (Wołczańska 2005).

- **euphrasiae** Ondřej

Host(s): *Odontites serotina* (Lam.) Rchb.

Ref.: Adamska (2001).

- **kabatiana** Allesch. ex Lindau

Host(s): *Galeobdolon luteum* Huds.

Ref.: Wołczańska (1998).

- **lycii** Ellis & Halst.

Host(s): *Lycium barbarum* L.

Ref.: Jankowska-Barbacka (1931).

- **maianthemii** Fuckel (*majanthemi*)

Host(s): *Maianthemum bifolium* (L.) F.W. Schmidt

Ref.: Hennings (1892); Rouppert (1912); Namysłowski (1914); Siemaszko (1923); Konopacka (1924); Zweigbaumówna (1925); Moesz (1926); Dominik (1936).

- **medicaginis** Ellis & Everh.

Host(s): *Medicago sativa* L.

Ref.: Danilkiewicz (1987-1990).

- **meliloti** Oudem.

Host(s): *Melilotus alba* Medik.

Ref.: Kućmierz (1976a, b, 1977a).

- **mercurialis** Pass.

Host(s): *Mercurialis perennis* L.

Ref.: Siemaszko (1925); Moesz (1926); Starmachowa (1966); Starmachowa & Kućmierz (1967); Kućmierz (1971, 1973, 1976a, b, 1977b); Danilkiewicz (1982-1984); Michalski (1982-1986); Sałata et al. (1993); Mułenko (1994b, 1996a); Faliński & Mułenko (1997).

- ***nasturtii*** Pass.

Host(s): *Rorippa amphibia* (L.) Besser, *R. palustris* (L.) Besser

Ref.: Mułenko (1988-1989).

- ***olivascens*** Sacc.

Host(s): *Phaseolus vulgaris* L.

Ref.: Namysłowski (1914).

- ***ononidis*** (Auersw.) Höhn.

Host(s): *Ononis arvensis* L.

Ref.: Michalski 1982-1986.

NOTES: The species is doubtful and excluded, the name does not refer to true species of *Cercospora s. str.* (Chupp 1954, Crous & Braun 2003).

- ***pantoleuca*** Sacc.

_ *Cercospora pantoleuca* Sacc.

Host(s): *Plantago lanceolata* L.

Ref.: Zweigbaumówna (1925); Madej (1972, 1974).

- ***paridis*** Erikss.

Host(s): *Paris quadrifolia* L.

Ref.: Hennings (1892); Konopacka (1924); Dominik (1936); Zaleski et al. (1948).

- ***physalidis*** Ellis

= *Cercospora abchasica* Siemaszko

Host(s): *Hyoscyamus* sp.

Ref.: Miczyńska & Stachyra (1961).

- ***pietrenii*** Dominik (*pietreni*)

Host(s): *Chenopodium album* L.

Ref.: Dominik (1936).

- ***plantaginis*** Sacc.

Host(s): *Plantago lanceolata* L., *P. major* L.

Ref.: Danilkiewicz (1987-1990); Mułenko (1988-1989).

- ***radiata*** Fuckel

Host(s): *Anthyllis vulneraria* L.

Ref.: Hellwig (1897); Dominik (1936); Starmachowa (1966); Kućmierz (1976b, 1977b);

Romaszewska-Sałata & Mułenko (1983).

- ***senecionis*** Ellis & Everh.

Host(s): *Senecio* sp.

Ref.: Durska (1974).

- ***setariae*** G.F. Atk.

Host(s): *Setaria pumila* (Poir.) Roem. & Schult.

Ref.: Jankowska-Barbacka (1931).

- ***tragopogonis*** Ellis & Everh.

Host(s): *Tragopogon pratensis* L.

Ref.: Adamska et al. (1999); Adamska (2001).

- ***violae*** Sacc.

= *Cercospora violae-tricoloris* Briosi & Cavara

Host(s): *Viola canina* L., *V. palustris* L., *V. reichenbachiana* Jord. ex Bor., *Viola* sp., *V. tricolor* L.,

Ref.: Hennings (1892); Moesz (1926); Garbowski & Juraszkówna (1933); Dominik (1936);

Leszczenko (1937); Zaleski & Madej (1964); Kućmierz (1971, 1973); Madej (1974); Mućenko (1988-1989).

- ***violae-sylvaticae*** Oudem.

Host(s): *Viola reichenbachiana* Jord. ex Bor.

Ref.: Jankowska-Barbacka 1931.

NOTES: The species is doubtful and excluded, the name does not refer to true species of *Cercospora* s. str. (Chupp 1954, Crous & Braun 2003).

- ***zebrina*** Pass.

= *Cercospora helvola* Sacc.

Host(s): *Trifolium dubium* Sibth., *T. repens* L., *Trifolium* sp.

Ref.: Garbowski & Juraszkówna (1933); Kućmierz (1971, 1973); Danilkiewicz (1987); Mućenko (1988-1989).

- ***zonata*** G. Winter

= *Cercospora fabae* Fautrey

Host(s): *Vicia faba* L., *V. faba* var. *minor* Petem.

Ref.: Jankowska-Barbacka (1931); Kućmierz (1977b); Kućmierz & Gondek (1978).

- ***Cercospora*** sp.

Host(s): honey-dew of *Abies* sp., *Begonia rex* Putz., *Cardamine pretensis* L., *Secale cereale* L.

Ref.: Jankowska-Barbacka (1931); Dominik (1936); Badurowa & Badura (1967); Borowska & Demianowicz (1972); Durska (1974).

Passalora Fries:

- ***actaeae*** (Ellis & Holw.) U. Braun & Crous

≡ *Ramularia actaeae* Ellis & Holw.

Host(s): *Actaea spicata* L.

Ref.: Konopacka (1924).

- ***ariae*** (Fuckel) U. Braun & Crous

≡ *Cercospora ariae* Fuckel

≡ *Mycovellosiella ariae* (Fuckel) U. Braun

= *Cercospora kriegieriana* Bres.

= *Ramularia sorbi* Karak.

Host(s): *Sorbus aucuparia* L. emend. Hedl., *Sorbus* sp.

Ref.: Zweigbaumówna (1925); Danilkiewicz (1987-1990); Mućenko (1988-1989, 1996a, b); Faliński & Mućenko (1997).

- **avicularis** (G. Winter) Crous et al.
Host(s): *Polygonum aviculare* L.
Ref.: Piątek & Wołczańska (2004).
- **bacilligera** (Mont. & Fr.) Mont. & Fr.
≡ *Scolicotrichum bacilligerum* (Mont. & Fr.) J. Schröt.
Host(s): *Alnus glutinosa* (L.) Gaertn.
Ref.: Schroeter (1897); Jankowska-Barbacka (1931); Starmachowa & Kućmierz (1967); Mułenko (1996a, b); Faliński & Mułenko (1997).
- **bellynckii** (Westend.) U. Braun
≡ *Cercospora bellynckii* (Westend.) Sacc.
≡ *C. bellynckii* (Westend.) Niessl
Host(s): *Vincetoxicum hirundinaria* Medik., *Vincetoxicum* sp.
Ref.: Jankowska-Barbacka (1931); Kućmierz (1976a, b, 1977b).
- **bupleuri** (Pass.) U. Braun
= *Cercospora chaerophylli* Höhn.
= *Cercospora chaerophylli* Aderh.
= *Cercospora coriandrii* Rjach.
Host(s): *Anthriscus nitida* (Wahlenb.) Hazsl., *Chaerophyllum bulbosum* L., *Ch. hirsutum* L., *Ch. temulum* L., *Coriandrum* sp.
Ref.: Zweigbaumówna (1925); Jankowska-Barbacka (1931); Miczyńska et al. (1961); Romaszewska-Sałata (1981); Romaszewska-Sałata & Mułenko (1983); Sałata et al. (1984, 1993); Adamska (2001).
- **campi-silii** (Speg.) U. Braun
≡ *Cercospora campi-silii* Speg.
Host(s): *Impatiens noli-tangere* L.
Ref.: Konopacka (1924); Mułenko (1996a, b); Faliński & Mułenko (1997); Piątek & Wołczańska (2004).
- **carlinae** (Sacc.) U. Braun & Crous
≡ *Cercospora carlinae* Sacc.
Host(s): *Carlina vulgaris* L.
Ref.: Hellwig (1897); Dominik (1936).
- **circumscissa** (Sacc.) U. Braun
≡ *Cercospora circumscissa* Sacc.
= *C. cerasella* Sacc.
= *C. padi* Bubák & Serebrian.
Host(s): *Cerasus avium* Moench, *Cerasus* sp., *Padus avium* Mill., *Prunus spinosa* L.
Ref.: Chełchowski (1902); Trzebiński et al. (1916); Jankowska-Barbacka (1931); Garbowski & Juraszkówna (1933); Garbowski (1935); Stec-Rouppertowa (1936); Leszczenko (1937).
NOTES: Jankowska-Barbacka (1931) reports fungal species on *Prunus padus* L. This host occurs in 2 subspecies: *P. padus* L. subsp. *borealis* Cajander, currently *Padus petraeae* Tausch, and *P. padus* L. subsp. *padus* currently *Padus avium* Mill. As the fungus was not recorded on *Padus petraea* (Crous & Braun 2003), *Padus avium* was accepted as the host.
- **comari** (Peck) U. Braun

≡ *Cercospora comari* Peck (*comarum*)

Host(s): *Comarum palustre* L.

Ref.: Mułenko (1994a, 1996a).

- **concors** (Casp.) U. Braun & Crous

≡ *Cercospora concors* (Casp.) Sacc.

= *C. heterosperma* Bres.

Host(s): *Lycopersicon esculentum* Mill., *Solanum tuberosum* L.

Ref.: Trzebiński et al. (1916); Laubert (1921); Siemaszko (1923); Zweigbaumówna (1925); Kuryłło (1927); Garbowski (1929, 1935); Garbowski & Juraszkówna (1933); Leszczenko (1937); Michalski (1965).

- **depressa** (Berk. & Broome) Sacc.

≡ *Fusicladium depressum* (Berk. & Broome) Roum.

≡ *F. depressum* (Berk. & Broome) Sacc.

≡ *Scoliotrichum depressum* (Berk. & Broome) J. Schröt.

≡ *Cercospora depressa* (Berk. & Broome) Vassiljevsky

= *Passalora polythrincioides* Fuckel

Host(s): *Aegopodium podagraria* L., *Anethum graveolens* L., *Angelica archangelica* L. subsp. *litoralis* (Fr.) Thell., *Angelica* sp., *A. sylvestris* L., *Foeniculum vulgare* Mill., *Heracleum sibiricum* L., *Ostericum palustre* Bess., *Sium latifolium* L.

Ref.: Hellwig (1897); Schroeter (1897); Elenkin (1901); Laubert (1931); Konopacka (1924);

Zweigbaumówna (1925); Dominik (1936); Miczyńska et al. (1961); Starmachowa (1964); Zaleski & Madej (1964); Kućmierz (1971, 1973, 1976b, 1977b); Michalski (1982-1986); Danilkiewicz (1987, 1987-1990); Mułenko (1996a, b); Faliński & Mułenko (1997).

NOTES: The data of Starmachowa (1964) were reported after checking the herbarium specimen, first referred to as *Ramularia angelicae* Höhn. (Wołczańska 2005).

- **dissiliens** (Duby) U. Braun & Crous

= *Cercospora roesleri* (Catt.) Sacc.

Host(s): *Vitis vinifera* L.

Ref.: Schroeter (1892).

- **dubia** (Riess) U. Braun

≡ *C. dubia* (Riess) G. Winter

≡ *Ramularia dubia* Riess

= *Cercospora chenopodii* Fresen.

Host(s): *Atriplex nitens* Schkuhr, *A. patula* L., *Chenopodium album* L., *Ch. bonus-henricus* L.

Ref.: Hellwig (1897); Namysłowski (1906, 1914); Waśniewski (1911); Siemaszko (1923);

Zweigbaumówna (1925); Jankowska-Barbacka (1931); Dominik (1936); Michalski (1959); Madej (1963, 1969, 1974); Starmachowa & Kućmierz (1967); Adamska et al. (1999); Adamska (2001).

NOTES: Madej (1969) reports *Cercospora dubia* (Riess) G. Winter as *Cercospora dubia* (Riess) Sacc.

- **ferruginea** (Fuckel) U. Braun & Crous

≡ *Cercospora ferruginea* Fuckel

= *C. olivacea* G.H. Otth

= *Ramularia absinthii* Laubert

Host(s): *Artemisia absinthium* L., *Artemisia* sp., *A. vulgaris* L.

Ref.: Moesz (1920, 1926); Laubert (1921); Siemaszko (1923); Jankowska-Barbacka (1931); Madej (1963, 1974); Kućmierz (1971, 1973); Mułenko (1988-1989); Adamska (2001).

- ***fulva*** (Cooke) U. Braun & Crous

≡ *Cladosporium fulvum* Cooke

Host(s): *Lycopersicon esculentum* L.

Ref.: Garbowski (1932, 1935); Siemaszko (1933); Dominik (1936); Leszczenko (1937); Ruskowski et al. (1938); Stec-Roupertowa (1939); Michalski (1965); Kućmierz (1971, 1973); Madej (1974).

- ***galii*** (Ellis & Holw.) Arx

≡ *Cercospora galii* Ellis & Holw.

≡ *Cercosporidium galii* (Ellis & Holw.) Deighton

= *Scolicotrachium ruthenicum* (Petr.) Karak. & Vassiljevsky

Host(s): *Galium mollugo* L., *G. saxatile* L., *G. sylvaticum* L., *G. uliginosum* L.

Ref.: Zweigbaumówna (1925); Jankowska-Barbacka (1931); Mułenko (1988-1989); Adamska (2001).

- ***graminis*** (Fuckel) Höhn.

≡ *Cercosporidium graminis* (Fuckel) Deighton

≡ *Scolecotrichum graminis* Fuckel

Host(s): *Agrostis alba* L., *Alopecurus aequalis* Sobol., *A. geniculatus* L., *A. pratensis* L.,

Arrhenatherum elatius (L.) P. Beauv. ex J. Presl & C. Presl, *Avena* sp., *Avenula pubescens* (Huds.)

Dumort., *Brachypodium sylvaticum* (L.) P. Beauv., *Calamagrostis canescens* (Weber) Roth., *Dactylis*

glomerata L., *Dactylis* sp., *Elymus repens* (L.) Gould, *Festuca rubra* L., *Glyceria fluitans* (L.) R.Br.,

G. maxima (Hartm.) Holmb., *G. notata* Chevall., *Leersia oryzoides* (L.) Sw., *Lolium perenne* L.,

Milium effusum L., *Phalaris arundinacea* L., *Phleum pratense* L., *Poa nemoralis* L., *P. palustris* L., *P.*

pratensis L., *Poa* sp., *P. trivialis* L., *Secale cereale* L., *Triticum aestivum* L.

Ref.: Hellwig (1897); Schroeter (1897); Schander (1909); Siemaszko (1925); Zweigbaumówna (1925);

Garbowski (1929, 1932, 1935); Jankowska-Barbacka (1931); Garbowski & Juraszkówna (1933);

Dominik (1936); Mikołajska (1960, 1974); Michalski (1965, 1982-1986); Starmachowa (1966);

Starmachowa & Kućmierz (1967); Kućmierz (1969, 1976b, 1977a, b); Zgórkiewicz (1972); Madej &

Miętkiewski (1974); Danilkiewicz (1987, 1987-1990); Mułenko (1996a, b); Faliński & Mułenko

(1997); Adamska (2001).

NOTES: Adamska (2001) reports *Scolecotrichum graminis* Fuckel as *Scolecotrichum graminicola* Fuckel.

- ***malkoffii*** (Bubák) U. Braun

≡ *Cercospora malkoffii* Bubák

Host(s): *Pimpinella anisum* L.

Ref.: Miczyńska et al. (1961).

- ***heterospora*** (Höhn.) Höhn.

≡ *Fusicladium heterosporum* Höhn.

Host(s): *Chamaenerion angustifolium* (L.) Scop.

Ref.: Moesz (1926).

- ***microsora*** (Sacc.) U. Braun

≡ *Cercospora microsora* Sacc.

Host(s): *Tilia cordata* Mill., *T. platyphyllos* Scop., *Tilia* sp.

Ref.: Hennings (1892); Trzebiński et al. (1916); Konopacka (1924); Zweigbaumówna (1925); Garbowski (1929, 1935); Garbowski & Juraszkówna (1933); Dominik (1936); Stec-Rouppertowa (1936); Leszczenko (1937); Zaleski et al. (1948); Pachlewski & Borowski (1959); Madej (1963, 1974); Michalski (1965); Danilkiewicz (1987-1990); Mułenko (1996a, b); Faliński & Mułenko (1997).

- ***microsperma*** Fuckel

Host(s): *Alnus incana* (L.) Moench

Ref.: Fełenczak (1927).

- ***minutissima*** (Desm.) U. Braun & Crous

Host(s): *Geranium sanguineum* L.

Ref.: Siemaszko (1925).

NOTES: The data of Siemaszko (1925) referred to as *Ramularia geranii* (Westend.) Fuckel were included here after checking the herbarium specimen (Wołczańska 2005).

- ***montana*** (Speg.) U. Braun & Crous

≡ *R. montana* Speg.

= *Ramularia punctiformis* (Schltdl.) Höhn.

≡ *Phaeoramularia punctiformis* (Schltdl.) U. Braun

= *Ramularia epilobii* (W.G. Schneider ex Thümen) Magnus

= *R. epilobii-parviflori* Lindr.

= *R. epilobii-rosei* Lindau

= *R. karakulinii* N. Golovina

Host(s): *Chamaenerion angustifolium* (L.) Scop., *Epilobium hirsutum* L., *E. montanum* L., *E. palustre* L., *E. parviflorum* Schreb., *E. roseum* Schreb.

Ref.: Konopacka (1924); Zweigbaumówna (1925); Starmachowa & Kućmierz (1967); Kućmierz (1969, 1971, 1973, 1976b, 1977b); Mułenko (1988-1989, 1996a, b); Sałata et al. (1993); Faliński & Mułenko (1997); Adamska et al. (1999); Adamska (2001).

- ***murina*** (Ellis & Kellerm.) U. Braun & Crous

≡ *Mycovellosiella murina* (Ellis & Kellerm.) Deighton

= *Cercospora ii* Trail

Host(s): *Viola epipsila* Ledeb., *V. palustris* L., *V. rupestris* F.W. Schmidt

Ref.: Moesz (1926); Mułenko (1988-1989, 1996a, b); Faliński & Mułenko (1997); Ruszkiewicz (2000).

NOTES: The data of Mułenko (1988-1989) referred to as *Ramularia lactea* (Desm.) Sacc. were included here after checking the herbarium specimen (Wołczańska 2005)

- ***punctum*** (Lacroix) S. Petzoldt (*puncta*)

= *Cercospora apii* var. *petroselini* Sacc.

Host(s): *Petroselinum crispum* (Mill.) Nyman

Ref.: Jankowska-Barbacka (1931); Garbowski & Juraszkówna (1933).

- ***rhamni*** (Fuckel) U. Braun

≡ *Cercospora rhamni* Fuckel

Host(s): *Rhamnus cathartica* L.

Ref.: Kućmierz (1976a, b, 1977b).

- ***ribis-rubri*** (S_vul. & Sandu) U. Braun

= ?*Cercospora marginalis* Thüm.

Host(s): *Ribes nigrum* L., *Ribes* spp., *R. uva-crispa* L.

Ref.: Chęłchowski (1902); Trzebiński et al. (1916); Mułenko (1994b, 1996a); Faliński & Mułenko (1997).

NOTES: Crous & Braun (2003) published that *Cercospora marginalis* is a doubtful name and needs to be confirmed as synonym.

- ***rosicola*** (Pass.) U. Braun

≡ *Cercospora rosicola* Pass.

Host(s): *Rosa tomentosa* Sm.

Ref.: Danilkiewicz (1987-1990).

- ***scandicearum*** (Magnus) U. Braun & Crous

≡ *Cercospora scandicearum* Magnus

Host(s): *Chaerophyllum hirsutum* L.

Ref.: Starmachowa (1966).

- ***vexans*** (C. Massal.) U. Braun & Crous

≡ *Cercospora vexans* C. Massal.

Host(s): *Fragaria vesca* L.

Ref.: Zweigbaumówna (1925); Madej (1966, 1969, 1974).

Pseudocercospora Spegazzini:

- ***geicola*** U. Braun

Host(s) *Geum montanum* L.

Ref.: Rouppert (1912), Starmachowa (1963).

NOTES: The data of Rouppert (1912) and Starmachowa (1963) referred to as *Ramularia gei* (Elliasson) Lindr. were included here after checking the herbarium specimen (Wołczańska 2005).

- ***opuli*** (Höhn.) U. Braun & Crous

≡ *Cercospora opuli* Höhn.

Host(s): *Viburnum opulus* L.

Ref.: Zweigbaumówna (1925); Jankowska-Barbacka (1931); Mułenko (1988-1989, 1994b, 1996a); Faliński & Mułenko (1997).

Stenella Sydow:

- ***lythri*** (Westend.) J.L. Mulder

≡ *Cercospora lythri* (Westend.) Niessl

Host(s): *Lythrum salicaria* L.

Ref.: Madej (1969, 1974); Mułenko (1988-1989, 1996a, b); Faliński & Mułenko (1997).

- ***subsanguinea*** (Ellis & Everh.) U. Braun

≡ *Ramularia subsanguinea* (Ellis & Everh.) Karak.

= *R. rubicunda* Bres.

Host(s): *Maianthemum bifolium* (L.) F.W. Schmidt

Ref.: Rouppert (1909, 1912); Namysłowski (1914); Wróblewski (1915, 1925); Zweigbaumówna (1916); Konopacka (1924); Moesz (1926); Starmachowa (1963, 1966); Mułenko (1988-1989, 1996a, b); Adamska (2001).

NOTES: Wróblewski (1915), Rouppert (1909) and Starmachowa (1963) reports *Ramularia rubicunda* Bres. as *Ramularia rubicunda* Sacc.

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Literature Cited

- Adamska I. 2001. Microscopic fungus-like organisms and fungi of the Słowiński National Park. II. (NW Poland). *Acta Mycol.* 36: 31-65.
- Adamska I, Madej T, Czerniawska B, Błaszowski J. 1999. Parasitic and saprotrophic fungi from Słowiński National Park. *Acta Mycol.* 34: 97-103.
- Agrios GN. 1997. *Plant Pathology*. 4th ed. Academic Press, New York, pp. 633.
- Badurowa M, Badura L. 1967. Further investigations on the relationship between soil fungi and the macroflora. *Acta Soc. Bot. Pol.* 36: 515-529.
- Borowska A, Demianowicz Z. 1972. Fungi on fir honey-dew. *Acta Mycol.* 8: 175-189 (in Polish with English summary).
- Braun U, Melnik VA. 1997. Cercosporoid fungi from Russia and adjacent countries. *Trudy Botanicheskogo Instituta Imeni V. L. Komarova, St. Petersburg*, 20: 1-130.
- Braun U. 1995. A monograph of *Cercospora*, *Ramularia* and allied genera (phytopathogenic hyphomycetes). Vol. 1. IHW-Verlag Eching, pp. 333.
- Chełchowski S. 1902. Spostrzeżenia grzyboznawcze. *Pam. Fizjogr.* 17(3): 3-38.
- Chupp C. 1954. A monograph of the fungus genus *Cercospora*. Ithaca, New York. Published by the author.
- Crous PW, Braun U. 2003. *Mycosphaerella* and its anamorphs: 1. Names published in *Cercospora* and *Passalora*. *CBS Biodiversity Series* 1: 1-571.
- Crous PW, Aptroot A, Kang J, Braun U, Wingfield MJ. 2000. The genus *Mycosphaerella* and its anamorphs. *Studies in Mycology* 45: 107-121.
- Danilkiewicz M. 1982-1984. Microscopic parasitic fungi of the Omelno Forest Nature Reserve near Radzyń Podlaski (North-Eastern Poland). *Fragm. Flor. Geobot.* 28: 643-649 (in Polish with English summary).
- Danilkiewicz M. 1987. Parasitic fungi occurring on meadows and pastures in the Krzna river valley. *Zesz. Probl. Post. Nauk Roln.* 307: 91-104 (in Polish with English and Russian summary).
- Danilkiewicz M. 1987-1990. Parasitic fungi of river Bug valley. *Acta Mycol.* 23: 37-80 (in Polish with English summary).
- Deighton FC. 1959. Studies on *Cercospora* and allied genera. I. *Cercospora* species with coloured spores on *Phyllanthus* (*Euphorbiaceae*). *Mycological Papers* 71: 1-23.
- Deighton FC. 1967. Studies on *Cercospora* and allied genera. II. *Passalora*, *Cercosporidium* and some species of *Fusicladium* on *Euphorbia*. *Mycological Papers* 112: 1-80.

- Deighton FC. 1976. Studies on *Cercospora* and allied genera. VI. *Pseudocercospora* Speg., *Pantospora* Cif. and *Cercoseptoria* Petr. Mycological Papers 140: 1-168.
- Dominik T. 1936. Materiały do flory grzybów mikroskopowych zachodniej Polski. Spraw. Komisji Fizjogr. 70: 1-72 (in Polish with German summary).
- Durska B. 1974. Studies on parasitic fungi of plants occurring in the lake littoral of the Masurian Lakeland. Acta Mycol. 10: 73-139 (in Polish with English summary).
- Elenkin A. 1901. Flora Ojcovskoj Doliny. Tip. Warsz. Uczebn. Okruga. Warszawa, pp. 167 (in Russian).
- Faliński JB, Mułenko W. 1997. Cryptogamous plants in the forest communities of Białowieża National Park. Ecological Atlas (*Project CRYPTO 4*), pp. 522.
- Fełenczak W. 1927. Grzyby podkarpackie okolicy Dukli. Spraw. Kom. Fizjogr. 61: 167-187 (in Polish with German summary).
- Fresenius G. 1863. Beiträge zur Mykologie 3. Heinrich Ludwig Brömmer Verlag, Frankfurt.
- Garbowski L. 1929. Choroby roślin uprawnych oraz drzew i krzewów leśnych i parkowych w Wielkopolsce i na Pomorzu w r. 1926 i 1927. Pr. Wydz. Chor. Rośl. PINGW, Bydgoszcz 7: 1-70 (in Polish with French summary).
- Garbowski L. 1932. Spostrzeżenia nad chorobami roślin uprawnych w Wielkopolsce i na Pomorzu w okresie 1928-1931 r. Prace Wydz. Chorób Rośl. PINGW, Bydgoszcz 11: 3-50 (in Polish with French summary).
- Garbowski L. 1935. Choroby roślin użytkowych w okresie 1931-1933. Zestawienie notowań Zakładów Ochrony Roślin. Rocz. Ochr. Rośl., Cz. A, 2: 406-580.
- Garbowski L, Juraszkówna H. 1933. Choroby roślin użytkowych w okresie 1926-1930. Rocz. Ochr. Rośl., Cz. A, 1: 97-235.
- Hellwig T. 1897. Beiträge zur Florenkenntnis der Provinz Posen. II. Pilze von Wengierki. Kreis Wreschen. Zeitschr. Naturwiss. Ver. Bot. Abt. 4(2): 41-50.
- Hennings P. 1892. Bericht über meine vom 31. August bis zum 17. September 1890 ausgeführte kryptogamische Forschungsreise im Kreise Schwetz. Schriften der naturforschenden Gesellschaft in Danzig, N. F. 8, 1: 59-113.
- Jankowska-Barbacka J. 1931. List of fungi collected in the surroundings of Puławy during 1927-30. Pam. Państw. Inst. Nauk. Gosp. Wiejskiego w Puławach 12: 492-508 (in Polish with English summary).
- Kim J-D, Shin H-D. 1998. Taxonomic Studies on *Cercospora* and Allied Genera in Korea (I). The Korean Journal of Mycology 26(3): 327-341.
- Konopacka W. 1924. Grzyby pasorzytnicze z okolic Puław i Kazimierza. Kosmos 49: 855-872 (in Polish with French summary).
- Kossobudzka H. 1936. przyczynek do znajomości flory grzybów mikroskopowych powiatu grudziądzkiego. Bad. Przyr. Pom. 1: 1-23 (in Polish with French summary).
- Kućmierz J. 1969. Parasitic fungi collected from the territory of Mszana Dolna (Gorce Mts., Polish Western Carpathians). Fragm. Flor. Geobot. 15: 111-128 (in Polish with English summary).
- Kućmierz J. 1971. Parasitic Fungi of the Ojców National Park. Part III. *Ascomycetes*, *Deuteromycetes*. Fragm. Flor. Geobot. 17: 425-438 (in Polish with English summary).
- Kućmierz J. 1973. The parasitic fungi in the Ojców National Park. Ochr. Przyr. 38: 155-211 (in Polish with English summary).
Kućmierz J. 1973. The parasitic fungi in the Ojców National Park. Ochr. Przyr. 38: 155-211 (in Polish with English summary).
- Kućmierz J. 1976a. New and rare for Poland species of *Deuteromycetes* collected in the area of the Pieniny Mts. (Western Carpathians). Fragm. Flor. Geobot. 22: 141-146 (in Polish with English summary).
- Kućmierz J. 1976b. Flora of parasitic fungi of the Pieniny Mountains (Western Carpathians). Part II. *Basidiomycetes*, *Deuteromycetes*. Fragm. Flor. Geobot. 22: 605-622 (in Polish with English summary).

- Kućmierz J. 1977a. The results of observations concerning the influence of mineral fertilization on the occurrence of parasitic fungi of meadow grass in the surroundings of Jaworki (The Pieniny Mountains). *Zesz. Nauk. AR, Kraków* 120: 69-86 (in Polish with English and Russian summary).
- Kućmierz J. 1977b. Investigation on the parasitic fungi from the Pieniny Mts. *Zesz. Nauk. AR, Kraków* 137. *Rozpr.* 52: 2-142 (in Polish with English and Russian summary).
- Kućmierz J. 1978. Fungal diseases of crops in the Pieniny Mountain Region and the problem of sowing of crops in mountain areas. *Zesz. Prob. Post. Nauk Roln.* 213: 75-93 (in Polish with English and Russian summary).
- Kućmierz J, Gondek J. 1978. Fungus diseases of root plants in the Pieniny Mts. region. *Probl. Zagosp. Ziem Górsk.* 17: 179-202 (in Polish with English and Russian summary).
- Kuryłło A. 1927. Choroby i szkodniki roślin uprawnych w Wielkopolsce w roku 1926. Ed. Wielko. Izba Rol. Poznań, pp. 32.
- Kuryłło A. 1929. Choroby i szkodniki roślin uprawnych w Wielkopolsce w 1928 roku. Ed. Wielko. Izba Rol. Poznań, pp. 66.
- Laubert R. 1921. Schmarotzerpilze und Pflanzenkrankheiten aus Polen und Masuren. *Centralbl. Bacter. Parasit.* II, 52: 236-244.
- Laubert R. 1931. Schmarotzerpilze aus den Sudeten. *Zeitschr. f. Pilzk.* 15 (A.F.): 42-49.
- Leszczenko P. 1937. Choroby roślin użytkowych w r. 1934. Zestawienie notowań Zakładów Ochrony Roślin. *Rocz. Ochr. Rośl. Bydgoszcz* 1937, 3, 4: 148-207.
- Madej T. 1963. A contribution to the knowledge to the flora of parasitical fungi causing illnesses of plants, (found in Szczecin and its suburbs in 1959-1961). *Zesz. Nauk. WSR, Szczecin* 10: 79-88 (in Polish with English and Russian summary).
- Madej T. 1966. A contribution to knowledge of fungal-diseases of strawberry in North-West-Poland. *Zesz. Nauk. WSR, Szczecin* 21: 59-80 (in Polish with English and Russian summary).
- Madej T. 1968. Materiały do znajomości mikoflory leszczyny i dzikiego bzu. *Acta Mycol.* 4: 71-83 (in Polish with French summary).
- Madej T. 1969. Mycoflora of herbs of the dendrologic garden in Przelewiec (Szczecin voivode). *Fragm. Flor. Geobot.* 15: 99-110 (in Polish with English summary).
- Madej T. 1972. Materials from the mycoflora of Szczecin. *Acta Mycol.* 8: 35-45 (in Polish with English summary).
- Madej T. 1974. Materiały do flory roślin woj. szczecińskiego. *Akad. Roln., Szczecin, Rozpr.* 35: 1-235.
- Madej T, Miętkiewski R. 1974. Contribution to the micoflora of grasses in Szczecin voivodeship. *Rocz. Nauk Roln., E.* 4: 195-204 (in Polish with English and Russian summary).
- Michalski A. 1959. Grzyby pasożytnicze okolic Żegiestowa-Zdroju. *Monogr. Bot.* 8: 237-243 (in Polish with French summary).
- Michalski A. 1965. Spostrzeżenia nad występowaniem grzybów pasożytniczych na roślinach uprawnych i dziko rosnących na terenie Bydgoszczy i okolic w latach 1953-1962. *Fragm. Flor. Geobot.* 11: 215-235 (in Polish with French summary).
- Michalski A. 1967. Grzyby pasożytnicze Wybrzeża Gdańskiego. *Acta Mycol.* 3: 153-162 (in Polish with French summary).
- Michalski A. 1982-1986. Parasitic fungi of Noteć meadows and neighbouring areas adjacent on the stretch Nakło – Ujście. *Acta Mycol.* 18: 175-202 (in Polish with English abstract).
- Michno-Zatorska Z. 1959. Investigations on the influence of some external factors to sugar-beet leaf spot fungus (*Cercospora beticola* Sacc.) in laboratorial conditions. *Stud. Soc. Sc. Tor., sec. D.* 3(4): 1-34 (in Polish with English summary).
- Miczynska Z, Stachyra T. 1961. Diseases and pesos of savory herbs cultivated in Poland. II. Diseases and pesos of herbs belonging to the family of Solanaceae observed during the years 1951-1960. *Biul. IOR* 13: 45-77 (in Polish with English summary).

- Miczynańska Z, Rojecka N, Stachyra T. 1961. Pests of savory herbs cultivated in Poland. I. Diseases and noxious insects observed on *Umbelliferae* during 1951-1959. Biul. IOR 13: 7-44 (in Polish with English summary).
- Mikołajska J. 1960. Z badań nad występowaniem i ekologią chorób traw pochodzenia grzybowego. Zesz. Nauk. WSR, Olsztyn. Rolnictwo 10(103): 403-408.
- Mikołajska J. 1974. Badania pojawów grzybów pasożytniczych traw na tle zmian ekologicznych siedliska łąk w dolinie Łyny. Zesz. Nauk. Akad. Roln.-Tech. w Olsztynie. Rolnictwo 6: 3-47.
- Mirek Z, Piękoś-Mirkowa H, Zajac A, Zajac M. 2002. Flowering plants and pteridophytes of Poland. A checklist. Biodiversity of Poland 1: 1-442.
- Moesz G. 1920. Beiträge zur Kenntnis der Pilzflora von Polen. I. Pilze aus Gegend von Lubartów. Bot. Közl. 18: 22-28, 6-13.
- Moesz G. 1926. Additamenta ad cognitionem fungorum Poloniae. II. Magyar Bot. Lapok. 25: 25-39.
- Muńko W. 1988-1989. The microscopic pathogenic fungi of the Łęczna-Włodawa Lake District. II. The list of species. Acta Mycol. 24: 125-171 (in Polish with English summary).
- Muńko W. 1994a. Parasitic *Hyphomycetes* of the Białowieża National Park. I. Acta Mycol. 29: 121-127.
- Muńko W. 1994b. Parasitic *Hyphomycetes* of the Białowieża National Park. II. Acta Mycol. 29: 179-187.
- Muńko W. 1996a. Parasitic microfungi and their hosts collected on the study area. Plant pathogenic fungi. In: J.B. Faliński, W. Muńko (eds.), Cryptogamous plants in the forest communities of Białowieża National Park (*Project CRYPTO*). Phytocenosis 8 (N. S.) Archiv. Geobot. 6: 55-65.
- Muńko W. 1996b. Parasitic *Hyphomycetes* of the Białowieża National Park. III. Acta Mycol. 31: 3-11.
- Muńko W, Wojdyło B. 2002. Parasitic microfungi of trees and shrubs at Bolestraszyce Arboretum (SE Poland). Arboretum Bolestraszyce 9: 5-14 (in Polish with English summary).
- Namysłowski B. 1906. Zapiski mykologiczne. Spraw. Kom. Fizjogr. 39: 70-86.
- Namysłowski B. 1909. Zapiski grzyboznawcze z Krakowa, Gorlic i Czarnej Hory. Spraw. Kom. Fizjogr. 43: 1-30.
- Namysłowski B. 1910a. Przyczynek do mykologii Galicyi. Spraw. Kom. Fizjogr. 44(3): 43-48.
- Namysłowski B. 1910b. Zapiski z wycieczek mykologicznych odbytych w 1907 roku (Zur Pilzflora Galiziens). Kosmos 35: 1023-1031.
- Namysłowski B. 1914. Śluzowce i grzyby Galicyi i Bukowiny. Pam. Fizjogr. 22: 1-151.
- Narkiewicz-Jodko J. 1959. Introductory observations on the indirect influence of plantations of wood on the healthiness of culture plants. Biul. IOR 6: 177-196 (in Polish with English summary).
- Osińska B. 1970. Wpływ warunków przechowywania na żywotność i degenerację grzybni *Cercospora beticola* Sacc. Acta Mycol. 6: 21-27 (in Polish with French summary).
- Pachlewski R, Borowski S. 1959. Decease of young linden trees in the National Park of Białowieża. Sylwan 103(8): 1-11 (in Polish with English summary).
- Piątek M, Wołczańska A. 2004. Some phytopathogenic fungi rare or new to Poland. Polish Bot. Jour. 49: 67-72.
- Piekarczyk K, Studziński A. 1959. Signalization of the appearance of the most important diseases and pests of plants in Poland in 1959. Biul. IOR 7: 45-67 (in Polish with English and Russian summary).
- Romaszewska-Sałata J. 1981. Materials on microscopic phytopathogenic fungi in xerothermic communities in the Małopolska Upland. Ann. UMCS, C 36: 51-69 (in Polish with English and Russian summary).
- Romaszewska-Sałata J, Muńko W. 1983. Microscopic phytopathogenic fungi of the environs of Drohiczyń and Mielnik upon Bug. Ann. UMCS, C 38: 19-36 (in Polish with English and Russian summary).
- Rouppert K. 1909. Zapiski grzyboznawcze z Galicyi. Spraw. Kom. Fizjogr. 43: 31-38.
- Rouppert K. 1912. Grzyby, zebrane w Tatrach, Beskidzie Zachodnim i na Pogórzu. Spraw. Kom. Fizjogr. 46: 80-100.
- Ruszkiewicz M. 2000. Microscopic phytopathogenic fungi rare and new for Poland. Acta Mycol. 35: 85-98.
- Ruszkowski J, Zweigbaumówna Z, Blockówna H. 1938. Stan zdrowotności roślin uprawnych w Polsce w roku 1937. Roczn. Ochr. Rośl. 5, 4: 49-102.

- Sałata B, Romaszewska-Sałata J, Mułenko W. 1984. Mycological notes from the Polish Tatra National Park. *Acta Mycol.* 20: 13-21 (in Polish with English abstract).
- Sałata B, Romaszewska-Sałata J, Mułenko W. 1993. Microscopic phytopathogenic fungi. *Tatry i Podtatrze* 2: 183-207. In: Z. Mirek & H. Piękoś-Mirkowa (eds) *Przyroda Kotliny Zakopiańskiej – poznanie, przemiany, zagrożenia i ochrona* (in Polish with English summary).
- Schander R. 1909. Bericht über das Auftreten von Krankheiten und tierischen Schädlingen an Kulturpflanzen in den Provinzen Posen und Westpreussen im Jahre 1908. *Mitteil. Kaiser Wilhelms Inst. Landwirt. Bromberg* 2: 3-148.
- Schroeter J. 1892. Pilzkrankheiten des Weinstockes in Schlesien. *Hedwigia* 31: 114-119.
- Schroeter J. 1897. Die Pilze Schlesiens. II. In: F. Cohn (eds) *Kryptogamen-Flora von Schlesien*, Breslau 3(4): 385-500.
- Shin HD, Kim JD. 2001. *Cercospora* and allied genera from Korea. *Plant pathogens from Korea* 7: 1-302.
- Siemaszko W. 1923. *Fungi Bialowiezensis exiccati*. Centuria prima. *Acta Inst. Phytopath. Scholae Super. Agricult. Varsav.* 2: 1-17.
- Siemaszko W. 1925. *Fungi Bialowiezensis exiccati*. Centuria secunda. *Acta Inst. Phytopath. Scholae Super. Agricult. Varsav.*, pp. 18.
- Siemaszko W. 1929. Phytopathologische Beobachtungen in Polen. *Zentralbl. Bakter. Parasit.* 78: 113-116.
- Siemaszko W. 1933. Quelques observations sur les maladies des plantes en Pologne. *Rev. Pathol. Végét. Entomol. Agr.* 20(3): 139-148.
- Starmachowa B. 1963. Grzyby pasożytnicze z Tatr. *Monogr. Bot.* 15: 153-294 (in Polish with French summary).
- Starmachowa B. 1964. Grzyby pasożytnicze zebrane w Polanicy-Zdroju, Dusznikach i innych miejscowościach Ziemi Kłodzkiej (Dolny Śląsk). *Fragm. Flor. Geobot.* 10: 89-96 (in Polish with French summary).
- Starmachowa B. 1966. Grzyby pasożytnicze Krynicy i okolicznych gór (Beskid Sądecki). *Fragm. Flor. Geobot.* 12: 471-495 (in Polish with French summary).
- Starmachowa B, Kućmierz J. 1967. Mycological records from the territory of Ziemia Kłodzka (Sudety Mts.). *Fragm. Flor. Geobot.* 13: 141-153 (in Polish with English summary).
- Stec-Rouppertowa W. 1936. Zapiski mikologiczne. *Spraw. Kom. Fizjogr.* 70: 149-172.
- Stec-Rouppertowa W. 1939. Zapiski grzyboznawcze. *Spraw. Kom. Fizjogr.* 73: 277-283.
- Trzebiński J, Gorjaczkowski W, Zweigbaumówna Z. 1916. Choroby i szkodniki roślin hodowanych w Królestwie Polskiem. *Pam. Fizjogr.* 23: 1-106 (in Polish with French summary).
- Trzebiński J. 1918. Choroby roślin uprawnych w Królestwie Polskiem w roku 1915 i 1916. *Pam. Fizjogr.* 25: 1-15 (in Polish with French summary).
- Waśniewski S. 1911. Przyczynek do mykologii Królestwa Polskiego. *Spraw. Kom. Fizjogr.* 45(3): 23-27.
- Wodziczko A. 1911. Materiały do mykologii Galicyi. I. *Spraw. Kom. Fizjogr.* 45(3): 40-57.
- Wotczańska A. 1998. New and rare species of *Moniliales* in Poland. *Acta Mycol.* 33: 273-276.
- Wotczańska A. 2005. The *Ramularia* species in Poland. *Monogr. Bot.* 95: 1-154 (in Polish with English summary).
- Wróblewski A. 1915. Spis grzybów zebranych na Ziemiach Polskich przez Feliksa Berdausa i Aleksandra Zalewskiego oraz wybranych zielników Komisji Fizjograficznej Akademii Umiejętności przez Prof. M. Raciborskiego. *Spraw. Kom. Fizjogr.* 49: 92-125 (in Polish with German summary).
- Wróblewski A. 1925. Spis grzybów zebranych przez Marjana Raciborskiego w okolicy Krakowa i w Tatrach w latach 1883 i 1890. *Acta Soc. Bot. Pol.* 3: 29-41 (in Polish with French summary).
- Zaleski K, Madej T. 1964. Fungus diseases of fruit trees and bushes, vegetables and ornamental plants in allotment gardens in the city of Szczecin in 1958. *Roczn. WSR, Poznań*, 19: 209-232 (in Polish with English and Russian summary).
- Zaleski K, Domański S, Wojciechowski E. 1948. Fungi of State Forests Zielonka (Province Poznań, Poland), collected in 1946-1947. *Acta Soc. Bot. Pol.* 19(1): 101-143 (in Polish with English summary).

- Zgórkiwicz A. 1972. Incidence of seed grass diseases in Poland in 1965-1967. Biul. IOR 53: 95-132 (in Polish with Russian and English summary).
- Zweigbaumówna Z. 1916. Grzybki pasorzytnicze na roślinach zielnych dziko-rośnących zebrane w 1912-1915 roku w Królestwie Polskim przez J. Trzebińskiego i W. Gorjaczkowskiego. Pam. Fizjogr. 23: 203-216 (in Polish with French summary).
- Zweigbaumówna Z. 1925. Grzyby okolic Skierniewic. Acta Soc. Bot. Pol. 2: 275-301 (in Polish with French summary).