

## 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 19<sup>th</sup>-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 20<sup>th</sup> 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

= *Scolicotrimum 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); Ruskiewicz (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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