

New and rare to species of *Sphaeropsidales* the Polish flora

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The paper presents a list of 23 species of *Sphaeropsidales* (*Ascochyta*, *Phoma*, *Phyllosticta*, *Septoria* and *Stagonospora*) new or rare to the Polish flora. Some of them are very rare in Europe and are known from a few countries all over the world, e.g. *Ascochyta geranicola*, *A. kleinii*, *A. teretiuscula* var. *caricicola*, *A. pachyphragmae*, *Phoma funkiae-albomarginatae*, *Phyllosticta lunariae* and *Septoria cucubali*.

Key words: Parasitic fungi, *Sphaeropsidales*, distribution in Poland.

The paper presents a list of 23 *Sphaeropsidales* species collected recently in Poland together with notes on their morphology and geographic distribution. The fungi have not been recorded earlier in Poland. They are known either from scarce localities or new host plants. For each taxon the binding name was given, together with full bibliographic quotation. Synonyms are also proposed, but only those which are the names of the fungi described on host plants quoted in the paper. Short descriptions of the fungi were mostly given on the basis of the herbaria studied. The nomenclature was determined using more recent monography (Grove, 1935; Jørstad, 1965, 1967; Melnik, 1977; Punithalingam, 1979, 1988; Rădulescu et al., 1937; Teterovnikova-Babajan, 1987), introducing necessary amendments in bibliographic quotations in the some cases. On the basis of these sources there were also given notes on general geographic distribution of the described fungi. The publication by Farr et al. (1989) was also very helpful in this respect.

Ascochyta bohémica Kab. et Bub., Hedwigia 44: 352. 1905 [= *Stagonospora bohémica* (Kab. et Bub.) Tobish].

Pycnidia yellowish, pale ochre or yellow-brown, 75-250 µm in diam, slightly flattish from the top, usually immersed, scattered or gathered in small groups on the

upper side of leaves. Ostiole circular or oval, distinctly conspicuous, 10-20 μm in diam. Conidia cylindrical, apex and base rounded, erect, occasionally slightly curved, usually not constricted, 1-septate, measuring (3.5-) 10-23 x 3.5-5 (-6) μm (Fig. 1, f; Tab. I, 5). On leaves of *Campanula bononiensis* L.: the Bielinek reserve upon the Oder, VI. 1984 and Rudnik near Lublin, VI. 1985; in xerothermic grass at both localities. On *Campanula trachelium* L.: the Białowodzka Góra reserve upon the Dunajec, VI. 1989, in deciduous forest.

The fungus not recorded from Poland so far. Found on different species of the genus *Campanula* L. in many countries of Europe, also in central Asia, South and North America.

Ascochyta boltshauseri Sacc., Z. Pflanzenkrankh. 1: 136. 1891. [= *Stagonosporopsis boltshauseri* (Sacc.) Died. – *Stagonospora boltshauseri* (Sacc.) Grigoriu – *Stagonospora hortensis* Sacc. et Malbr. – *Ascochyta hortensis* (Sacc. et Malbr.) Jørst. – *Stagonosporopsis hortensis* (Sacc. et Malbr.) Petr. – *Ascochyta trifolii* Siem.].

Pycnidia yellowish-brown, ochre-brown or dark-brown, (80-) 100-250 μm in diam., globose, sometimes slightly flattish from the top, more seldom almost lenticular, immersed or half-immersed, scattered or gathered in concentric circles, distributed mostly on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-25 μm in diam. Conidia longitudinally ellipsoid or cylindrical, apex and base rounded, erect, more seldom slightly curved, usually not constricted, 1-2 (-3) – septate, measuring (12-) 15-22 (-30) x 3-5 (-7) μm (Fig. 1, g).

On leaves of *Vicia tenuifolia* Roth.: the Bielinek reserve upon the Oder, VI. 1984, in xerothermic grass.

The fungus has not been recorded from this host plant in Poland so far. Reported from the family *Fabaceae* throughout the temperate zone.

Ascochyta doronici Allesch., Hedwigia 36: 162. 1897 [= *Ascochyta homogynes* Ranoj. – *Phyllosticta taraxaci* Hollós – *Ascochyta taraxaci* (Hollós) Grove].

Pycnidia greyish-brown, dark-brown or even blackish, 100-200 μm , globose, slightly flattish from the top, or almost lenticular, at first immersed, then almost superficial, scattered all over the attacked area or gathered in small groups, usually distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-25 μm in diam. Conidia cylindrical, apex and base rounded or longitudinally ellipsoid, erect or slightly curved and usually not constricted, 1-septate, measuring 8-12 x 2.5-3 (-4) μm (Fig. 1, a).

On leaves of *Homogyne alpina* Cass.: Olczyska Valley in the Tatra Mountains, IX. 1992, in spruce forest. On *Taraxacum officinale* Weber: Radom, VI. 1989, in a fruit orchard.

The fungus not recorded from Poland so far. Reported from the family *Asteraceae* on all the continents.

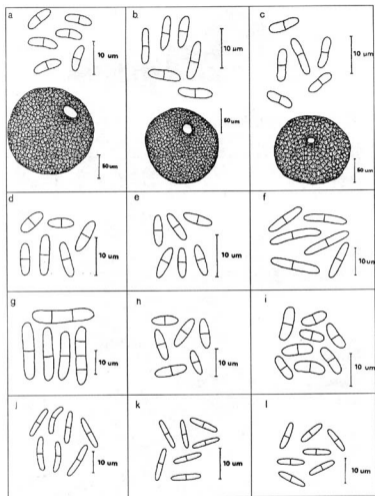
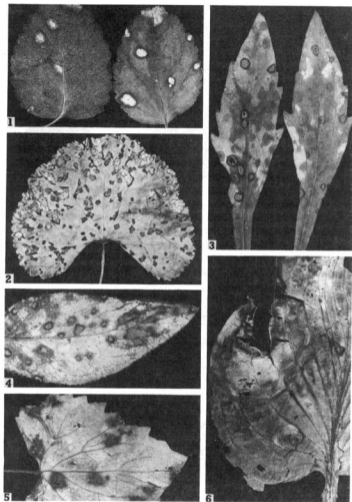


Fig. 1. Pycnidia or conidia of the genus *Ascocytha*

- a - *A. doronici* on *Homogyne alpina*, b - *A. geraniicola* on *Geranium palustre*, c - *A. leonuri* on *Mentha arvensis*,
 d - *A. impatientis* on *Impatiens parviflora*, e - *A. euphrasiae* on *Digitalis purpurea*, f - *A. bohémica* on *Campanula trachelium*,
 g - *A. boltshauseri* on *Vicia tenuifolia*, h - *A. leptospora* var. *variospora* on *Azithesatherum elatius*,
 i - *A. lamium* on *Lamium maculatum*, j - *A. kleini* on *Calystegia sepium*, k - *A. teretiuscula* var. *caricicola* on *Carex pilosa*,
 l - *A. humulphila* on *Humulus lupulus*



Tab. 1. Leaves of some host plants affected by fungi from the Sphaeropsidales

- 1 - *Septoria didickei* Sacc. on *Lamiastrum galeobdolon*, 2 - *Septoria heterochroma* Desm. on *Malva neglecta*, 3 - *Septoria erigerontis* Pk. on *Erigeron annuus*, 4 - *Septoria tricoloriae* Bub. on *Serratula tricoloria*, 5 - *Ascochyta bohemica* Kab. et Bub. on *Campanula trachelium*, 6 - *Phoma funkiae* - *albomarginata* Punith. on *Hosta ventricosa*

Ascochyta euphrasiae Oud. Ned. Kruidk. Archf. Ser. 3. 1: 430. 1898 [= *Ascochyta digitalis* Fuck. – *Ascochyta molleriana* Wint. – *Gloeosporium digitalis* Rostr.].

Pycnidia yellowish-brown or brown, 100-200 µm in diam., globose, occasionally flattish from the top, half-immersed or sometimes almost superficial, scattered all over the attacked area and distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 µm. Conidia cylindrical, apex and base rounded, more seldom longitudinally ellipsoid, erect, not constricted, 1-septate, measuring 7-9 (-11) x 2.5-3 µm (Fig. 1, c).

On leaves of *Digitalis purpurea* L.: Lublin-Stawinek, VII.1989, on a plot in the Botanic Garden.

The fungus not recorded from Poland so far. Reported from abundant representatives of the family *Scrophulariaceae* in many countries of Europe and Asia.

Ascochyta geraniicola Siem., Arch. Nauk Biol. Tow. Nauk. Warszaw. 1 (14): 32. 1923.

Pycnidia yellowish-brown, brown, or even dark-brown, 100-160 µm in diam., globose, usually immersed, scattered all over the attacked area, distributed on both sides of leaves. Ostiole circular or wide-oval, distinctly conspicuous, 15-20 µm in diam. Conidia cylindrical, apex and base rounded or longitudinally ellipsoid, erect or more seldom slightly curved, occasionally slightly asymmetric, not constricted, 1-septate, measuring 8-10 (11.5) x 2.5-3 (-3.5) µm (Fig. 1, b).

On leaves of *Geranium palustre* L.: Sądkowa near Jasło, VII.1986 and Rajec near Radom, VII.1988; scarcely occurring at both localities on wet meadow.

The fungus not recorded from Poland so far. Known so far from *Geranium sylvaticum* L. in south-east Asia (Abkhazia).

Ascochyta humuliphila Meln., Nov. Sist. Nizš. Rast. 12. 210. 1972 [= *Ascochyta humuli* Kab. et Bub. non Lasch].

Pycnidia yellowish, yellow-brown, more seldom brown, 100-200 µm in diam., globose, often slightly flattish from the top, immersed, scattered all over the attacked area, mostly distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 µm in diam., located on a small papilla. Conidia longitudinally ovoid, longitudinally ellipsoid or even cylindrical, apex and base rounded, erect, more seldom slightly curved, not constricted, 1-septate, measuring 7-12 (-15) x 2.5-3 (-5) µm (Fig. 1, 1).

On leaves of *Humulus lupulus* L.: the Białowieża National Park, X.1990, in streamside floodplain forest (B u j a k i e w i c z et al., 1992).

The fungus known from many countries of Europe and also recorded from Russia.

Ascochyta impatientis Bres., Hedwigia 39: 326. 1900 [= *Diplodina impatientis* Kab. et Bub. – *Diplodina richteriana* Staritz].

Pycnidia fawn or fawn-brown, 100-200 μm in diam., globose, usually flattish from the top, occasionally almost semi-globose, immersed, scattered all over the attacked area, mostly distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia cylindrical, apex and base rounded, more seldom cylindrical-ellipsoid, erect or slightly curved, not constricted, 1-septate, measuring (7-) 9-12 x 2.5-4 μm (Fig. 1, d).

On leaves of *Impatiens parviflora* DC.: Nowy Sącz, VI.1989, in the bushes upon the Dunajec; Lublin-Sławinek, VII.1989, in the Botanic Garden.

The fungus not reported from Poland so far. Known from different species of the genus *Impatiens* L. in several countries of central and east Europe also in south-west and central Asia.

***Ascochyta kleinii* Bub., Növényt. Közlem. 4: 13. 1907.**

Pycnidia yellowish to light-brown, 150-200 μm in diam., globose, slightly flattish from the top, immersed, scattered all over the attacked area, distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-25 μm in diam., located on a small papilla. Conidia cylindrical, apex and base rounded, erect, more seldom slightly curved, not constricted, 1-septate, measuring 13-18 x 2.5-3 μm (Fig. 1, j).

On leaves of *Calystegia sepium* (L.) R. Br.: the Białowodzka Góra reserve upon the Dunajec, IX.1989, in forest margin.

The fungus not recorded in Poland so far. Also reported from Hungary only.

***Ascochyta lamiorum* Sacc., Michelia 1: 170. 1878 [= *Ascochyta labiatarum* Bres.].**

Pycnidia yellowish-brown to dark-brown, 100-180 μm in diam., globose, slightly flattish from the top, immersed, relatively not abundant and scattered all over the attacked area, distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 10-20 μm in diam. Conidia cylindrical or longitudinally ellipsoid, occasionally even clavate, erect or slightly curved, not constricted, 1-septate, measuring 7-12 (-14) x 3-4 μm (Fig. 1, i).

On leaves of *Lamium maculatum* L.: Nowiny Horynieckie (Southern Roztocze), in roadside thicket (together with *Septoria lamiicola* Sacc.).

The fungus not recorded in Poland so far. Known from abundant representatives of the family *Lamiaceae* in many countries of Europe and also in Asia.

***Ascochyta leonuri* Ell. et Dearn., Proc. Roy. Canad. Inst. N.S. 1897: 92. 1897 [= *Ascochyta menthicola* Ishiyama - *Ascochyta menticola* Bub. et Picb.].**

Pycnidia ochre-brown, brown or even dark-brown, 80-160 (-200) μm in diam., globose or slightly flattish from the top, immersed, scattered all over the attacked area, more seldom gathered in small groups, distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia cylindrical, apex and base rounded, erect or slightly curved, occasionally slightly constricted, 1-septate, measuring 8-15 x 2.5-4 μm (Fig. 1, c).

On leaves of *Mentha arvensis* L.: Firlej near Radom, VIII.1988, on dry meadow.

In Poland the fungus collected so far only at Zakrzów near Koźle on *Nepeta*

cataria var. *citriodora* Balb. and on *Nepeta* sp. (M i c z y Ń s k a, 1967). Reported from different species of the genera: *Leonurus*, *Mentha* and *Nepeta* in many countries of Europe and also, in Asia and North America.

Ascochyta leptospora (Trail) Hara, Diseases Rice Plant, p. 178. 1918 [= *Ascochyta graminicola* Sacc. var. *leptospora* Trail – *Ascochyta graminicola* Sacc. var. *hispanica* Frag. – *Ascochyta graminicola* Sacc. var. *diedickeana* Baudyš et Picb. – *Ascochyta elymi* Tehon et Daniels].

Pycnidia yellowish-brown to rusty brown, (100-) 140 x 160 (-200) μm in diam., sometimes slightly flattish from the top, immersed, usually equally scattered all over the attacked area. Ostiole circular, distinctly conspicuous, 10-20 μm in diam. Conidia longitudinally ellipsoid or ellipsoid-fusiform, erect, more seldom slightly curved, not constricted, 1(-2)-septate, measuring 10-14 (-16) x 2.5-3.5 μm (Fig. 1, h).

On leaves of *Arrhenatherum elatius* (L.) Beauv. ex J. et C. Presl.: Puławy, VIII.1988, on the IUNG experimental field.

The species not recorded from Poland so far. However, it is conceivable that some localities of *Ascochyta graminicola* Sacc., from which the fungus has been recorded or collected from different gramineous species, should be related to this taxon. The fungus reported from the family *Poaceae* in Europe, Asia and North America.

Ascochyta teretiuscula Sacc. et Roum. var. *caricicola* Punith., Mycol. Pap. 159. 136. 1988.

Pycnidia dark-brown or even blackish-brown, 140-200 μm in diam., globose, often slightly flattish from the top, immersed, equally spread all over the attacked area, distributed on both sides of leaves. Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia cylindrical, slightly narrowed and rounded at the apex and base, erect, not constricted, 1-septate, measuring (9-) 10-12 x 2-2.5 μm (Fig. 1, k).

On leaves of *Carex pilosa* Scop.: the Białowieża National Park, X.1990, in deciduous forest (B u j a k i e w i c z et al., 1992).

The fungus known so far only from scarce localities in the Central Europe. This taxon is slightly distinguished from the typical variety (*A. teretiuscula* var. *teretiuscula*), occurring on the representatives of the genus *Luzula* by the size of conidia.

Ascochyta pachyphragmae Lobik, Bolezni Rast. 17: 174. 1928 [= *Ascochyta lunariae* Syd., Ann. Mycol. 33: 279. 1937.].

Pycnidia grey-brown or fawn, 70-150 (-200) μm in diam., globose, sometimes slightly flattish from the top, mostly immersed, equally scattered all over the attacked area, more seldom gathered in small groups, usually distributed only on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia cylindrical, apex and base rounded, occasionally longitudinally ellipsoid or even ellipsoid, erect or slightly curved, not constricted, 1-septate, measuring 8-13 (-16) x 3-4.5 μm .

On leaves of *Lunaria rediviva* L.: the Cergowa Mountain near Dukla, VII.1993, in beech forest.

The fungus not recorded from Poland so far. Reported from scarce localities in central and south-east Europe.

Phoma funkiae-albomarginatae Punith., Mycol. Pap. 159: 189. 1988 [= *Ascochyta hortensis* Kab. et Bub. – *Ascochyta funkiae* Bond et Truss.]

Pycnidia yellowish-brown to dark-brown, 70-160 (-180) μm in diam., globose, usually immersed, scattered all over the attacked area or gathered in concentric circles, especially on the upper side of leaves (Tab. I, 6). Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia cylindrical, apex and base rounded, more seldom longitudinally ellipsoid, erect or slightly curved, not constricted, quite long unicellular, then 1-septate, measuring 5-10 x 2.5-3.5 μm .

On leaves of *Hosta ventricosa* Stearn: Lublin-Sławinek, IX.1989, on a flower-bed in the Botanic Garden.

The fungus not recorded from Poland so far. Known from scarce localities in Germany, Czech and in the European part of Russia.

Phyllosticta lunariae Vanev et Bakalova, Phytology 5: 98. 1976.

Pycnidia light-brown, 110-160 μm in diam., globose, more seldom slightly flat-tish from the top, immersed, scattered all over the attacked area, mostly distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia ovoid, ellipsoid, more seldom almost cylindrical, apex and base rounded, erect or curved, mostly with two minute drops of fat, unicellular, measuring 3.5-5.5 x 1.5-2.5 μm .

On leaves of *Lunaria rediviva* L.: the Cergowa Mountain near Dukla, VII.1993, in beech forest.

The fungus not recorded from Poland so far. Described and recorded from Bulgaria only.

Septoria agrimoniae-euptoriae Bomm. et Rouss., Bull. Soc. Roy. Bot. Belg. 29: 224. 1891.

Pycnidia dark-brown, occasionally almost blackish, 50-75 μm in diam., globose, half-immersed, quite abundant and scattered all over the attacked area, distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, relatively small, up to 10 μm in diam. Conidia filiform, slightly narrowed at the apex and base, usually curved, with several (3-5) indistinct septa, measuring 30-65 x 1.5-2 μm (Fig. 2, b).

On leaves of *Agrimonia eupatoria* L.: Rymanów near Krosno, VIII.1991, on dry sunny slope.

The fungus reported so far only in the environs of Krynica (S t a r m a c h o w a, 1966). Known from representatives of the genus *Agrimonia* in many countries of Europe, Asia and North America.

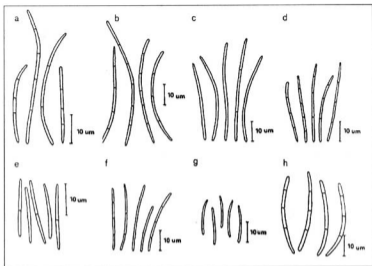


Fig. 2. Conidia of the genus *Septoria*

a - *S. heterochroa* on *Malva neglecta*, b - *S. agrimoniae* - *eupatoriae* on *Agrimonia eupatoria*, c - *S. tinctoriae* on *Serratula tinctoria*, d - *S. erigeronis* on *Erigeron ansuus*, e - *S. diedickei* on *Lamium galeobdolon*, f - *S. galeobdoli* on *Lamium galeobdolon*, g - *S. calaminthae* on *Acinos arvensis*, h - *S. cucubali* on *Cucubalus baccifer*

***Septoria calaminthae* Massal. in Sacc., Ann. Mycol. 9: 252. 1911.**

Pycnidia grey-brown to dark-brown, 40-80 (-100) μm in diam., globose, usually immersed, quite abundant, scattered all over the attacked area, distributed on the upper side of leaves. Ostiole oval, distinctly conspicuous, relatively big, measuring 15-30 μm . Conidia filiform or filiform-acerose, narrowed at the apex and base, erect or slightly curved, unicellular, more seldom with one indistinct septum, measuring 15-30 x 0.5-1.5 μm (Fig. 2, g).

On leaves of *Acinos arvensis* (Lam.) Dandy: Rudnik near Lublin, VI.1970, on a sunny grassy slope.

The fungus not recorded from Poland so far. Known from representatives of the genera *Acinos* and *Calamintha* in several countries of Europe and also recorded from Asia.

***Septoria cucubali* Lebed., Mater. Mikol. Obsled. Rossii, 5 (3): 4. 1921.**

Pycnidia yellowish, yellow-brown or even light-brown, 60-100 (-140) μm in diam., globose, usually only half-immersed, scattered all over the attacked area, distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 10-15

μm in diam. Conidia thin-bacilliform, narrowed at the apex and base, curved, more seldom erect, with 2-3 distinct septa, measuring $30\text{-}50 \times 1.5\text{-}2$ (-3) μm (Fig. 2, h).

On leaves of *Cucubalus baccifer* L.: Tyszowce near Hrubieszów, VIII.1988, in riverine bush.

The fungus not recorded from Poland so far. Known only from the European part of Russia.

Septoria diedickei Sacc. et D. Sacc., Syll. Fung. 18: 385. 1906 [= *Septoria galeobdoli* Died. non Massal.].

Pycnidia grey-brown or brown, $50\text{-}150 \mu\text{m}$ in diam., globose, usually immersed, relatively scarce, distributed singly or in groups of 2-3 in the central part of the attacked area, on the upper side of leaves. Ostiole circular or lenticular, distinctly conspicuous, measuring $15\text{-}20 \mu\text{m}$. Conidia filiform, narrowed at the apex and base, erect or slightly curved, unicellular, more seldom with one indistinct septum, measuring $15\text{-}25$ (-30) $\times 1\text{-}1.5 \mu\text{m}$ (Fig. 2, e; Tab. I, 1).

On hibernated, last year's leaves of *Lamiastrum galeobdolon* (L.) Ehrend et Polatschek: the Bachus reserve near Chelm, IV.1986, in deciduous forest and Zmysłówka near Rymanów, IV.1993, in beech forest.

The fungus not reported from Poland so far. Known from several countries of the west, central and south-east Europe.

Septoria erigerontis Peck, Ann. Rep. New York State Mus. Nat. Hist. 24: 67. 1872 [= *Septoria erigerontis* Berk. et Curt. - *S. erigerontis* Hollós - *S. erigeronata* Thüm. - *S. stenactis* Vill. ex Syd.].

Pycnidia dark-brown to blackish-brown, $60\text{-}140$ (-160) μm in diam., globose, more seldom slightly flattish from the top, usually immersed, quite abundant and scattered all over the attacked area, mostly distributed on the upper side of leaves. Ostiole circular or wide-oval, distinctly conspicuous, relatively big, measuring $15\text{-}30 \mu\text{m}$. Conidia filiform, slightly narrowed at the apex and base, erect or slightly curved, with 3-5 indistinct septa, measuring $16\text{-}55 \times 0.7\text{-}1.5$ (-2) μm (Fig. 2, d; Tab. I, 3).

On leaves of *Erigeron annuus* (L.) Pers.: Lublin-Centre, X.1985, on the lawn.

The fungus not recorded from Poland so far. Reported from the representatives of the genera *Conyza* and *Erigeron* in many countries of Europe and also from Asia and North America.

Septoria galeobdoli Massal., Atti Mem. Acad. Agricolt. Sci. Lett. Arti Commercio Verona, ser. 3. 4: 149. 1902.

Pycnidia brown to dark-brown, $100\text{-}150$ (-200) μm in diam., globose, immersed, relatively abundant and scattered all over the attacked area, distributed on the upper side of leaves. Ostiole wide-oval, distinctly conspicuous, measuring $15\text{-}20 \mu\text{m}$. Conidia filiform, narrowed at the apex and base, usually slightly curved, unicellular or with 2-3 indistinct septa, measuring $35\text{-}46 \times 1\text{-}1.5$ (-2) μm (Fig. 2, f).

On hibernated, last year's leaves of *Lamium galeobdolon* (L.) Ehrend et Polatschek: Lipowica near Dukla, IV.1993, in beech forest.

The fungus not recorded from Poland so far. Known from scarce localities in central and south Europe.

Septoria heterochroa Desm., Ann. Sci. Nat. ser. 3. Bot. 8: 22. 1847 [= *Septoria malvicola* Ell. et G. Mart., ?*Septoria malvae* Unamuno].

Pycnidia brown, dark-brown or even blackish-brown, 50-100 (-140) μm in diam., globose, occasionally slightly flattish from the top, usually only half-immersed, gathered in small groups or equally scattered all over the attacked area, mostly distributed on the upper side of leaves. Ostiole wide-oval or circular, distinctly conspicuous and relatively big, measuring 20-30 μm . Conidia filiform, slightly narrowed at the apex and base, erect or slightly curved, with 2-3 indistinct septa, measuring 25-50 x 1.5-2 (-2.5) μm (Fig. 2, a; Tab. I, 2).

On leaves of *Malva neglecta* Wallr.: the environs of Augustów, VIII.1980, at the roadside.

On this host recorded only from Myszyniec so far (Laubert, 1921). In Poland also reported from Puławy on more closely undefined species from the genus *Malva* (J a n k o w s k a - B a r b a c k a, 1931). Recorded from the representatives of the genera *Althaea* and *Malva* in many European countries and also from Asia and North America.

Septoria tinctoriae Brun., Acta Soc. Linn. Bordeaux, 44: 247. 1890.

Pycnidia grey-brown or brown, 80-140 (-160) μm in diam., globose, usually only half-immersed, and with time even almost superficial, equally scattered all over the attacked area, mostly distributed on the upper side of leaves. Ostiole circular, more seldom wide-oval, distinctly conspicuous, measuring 15-25 μm . Conidia filiform, erect or slightly curved, unicellular or with 1-3 indistinct septa, measuring 30-70 x 1-1.5 μm (Fig. 2, c; Tab. I, 4).

On leaves of *Serratula tinctoria* L.: Rymanów, VII.1992, on wet meadow.

The fungus not recorded from Poland so far. Reported from different representatives of the genus *Serratula* in many countries of Europe and also from Asia.

Stagonospora calystegiae (West.) Grove, British Stem-Leaf-Fungi 1: 347. 1935. [= *Septoria calystegiae* West. - *Septoria sepium* Desm.]

Pycnidia light-brown, brown or even dark-brown, 60-150 (-180) μm in diam., globose, immersed, relatively scarce and usually gathered in small groups, more seldom scattered all over the attacked area, mostly distributed on the lower side of leaves. Ostiole circular, distinctly conspicuous, 15-25 μm in diam. Conidia longitudinally cylindrical, apex and base rounded and usually curved, 2-3 (-5) -septate, measuring (20-) 25-45 x 4-5 μm (Fig. 3, a).

On leaves of *Calystegia sepium* (L.) R. Br.: Ropa near Grybów (leg. K. Oklejewicz), VIII.1991 and Rymanów, VII.1992 in brushwood on both localities.

In Poland, the fungus reported so far only from *Convolvulus arvensis* in the environs of Szczecin (M a d e j, 1974). Known from different species of the genus *Calystegia* and *Convolvulus* L. in many countries of Europe and also recorded from Asia, north Africa and North America.

Stagonospora foliicola (Bres.) Bub., Ann. Mycol. 13: 31. 1915 [= *Stagonospora vexata* Sacc. f. *foliicola* Bres.].

Pycnidia dark-brown, (70-) 100-160 μm in diam., globose, occasionally slightly flattish from the top, usually immersed, quite abundant and arranged linearly between nerves, mostly distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-20 μm in diam. Conidia cylindrical-fusiform, erect or slightly curved, multicellular, mostly 7-9-septate, measuring (24-) 40-80 (-90) \times 4.5-6 μm (Fig. 3, c).

On leaves of *Phalaris arundinacea* L.: Rymanów, VIII.1991 in the bush at the side of a drainage ditch.

The fungus reported in Poland so far from several localities at the Mazury Lake District (D u r s k a, 1974). Also reported from *Festuca pratensis* Hudson in the environs of Olsztyn (M i k o ł a j s k a, 1974), but this information needs confirmation. Found on representatives of the genus *Phalaris* in many countries of Europe and also in North America.

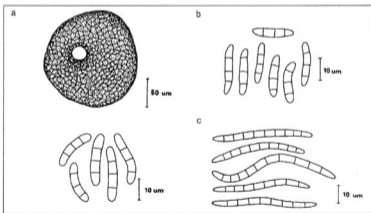


Fig. 3. Pycnidium and conidia of the genus *Stagonospora*

a - *S. calystegiae* on *Calystegia sepium*, b - *S. melloti* on *Trifolium montanum*, c - *S. foliicola* on *Phalaris arundinacea*

Stagonospora melloti (Lasch) Petr., Ann. Mycol. 17: 66. 1919 [= *Stagonospora compta* (Sacc.) Died. - *Gloeosporium trifolii* Peck - *Septoria trifolii* Cavara - *Sphaeronema bustingzae* Unamuno - *Septoria antoniana* Unamuno].

Pycnidia dark-brown or even blackish-brown 100-200 (-250) μm in diam., globose, more seldom slightly flattish from the top, usually immersed, relatively scarce and scattered all over the attacked area, more seldom gathered in small groups, mostly distributed on the upper side of leaves. Ostiole circular, distinctly conspicuous, 15-25 μm in diam. Conidia cylindrical or even cylindrical-fusiform, erect or slightly curved 2-5 septate, mostly 4-cellular, measuring (16-) 18-22 x 3-4.5 μm (Fig. 3, b).

On leaves of *Trifolium montanum* L.: Rymanów, VII.1992, on a sunny grassy slope.

This fungus has not been reported from the host in Poland so far. Known from the scattered localities on other representatives of the genus *Trifolium* and also on the species from the genera *Medicago* and *Melilotus*. Recorded among others, from Estonia (Põldmaa, 1967) on *Trifolium montanum* L. The fungus has spread all over Europe and North America. It is also recorded from west and central Asia.

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