
**Septoria sisymbrii** Niessl, in **Rabenhorst, Botanische Zeitung** 24(52): 411 (1866).

*Depazea erdingeri* Thüm., **Fungi Austriaci exsiccati** Cent. 7, No. 697 (1873).
**Septoria sisymbrii Ellis, American Naturalist** **16**: 811 (1882), nom. illegit., Art. 53.


**Ascochyna sisymbrii** Ellis & Kellerm., *Journal of Mycology* **5**: 142 (1889).

**Septoria sisymbrii** Hoff. & Ranoj., *Annales Mycologici* **8**: 390 (1910), nom. illegit., Art. 53.


*Habit* on living and later drying or dead leaves. *Leaf spots* first appearing on living leaves, small, orbicular, light greenish to pale yellow, up to 2 mm diam., soon changing to dry lesions bearing conidiomata, spots bearing conidiomata orbicular and oblong, scattered or confluent, 3–7 mm diam., whitish-grey to pale brown, with very narrow, distinct, brown, sharply delimited margin, same lesions on leaf lower surface being greenish or yellowish-grey, pale, with dark, narrow margin same colour as on upper surface, sometimes giving rise to irregular dead patches of plant tissue at edges of leaves. *Conidiomata* pycnidal, on upper surface of leaf, separate or aggregated, not confluent, numerous, circular when viewed from above, at first closed and entirely covered by thin layer of leaf epidermal tissue, gradually protruding and breaking leaf surface, later exerted from leaf for *c.* one third of their height, immersed or semi-immersed, pale brown, globose to lens-shaped or wide pyriform, (90–)100–120(–160) µm diam., ostiolate, thin-walled, with wall 6·8–9·0 µm thick, composed of two or three layers of unevenly pigmented pale brown *textura angularis* to *textura globulosa*, fertile part of which has paler cells with thinner walls. *Ostiole* circular, papillate, central, (20–)25–35 µm diam., surrounded by dark brown, small cells. *Conidiogenous cells* colourless, cylindrical to lageniform, 9–11(–15) × 2·5–3·0(–4·0) µm, integrated or discrete, arising from smaller cells of conidiomatal cavity inner lining, holoblastic, with two or three obscure percurrent enteroblastic proliferations (annellations) and often with limited number of sympodial proliferations, with one, two or, occasionally, three conidia simultaneously attached to conidiogenous cell and with unthickened scars where conidia have seceded. *Conidia* colourless, (25–)28–35(–44) × 2·5–3·0(–3·5) µm, fusiform, slightly falcate, or slightly curved, tapered at apex, slightly attenuate and truncate at base, apical cell subulate, widest at middle, with (one or) two or three septa, without constrictions at septa.

**DISEASE**: Leaf spot, leaf spot of watercress (ANON., 1984), drying of the leaves.

**HOSTS**: *Dentaria laciniata*, *Descurainia incisa*, *D. richardsonii* subsp. *incisa*, *Nasturtium microphyllum*, *N. officinale*, *Sisymbrium altissimum*, *S. columnae*, *S. irio*, *S. junceum*, *S. loeselii*, *S. officinale*, *S. orientale*, *S. polymorphum*, *S. septulatum*, *S. sinapistrum*, *S. strictissimum* (Brassicaceae).

**GEOGRAPHICAL DISTRIBUTION**: NORTH AMERICA: USA. CENTRAL AMERICA: Cuba. SOUTH AMERICA: Venezuela. ASIA: Armenia, Georgia [http://www.cybertruffle.org.uk/gruzmaps/index.htm], India, Iran, Kazakhstan, Kirgizstan, Russia (West Siberia, Far East), Tadjikistan, Turkmenistan, Uzbekistan. EUROPE: Austria, Bulgaria, Czech Republic, Estonia, Germany, Great Britain, Latvia, Lithuania, Moldova, Poland, Portugal, Romania, Russia, Serbia, former Yugoslavia.

**PHYSIOLOGICAL SPECIALIZATION**: None reported.

**TRANSMISSION**: Not reported, but almost certainly by airborne or splash-dispersed conidia.

**NOTES**: *Septoria sisymbrii* is a pathogen of wild and cultivated plants with a disjunct world distribution. A wide host range is characteristic for this fungus in temperate and submeridional areas (TETEREVNIKOVA-BABAYAN, 1968; FARR et al., 1989). *Septoria sisymbrii* is also known in the northern subtropics (MUTHUMARY, 1999). Collections from Serbia, Bulgaria and the USA (B, NY; SAMEVA, 1987) show that the disease starts to develop in May and continues through to October (RĂDULESCU et al., 1973). It is abundant in Russia, Moldova and Kazakhstan during high summer (POPUSHOY & MIL’KO, 1956; BREZHNIEV, 1962; BYZOVA et al., 1970). The name *Septoria sisymbrii* has been introduced three times: *S. sisymbrii* Niessl (1866), *S. sisymbrii* Ellis (1882) and *S. sisymbrii* Hoff. & Ranoj. (1910). Several authors studied and discussed these homonyms
around the same time (TETEREVNIKOVA-BABAYAN, 1968; PETRAK, 1969; BYZOVA et al., 1970). PETRAK (1969) concluded that all three names are conspecific and that S. sisymbrii Niessl should be used. The other homonyms have, however, appeared in some modern publications. The senior author has studied isotypes of S. sisymbrii Henn. & Ranj. (B); an isotype and earlier exsiccati of S. sisymbrii Ellis (NY); exsiccati of Depaeza erdingeri (LE) and an original Niessl collection of S. sisymbrii Niessl (B), which quite possibly should be regarded as the type of that name. All the material was considered to belong to a single taxon, thus confirming Petrak’s view.

There are reports that S. sisymbrii may have rather large conidia, up to 45–55(–60) × 3·0–4·5 µm under favourable conditions in nature (BREZHNIEV, 1955; TETEREVNIKOVA-BABAYAN, 1968), but these are not typical for the fungus. A greenish coloration of conidia in mass has been observed with the light microscope (VANEV et al., 1997). A teleomorph, identified as Mycosphaerella cruciferarum (Fr.) Lindau, has been tentatively reported, based on observations in nature (ALFEROVA, 1970).


T.V. Andrianova\(^1\) & D.W. Minter\(^2\)

\(^1\)M.G. Khloodeny Institute of Botany, Kiev, Ukraine
\(^2\)CABI Bioscience, Egham, UK

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