

***Microsphaera russellii* – an interesting species
in the mycoflora of Poland**

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The paper presents the specification of *Microsphaera russellii* Clint. found in Poland.

Key words: *Microsphaera russellii*, Erysiphales.

M. russellii Clint. has so far been found in Poland only in conidial state (*Oidium oxalidis* McAlp.) on *Oxalis corniculata* L. The following description of the species is based on the perfect state that has been recently found. The fungus attacks leaves, covering them on the upper side with white, arachnoid coating composed of conidiophores and conidia.

Conidia (pseudoidium type) form singly or in short chains. They are longitudinally ellipsoidal and they measure 25-37 x 10-15 µm. The coating on leaves disappears with time, so that there are only cleistothecia left on the attacked specimens.

Dark brown cleistothecia, measuring (80)85-100 µm are evenly distributed on both sides of leaves, more rarely collected in small groups. Their appendages grow radially in the equatorial zone of the cleistothecium and may be even 7 times longer than the latter's diameter. They are brownish at the base, and hyaline towards the apex, with transverse septae. At the apex they are 1-5 times dichotomously branched. Asci (4-8) ovoid or widely ellipsoidal, measuring (37)40-55 x 24-35 µm, most often 43-50 x 24-32 µm; containing 3-4 spores (Fig. 1). Ascospores ellipsoidal, measuring (14)16-19 x (7)8-11 µm (Tabl. 1).

Occurrence in Poland: conidial state – on *Oxalis corniculata* L.: Lublin, on specimens growing in glasshouses (S a ł a t a, 1985); on *Oxalis stricta* L.: Kleczanów near Sandomierz, mixed forest, 07.82. (leg. et det. H. Śledzińska); perfect state – on *Oxalis stricta* L.: Rymanów (Doły Jasielsko-Sanockie), waste land, 09.94 (leg. et det. A. Wołczańska); Skierniewice (leg. et det. J. Skrobisz) 09.93, 10.93.

General distribution: on different species of the genus *Oxalis* L. mostly in North America, also in Europe, Asia, Australia, south Africa and New Zealand. Perfect

state known only from North America and Ukraine (Braun, 1984, 1987; Geluta, Marčenko, 1987; Geluta, 1989).

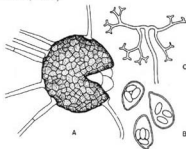


Fig. 1. *Microsphaera russellii* Clint. on *Oxalis stricta* L.
A - cleistothecium, B - asci with ascospores, C - top of a branched appendage

Table 1

A comparison of some more important features of the *Microsphaera russellii* Clint. specimens in North America (Braun, 1987), Ukraine (Geluta, Marčenko, 1987) and Poland

	N. AMERICA	UKRAINE	POLAND
CLEISTOTHECIA	(70-)80-110(-120)	76-103	(80-)85-100
ASCI			
quantity	4-10	5-9	4-8
length	40-55	40-55	(37-)40-55
width	(20-)25-35	23-37	24-35
ASCOSPORES			
quantity	3-5	3-4(-5)	3-4
length	15-22	13-18	(14-)16-19
width	10-14	8-10.5	(7-)8-11
CONIDIA			
length	25-40	27-47	25-37
width	(11-)12.5-16(20)	12-17	10-15

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REFERENCES

- Braun U., 1984. A short survey of the genus *Microsphaera* in North America. *N. Hedw.* 39: 211-234.
 Braun U., 1987. A monograph of the *Erysiphales* (powdery mildews). *Beih. N. Hedw.* 89. Berlin-Stuttgart. pp. 700.
 Geluta W. P., Marčenko P. D., 1987. *Microsphaera russellii* Clint. - novyj vid mučnistorosjanovo griba (*Erysiphaceae*). *Mikol. Fitopatol.* 21(2): 122-124.
 Geluta W. P., 1989. Flora gribov Ukrainy. *Nauk. Dumka* Kijev. pp. 256.
 Sałata B., 1985. Wrokwce (*Ascomycetes*), mączniakowe (*Erysiphales*) [in:] *Flora Polska, Grzyby (Mycota)*. XV. Warszawa-Kraków.