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Micromyces bulbosus sp. nov.

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K a d ł u b o w s k a J. Z.: *Micromyces bulbosus sp. nov.* Acta Mycol. 34 (2): 177–180, 1999.

A new species *Micromyces bulbosus* K a d ł u b o w s k a is described and illustrated from a puddle in the forest reserve Wolbórka (near Łódź). This species differs from the others by the dimensions of the prosorus, sorus and resting spore, as well as shape and length of spines, also reticulate outer surface of prosorus.

Key words: *Micromyces bulbosus*, fungi parasites, aquatic fungi, *Mougeotia*.

During taxonomical elaborating of the family *Zygnemaceae* (K a d ł u b o w s k a 1984) samples were collected in various parts of Poland. In the sample taken in April 1961 from a puddle in the forest reserve Wolbórka (near Łódź) a new species *Micromyces bulbosus* (*Synchytriaceae*) has been described and illustrated by the author.

The genus *Micromyces* was established by D a n g e a r d (1889) for *M. zygogonii* according to S k i r g i e ł ł o (1954). This species was recorded from Poland by C z e c z u g a (1994) and K a d ł u b o w s k a (1998).

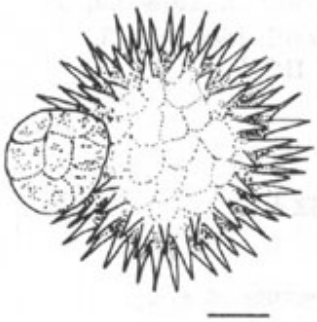
Micromyces bulbosus sp. nov.

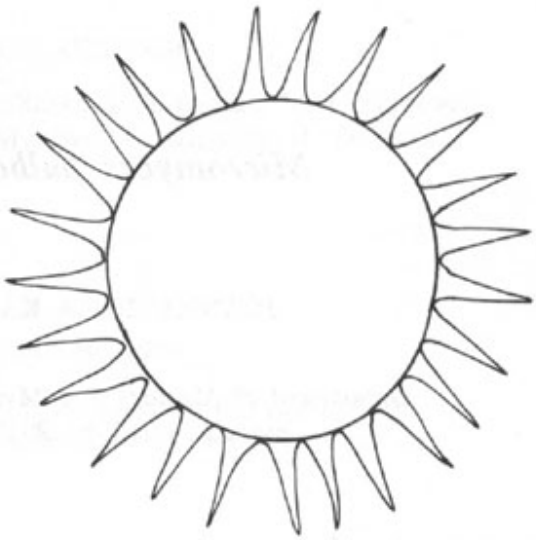
(Etym. Latin: *bulbosus* = *bulbous*)

Prosorus sphaericus 28 μm diametro cum membrana spinulosa, structura reticulosa. Spinae in magno numero angustae, acutae 8 μm longae. Sorus sphaericus 11 μm diametro cum membrana tenui laevi. Sporangia multa. Zoosporae sphaericae 1–2 μm diametro Cysta sphaerica 48 μm diametro. Membrana spinulosa. Spinae conicae, 12–15 μm longae, basi 5 μm latae. Spinae cystae minus multae et differentibus formis quam spinae prosori.

Parasitatur in cellulis vivis *Mougeotia* sp. et efficit tumorem cellularum ca. 2.7–4.

Habitation of *Mougeotia* in stagno in silva Wolbórka (prope Łódź) Polonia, 14 Aprilis 1961.





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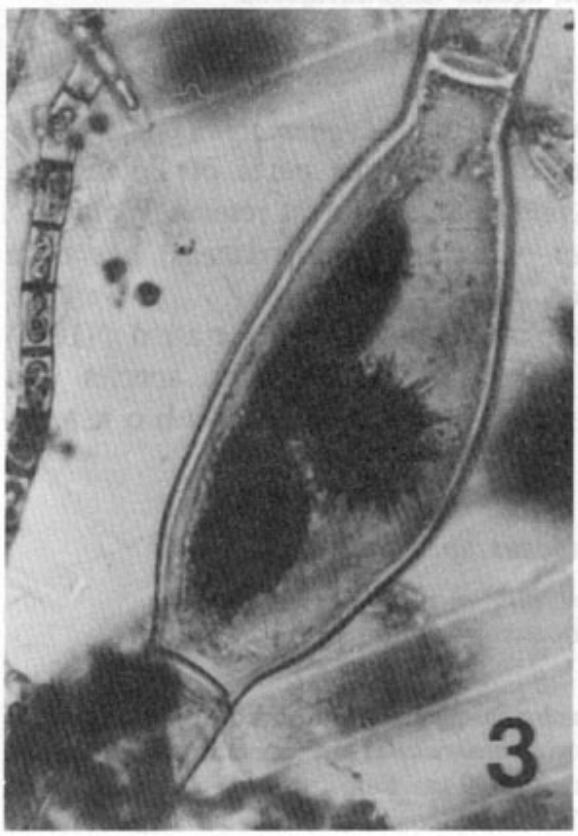
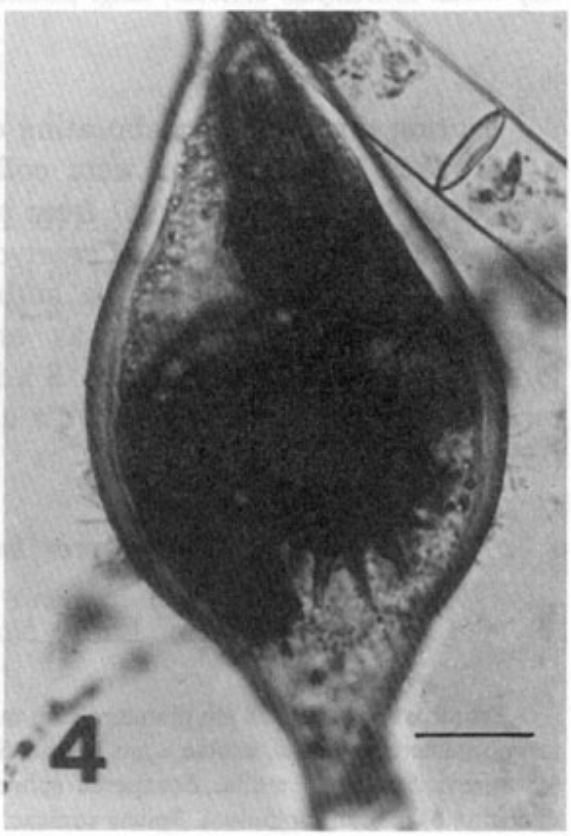
Figs 1, 2. *Micromyces bulbosus*: Fig. 1. Prosorus with sharp and tapering spines and sorus (bar — 10 μm). Fig. 2. Resting spore with conical spines





Figs 3, 4. *Micromyces bulbosus*: Fig. 3. Prosorus and sorus in an inflated cell of *Mougeotia* sp. Fig. 4. Two resting spores in a pronouncedly inflated cell of *Mougeotia* sp. (bar — 20 μm)

Prosorus spherical 28 μm in diameter, spiny-walled. The outer surface of prosorus reticulate and covered with numerous sharp tapering spines to 8 μm long (Figs 1 and 3).

Sorus spherical 11 μm (Fig. 1) in diameter, with a thin smooth wall. Sporangia numerous. Zoospores spherical, 1–2 μm in diameter.

Resting spore spherical 48 μm in diameter, covered with conical spines, 12–15 μm long and 5 μm thick at the basis (Figs 2 and 4).

Spines of resting spore less numerous and of different shape then those of the prosorus. Parasitic on the cells of *Mougeotia* sp. and causing extraordinary great swelling of the host cells, from 2.7–4 times. Habitat of *Mougeotia* sp.: a puddle in the forest reserve Wolbórka (near Łódź), 14.04.1961.

Holotype: microphotographs, deposited in the Department of Algology and Mycology, University of Łódź, Poland.

REMARKS

The following features are first of all essential for identification of species of the genus *Micromyces*:

– cell wall of the prosorus, sorus and resting spore, which may be smooth, reticulate, and spines;

Table 1

Comparison of characteristics of *Micromyces bulbosus* and some other species of the genus

Characteristic	*M. bulbosus* sp. nov.	*M. zygogonii* Dangeard*	*M. longispinus* Couch*	*M. grandis* Miller*
Prosorus shape and dimensions	spherical 28 μm in diameter	spherical 11–18 μm in diameter	spherical 10–33.6 μm in diameter	spherical 30.4–51.2 μm in diameter
outer surface	reticulate	smooth	reticulate	smooth
shape and length of spines	sharp and tapering up to 8 μm long	sharp and tapering 407.5 μm long	tapering up to 22 μm long	sharp 38.4–67.2 μm long
Sorus shape and dimensions	spherical 11 μm in diameter	spherical 13–25 μm in diameter	spherical or ovoid	no data
Resting spore shape and dimensions	spherical 48 μm in diameter	spherical 12,5 μm in diameter	subspherical 16–21 μm in diameter	spherical 16–32 μm in diameter
shape and length of spines	conical 12–15 μm long	short	long tapering	short
Host cell	swelling ca. 270–400%	swelling 100%	no swelling	no swelling

*acc. to Sparrow (1960) and Batko (1975)

– arrangement of spines of the cell wall scattered, seriate or helically seriate, and their shape and length;
– dimensions and shape of prosorus, sorus and resting spore;
– changes of host cell caused by the parasite.

From a comparison of morphological characters of the *Micromyces* species with the spiny-walled prosorus and resting spores with those of *Micromyces bulbosus* it follows that it differs by the structure of the outer surface of the prosorus and by the dimensions of the prosorus, resting spore and length of the spines (Table 1).

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Streszczenie

Opisano i zilustrowano nowy gatunek *Micromyces bulbosus* Kadł. Zidentyfikowano go w próbie pobranej z kałuży w rezerwacie leśnym Wolbórka koło Łodzi oraz porównano cechy morfologiczne *M. bulbosus* z innymi dotychczas opisanymi gatunkami rodzaju *Micromyces* Dangeard o kolczastych prosorusach i zarodnikach przetrwalnikowych.