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Podochytrium clavatum Pfitzer and *Aphanomycopsis bacillariacearum* Scherffel new species in the Polish flora

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For investigations of algae carried out in 1963—67 a number of water and slime samples were necessary. They were taken from pits in the peat-bog Bagno Przerębiec lying in the ice-marginal streamway of the Widawka river in the western part of the Łódź region, between Szczerców and Lubiec. The samples were preserved in formalin.

In the sample of 16-th October 1963 *Podochytrium clavatum* was recorded parasitizing on numerous members of *Pinnularia viridis* (Nitsch.) Ehr. and in the sample of 20-th May 1967 it was also found on several members *P. nobilis* Ehr. This fungus developed from several to several tens of spores on the diatom theca (Fig. 1 *a*). Sporangia clavate or obpyriform were placed on the sterile basal cell. On numerous members of *P. viridis* there were empty split sporangia from which spores had escaped; the tips of split sporangia were distinctly dilated (Fig. 1 *b*). Sporangia 12—15 μ (mean size 13 μ, confidence interval 11—15 μ) × 5—8 μ (mean size 7 μ, confidence interval 6,4—7,6 μ). Spores 1—2 μ in diameter, sterile basal cell 11—12 × 2—3 μ.

Aphanomycopsis bacillariacearum (Fig. 1 *c*) parasitized on numerous members of *Pinnularia viridis* in the sample of 13-th May 1966. Branched thallus occupied almost the entire host cell. On the outer part of the diatom theca there were one of two sporangia. Sporangium mean diameter 17 μ, confidence interval 15—19 μ. One or two discharge tubes developed on the sporangium. Only one cyst of the primary zoospores consisting of 7 spores was noticed (Fig. 1 *d*). Spore diameter 8 μ.

Podochytrium clavatum and *Aphanomycopsis bacillariacearum* were found for the first time in Poland.

Podochytrium clavatum was reported from Germany, Belgium, France, Hungary, Great Britain and Japan. *Aphanomycopsis bacillariacearum* was reported from Czechoslovakia (C e j p 1959), Hungary, Great Britain, Austria and from the United States (S p a r r o w 1960).

Both *Podochytrium clavatum* and *Aphanomycopsis bacillariacearum* are endobiotic parasites but they develop sporangia outside of the host.

It seems that in such a case not only the host is important but also the water habitat. The morphology of Bagno Przerębiec has been described by Gawlik (1964), and the floristic complexes — by Krzywań-

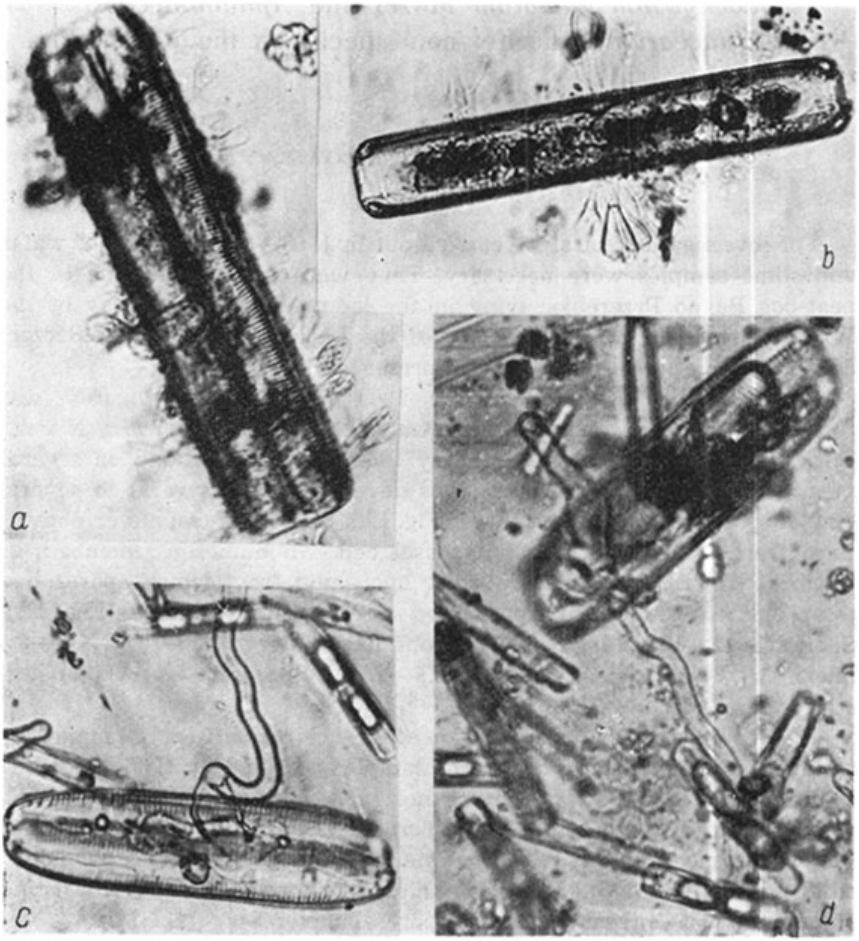

Fig. 1. *Podochytrium clavatum* (*a*, *b*) and *Aphanomycopsis bacillariacearum* (*c*, *d*) on *Pinnularia viridis*

a — sporangia with zoospores; *b* — split sporangia; *c* — endobiotic thallus, sporangium with discharge tube; *d* — discharge tube and cyst with primary zoospores

ski (1967). The diatoms *Pinnularia viridis* and *P. nobilis* are widely spread all over Poland and also occur in the water basins investigated in the Łódź region (Kadłubowska 1961). It should by emphasized

that the fungi described above were found solely in the samples taken from the peat-bog Bagno Przerębiec with water pH 5. In all probability the acid water is favourable to the development of these fungo on diatoms.

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Podochytrium clavatum Pfitzer i *Aphanomycopsis bacillariacearum* Scherffel nowe gatunki dla flory Polski

STRESZCZENIE

W próbkach wody (o pH 5) z glonami pobranymi z torfowiska w okolicy Łodzi znaleziono liczne osobniki *Podochytrium clavatum* Pfitzer i *Aphanomycopsis bacillariacearum* Scherffel na okrzemce *Pinnularia viridis* (Nitsch.) Ehr. i *P. nobilis* Ehr. Są to grzyby notowane na północnej półkuli na różnych gatunkach okrzemek; w Polsce znalezione po raz pierwszy. Wobec powszechnego występowania rodzaju *Pinnularia* oraz faktu stwierdzenia pasożytów tylko na jednym stanowisku można przypuszczać, że ich rozwojowi sprzyja wysoki stopień zakwaszenia wody.

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