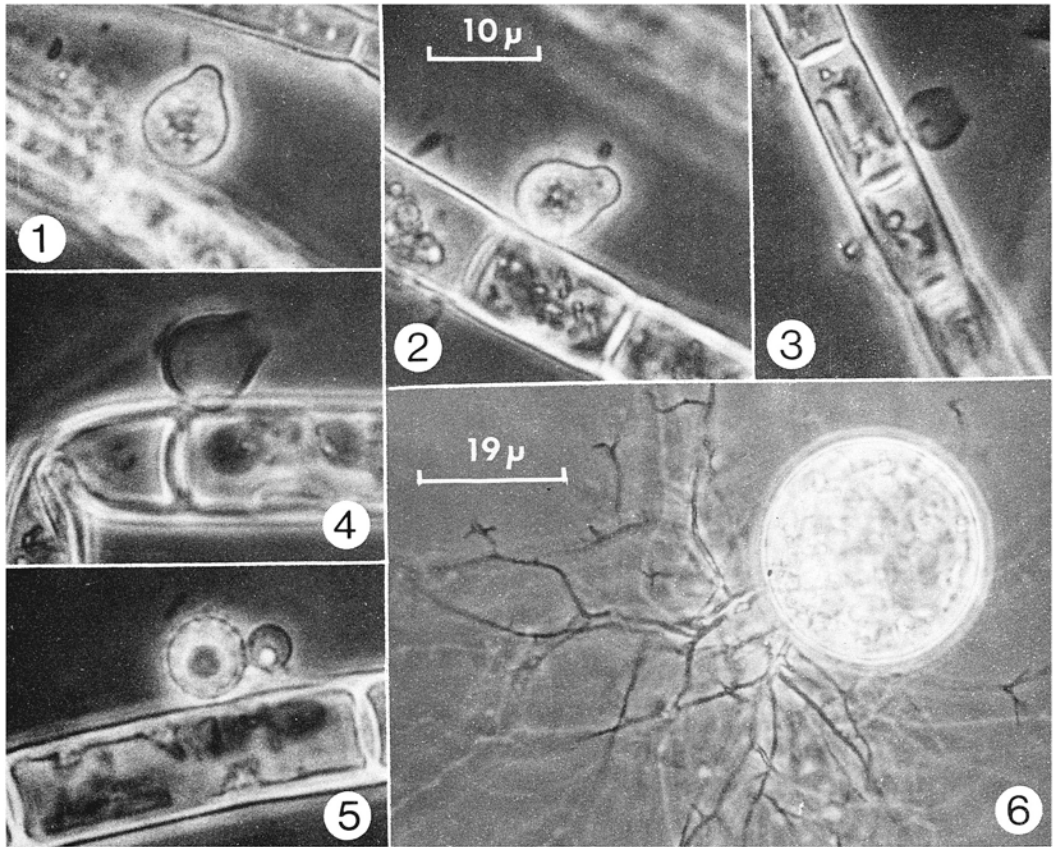


RHIZOPHYDIUM GRANULOSPORUM



1-5, on *Tribonema bombycinum* in freshly collected material, magnification as shown by scale on fig. 2; 1-2, mature sporangia; 3-4, empty sporangia; 5, resting spore and male companion cell; 6, mature sporangium and rhizoids in broth culture. All from DAOM 145536.

Rhizophydium granulosporum Scherffel, Arch. Protistenk. 53: 44, figs. 81-86. 1925.

SPORANGIA elliptical, ovate, smallest $3.5 \times 5 \mu$ diam., to subspherical, largest 12μ diam.; papillae 1-2(-3). **RHIZOID** a globular swelling $1-2.5 \mu$ diam., sparingly branched and tapering to fine threads. **ZOOSPORES** $2.5-3.0 \mu$ diam.; flagellum 20μ long including 5μ whiplash end. Zoospores discharge individually over 5-10 min. period, each becoming motile approx. 5-60 sec. after discharge. **RESTING SPORES** spherical, $6-7 \mu$ diam., covered in minute spines approx. 0.5μ long. Attached to resting spore a small male companion cell. Germination of resting spore not seen.

CULTURE CHARACTERISTICS (in broth - 0.1% yeast extract, 0.1% bacto peptone, 0.5% dextrose): **SPORANGIA** spherical, $25-53 \mu$ diam.; papillae numerous, flat or slightly raised. **RHIZOIDS** arising from 1-5(-8) axes on sporangium base, $0.5-1.0(-1.5) \mu$ diam., extensively branched and gradually tapering to 0.3μ near ends. Sexual state and resting spores not seen. **TEMPERATURE RESPONSES**: $10-25^{\circ}\text{C}$, optimum $20-25^{\circ}\text{C}$. **COLOUR** buff to off-white.

SUBSTRATE: Saprophytic on *Tribonema bombycinum*.

DISTRIBUTION: Quebec, Ontario.

ISOLATIONS: Que., Gatineau Park, near Hull, on *T. bombycinum*, 12.V.1971, DAOM 145536 consisting of photographs and culture (Barr). Also seen and isolated (Foy and Barr) from Ont., Ramseyville Marsh, near Ottawa, 1.VI.1971, on *T. bombycinum*, but culture not kept.

NOTES: In culture, isolates grew saprophytically on numerous algae and pine pollen, and showed very extensive morphological variation (Barr, Can. J. Bot. 51: 967. 1971). This species is characterized by the sexual state found in nature and the way it grows in broth culture. The asexual characteristics on *Tribonema* in nature, and on other algae in the laboratory, are similar to numerous other chytrids. It is not known if this fungus grows on substrata other than *Tribonema* spp. in nature. *R. granulosporum* was originally found in Hungary and has since been reported from Michigan, U.S.A. (Sparrow, Papers Mich. Acad. Sci., Arts. Letters, 24(pt.1): 121. 1939).

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