

Fungi of Delhi. XXXII. A Homothallic Strain of *Syncephalastrum racemosum* Cohn ex Schroeter

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Syncephalastrum racemosum is reported here to be homothallic and cellulolytic (growing on paper).

Key Words: Fungal Taxonomy, *Syncephalastrum*

Introduction

During our ecological and taxonomic studies of fungi several forms have been isolated from various living and non-living substrates. These include many species of Mucorales. The present note reports an unusual homothallic strain of *Syncephalastrum racemosum*.

Materials and Methods

The above strain was isolated from decaying paper incubated on Potato Dextrose Agar (PDA) at $27 \pm 1^\circ\text{C}$ in the month of October, 1978. Pure cultures of this strain were maintained on Czapek's-Dox Agar. The strain produced zygospores abundantly on PDA in isolation plates. However, in subcultures, the number of zygospores formed was low. The sporangia were taken as the inoculum for subculturing and each inoculum produced zygospores.

The strain was of special interest since it grew on decaying paper. Earlier *S. racemosum* has been reported from India from the rhizosphere of various plants, soil, on living and decaying fruits, and other parts of plants, including seeds, various types of dung and air (Sarbhoy 1967, Mukerji & Juneja 1975).

Results and Discussion

One of us (KGM) has observed more than 50 isolates of *S. racemosum* from time to time from different substrates. A study of these has revealed that *S. racemosum* is heterothallic as it never exhibits formation of zygospores. In his monograph on merosporangiferous Mucorales Benjamin (1959) has described this species as heterothallic. The present strain is interesting as it is homothallic and produces abundant

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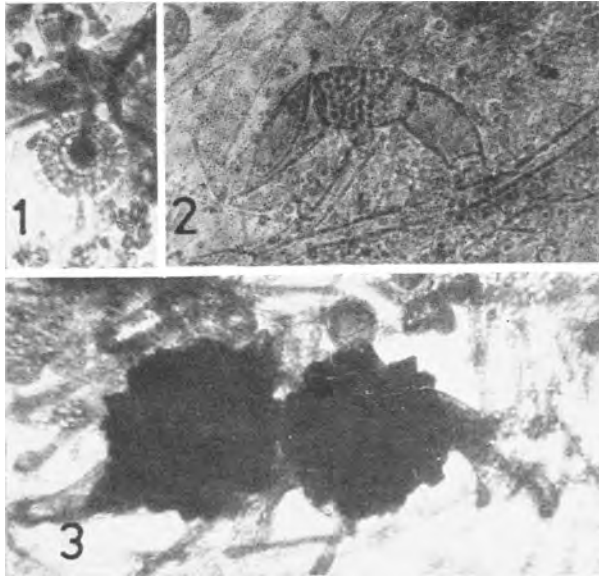


Figure 1 Sporangium with sporangium ($\times 200$)
Figure 2 Fusing gametangia with suspensors ($\times 230$)
Figure 3 Mature zygospores ($\times 230$)

zygospores in isolation plates, which on further subculturing maintained its unusual character of forming zygospores.

The other characters of this strain fit the type description (Benjamin 1959). It develops abundant zygospores above the substratum on hyaline aerial hyphae. The

gametangia are of equal size (figure 2). Mature zygospores (figure 3) are round, 60–115 μm , in diameter (average 70 μm), with a rough black wall, with shallow, conical, tooth-like projections; suspensors opposed, hyaline, smooth-walled and nearly equal.

References

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