

A new Species of *Mucor* from India

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With 2 fig. in the text.

During the Winter of 1962, soil from different places in Suhagi (M. P.) was collected. Later on, the different soil samples were examined for new forms belonging to the order *Mucorales*. A number of fungi were isolated and out of them, one appeared to be interesting. Single spore cultures of the fungus were made, and on examination, it was found to belong to the genus *Mucor*, but differed from

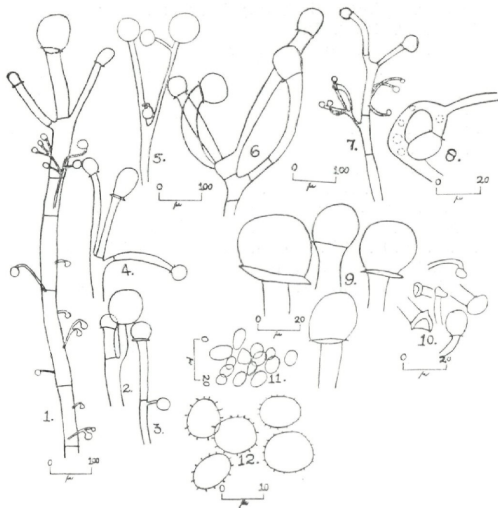


Fig. I. — 1—12. *Mucor suhagiensis*. 1. A sporangiophore. Note the presence of septation and circinate borne lateral sporangia. 2—4. Sporangiophores showing terminal columellae. 5—7. Branching of the lateral sporangiophores. 8. Note the circinate tip of the lateral branch of the sporangiophore. 9. Columellae of terminal sporangia. 10. Columellae of lateral sporangia. 11. Sporangiospores. Note the range in size and shape. 12. Some enlarged sporangiospores showing echinulations.

all the described species of the section *Sphaerosporus* in certain features. The fungus was also sent to Dr. C. W. Hesselstine by Dr. B. S. Mehrotra who identified it as a strain of *Mucor brunneus*. It was, therefore, thought desirable to compare the present isolate with *Mucor brunneus*. A culture of *M. brunneus* was obtained through the courtesy of the Director, Central Bureau Voor Schimmel Cultures, Baarn, Holland. A detailed comparative study was made on various solid media. The author noticed several distinguishing characters between the two, and the differences are enumerated below.

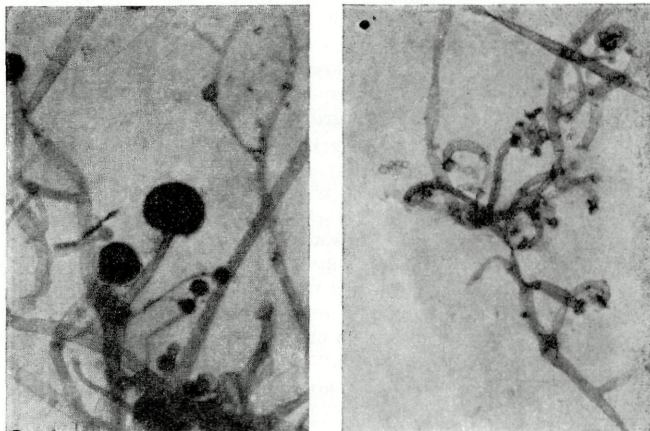


Fig. 11. — 1—2. *Mucor suhagiensis*. 1. Photomicrograph showing terminal sporangia, $\times 150$. 2. Photomicrograph showing columellae. Note the presence of circinate lateral sporangiophores, $\times 130$.

The present isolate comes in the section *Sphaerosporus* of the key to the genus *Mucor*, because majority of the spores are spherical. In this section it comes in the group with species growing at room temperature and with sporangiospores larger than 4.0μ . Out of the species included in this group, the present isolate comes close to *Mucor brunneus* Naumov, mainly because of the presence of echinulate sporangiospores, but differs from it in the absence of cylindrical columella with a spine at its tip; the presence of markedly septate sporangiophores; the presence of sporangia of two size ranges — the terminal sporangia markedly larger than the lateral ones; the lateral sporangia usually circinate borne; mostly spherical sporangiospores instead of spherical to irregular; and the absence of chlamydospores.

Taking all the above facts into consideration, it appears that this isolate is one hitherto unknown. It is described as a new species and named after the place of origin.

***Mucor suhagiensis* Mehrotra, sp. nov.**

Caespituli in PDA¹ et SMA² celeriter crescentes, primum caerulescentes postea brunnei; sporangiophora „Petri“ paterae tectum attingentia, sporangio terminata, septata, 14.0—30 μ diam., irregulariter ramulosa; ramuli laterales iterum ramulosi, sporangiis globulosis terminati; sporangia biformia: terminalia majora, globulosa, asperula, fragilia, 56.5—96.0 μ ; sporangia lateralia minora, sed terminalibus similia, 16.5—47.5 μ ; columella sporangiorum terminalium globosa vel hemisphaerica, 40.0—67.8, sed sporangia lateralia 6.0—40 μ ; sporangiosporae globulosae, ovoideae vel oblongae, echinulatae, 4.5—15.5 $\times$ 4.5—9.9 μ ; zygosporae non visae.

Colonies on PDA¹ and SMA² growing rapidly, at first bluish later becoming brown; sporangiophores touching the lid of the Petri dish, terminating into a sporangium, septate, 14.0 — 30 μ in diam branching profusely; side branches also branching, bearing circinate sporangia at their tip, 40. — 10.0 μ ; sporangia of two types, the terminal sporangia larger, globular, rough-walled, fragile, 56.5—96.0 μ ; the lateral sporangia smaller but like the terminal ones, 16.5 — 47.5 μ ; columellae of the terminal sporangia globular to hemispherical, 40.0 — 67.8 μ in diam, while of the lateral sporangia 6.0 — 40 μ ; sporangiospores globular, oval to oblong, echinulate, 4.5 — 15.5 $\times$ 4.5 — 9.9 μ ; zygosporae not seen.

PDA¹: Peeled potatoes, 200gm; glucose, 20gm; agar agar, 20gm; dist. water, 1000ml.

SMA²: Dextrose, 40gm; asparagine, 2gm; KH₂PO₄, 0.5gm; MgSO₄ · 7H₂O, 0.25gm; thiamine chloride, 0.5mg; agar agar, 20gm; dist. water, 1000ml.

Isolated from soil collected from Suhagi, pH 6.4. Type: Culture deposited at NURD, Peoria, Illinois, U.S.A. Also, a culture deposited in the culture collection of the Botany Department (PCCC) as No. MD 10.

A c k n o w l e d g e m e n t s

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