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A new species of Beniowskia from India.

By Madhava Das Mehrotra.*)

With plates XIII—XV.

Recently an interesting species of *Beniowskia* was isolated from leaf pieces of an unidentified grass collected from a field near Allahabad. When the leaf bits were incubated in moist chambers at 25°C ± 1, in about four days time sporodochia were found to develop in great profusion.

The genus *Beniowskia* Raciborski of the order *Moniliales,* is characterized by the presence of globular and sessile sporodochia. Conidia are globular, hyaline, sessile and laterally borne. Uptil now only three species of *Beniowskia,* viz., *B. graminis* Rac. (Saccardo, 1902), *B. sphaeroidea* and *B. penniseti* wakefield (Saccardo, 1931) are known. The above species have been described to develop conidia which are not more than 12 μ in diameter. In a letter to the author Dr. Hopkins commented that „No culture of this fungus has previously been received in our herbarium and it is not known to me or to any of my colleagues. We do not know any genus other than *Beniowskia* with which your fungus has any affinity. Apart from the size of the spores it resembles morphologically *Beniowskia sphaeroidea,* a species which is common on grasses such as *Pennisetum* in the tropics." The author had opportunity to study *B. sphaeroidea* whose herbarium specimen (IMI 94056) was obtained through the courtesy of Dr. Hopkins. From the comparative study it is clear that the present isolate shows resemblance with *B. sphaeroidea* but differs from it in the following characters.

1. Colour of the sporodochia
2. Size of the conidia
3. Absence of minute roughening in the conidia (oftenly seen in *B. sphaeroidea* as observed by Dr. Hopkins).

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

The following culture media were tried for the isolation and identification of the present organism.

Potato Dextrose Agar Medium: Potato, 200 gm; dextrose, 20 m; dist. water, 1000 ml; agar agar, 20 gm.

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Blakeslee's Agar Medium: Dry malt extract, 20 gm; dextrose, 20 gm; peptone, 1 gm; dist. water, 1000 ml; agar agar, 20 gm.

Asthana and Hawker's Agar Medium A: Dextrose, 5 gm; pottassium nitrate, 3.5 gm; KH_2PO_4, 1.75 gm; $MgSO_4$ $7H_2O$, 0.75 gm; dist. water, 1000 ml; agar agar, 20 gm.

Beniowskia macrospora Mehrotra, spec. nov.

Caespites in PDA et in SMA tarde crescentes, in juventute albidi, postea flavidi, conspectu funiculari et sectili, subtus rufescentes; hyphae septatae, irregulariter ramosae, ca 10 μ latae; sporodochia sessilia, post dies 4—5 distincte conspicua, primum albida, postea flavescentia, quasi stroma basale imitantia; conidiophora longa, septata, ramosa, dense fasciculata, hyphis numerosis accumulatis insidentia; conidia exogena et pleurogena, hyalina, globosa vel subglobosa, tenuiter tunicata, 7,5—30 μ plerumque 12,5—20 μ diam. metientia, catenulata, in maturitate singulariter vel catenulatim secedentia.

Colonies on PDA and SMA growing slowly, white when young, becoming light yellow on aging, with funniculose and sectorial appearance: reverse reddish brown; hyphae hyaline, septate, branching irregularly, 10 μ thick; sporodochia sessile, discernible after 4—5 days, at first white turning light yellow with the age, lacking a basal stroma: coinidiophores long, septate, branched, tightly placed together upon a mass of hyphae; conidia exogenous, hyaline, globose to subglobose, pleurogenous, smooth-walled, 7.5—30 μ in diam., mostly 12.5—20 μ, produced in chains, breaking into single or short chains of conidia.

Isolated from dried leaves of an unidentified grass, January 1963, Allahabad, U. P., coll. M. Das, Herb. M. H. C. No. 501. Type: Represented by a single isolate deposited at Commonwealth Mycological Institute, Ferry Lane, Kew, Surrey. The culture has been given their herbarium accession number IMI 99625.

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1. Saccardo, P. A. 1902. Sylloge Fungorum. **16**: 1091.
2. Saccardo, P. A. 1931. Sylloge Fungorum. **25**: 945—946.

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Explanation of plates XIII—XV.

Plate XIII., Figs 1—17. *Beniowskia macrospora.* 1 & 2. Young stages of the development of conidia. 3. Three conidia borne on a conidiophore. 4. A chain of conidia borne at the swollen apex of the sporogenous cell. 5. Chains of conidia borne on the sporogenous cell. 6. A conidiophore with sporogenous cells bearing conidia. 7.—12. Conidiophores bearing conidia. 13. A conidiophore with an enlarged apex bearing conidia. 14—15. Conidia showing the range in size and shape. 16—17. Branched conidiophores.

Plate XIV., Figs. 1—5. *Beniowskia macrospora.* 1. Photograph showing growth on PDA. 2. Photomicrograph showing a conidiophore with a terminally borne conidium, × 250. 3. Photomicrograph showing a branched conidiophore, × 250. 4. Photomicrograph showing laterally borne conidia, × 250. 5. Photomicrograph with conidiophores bearing conidia in chains, × 250.

Plate XV., Figs. 1—2. *Beniowskia macrospora.* 1. Photomicrograph showing a number of conidia. Note the range in size and shape, × 250. 2. An enlarged portion of the same showing a branched conidiophore bearing conidia in chains, × 500.

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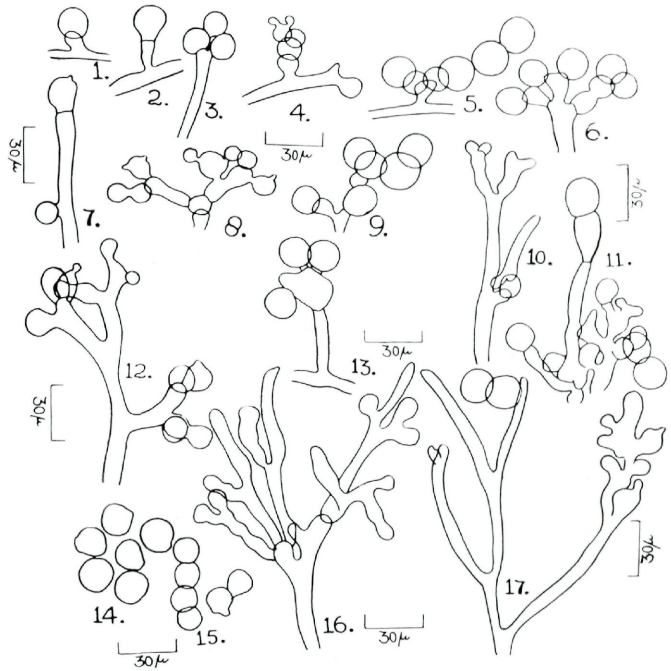

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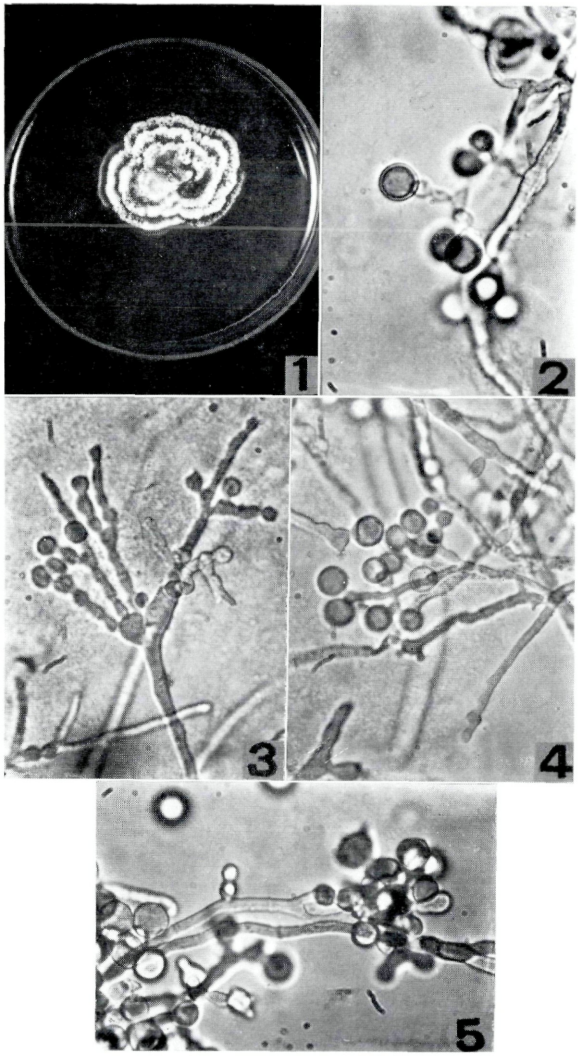

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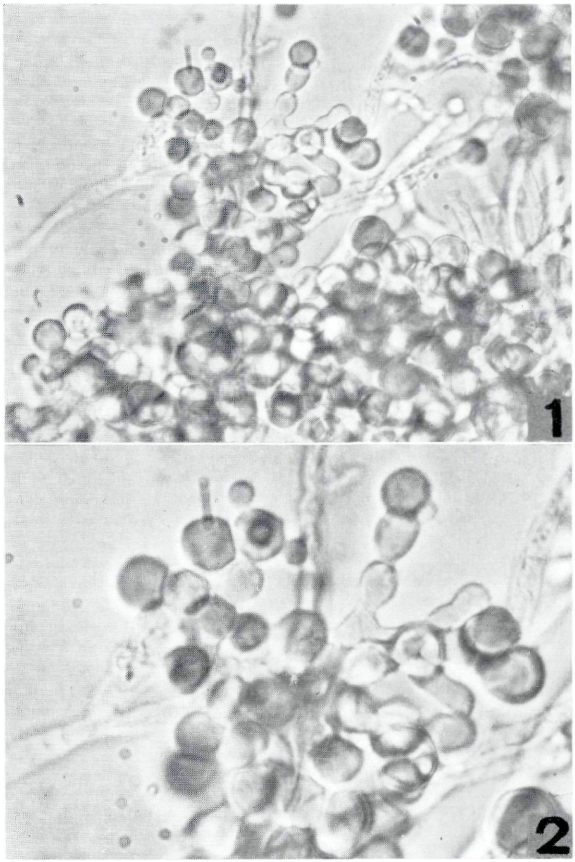

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