

2.8-7.0 μ \times 1.4-2.8 μ in a globose gelatinous conidial heads, 8.4-22.0 μ in diameter.

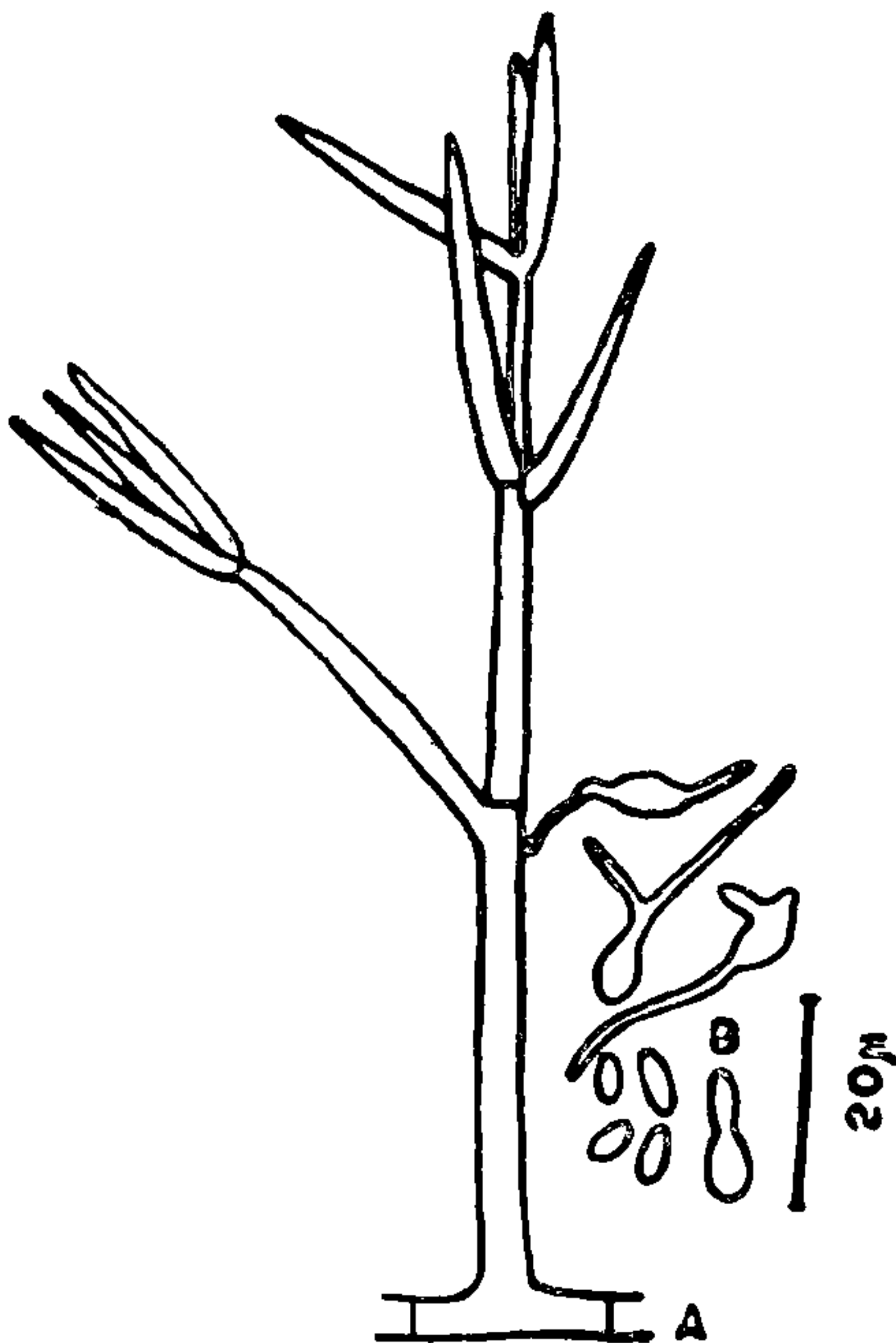


FIG. 1

This fungus does not resemble with any of the known species^{3,4}. The colony colour of this isolate resembles with *G. roseum* only in its initial stage. The typical flask shaped phialides and chain of conidia of *G. roseum* are not found in the present isolate. White colored colonies also resemble with *G. penicilloides* but the present isolate differs in shape of phialides and size of conidia.

As these features do not fit into any of the described species, it is described here as a new species and named in the honour of Dr. S. C. Agarwal. The living cultures are deposited at CMI, Kew (IMI 179846) and at Mycological Collection of Botany Department of University of Saugar (SU/KU 128).

The fungus grows well on Sabouraud's dextrose agar at 28°C. This fungus showed 25.7% weight loss of peacock feathers, 190 μ g/ml protein release from feather and 78 KU/ml keratinolytic activity on feather. This strain also colonizes human hair exhibiting 16.1% weight loss and 118.9 KU/ml keratinolytic activity.

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1. Kushwaha, R. K. S. and Agrawal, S. C., *Proc. Ind. Natl. Sci. Acad.*, 1976, 42, 102.
2. Agrawal, S. C. and Kushwaha, R. K. S., *Curr. Sci.*, 1974, 43, 791.
3. Gillman, J. C., *A Manual of Soil Fungi*, Iowa State University Press, 1959.
4. Subramanian, C. V., *Hyphomycetes*, I.C.A.R. Publ., 1971.

DRECHSLERA COLOCASEAE—A NEW SPECIES

DURING August to October, at Allahabad (India), *Colocasia esculenta* was found to suffer from a leaf spot disease. The disease manifested itself as circular spots 0.5 cm-1.5 cm in diam., dirty yellow in colour and sometimes coalescing to form larger patches. As the lesion aged, it dried up, became brittle and ultimately the dead portion of the spot fell from the leaf. About 8-10% of the crop was estimated to be affected by the disease. Repeated isolations from the diseased areas always yielded a species of *Drechslera*. Its pathogenicity was established as Koch's postulates were fully satisfied.

The cultural characteristics of the isolate resembled to some extent that of *D. hawaiiensis*. It differed from the other known species of *Drechslera* (Ellis), therefore, it is being reported as a new species. Its latin diagnosis is given below :

Drechslera colocaseae sp. nov. Tandon et Bhargava

Coloniae in medio Asthana and Hawker's "A" dicto cultae, effusae, primum albae, postea intense olivaceo-griseae factae, stromata nulla. Hyphae olivaceo-griseae, leves, septatae, 1-4.4 μ m crass, septis distantibus inter se 13.2-19.8-22.0 μ m. Conidiphora solitaria, geniculata, septata, olivaceo-grisea ad intense olivaceo-grisea, 17.6 μ m-132.0 μ m long., et 4.4 μ m crass., 2-4 conidia ferentia. Conidia recta, oblonga, ad extrema rotundata, hyalina dum iuvena, virida "vetiver" dum matura, 3-7 (plerumque 5-) pseudoseptata, 19.8 μ m-26.4 μ m-30.8 μ m-36.0 μ m-39.6 μ m (36.0 μ m) \times 4.4 μ m-8.8 μ m (6.6 μ m).

Specimen e Praedio Experimentali Departmenti Botanici Universitatis Allahabad, Allahabad (India) collectum.

Drechslera colocaseae sp. nov. Tandon and Bhargava

Colonies on Asthana and Hawker's medium "A" effuse, first white and later turn to deep olive grey, stromata absent. Hyphae olive grey in colour, smooth, septate, 1-4.4 μm thick, septa 13.2 μm -19.8 μm 22.0 μm apart. Conidiophores solitary, geniculate, septate, olive grey to deep olive grey 17.6 μm -132.0 μm long and 4.4 μm thick, bearing 2-4 conidia. Conidia straight, oblong, rounded at the ends, hyaline when young, vetiver green when mature, 3-7 (usually 5-) pseudoseptate, 19.8 μm -26.4 μm -30.8 μm -36.0 μm -39.6 μm (36.0 μm \times 4.4 μm -8.8 μm (6.6 μm).



FIG. 1. Showing conidiophores and conidia of *Drechslera colocaseae* sp. nov. of Tandon and Bhargava.

Specimen collected from the Experimental Farm, Department of Botany, University of Allahabad, Allahabad (India).

From the above description it is noticed that the fungus differs from *Drechslera hawaiiensis* (Bugnicourt) Subram. & Jain ex M. B. Ellis, in the following: (i) Absence of stromata formation in culture, (ii) Hyphae are thicker, (iii) Conidiophores are longer, (iv) Conidia are larger and narrower. Obviously it is a new species and the same has been confirmed by C.M.I. (Kew), England, where its culture is deposited as IMI 172992.

The authors are thankful to the Head of the Botany Department, Allahabad University, for providing laboratory facilities, to Dr. H. Croasdale for Latin

rendering and to Director, C.M.I., Kew, England, for confirming the identity of the organism.

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1. Ellis, M. B., *Dematiaceous Hyphomycetes*, Commonwealth Agricultural Bureaux, 1971.

B-CHROMOSOMES IN TETRAPLOID *MATRICARIA INODORA* L.

ACCESSORY, or B, chromosomes are not genetically inert, although the adaptive and functional significance of many of them is only rarely understood and their precise role in many plant populations is yet to be elucidated. These are conspicuously absent in the inbreeders, and compared to diploids are generally less frequent in polyploids¹.

In one plant of a tetraploid race of *Matricaria inodora* L. introduced from France, an accessory chromosome is consistently present in the root meristem as well as in the pollen mother cells analysed. The individual plant possessing them exhibits no phenotypic effect. The supernumerary chromosome is euchromatic, approximately 3.8 μ in length, which is 71.43% of the smallest chromosome of the A set (Fig. 1). Similar to the normal diploid (Fig. 2), at diakinesis, this plant usually contains two nucleoli in a cell, one of which is markedly smaller than the other with chromosomes attached to both. The B-chromosome is nucleolar (Fig 3) and appears to share little or no synaptic homology with the members of the normal complement. The plants devoid of B chromosome have 36 A-chromosomes which in 95% of the cells form 1 to 4 quadrivalents. But, the plant with B-chromosome has mostly bivalents in its cells. However, its chiasma frequency is not affected, or is even favoured by the presence of such a chromosome. At metaphase I, the normal chromosomes exhibit a considerable amount of stickiness. Eventhough the B may not join the sticky A-chromosomes, it generally occupies the equatorial plate (Fig 4) that helps in its regular disjunction at Anaphase I. The pollen size and fertility remained unaltered from that of the normal plant.

Mulligan² observed an accessory chromosome (rarely two) in diploid *Matricaria maritima* var. *agrestis* found as a weed in Canada. None of the tetraploid plants cytologically screened by him had any accessory chromosomes. The *Matricaria* B-chromosome is conspicuous in being nucleolar. In fact, the absence of nucleolar organizer region in B chromosomes has been emphasized in the literature³. While comparing the meiotic behaviour of the normal plant with that of its sister