A NEW *HANSFORDIA* HUGHES FROM INDIA

HUGHES[4] described *Hansfordia* growing on dead leaves of *Saccharum officinarum* L. with *H. ovalisopora* as the type, which is characterized by simple or branched conidiophores with terminal, integrated or discrete, sympodial, geniculate conidiogenous cells cutting off light to deep brown, subhyaline, continuous, globular to oval blastoconidia borne on minute, short cylindric separating cells. During the study of micro fungi of Andhra Pradesh, a species of *Hansfordia* Hughes was collected growing on dead rachis of *Caryota urens*. On comparison, it was found to be differing from all the earlier described species[1–4] and hence is being reported here as a new taxon, *H. indica*. The present record is a maiden report of this fungus genus to India.

Hansfordia indica Raghuveer sp. nov.

Colonies minute, black to blackish brown, discrete, gregarious, round to oval, 92–168 μ in diameter; creeping mycelium meagre; conidiophores grouped, simple or branched, 30–95 μ long, 1–5 septate, 3–5 μ broad producing branches or conidiogenous cells terminally and laterally; branches 0–2 septate, 5–25 μ long, 3–5 μ broad bearing conidiogenous cells; conidiogenous cells terminal, integrated or discrete, light brown to subhyaline, sympodial, geniculate, 9–22 (–42) μ long, 3–4·5 μ broad, producing conidia singly from blackish brown, short cylindric 0·5–1 μ long, 1–1·5 μ broad separating cells; conidia light to deep brown, smooth walled, continuous, blastosporous, acropleurogenous, oval, slightly truncate at base, 2·5–4·5 μ long, 2–3 μ broad.

Among the species known earlier, *H. ugandensis* (Hans) Hughes is comparable to the fungus described above, which is a mycoparasite[4]. However, the present fungus differs from it in the morphological characters of conidiophores and conidia besides growing as a saprophyte. As such, this is reported as new *H. indica*.

Collected on dead leaf rachis of *Caryota urens* by Raghuveer Rao, on 1-7-1975. Type material deposited in Herbarium hyderabadense, O.U.B.L. No. 901.

Hansfordia indica Raghuveer sp. nov.

Coloniae minutae, fusce-brunneae, discretae, gregaria, circulares vel ovalia, 92 168 μ in diam; mycelium repentes exiguum, producere conidiophora; conidiophora aggregata, ramosa vel simplicia, 1–5 septata, 30–75 μ longa, 3–5 μ lata ad basim, producere rami vel cellae conidiogenae in 2–3 numerie ex conidiophora vel rami; cellae conidiogenae subhyalinae vel pallide brunneae geniculatae 9–22 (–42) μ longae, 3–4·5 μ latae, producta conidia singularis e cellulis separationis; cellulis separationis fusce-brunnaeis, 0·5–1 μ longis, 1–1·5 μ latis, cyclindricis breviter; conidia acropleurogena, ovalia, truncata ad basim, laevia, pallide vel fuscae brunnea, 2·5–4·5 μ longa, 2–3 μ lata.

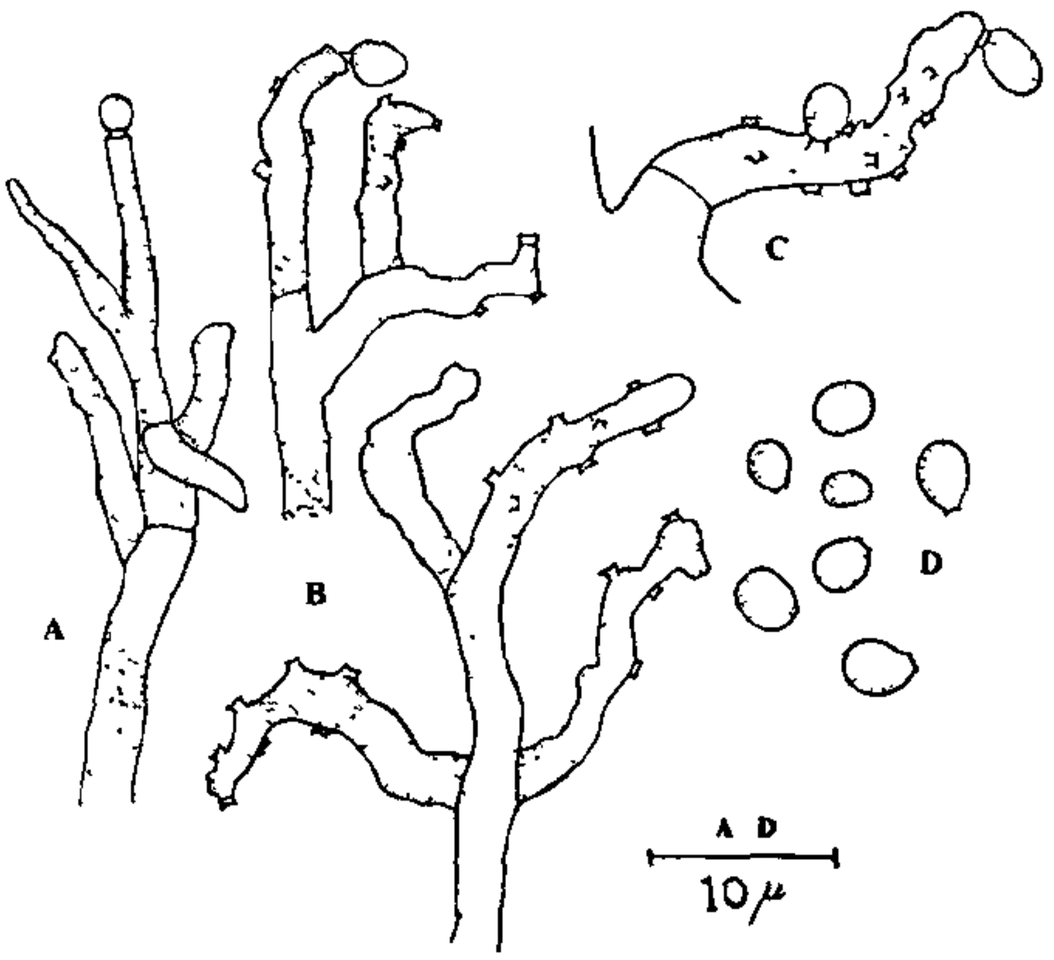

FIG. 1

Typus lectus in rachis *Caryota urens* a Raghuveer Rao ad campos Osmania Universitae, die 1 mensis julii anni 1975 et positus in herbario hyderabadense, department ad Botanique, subnumeris 901.

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Plant Pathology Laboratory,
Department of Botany,
Osmania University, Hyderabad,
January 28, 1980.

P. RAGHUVEER RAO.
SUDARSHAN RAO.

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B CHROMOSOMES IN INDUCED OCTOPLOID OF *IMPATIENS BALSAMINA* L.

IT was believed that B chromosomes are mostly confined to diploids in nature and are rare in polyploids[1], but there are a number of reports of their occurrence in natural polyploids[2]. Some workers have studied response of B chromosomes to induced change in level of ploidy. Sharma and Aiyangar[3]

FIGS. 1–2. Fig. 1. Metaphase I showing a non-carrier PMC. $8x = 56$. Fig. 2. Metaphose I showing a carrier PMC $8x = 56 + 2B$.

showed that while diploids of *Allium strachiyi* collected from Darjeeling had 2 to 10 Bs which were eliminated or their frequency was reduced in polyploids. Retention of Bs in induced polyploids has been reported in Rye[4], but all these reports concern only up to $4x$ level of ploidy.

The authors are reporting for the first time the retention of B chromosomes at $8x$ level in *Impatiens balsamina*. A bicolor variety has two B chromosomes ($2n = 14 + 2B$) indistinguishable from the normal complement[5]. Whenever present in any pollen mother cell, the Bs are two in number, and this pair forms a bivalent that behaves normally during subsequent stages and is also included in pollen grains. To investigate the response of these Bs to change in ploidy level, polyploids in *Impatiens balsamina* were induced in carrier seedlings through colchicine treatment. The Bs were retained not only at $4x$ level but also in $8x$. Both $4x$ and $8x$ carrier plants had 2B chromosomes. In octoploid 0–8 univalents (mean $3{\cdot}5909 \pm 0{\cdot}5372$) and 19–29 bivalents (mean $25{\cdot}96 \pm 0{\cdot}3208$) were noted during meiosis. Quadrivalents ranging from 1 or 2 were present in 13% PMCs (mean $0{\cdot}136 \pm 0{\cdot}0997$). Trivalents ranging from 0–1 were very rare. Despite the presence of eight homologous chromosomes of each type, associations higher than quadrivalents were not observed. A low multivalent frequency of this kind has also been reported in induced octoploids of single and double varieties of *Tropaeolum majus*[6]. At M_I bivalents and multivalents oriented themselves at the equator of the spindle. Figs. 1 and 2 show a non-carrier ($13_{(II)}$ $15_{(II)}$) and carrier ($1_{(IV)}$ $14_{(II)}$ 12_{II} 2_I) PMC respectively. Pollen fertility in $2x$, $4x$ and $8x$ was 89·3%, 55·5% and 45·5% respectively.

These studies have clearly established that Bs can be retained *et* octoploid level also.

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Cytogenetics and Plant Breeding Laboratory,
Department of Botany,
University of Lucknow,
Lucknow 226 007, India,
March 10, 1980.

S. S. RAGHUVANSHI.
SAVITA MAHAJAN.

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B-CHROMOSOME IN *LINARIA BIPARTITA* WILLD.

Linaria bipartita Willd (Scrophulariaceae) is grown as a winter annual for its beautiful flowers. While screening 7 colour strains, one plant (of pink strain), out of a total of 20 analysed, showed one B-chromosome. This plant, however, could not be phenotypically distinguished from others. This is the first report of B-chromosome in the species, the meiotic behaviour of which is described.

For meiotic studies young flower buds were fixed in 1 : 3 : 6 acetic acid : chloroform : alcohol mixture, of which acetic acid component was saturated with ferric acetate. After 24 hrs the anthers were squashed in 1% acetocarmine following the usual technique. Out of the 50 cells analysed at M–I, 32 (64%) showed 6 bivalents (Fig. 1) the rest (36%) revealed the presence of a small accessory chromosome (Fig. 2). The inconsistent occurrence among PMC's could be due to