

but a detailed study of meiosis was not undertaken as an adequate number of flower buds was not available. Meiosis was studied in detail in flower buds of plants of C_2 generation. The mean chromosome pairing at metaphase I in the synthesized tetraploids of the crosses *S. integrifolium* × NB, *S. integrifolium* × GB, HRY × *S. integrifolium* and PPL × *S. integrifolium* was 22.62 II + 1.27 I + 0.14 III + 0.27 IV, 22.85 II + 1.32 I + 0.11 III + 0.16 IV, 22.77 II + 1.46 I + 0.16 III + 0.13 IV and 22.74 II + 1.43 I + 0.09 III + 0.20 IV respectively.

The high percentage of pollen sterility and the occurrence of as many as 12 bivalents at metaphase I in several pollen mother cells of the diploid hybrids of the crosses indicate that in spite of gross similarity of the chromosomes of the two species, there are some important genic or small structural differences thereby substantiating the lack of a significant genomic relationship between *S. integrifolium* and the cultivated varieties of eggplant. The production of amphidiploids from the sterile diploid hybrids with high pollen fertility and fruit-set with several viable seeds indicates that the sterility of the F_1 hybrids is chromosomal. The cryptic structural hybridity could have also played an important role in hybrid sterility and genetic distinctiveness of *S. integrifolium* and *S. melongena*.

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A NEW LEAFSPOT DISEASE OF BUCK WHEAT IN INDIA

BUCK WHEAT, *Fagopyrum sagittatum* Gilib (f. polygonaceae) is grown primarily for the grain which is used for human consumption and this crop was suffering from a disease during the year 1978-79 at Agricultural College, Dharwad, Karnataka.

The characteristic symptoms were leaf spots, which were circular, oval to oblong in shape and variable in size (Fig. 1). Each spot had a greyish centre and brownish margin. Blighting and withering of the central portion was seen in a severe infection. The fungus was isolated and pathogenicity was proved.

Fungal colony black, conidiophores were arising singly or in small groups, simple or branched, straight or henuous, sometimes geniculate measured 48 μ m long; 3-5 μ m thick with one or several conidial scars. Conidia long, obclavata with short conical or cylindrical beak, golden brown, verruculose, with 8 or less transverse and several longitudinal or oblique septa, average

length 21-60 μ m; breadth 8-19 μ m; break pale, 2-6 μ m thick. The fungus was identified as *Alternaria alternata* (Fr.) Keissler. It is a new record on buck wheat in India. Zimmer¹ had reported *A. alternata* on buck wheat from Manitoba, but it is new to India.

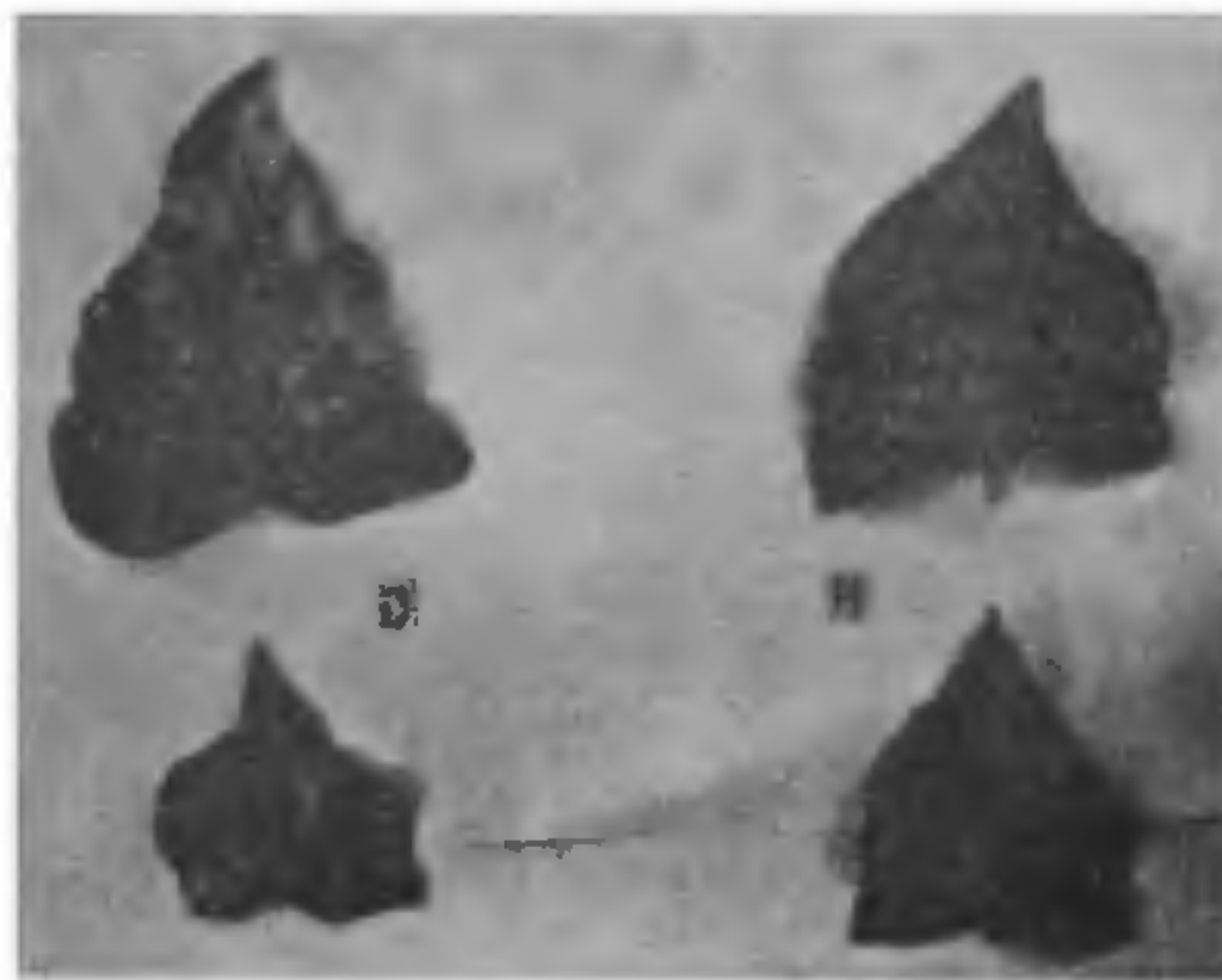


FIG. 1. Symptoms due to *Alternaria alternata* on buck wheat. D = Diseased; H = Healthy leaf.

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ON *CYTTAROPHYLLOPSIS CORDISFORA* HEIM

HEIM¹ described a scotiaceous fungus *Cyttarophyllopsis cordispora* from Bihar, India, growing in fields with sparse vegetation, after abundant rains. In the construction of fruit body, it closely resembles the genera *Galeropsis* Velen. and *Cyttarophyllum* (Heim) Singer, but differs from them in spore morphology. A similar fungus was collected after heavy rains at Madras during August, 1976. A detailed study of the present collection of *Cyttarophyllopsis* has revealed certain important features which have not been mentioned by Heim¹, and these have bearing on its relationship with other agaricoid members. A description of the fungus based on the present collection is given below. Colour terminology used is that of *Methuen Handbook of Colour*².

Pileus not expanding at maturity but remaining as a sub-ovoid, subglobose structure, up to 1 cm in height, enclosing the stipe very closely, with a prominent marginal veil at the point of attachment with the stipe.

The veil is made up of thin-walled, septate, parallel hyphae. Colour of the pileus orange grey (5 B2), epicutis hymeniform. Stipe well developed, cylindrical, rigid, up to 5.5 cm long and up to 1.2 mm wide, more or less of the same colour as that of the pileus. Lamellae in series, thin, anastomosing, light brown (7 D6). Basidia cylindrical to clavate, 2- or 4-spored and measuring 10.0–14.0 × 5.0–6.5 μ . Spores turbinate to cordiform, turbinate spores having a slight depression at the top, without any germ pores, smooth, 4.2–5.6 × 2.8–5.0 μ . Of pale cream colour under the microscope. Cheilocystidia and pleurocystidia absent. Caulocystidia present on the stipe, which are club-shaped with a capitate head.

Habitat: On the ground, Indian Institute of Technology campus, Adyar, Madras, India, 26–8–1976, Coll. K. Natarajan.

This collection very closely resembles *Cyttarophyllopsis cordispora*, but the presence of a prominent marginal veil which hangs down from the periphery of the pileus at the point of attachment with the stipe, and the caulocystidia on the stipe have not been reported by Heim¹.



PLATE 1. *Cyttarophyllopsis cordispora*. Pileus with marginal veil, $\times 5$.

Apart from the shape of the spore, the presence of velar remnants on the margin of the pileus can be used as an additional generic distinction from the genus

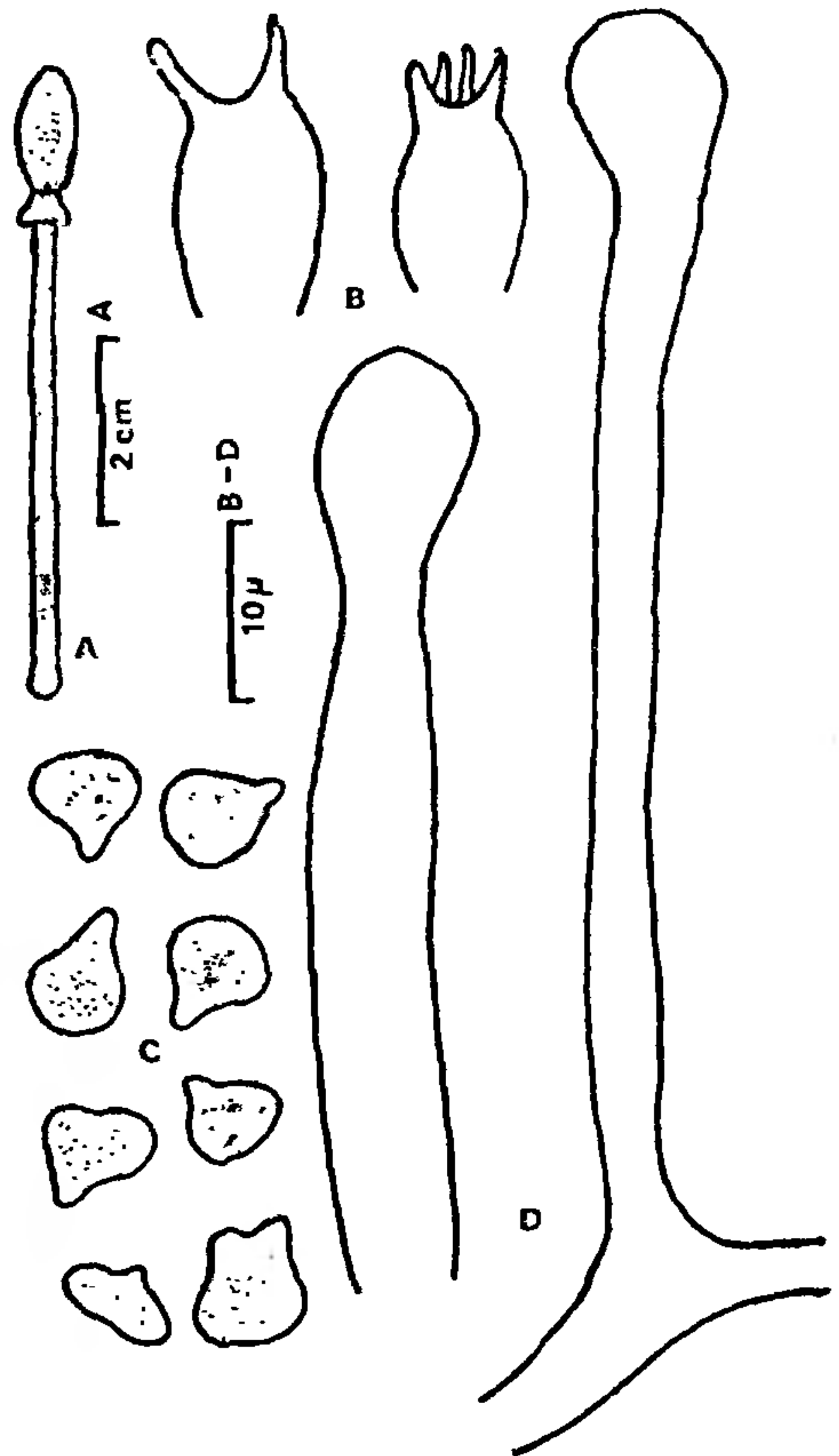


FIG. 1. A–D: *Cyttarophyllopsis cordispora*. A = Sporocarp, B = Basidia, C = Basidiospores, D = Caulocystidia.

Galeropsis. The gastromycetoid genus *Cyttarophyllopsis* has relationship with the agaricoid Bolbitiaceous members and as in the genus *Conocybe* Sec. *Conocybe* of Bolbitiaceae, in this fungus also all the caulocystidia are of the capitate type.

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Madras 600 005, December 9, 1978.

1. Heim, R., *Bull. Soc. Mycol. Fr.*, 1968, p. 103.
2. Kornerup, A. and Wanscher, J. H., *Methuen Handbook of Colour*, Methuen and Co. Ltd., London, 1967, p. 243.