

In general, the plants supplied with high potash tend to increase permeability of the protoplasmic membrane (Stocking¹³, 1956). In leaves supplied with potassium, phenolic compounds may accumulate around the diseased spots and thereby arrest the multiplication and migration of the bacterium, to control the severity of the disease.

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1. Bird, L. S., *Plant Dis. Repr.*, 1954, 38, 653.
2. Bray, H. G. and Thorpe, L. V., *Meth. Biochem Anal.*, 1954, 1, 27.
3. Hewitt, E. J., *Inorganic Nutrition of Plants*. Academic Press, New York, 1963, 3, 137.
4. Inman, R. E., *Phytopathology*, 1962, 52, 1207.
5. Mulder, E. G., "Mineral nutrition in relation to the biochemistry and physiology of potatoes," 1949, 2, 59.
6. Nayudu, M. V. and Walker, J. C., *Phytopathology*, 1961, 51, 368.
7. Nelson, N., *J. Biol. Chem.*, 1944, 15, 375.
8. Ono, K., *Potassium Symp. (Japanese) International Potash Inst., Berne, Switzerland, 1957*, p. 137.
9. Pridham, J. B., *Ann. Rev. Pl. Physiol.*, 1965, 16, 13.
10. Purushothaman, D., *IL RISO.*, 1975, 25, 85.
11. Rang Reddy, P. and Sridhar, R., *Indian Potash J.*, 1976, 1, 13.
12. Sridhar, R., *Acta Phytopath. Acad. Sci. Hung.*, 1972, 7, 57.
13. Stocking, C. R., *Encyclopedia of Pl. Physiol. of the Plant Cell*. Springer-Verlag, Berlin., 1956, p. 22.

PLEUROTUS EOUS (BERK) SACC.: A NEW CULTIVATED MUSHROOM

DURING the survey of edible mushrooms around Mysore, an attractive pink coloured mushroom, similar to *P. flabellatus* (white coloured), was collected during October 1975 from the dead portion of a living tree (*Ficus bengalensis*). The identification was confirmed by Dr. D. N. Peglar of Royal Botanic Gardens, Kew, as *Pleurotus eous* which was earlier reported in 1848 from hot valleys of Sikkim, India*.

The cultivation of *P. eous* (Fig. 1, A-C) was successfully carried out on water soaked chopped paddy straw in circular plastic basins (32 cm dia × 13 cm) shallow and deep rectangular wooden trays (60 × 90 × 17.5 cm) at room temperature (21–35° C) and R.H. 65–90%. About 100 g, spawn

on paddy straw, 25–30 g of coarsely ground horse gram and 3 kg of pre-soaked paddy straw were mixed and filled into containers to raise the mushroom crop. During the cultivation, it was observed that the deep wooden trays required less watering and provided 1.6–1.8 times more yield compared to the circular basins and shallow wooden trays. The number of pinheads formed in shallow containers were often more compared to the deep trays but the yield recorded from the latter was much higher. This may be attributed to the fact that lower number of pinheads grew to their maximum size. The substitution of oilseed cakes (groundnut/sesame) at different levels, while spawning, did not improve the mushroom growth.

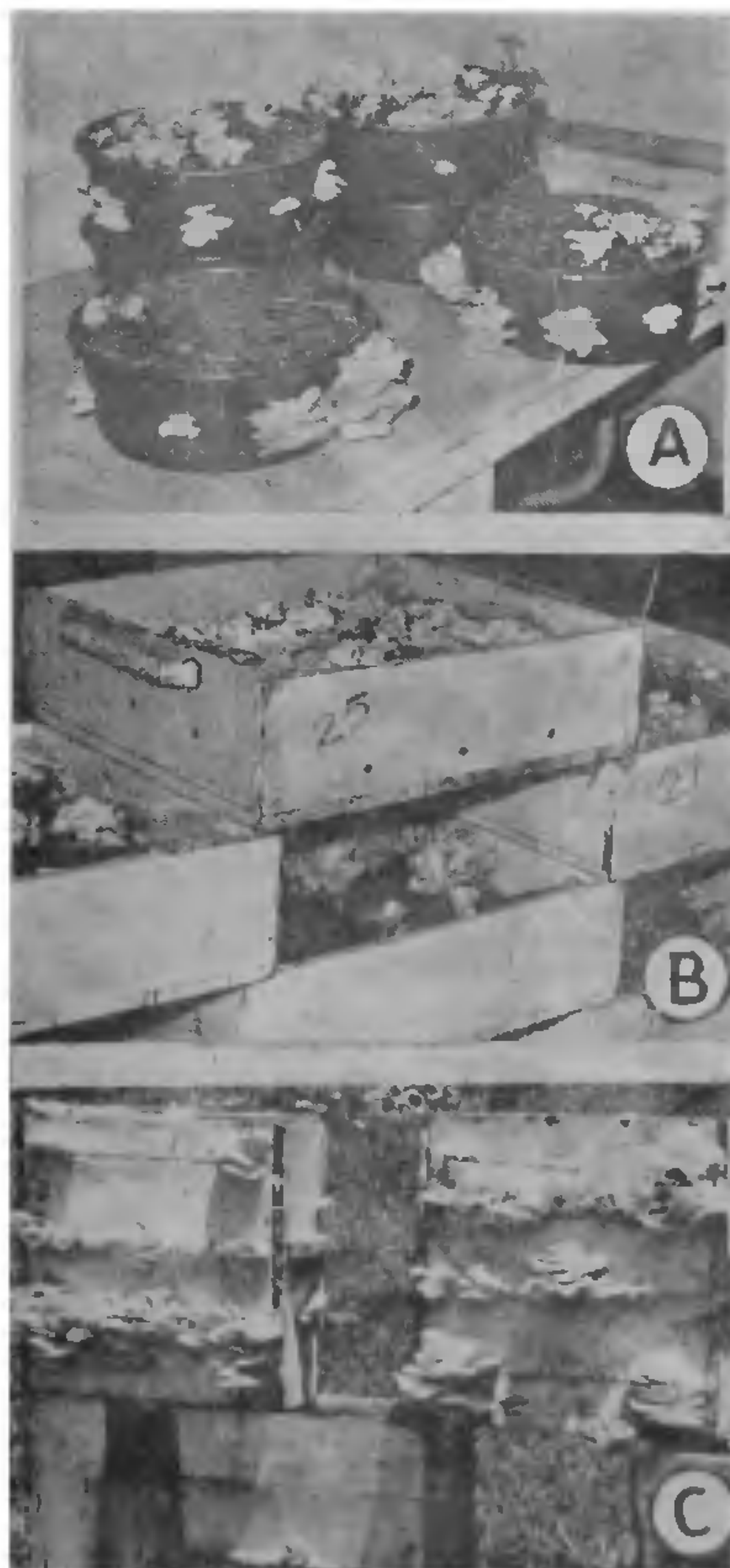


FIG. 1. *Pleurotus eous* growing in circular plastic basins (A), rectangular shallow (B) and deep (C) wooden trays.

Proper ventilation was found necessary for cultivation. The colour of *P. eous* was distinctly pink when young but faded slightly with growth. The colour of mushroom was darker when grown at lower temperatures (22–28° C).

Proximate composition and nutritive constituents of *P. eous* was found to be similar to that of other species of *Pleurotus*¹⁻³. The protein content was 33.24% on dry weight basis. The free amino acids were extracted in cold, with 80% ethyl alcohol, purified by passing through Dowex-50 column and separated by high voltage electrophoresis at pH 1.9 at 3 KV 100 ma for one hour. The mushroom contained thirteen free amino acids, viz., serine, glutamic acid, alanine, glycine, lysine, aspartic acid, arginine, tyrosine, methionine, valine, phenylalanine, isoleucine and leucine. In addition to the above the presence of cystine and threonine was shown by faint spots. The free amino acids reported in *Pleurotus* sp. were similar except tyrosine and valine which were not detected⁴.

Sensory evaluation of the recipes (*saute*) prepared from both the species showed that *P. eous* tastes softer and has stronger aroma compared to *P. flabellatus*. A freeze dried product of pink mushroom was more attractive.

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1. Zakia Bano, and Srivastava, H. C., *Food Sci.*, 1962, 11, 363.
2. Kaul, T. N. and Janardhanan, K. K., *Indian Phytopath.*, 1970, 23, 578.
3. Rangaswamy, G., Kandaswamy, T. K. and Ramaswamy, K., *Curr. Sci.*, 1975, 44, 403.
4. Zakia Bano, Srinivasan, K. S. and Srivastava, H. C., *Appl. Microbiol.*, 1963, 11, 184.

COLURA DUM. (HEPATICAEE)—A GENUS NEW TO INDIAN FLORA

EASTERN Himalayas are known to harbour many interesting genera of phylogenetic significance, viz., *Calobryum* Nees, *Haplomitrium* Nees, *Takakia* Hattori and Inoue, etc. The present note adds another rare genus *Colura* Dum. of the family Lejeuneaceae. The occurrence of this genus in Indian Flora as *C. ornata* Goebel (cf. Chopra¹, Parihar², Kachroo³) is erroneous. In fact *C. ornata* is distributed in Malaya Pen., Java, Borneo, and Philippines only.

Leaves with variously shaped sacs, amphigastria doubled, are the chief distinguishing characters of the taxon. In *Colura* the leaf structure is very complicated. The lobule is inrolled against the lobe and becomes concrescent with it, thus forming a canal leading into a sac. The sac is provided with a valvular closing apparatus, like that of *Utricularia*, allowing the water to run in, but preventing it from escaping.

Distribution

Jovet-Ast⁴, in the monograph of the genus, listed 51 species and remarked that the genus *Colura* may be regarded as pantropical-temperate-subantarctic in distribution. Its altitudinal distribution is also of interest. It ranges from plains to height of ca 1,500 m. The present report of the genus from Darjeeling Himalayas (Tiger Hill, ca 2573 m) now adds further to its known range of distribution.

The specimens worked out in the present study revealed two different taxa, of which one is *C. tenuicornis* (Evans) Steph. while the other is *C. calyptrifolia* (Hook.) Dum.

Specimens examined

Tiger Hill (ca 2573 m) Darjeeling, Eastern Himalayas, Lal and Ghosh, 205, 207; 235. 13-11-76 (in CAL), epiphyllous, on upper surface of dicot leaves.

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1. Chopra, R. S., *J. Indian bot. Soc.*, 1943, 22, 237.
2. Parihar, N. S., *Univ. Allahabad Studies (India)*, Botany Section, 1961-62.
3. Kachroo, P., *Bull. Bot. Surv. India*, 1970, 12, 226.
4. Jovet-Ast, S., *Rev. Bryol. Lichenol.*; 1953, 22, 206; 1954, 23, 1.