



Figures 1-5. 1. Excised mature embryos on MS medium. 2. Actively growing healthy callus. 3. Induction of roots. 4 and 5. Profused rhizogenesis and plantlet regeneration.

growing callus (figure 2). The callus initiated all over/hypocotyl of the embryo first showed patches of chlorophyll-containing cells but later turned pale brown. Profuse rhizogenesis (8-15 roots per embryo of almost equal length) was observed (figure 3) when calli were transferred to media containing IAA (1 mg/l) and Kn (0.1 mg/l). 2,4-D in combination with Kn or BAP was inhibitory for producing roots. On a medium fortified with 2,4-D (0.5 mg/l) and BAP (2 mg/l) multiple shoot buds were initiated. These shoot buds when transferred to a medium having BAP 3 mg/l exhibited further proliferation into plantlets. Complete plantlets with roots were observed (figures 4 and 5) three weeks after the transfer of compacted callus maintained for over one month, to MS media with IAA (0.1 mg/l) and BAP (1 mg/l). We are currently engaged in studying the response of different local *Capsicum* varieties in tissue culture.

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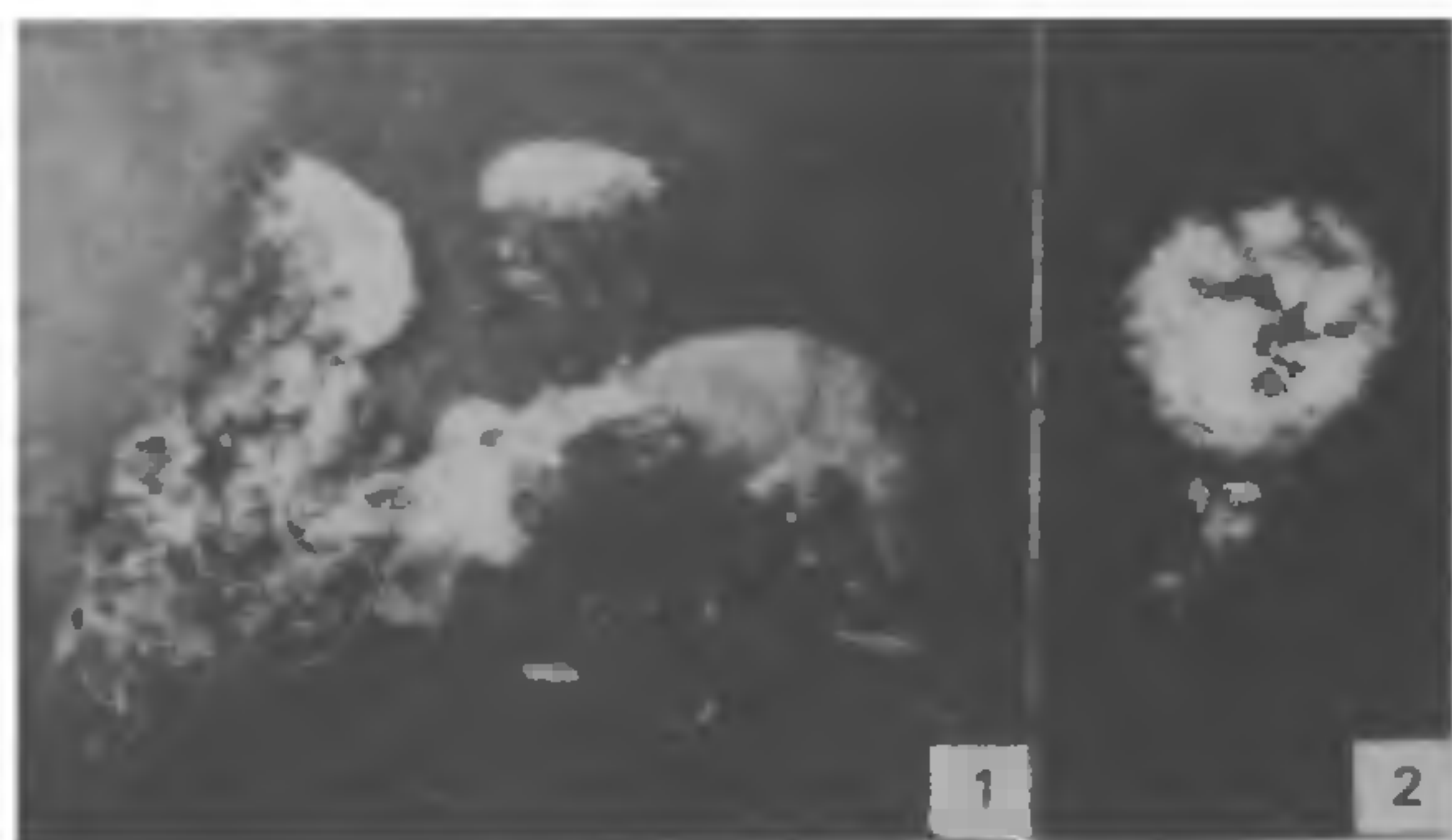
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OCCURRENCE OF *CLADOBOTRYUM VARIOSPERMUM* (LINK) HUGHES ON *POLYPORUS* FUNGI UNDER NATURAL CONDITIONS

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DURING a survey in the forest areas of Himachal Pradesh, *C. variospermum* was found to parasitize young fruit bodies of *Phomitopsis insulare* Murr and *Polyporus versicolor* L ex Fr during February 1986 at various locations. The mycoparasite invariably produced whitish mouldy growth on the lower surface of the fructifications. On microscopic examination it showed hyaline, profusely branched, septate hyphae up to 3 μ m thick, bearing erect, long, septate, hyaline conidiophores, branching irregularly and repeatedly terminating in irregular groups of phialides which may or may not taper towards apex. Conidia terminal, hyaline, non-septate to 1-septate, subglobose to broadly ellipsoidal, thick walled, 12.5-17 \times 8-9 μ m. The fungus showed profuse whitish fluffy mycelial growth on PDA and MEA media producing conidiophores and conidia. Chlamydospores were intercalary and in chains. Conidia were smaller in size in culture. It showed optimum growth between 15 and 20°C



Figures 1 and 2. 1. *Cladobotryum variospermum* on *Phomitopsis insulare* under natural conditions. 2. Symptoms produced by *C. variospermum* on fruit body of *Agaricus bisporus* on inoculation.

followed by 10° and 25°C. There was no growth at 30°C and beyond. The growth was inhibited by Bavistin (50 ppm) under *in vitro* condition.

On artificial inoculation it was found pathogenic on fruit bodies of *Agaricus bisporus* producing small irregular, brownish sunken spots, with profuse conidial formation. It also inhibited pin head formation. On *Pleurotus sajor-caju* (oyster mushroom) it produced whitish mouldy growth on fruit bodies. It could also grow on compost.

Based on conidial morphology and other characters, the fungus was identified as *C. variospermum*^{1,2}. *C. dendroides* is reported to cause cobweb disease in *A. bisporus* from various mushroom growing countries including India³⁻⁵. There is no report of the occurrence of the present species on *A. bisporus*, whereas it has been reported to attack *P. ostreatus*⁶. Species of *Cladobotryum* viz *C. varium* are reported to show antirust antibiotic activity against *Puccinia graminis*⁷ and antifungal activity against *Crinipellis perniciosus*, *Phytophthora palmivora*, *P. capsici* and *P. citrophthora*^{8,9}, pathogens of Cocoa. There is no report in literature on the occurrence of *C. variospermum* on any polypore. This aspect needs further study for its use as a biocontrol agent. Its natural occurrence in different areas of Himachal Pradesh having commercial cultivation of white button mushroom may pose serious disease problem in due course. Necessary precautions are, therefore, required to check its entry into commercial farms.

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CONTROL OF UZI FLY BY SEMIO-CHEMICALS

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TRICHOLYGA bombycis, commonly known as uzi fly is a major pest of the silkworm, *Bombyx mori*, ovipositing on III, IV and V instar larvae, killing them and causing damage to the extent of 15–20% to the silk industry. Insecticides cannot be used, as the silkworms too would be destroyed along with the pest.

In recent years pheromones have been used as lures in the control of insect pests. A phenomenal success was achieved¹ in completely eradicating the oriental fruit fly by dropping small absorbent cane fibre squares containing methyl eugenol and a fast acting insecticide. Similarly, Roelofs² trapped the leaf roller moths in the field.

This investigation reports the presence of a sex pheromone secreted by the female uzi, which attracts the male uzi and a kairomone secreted by the silkworm, which lures the gravid female uzi. Experiments involved dual choice studies to study the preferential behaviour as follows:—

The male and female uzi flies were separated soon after the emergence and maintained on the saturated solution of sucrose and honey. Two-day-old