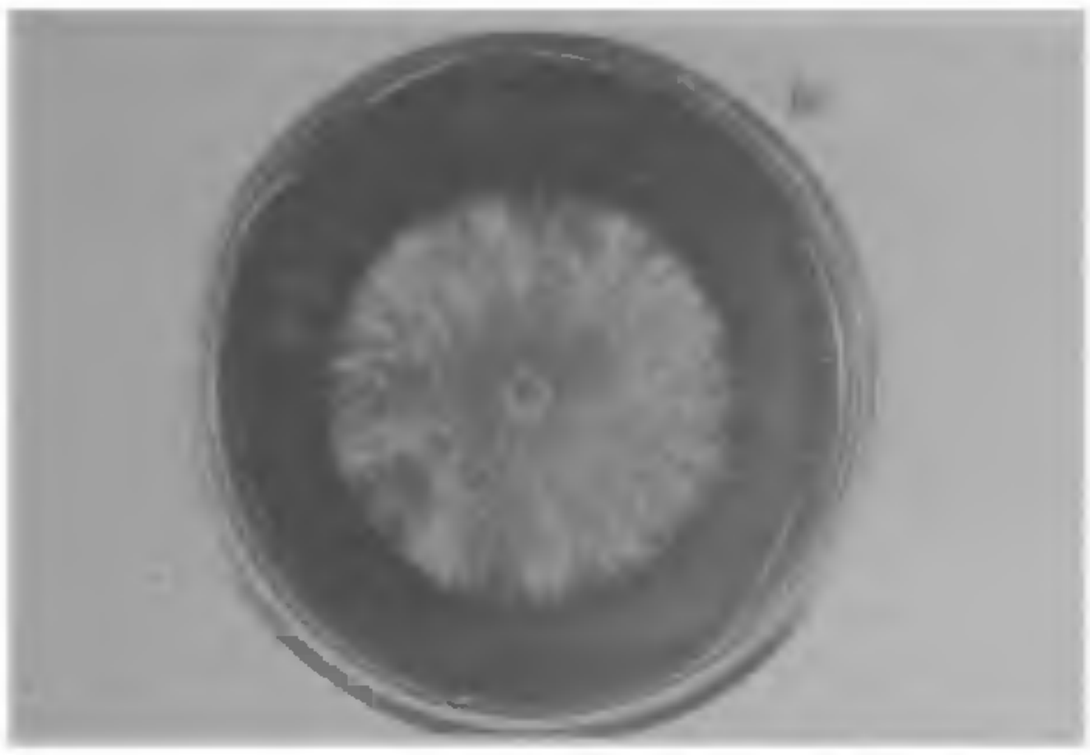

Figure 1. Growth of *Pleurotus sajor-caju* on Lignin agar medium. A dark zone around the growth confirms the presence of lignin degradation.

an average of 496 g fresh fruit bodies were harvested. The spent rice straw was analyzed for its lignin contents[4]. The loss of lignin in the straw was 47% of its initial contents calculated on percent dry weight basis.

Thus, the spent residues left after the growth of *P. sajor-caju* can be used more effeciently as a source of animal feed compared to the untreated raw residues.

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A NEW SPECIES OF *PHOMOPSIS* FROM INDIA CAUSING SOFT ROT DISEASE OF SAPOTA

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DURING a survey, the authors observed a serious fruit rot disease of 'Sapota' [*Manilkara achras* (Mill.) Fosberg] of family sapotaceae, in the fruit market and local orchards at Jabalpur (figure 1). The causal organ-

Figure 1. Infected and healthy fruits of Sapota.

ism was isolated from diseased fruit of 'Sapota' on potato-dextrose-agar (PDA) and was identified as a species of *Phomopsis.* It is proposed to describe the present isolate as a new species, *Phomopsis manilkarae* because no *Phomopsis* has previously been recorded on this host genus.

Phomopsis manilkarae sp. nov. (figure 2).

On PDA colony greyish white, floccose, later on immersed. Mycelium greyish white, thin-walled,

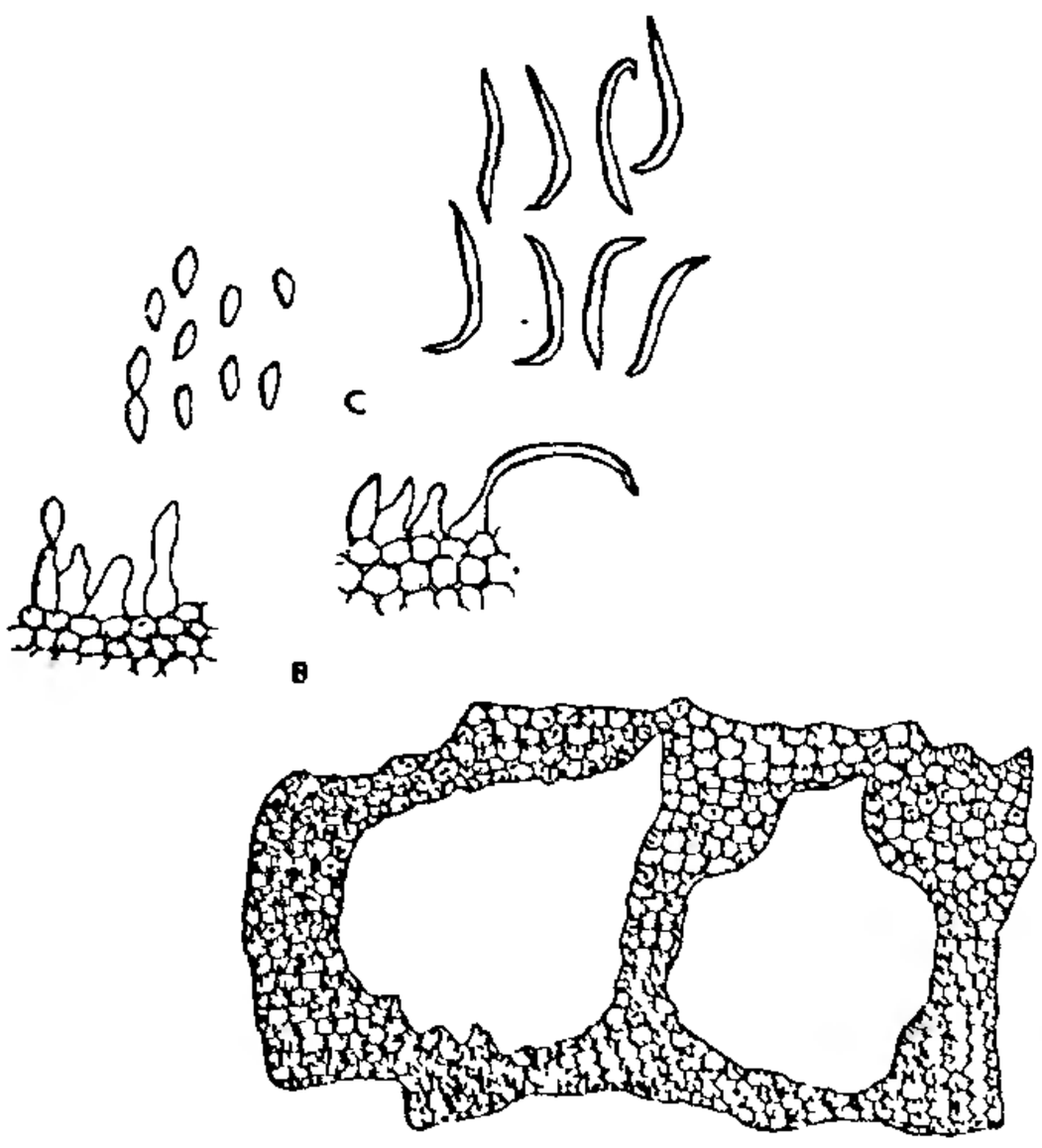

Figure 2. *Phomopsis manilkarae sp. nov.* **A.** Pycnostromata and pycnidial cavity. **B.** Phialospores and stylospores.

branched, septate, aggregate to form pycnostromata. Pycnostromata dark-coloured, leathery to carbonaceous, irregular, thick-walled, pseudoparenchymatous, aggregated, formed generally in 10-day old culture. Pycnidial cavity immersed, without an ostiole, 120–172 μm in diameter. Sporogenous cells hyaline, simple, rarely branched, phialidic, enteroblastic, arising directly from the innermost layer of cells lining the pycnidial cavity. Spores of 2 types: Phialospores, hyaline, unicellular, pointed at ends, fusiform, biguttulate, 7.5–10.5 × 3.4–5.2 μm. Stylospores hyaline, unicellular, long, slender, often bent at one side like a walking stick, 19–31 × 1.3–2 μm.

Pycnostromata fusca, Coriacea vel carbonacea, irregularis, crasse tunicata, pseudoparenchymatica, aggregata, plerumque die decema prima evoluta. Cavitatis pycnidii immerso, haud ostiolati, 120–170 μm in diametro. Cellulae sporogenae hyalinae, simplices, raro ramosae, phialdicae, enteroblasticae ex orientes stratis ex intimis cellularum cavitatis pycnidii. Sporae biformes: phialosporae hyalinae, continuis, utrinque acuta, fusiformes, biguttulatae, 7.5–10.5 × 3.4–5.2 μm; stylosporae hyalinae, continuis, longae, graciles, arcuatae vel lateraliter instar baculi deflectae, 19–31 × 1.3–2 μm.

The type species has been deposited at CMI, Kew, England, with accession no. IMI 276385.

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CYTOKININ-LIKE SUBSTANCES IN BLUE-GREEN ALGAE

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GROWTH regulators have been reported in both freshwater and marine algae. Very few of them, however, have been isolated and chemically examined. The information pertaining to their occurrence in algae has been reviewed by several workers[1–3].

Bentley-Mowat and Reid[4] were the first to study cytokinins in marine phytoplankton. Cytokinin-like substances were later reported[5–8] in a number of marine algae. These, however, have not been studied in blue-green algae. Two blue-green algae *Westiellopsis prolifica* Janet and *Plectonema boryanum* Geit. have, therefore, been studied for the presence of cytokinins.

The algae were grown in modified Benecke's medium[9] under 40 W fluorescent tube light at 30 ±2°C. Three-week old cultures were harvested by centrifugation under asceptic conditions and used for the experiments. Solvent extraction[10], purification on Dowex 50W-X8 H^+ column, paper chromatography and radish cotyledon expansion bioassay[11] were used. The strip chromatogram was divided into 10 Rf units (Rf 0.0–0.1 to 0.9–1.0) and these were tested for their biological activity. The hypocotyl sections were used to test any gibberellin activity.

The ultraviolet light absorption bands in chromatogram of *W. prolifica* at Rf 0.1 to 0.3 and 0.6 to 0.7 and in *P. boryanum* at Rf 0.7 to 0.8 and 0.9 to 1.0 and their activity in radish cotyledon bioassay indicated the presence of cytokinin-like substances of the nature of purine and its derivatives (figure 1). The biologically active factors observed near the starting line in a number of organisms[10,12] were identified as zeatin ribonucleotide. The activity at Rf 0.1 to 0.3 in *W. prolifica* may, therefore, be ascribed to substances of this nature. Zeatin has been identified at Rf 0.65 to

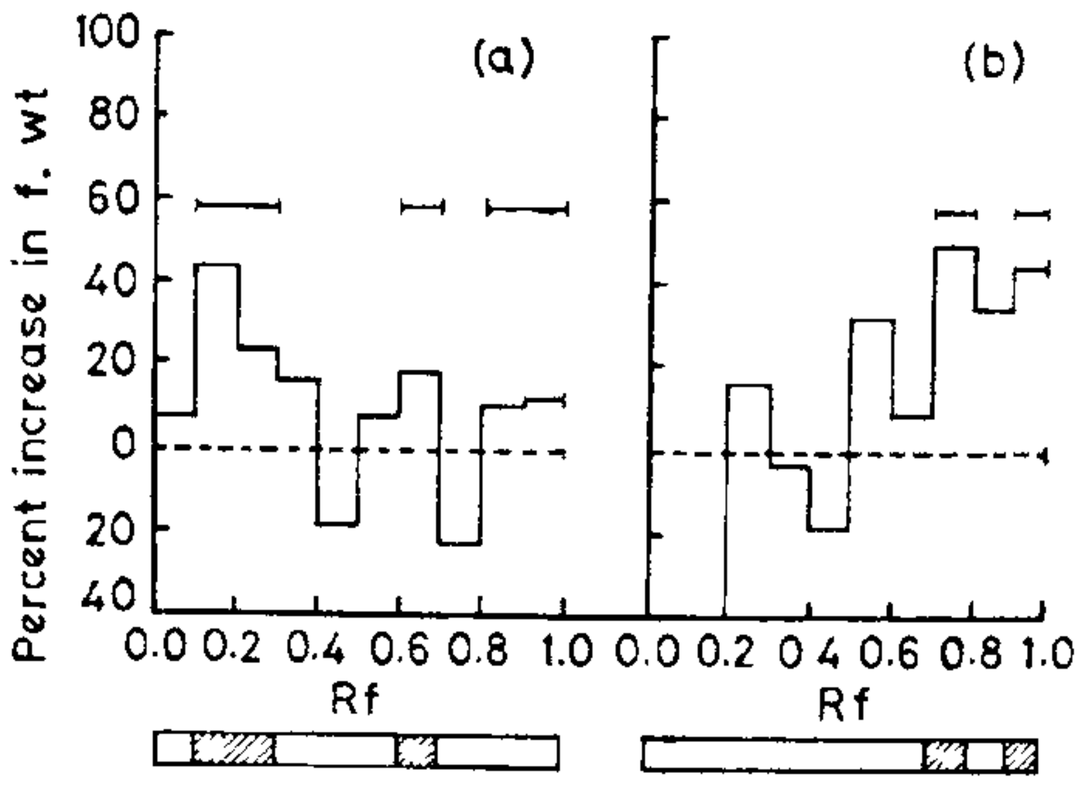

Figure 1. Percentage increase in fresh weight of radish cotyledons incubated in eluates from strip chromatogram. The shaded areas in horizontal bars indicate the location of UV light absorption bands of the chromatogram **a.** *W. prolifica* Janet **b.** *P. boryanum* Geit.