dark green leaves, arranged vertically can make efficient use of solar radiation[4]. Various reports indicate that the yield is higher in short statured mutants of cereals as compared to tall parental varieties[5,6]. Hence, simultaneous induction of the two desirable characters such as earliness and short stature in these mutants is of real value. These early dwarf mutants may prove to be a suitable breeding material for incorporating earliness and dwarfness in the existing late and tall promising varieties of barley.

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A NEW SPECIES OF *STENELLOPSIS*

IN the course of mycological collections the author collected a leaf spot on *Shorea robusta* Gaertn. f. (Sal tree) which on examination was found to be caused by a species of *Stenellopsis* belonging to dematiaceous hyphomycetes.

The present species of *Stenellopsis* was compared with the type species *S. fagraeae* Huguenin[1] and was found to differ greatly in its conidial and conidiophore morphology and as such described here as a new species.

Stenellopsis shorae Singh sp. nov.: On the living leaves of *Shorea robusta* Gaertn. f., Soopkhar, Balaghat, Dec. 1978, leg. S. M. Singh.

Colonies effuse, black, hypophyllous; mycelium immersed, stroma immersed, prosenchymatous; conidiophores in tufts, macro-nematous, mononematous, sympodial, unbranched, dark brown, sometimes geniculate, straight to flexuous, smooth 27–50 × 5·5–6 μm (40 × 5·5 μm); conidiogenous cells integrated, terminal, polyblastic, cicatrized; conidia dry, solitary, terminal, acropleurogenous, dark brown, multicelled (3–10 septate), cylindrical to obclavato-cylindrical, base truncate with scar of attachment, apex tapering, lighter in colour often with dry abnormal cells, smooth, thick walled, flexuous, rarely straight, 25–60 × 6·2–6·7 μm (35 × 6·5 μm) (Fig. 1).

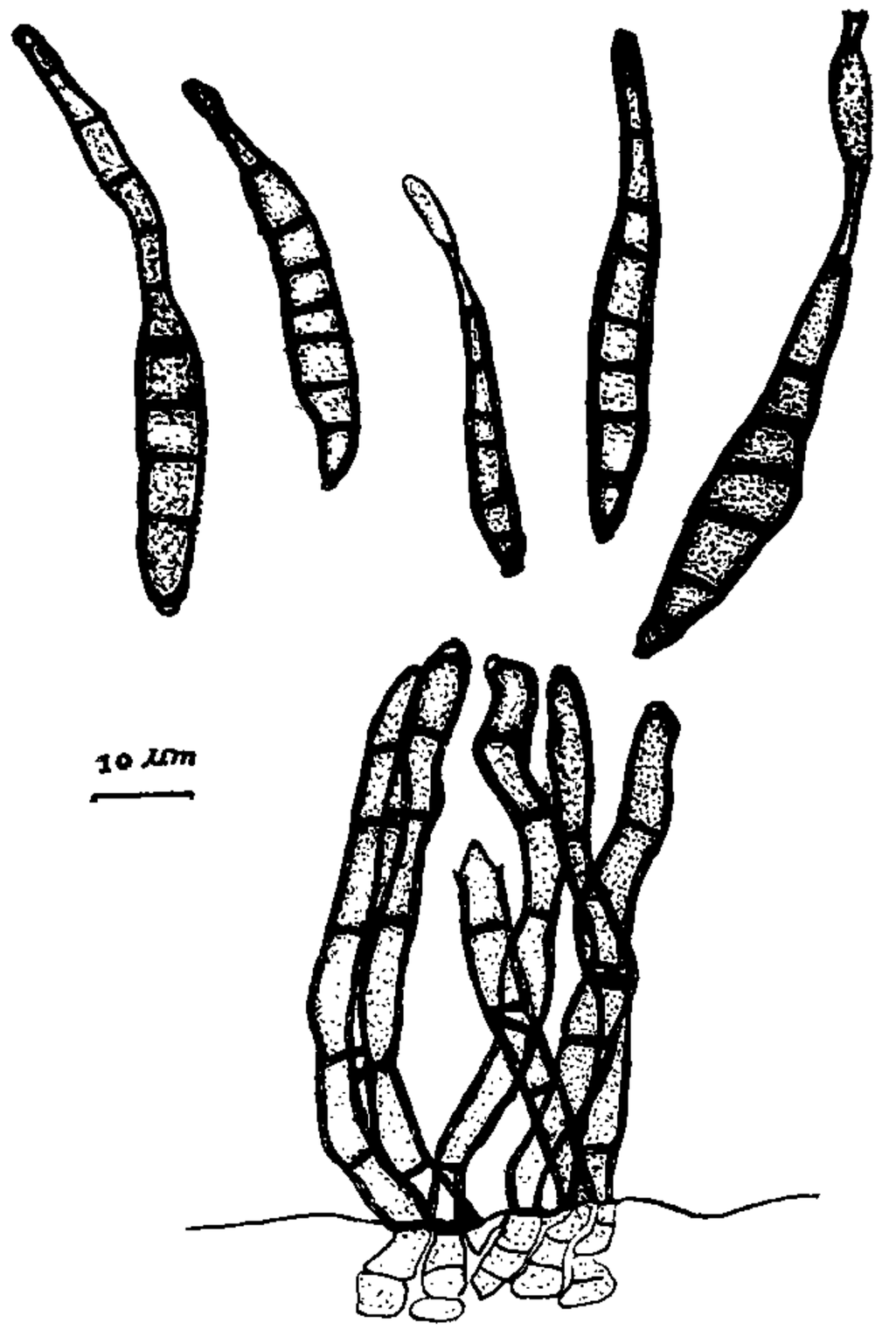

FIG. 1. *Stenellopsis shorae* Singh sp. nov. showing conidia and conidiophores.

Stenellopsis shorae Singh sp. nov.

Coloniae effusae, nigrosae, hypophyllosae; mycelium immersum; prosenchymatosum; conidiophori macronematosi, mono-nematosi, non-ramosi, sympodiales fusce brunnei, flexuosi raro recti, leves 27–50 × 5·5–6 μm (40 × 5·5 μm); cellulae conidiogenosae, polyblastosae, integratae, terminales, cicatricosae; conidia singularia, arida, acropleurogenosa, simplica, obclavato-cylindrica, in basi angusta cum cicatrice junctionis, in apice minuentia, colore pallidiora, saepe cum cellulis aridis abnormibus et cum parietibus crassis, fuscae brinnea, levia, cum pariete crasso, multiseptata (3–10 septata) flexuosa raro recta 25–60 × 6·2–6·7 μm (35 × 6·5 μm).

Typus positus in herbario I.M.I. Kew No. 233004.

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CONIOTHYRIUM FUCKELII CAUSING LEAF SPOT OF *PRUNUS CORNUTA* STEUD.

DURING investigation of the diseases of pome and stone fruits, a leaf spot disease of *Prunus cornuta* Steud. was recorded in July, 1976 at the Horticultural Research Station, Simla. *P. cornuta* grows wild at the higher altitude in H.P. and has been proved suitable root stock for cherry. The infected leaf showed the symptoms of circular to irregular, amphigenus, and numerous scattered spots on the entire leaf surface. The centre of the spot was greyish in colour and surrounded by dark margin. Later on, the spots increased in size and developed blighted areas on the affected parts of the leaves.

The isolation of the fungus was made from the diseased leaf and maintained on PDA. The pathogen test was confirmed by inoculating the healthy leaves of *P. cornuta* with 5 days old culture of the pathogen. Reisolation of the fungus, from the artificially inoculated leaves, produced the fungus which resembled the original one. The microscopic observation showed that the conidia were ovoid, single celled, dark brown and measured 3·94 to 5·94 μm, 3·00 to 3·96 μm. The fungus causing leaf spot was identified as *Coniothyrium fuckelii* Sacc. and its identity was confirmed by CMI, Kew, England, under succession No. 208559.

The review of literature revealed that there is no earlier record of this fungus on *P. cornuta*. However, *Diospyrus virgiana* L.[1] and *Anogeissus latifolia* Wall[2], have been noticed as additional hosts for this fungus. Hence, the present note constitutes the first record of the fungus on *P. cornuta* from India.

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OCCURRENCE OF *AZOTOBACTER* WITHIN THE ROOT CELLS OF *CYNODON DACTYLON*

Azotobacter is generally considered a non-symbiotic N_2 fixer in soil and rhizosphere. However, Dobereiner *et al.*[1] observed "Associated symbiosis" between *Azotobacter paspali* and *Paspalum notatum*, where occurrence of the bacterium is plant dependent and establishment of symbiosis takes several months[2]. The site of N_2 fixation is on the roots, with little in rhizosphere soil. Recently, Dobereiner and Day[2] have shown that *Spirillum lipoferum* occurs within root cells of *Digitaria decumbens* cv. *transvala* where the bacterium is localised in the inner cortex and occasionally in the endodermis.

While studying *Azotobacter* occurring in the rhizosphere of *Cynodon dactylon* (L.) Pers., it was thought worthwhile to find out whether such an association occurs with *Azotobacter* also since this bacterium is widely distributed.

Samples of *Cynodon dactylon* growing naturally were brought to the laboratory, roots were thoroughly washed and placed in warm tetrazolium agar solution as per method described by Dobereiner and Day[2]. After incubation overnight, sites showing high metabolic activity of tetrazolium reducing bacteria in root tissue could be seen as evidenced by reddening of such sites. Transverse sections through such areas observed under the microscope showed bacteria in the cortical cells (Fig. 1) as in *Digitaria decumbens* cv. *transvala*.

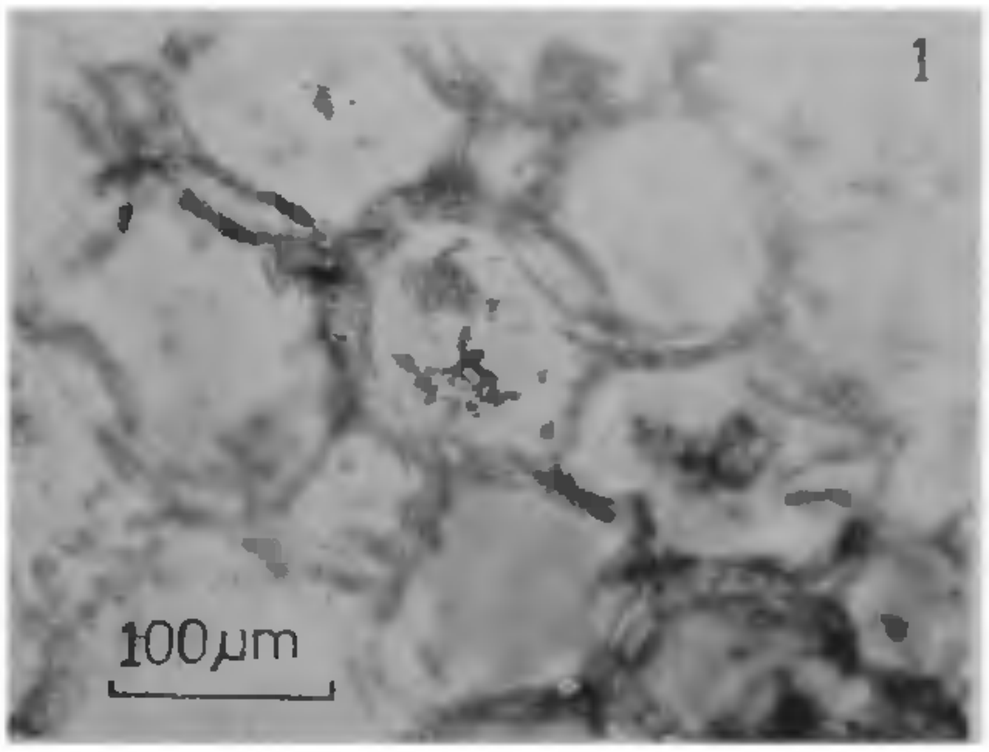

FIG. 1. Photomicrograph of T.S. of Root of *Cynodon dactylon* showing *Azotobacter chroococcum* occurring in cortical cells.

To confirm the presence of bacteria in root tissues, attempts to isolate the bacteria were made by the routine plating technique. Roots were surface sterilised with 2% mercuric chloride solution and washed several times with sterile distilled water. The roots were cut and the cell sap was streaked on petriplates on Jensen's N-free agar which were incubated at 30° C. After 4 days, discrete colonies appeared, which, on