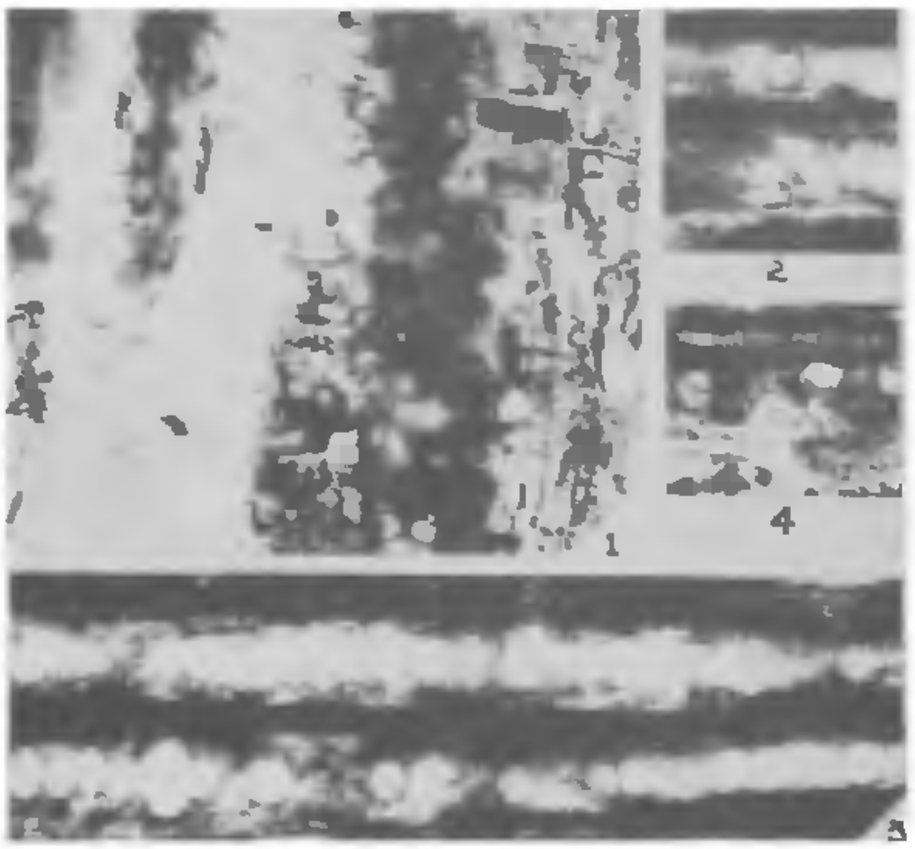
Horizon and Age. Kamthi Beds (Upper Permian) Lower Gondwana, India.

Taxopitys was instituted by Kräusel (1928). Later Lepekhina (1972) gave a new diagnosis as: "Secondary wood of *Prototaxoxylon* type. Primary xylem mesarch, pith non-septate, homo-or-heterocellular". As the present wood shows mearch primary xylem and the secondary wood of *Prototaxoxylon* type it is assigned to *Taxopitys* Kräusel. This wood appreciably differs from all the known species and so it is designated as new species, *T. indica*.



FIGS. 1–4. Fig. 1. L.S. through pith showing mesarch nature of primary xylem, × 150. Fig. 2. R.L.S. showing thin spiral bands on the tracheids, × 500. Fig. 3. R.L.S. showing 1–2 seriate; separate-contiguous pits with thin spirals on the tracheids, × 500. Fig. 4. R.L.S. showing pits with elliptical oblique pit pores, × 500.

The two known species of *Taxopitys*, viz., *T. africana* Kräusel (1928) and *T. alves-pintoi* Kräusel and Dolianiti (1958) differ appreciably from the present wood. In *T. africana* tangential wall pitting is absent, while *T. alves-pintoi* shows thick-walled cells in the pith. Hence, the present wood is referred to a new species which constitutes the first record of *Taxopitys* from India.

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FRUIT ROT OF ORANGE CAUSED BY *SCLEROTIUM ROLFSII* SACC.

DURING a survey in the markets of Kurukshetra, a number of orange fruits (*Citrus reticulata* Blanco) were seen showing rot during February–March 1977. There was initial discoloration and subsequent rot.

The disease was characterised by the formation of a greyish brown nearly circular lesion at the stalk end of the fruit. The lesion became necrotic and enlarged within a few days and a pure white fluffy mass of mycelium covered the fruit. The entire fruit rotted in about 10 days.

The causal organism was isolated by usual methods. The pathogenic nature of the fungus was confirmed by inoculating healthy orange fruits of the same variety and the pathogen proved to be a wound parasite. The fungus identified as *Sclerotium rolfsii* grew well on potato-dextrose agar and Czapex agar.

Rama Krishnan[1] reported *S. rolfsii* causing dieback of branches of *Citrus maxima* from Kerala. This is the first report of the occurrence of this fungus on oranges in India.

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EVIDENCE OF A NEW STRAIN OF *PHAEOISARIOPSIS GRISEOLA* SACC. FROM INDIA

Phaeoisariopsis (*Isariopsis*) *griseola* was first recorded on French beans (*Phaseolus vulgaris* L.) at the Crop Research Station, Solan, H.P. (Sohi, 1963) on five months old bean plants. Since then the fungus has deeply established in this locality and through seed (Sohi and Sharma, 1974) it has successfully disseminated to other parts of the pradesh.

Disease manifestation due to this fungus has been noticed as angular lesions of dark brown colour on leaves, elongated lesions on petioles and stem and circular spots on pods. During the course of the present study even cotyledonary leaves were found infected. Lesions on cotyledonary leaves were circular and as such were not limited by the veins and veinlets. Mycelium of this fungus forms stromatic structures in the substomatal cells. Conidiophores are borne in loose bundles known as Synnemata which arise from the stromatic structure. Numerous conidiophores grow parallel to one another and form erect, columnar coremia on the host surface. These coremia are dark coloured at the base and gradually become

lighter towards their tips. Their measurements range from 19·8–46·2 μ in thickness and 82·5–264·0 μ in length. Conidiophores are many celled, transversely septate, olive yellow in colour and are blunt at tne tips. The conidia are borne on or near the tips of the columnar conidiophores. They are 1–6 (mostly three) septate, light grey in colour, cylindrical to spindle shaped sometimes slightly curved and rarely constricted at the septa. They possess a narrow base at the point of attachment and measure 44·2–95·2 × 6·8–11·9 μ in length and width with an average of 71·06 × 9·86 μ.

Fungus grows readily on honey peptone agar when incubated at 20–25° C. Characteristic synnemata formation is lacking in culture and conidia are borne directly on the tips or even on the sides of the hyphae. In culture, conidia measure 37·4–81·4 × 6·8–10·2 μ in length and width respectively having an average of 57·8–7·8 μ.

On the basis of the morphological characters as described above it is suggested that the present isolate is different from the one reported by Saccardo (1885), Miles (1917), Benlloch (1944), Gremmen (1946), Srinivasan (1953) and Hocking (1967), in respect of length and width of synnemata, conidiophores, conidia and also the conidial septation. Conidial measurements reported by us *i.e.*, 44·2–95·2 × 6·8–11·9 μ on host) and 37·4–81·4 × 6·8–10·2 μ differ from the ones given by the above workers as 50–60 × 5–8·0 : 39·2–70·0 × 5·6–8·4 : 50–75·0 × 7·5 : 34–83·0 × 5·0–9·0 and 55–57·0 × 5·2 μ respectively. This establishes that a new strain of the fungus differing in morphological characters exists in this part of the country.

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EFFECT OF SUBMERGENCE ON THE GROWTH OF TYPHA SPECIES

Typha angustata Bory and Chaub, and *Typha elephantina* Roxb. are among the wide spread noxious weeds throughout India[1]. The plants obstruct the waterflow in irrigation channels and render large areas of low lying agricultural field unfit for cultivation[2]. Singh *et al.*[3] have found that *T. angustata* can be controlled by submerging the stubble of *T. angustata* for four weeks after cutting. Death and decay of *Typha* rhizomes after submergence has also been reported elsewhere[4]. The author's studies on *T. angustata* and *T. elephantina* do not support these findings. In field studies, the plants had been uprooted, cut, and left in the field under water for several weeks. In both the species the rhizomes readily sprouted and produced a number of aerial shoots. The rhizomes when submerged sprouted even after they had been cut to pieces. The cutting of the above ground shoots, also triggered the lateral buds to sprout and grow vigorously. Our detailed studies have shown that the cutting helps to maintain high density and more production.

Though it is difficult to say why the rhizomes decayed and did not sprout in the studies by Singh *et al.*[3]; the present observations show that the mechanical control suggested by them may not be successful, but create more problems.

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INDUCED MUTATIONS IN RIDGRAM WITH SPECIAL REFERENCE TO FLORAL COMPOSITION

In recent years, numerous studies have shown that the induced mutations can produce a large number of morphological variations in different plant parts[1–4]. The present paper deals with the induction of