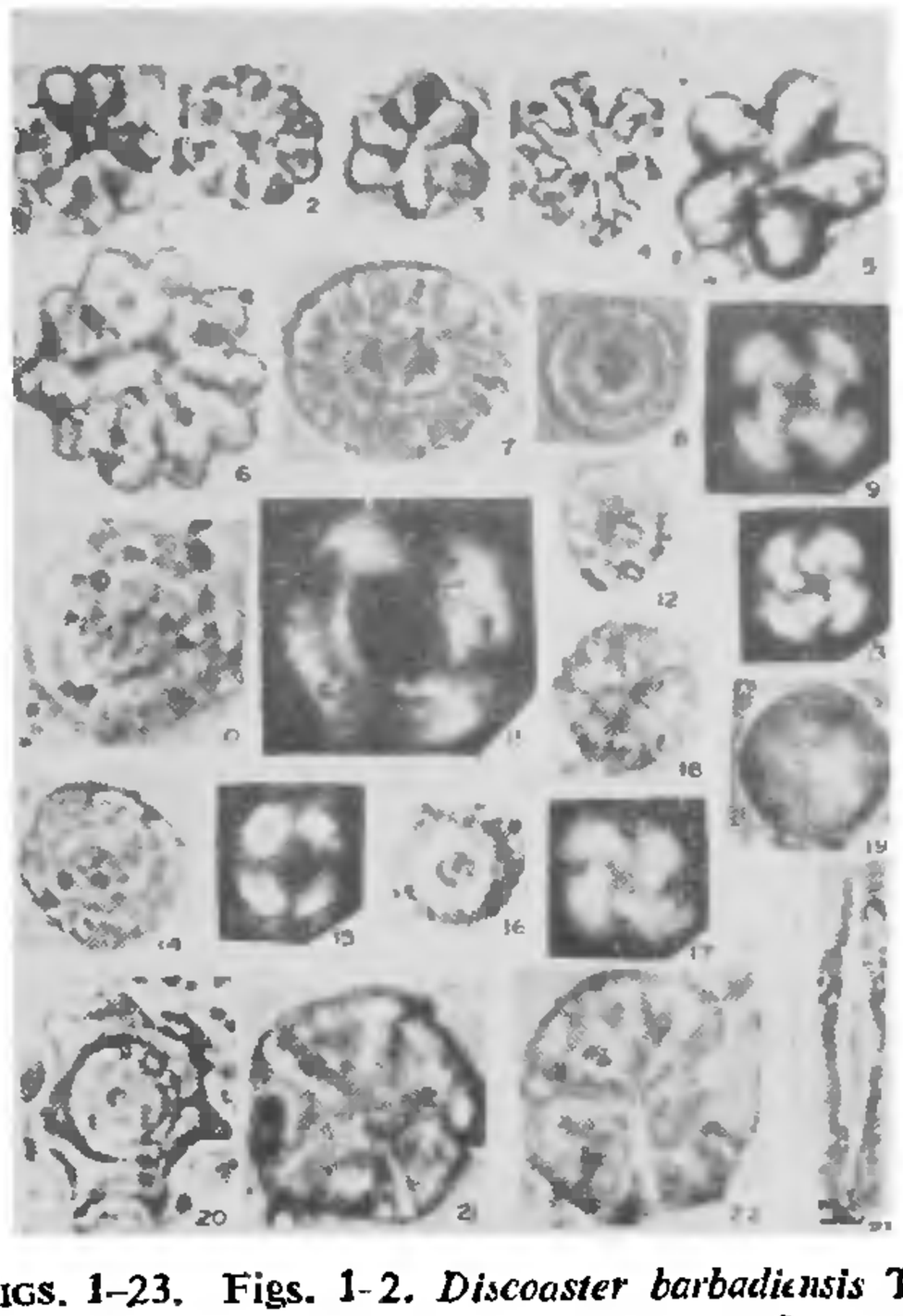

FIGS. 1–23. Figs. 1-2. *Discoaster barbadiensis* Tan Sin Hok, × 2,500; Fig. 3. *D. saipanensis* Bramlette and Riedel, × 2500; Fig. 4, *D. distinctus* Martini, ×2500; Fig. 5. *D. tani* Bramlette and Riedel, × 2500; Fig. 6. *D. elegans* Bramlette and Sullivan, × 2500; Fig. 7. *Ericsonia muiri* (Black), × 2500; Figs. 8–9. *Reticulofenestra dictyoda dictyoda* (Deflandre and Fert), Fig. 8. transmitted light, × 2500; Fig. 9. crossed-nicols, × 2600; Figs. 10–11. *R. placomorpha* (Kamptner and Deflandre), Fig. 10. transmitted light, × 2500, Fig. 11. Crossed-nicols, × 2600; Figs. 12–13. *R. pseudogammation* (Bouche), Fig. 12. transmitted light, × 2500; Fig. 13. crossed-nicols, × 2600; Figs. 14–15. *Cyclococcolithina formosa* (Kamptner); Fig. 14. transmitted light, × 2500; Fig. 15. crossed-nicols, × 2600; Figs. 16–17, *Heliolithus* sp. *a*, Fig. 16. transmitted light, × 2500; Fig. 17. crossed-nicols, × 2600 Fig. 18. *Micrantholithus crenulatus* Bramlette and Sullivan, ×2500; Fig. 19. ? *Coccolithites* sp., × 2500; Fig. 20. *Coronulus germanicus* Stradner, × 2500; Fig. 21. *Braarudosphaera bigelowi* (Gran and Braarud), × 2500; Fig. 22. *B. discula* Bramlette and Riedel, × 2500; Fig. 23, *Triquetrorhabdulus inversus* Bukry, × 2500.

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FIRST RECORD OF *TAXOPITYS* FROM THE INDIAN LOWER GONDWANA

A NEW species of *Taxopitys, T. indica* is described for the first time from the Kamthi Beds (Lower Gondwana) of Kanhargaon village, Chandrapur district, Maharashtra. So far *Taxopitys* is reported from Brazil, Africa and U.S.S.R. The wood measures 6 cm in length and 8 cm in diameter with pith.

Diagnosis : Growth rings clear, early wood 80–110 tracheids and late wood 3–5 tracheids wide. Medullary rays in cross section separated by 3–14 tracheids. Pith homogeneous, parenchymatous. Primary xylem adjacent to pith 8–12 cells deep, mesarch (Fig. 1). Vascular trace near pith present.

Metaxylem consisting of scalariform tracheids followed by protoxylem of spiral tracheids and finally secondary xylem with bordered pits. Annular and reticulate elements absent.

Medullary rays homogeneous, 1–2 seriate, 14% biseriate, 1–30 cells deep, average height 6–7 cells (25 counts). Tangential walls of tracheids showing 2–3·5 μ thick, transparent spirals, 1·5–4 μ apart, along with 1–2 seriate hexagonal, alternate contiguous pits.

Radial walls also showing uniseriate spirals, 1·5–4 μ thick, oriented at 40°–50°; spirals running between and over the border of radial wall pits (Fig. 2). Radial wall pits 1–3 seriate, circular, bordered, separate-contiguous and alternate. In uniseriate condition rarely 2–3 contiguous groups of pits found among isolated pits (Fig. 3). 2–3 seriate pits separate and alternate. Pit pores elliptical, oblique or circular (Fig. 4). Crossfield pits up to 7; 5·1–6·8 μ in diameter, circular bordered, separate with oval-subcircular pit pores.

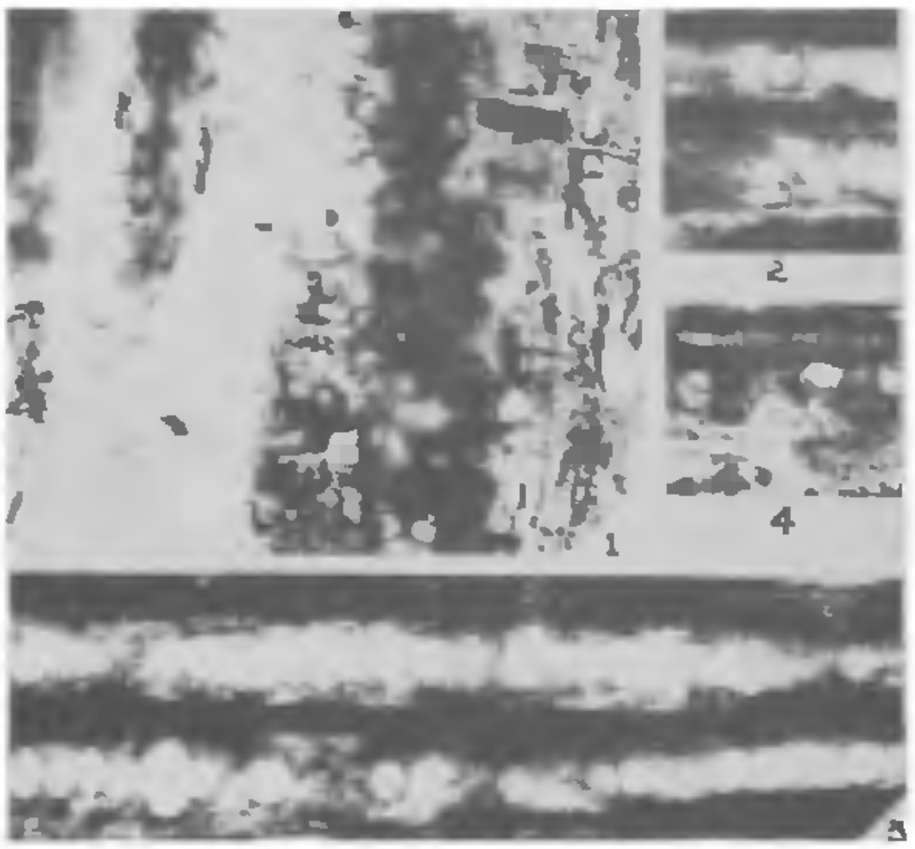
Taxopitys indica sp. nov.

Holotype : Regd. no. 35506, Birbal Sahni Institute of Palaeobotany, Lucknow.

Locality : Maharashtra, Chandrapur district, Kanhargaon village.

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.

Birbal Sahni Institute of Palaeobotany, Lucknow,
February 1, 1978.

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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