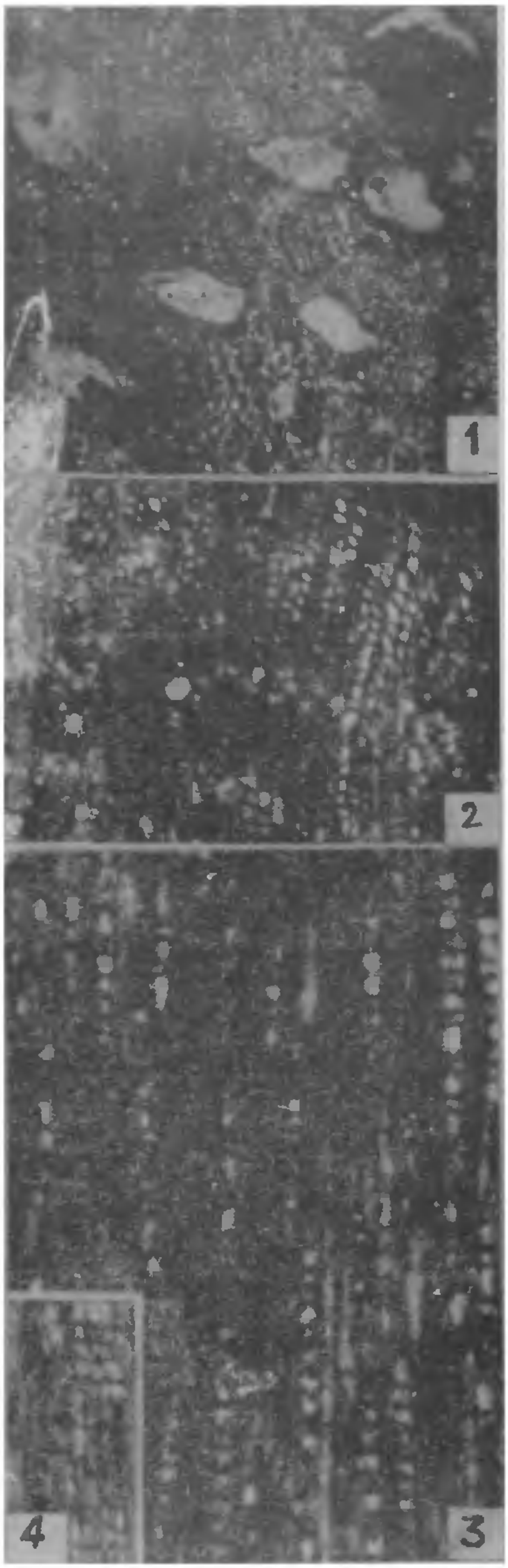

FIGS. 1–4. Fig. 1. Cross section showing the type and distribution of vessels and pacenthyma, × 90, Fig. 2. A portion of cross section magnified to show bands of parenchyma, × 190, Fig. 3. Tangential longitudinal section showing xylem rays, × 220. Fig 4. Radial longitudinal section showing xylem rays with procumbent and upright cells, × 220.

ends, perforation simple, intervessel pitting alternate. bordered with slit like aperture. *Parenchyma* apotracheal in fine tangential bands, each 1–3 (mostly 2) cells wide, wavy, continuous as well as in broken interrupted lines (Figs. 1 & 2). *Xylem rays* fine, uniseriate, occasionally biseriate due to pairing of the procumbent cells (Fig. 3), ray tissue heterogenous, rays heterocellular (Fig. 4) consisting of 1–2 marginal rows of upright cells, 6–27 (198–668 μm) cells in height, 12–24 per mm. *Fibrers* allgned in radial rows non-libriform (Figs. 1 & 2), non-septate.

That the present fossil wood resembles the genus *Parinarioxylon* Pfeffer & Van Heurn[2] of the family Rosaceae becomes evident on the basis of anatomical characters enumerated above. Resemblance with *P. itersonii* Pfeiffer & Van Heurn[2] & *P. cuddalorense* Awasthi[1], is only slight. It differs from *P. cuddalorense* in having larger vessels, less vessels per sq. mm. and low xylem rays. It is closer to *P. itersonii* but can be differentiated from the latter by its having small to large sized vessels per sq. mm. and mostly 2 cells wide apotracheal parenchyma. The present fossil wood is distinct from the two known species of *Parinarioxylon* and is not identical with any living species of the genus *Parinarium;* it is. therefore, named *Parinarioxylon sphendidum* sp. nov.

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A NEW TYPE OF ALTERNARIOSIS IN *ARACHIS HYPOGEA* L.

DURING navarai season the leaves of groundnut varieties TMV 2, 7 and 11 showed orange-brown necrotic spots in the interveinal areas extending into veins and veinlets (Fig. 1). The disease incidence was high with the onset of flowering. Infected leaves were surface sterilized with 0·1% mercuric chloride, and then plated onto acidified potato dextrose agar. White

fluffy colonies emerged from the spots after 48 hours and produced black diffusible pigments into the medium. Later, the colonies turned into olive colour but did not sporulate when incubated under total darkness. Exposure to day light fluorescent lamps or near ultra violet light (F 40 - BLB/U. S. A. Sylvania) for 12 hours followed by darkness induced sporulation. On the basis of conidial measurements, morphology and development the causal organism was identified as *Alternaria alternata* (Fr.) Keissler. Koch's postulates were followed in confirming the pathogenicity of this isolate.

FIG. 1. Typical veinal necrosis in leaves of *Arachis hypogea*.

Serial hand sections of the lesions revealed complete browning of the mesophyll tissue. Both epidermal and palisade cells were filled with brown substances and in some lesions conidiophores and conidia were seen on the upper epidermis.

The germinating fluid of the conidia was collected by incubating the conidia harvested from 10–day old cultures raised on potato dextrose agar. This was separated from the germlings by low speed centrifugation and the supernatant was tested for its phytotoxicity on detached leaves. Necroric flecks appeared after 48–60 hours of incubation under moist chamber. The germinating fluid was extracted with an equal volume of ethyl acetate and the extract was evaporated to dryness when a colourless residue was obtained. This residue was suspended in ethyl acetate and partitioned in a TLC plate using toluene: ethyl acetate ; formic acid (6 : 3. : 1) as the developing system. There was a blue fluorescing region near the solvent front which was then eluted in 2 ml of distilled water. A few drops of this fraction were placed on detached leaves of groundnut and incubated in a moist chamber. Typical necrosis appeared after 48–60 hours which extended into veins and veinlets. This fraction had an Rf value of 0·93. Of particular interest is the point that acidified ethyl acetate extracts of culture filtrates of different age levels, *viz.*, 10, 15 and 20 showed this particular fraction which is phytotoxic. Studies on the chemical nature of this substance are under way.

There was an earlier report of *Alternaria arachidis* on *Arachis hypogea* by Kulkarni[1], where he considered it as a new species based on conidial morphology. However, the disease symptom presented here is quite different from that of the reported one and furthermore, the caused organism fits into the characters of *A. alternata* described. The literature suggests that this is the first record of veinal necrosis on *A. hypogea* by *A. alternata* in India.

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SCREENING OF *JASMINUM* SPECIES AGAINST YELLOW RING MOSAIC VIRUS

DURING our surveys in and around Bangalore and also at the Experimental Farm of Indian Institute of Horticultural Research, Hessaraghatta, symptoms resembling virus disease were noticed on different species of *Jasminum*. The Plants multiplied through rooted cuttings collected from the infected plants exhibited chlorotic spots, rings, oak leaf pattern and mosaic symptoms Fig. 1). Conspicuous symptoms were noticed on the older leaves. The virus under study closely resembles the yellow ring mosaic of Jasmine reported by Mariappan and Ramanujam[1] in symptomatology and in transmission studies. It also resembles a whitefly transmitted virus disease on *Jasminum sambac* reported by Wilson[2]. The results of the screening of 18 species and 11 varieties of Jasmine grown at the Experimental Farm of Indian Institute of Horticultural Research, Hessaraghatta, are presented herein.