

a nearly globose to elliptical tip, diameter of the tip  $6-6.7\mu$ , bearing many conidia produced singly on minute, short pegs. Conidia ovate to oblong, 1-celled, pale-brown to fuliginous, smooth-walled, with a minute basal scar indicating the point of attachment,  $5-6.7 \times 3-4.7\mu$  (Fig. 1).

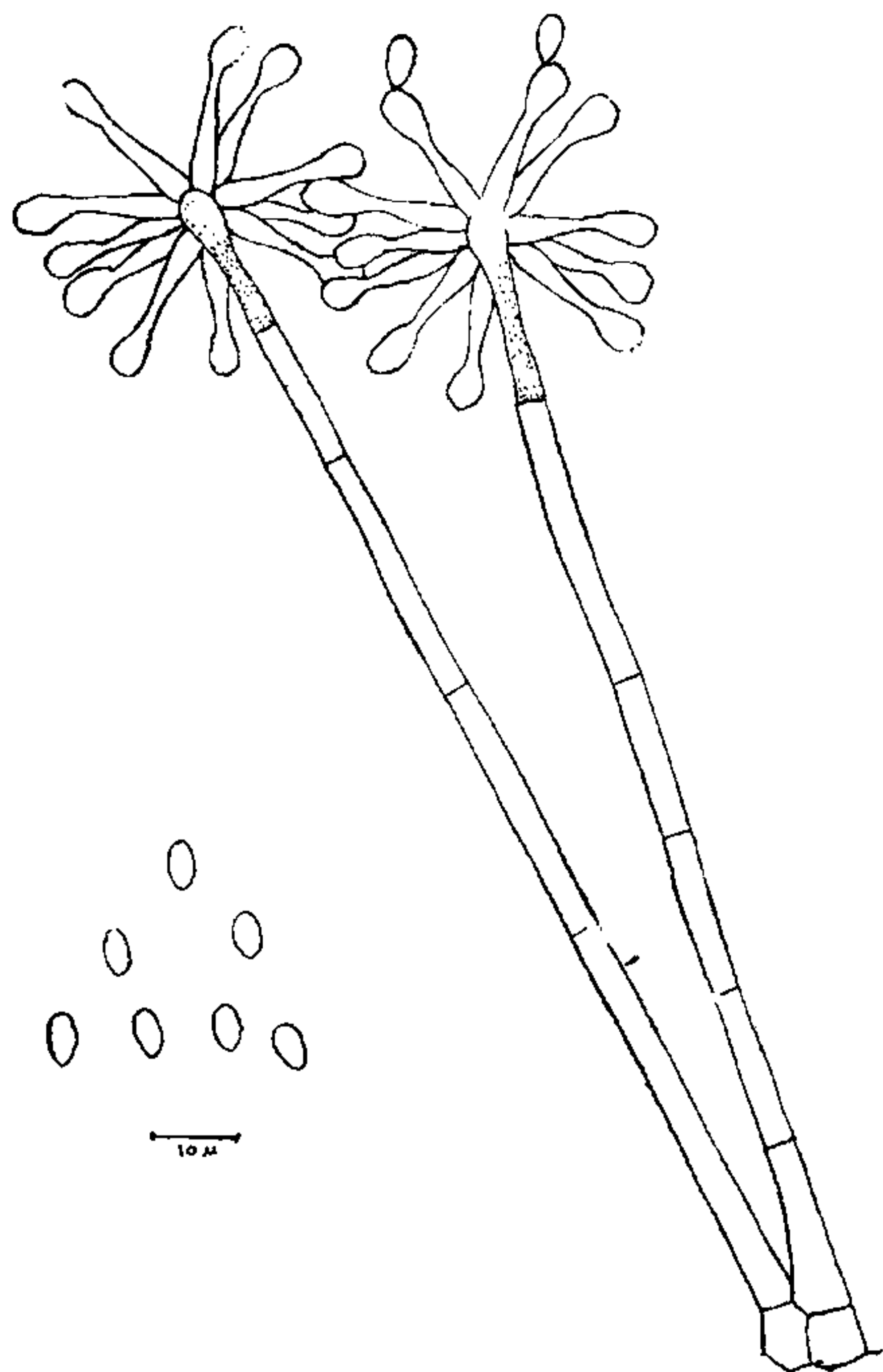


FIG. 1. Showing Conidiophores and Conidia.

Specimen deposited with Botany Department,  
University of Jodhpur, Jodhpur, J.U.M.L., 326.

Mycology and Plant Pathology  
Laboratory,

Department of Botany,  
University of Jodhpur,

Jodhpur, India, August 15, 1974.

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# AN INTERESTING ASCOMYCETE FROM COORG (KARNATAKA)

DURING a tour in the Coorg Forests an interesting ascomycetous fungus was collected growing on the twigs of *Lobelia trigona* Roxb. The infected areas were in the nature of stroma forming a thin, black, carbonaceous outer layer on the host. Critical examination of the material further revealed its identity as a species of *Pleuroceras* Riess. (Diaporthaceae)<sup>1</sup>, hitherto an unrecorded genus in India. For its identity, the fungus was studied in detail and found to be distinct, differing significantly from *Pleuroceras cryptoderis* (Lev.) v. Hohn.<sup>3</sup>, the type species, as well as *P. populi* Thompson<sup>2</sup> in respect of gross-morphological characters and dimensions of fruiting structures, besides being collected on a new host. Hence, the same has been described here as a new species, viz.,

*Pleuroceras lobelii* SP. NOV. (Fig. 1)

Stromata nigra, levia, coriaceo-carbonaceis tenui : perithecia rostellata, tenuiter-tunicata, membranaceo, defixus oblique in plantis textus, ostiolata, usque ad 1-2 per stroma, magnit :  $340-510 \times 255-340\mu$  ; collo brevia vel piriformibus,  $136-170 \times 80\mu$ , diagonalia et lateralialia oriunda ; periphyses numerosae, filiformae hyalinae ; paraphysibus nullae ; asci octospori, unitunicati, aparaphysatae, cylindricei vel clavati, emergentes in fasciculo, magnit :  $95-114 \times 9.5-11.4\mu$  ; ascospores bicellulares, hyalinae, tenuiter-tunicati, forma fusus, constrictae ad septa,  $22.8-30.4 \times 2-3.8\mu$ .

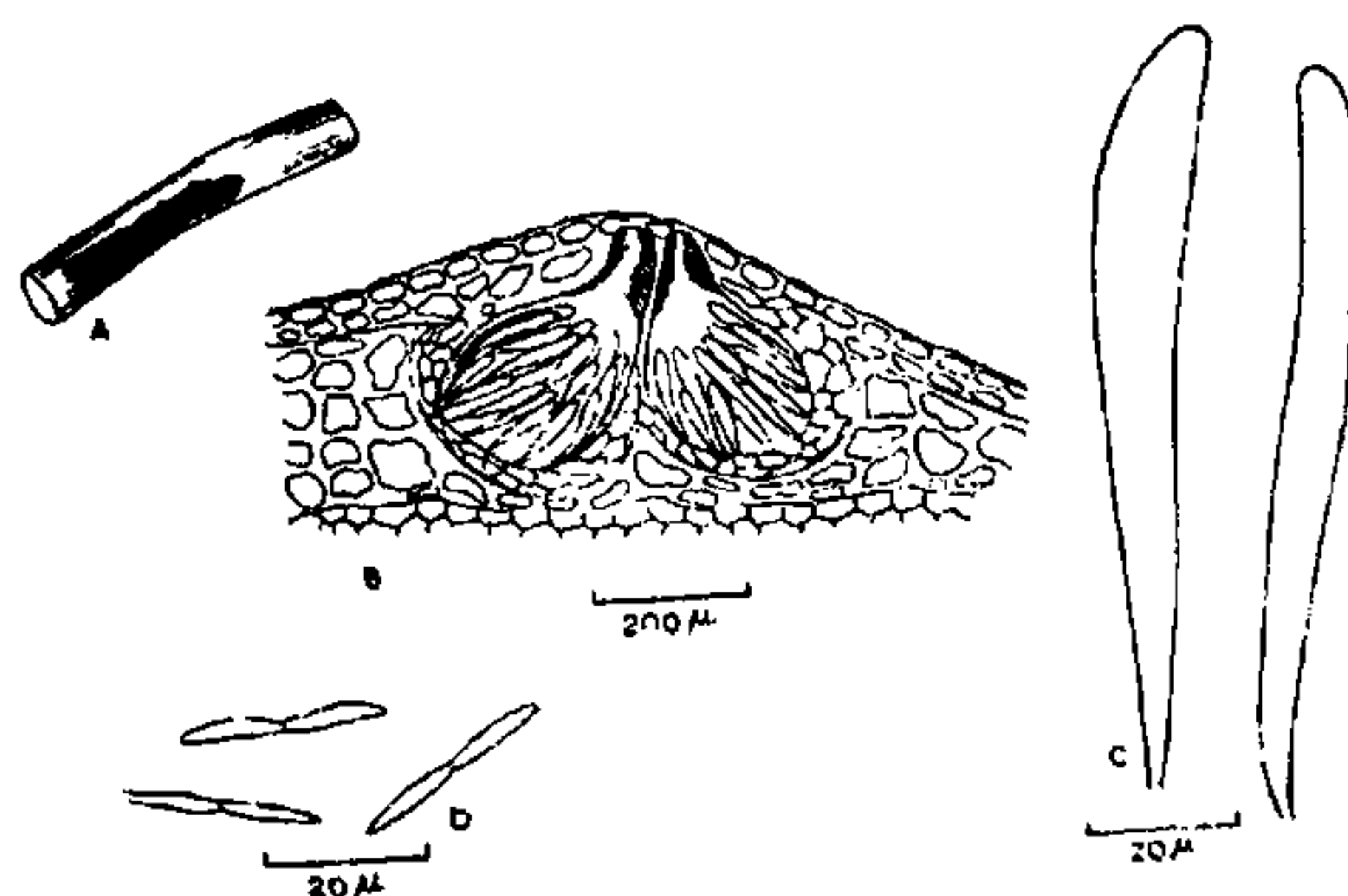


FIG. 1. *Pleuroceras lobelii*. A, Habit ; B, V. S. through a stroma ; C, Asci ; D, Ascospores.

Matrix : In culmis emortuis *Lobelia trigona* Roxb. (F. Lobeliaceae), leg. D. V. Narendra (November 11, 1971), ad Mercara (Coorg, Karnataka), No. AMH 2188 (Holotypus).

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confirming the identity of the fungus and to the Director, M.A.C.S., Poona, for laboratory facilities.

M.A.C.S., Research Institute, D. V. NARENDRA.  
Poona-4 (India). V. G. RAO.  
August 22, 1974.

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#### RESISTANCE OF TOMATO CULTIVARS TO THE ROOT-KNOT NEMATODE, *MELOIDOGYNE INCOGNITA*

(KOFOLD AND WHITE, 1919) CHITWOOD, 1949

ROOT-KNOT nematodes constitute one of the important pests of vegetables in India. Solanaceous crops including tomato suffer from heavy damage when grown in soil infested with *Meloidogyne incognita* and *M. javanica*.

In any nematode control programme, development of nematode resistant varieties constitute an important objective, in addition to chemical and crop rotation methods. Some cultivars and selections have been reported to show resistance to root-knot nematodes by various workers<sup>1-6</sup>.

Five tomato varieties were assessed for their relative resistance to the root-knot nematode, *M. incognita*, at the Experimental Station, Hessara-ghatta, Indian Institute of Horticultural Research, Bangalore. Cultures of *M. incognita*, maintained on tomato variety, Pusa Ruby, were used as the inoculum source. Seedlings of different varieties raised in nematode free soil (soil treated with D-D at the rate of 60 gallons/acre and stored in wooden boxes for about 6 months) were transplanted in 6" clay pots. At transplantation 100 gm of infested soil (about 5,800 larvae in 100 gm of soil) was added around the root system in each pot. Six replicates were kept for each variety. After 10 weeks the plants were carefully uprooted by breaking the pot and washing the roots under running tap water. The root-knot index was obtained on a scale of 1-5 with the plant showing an index between 1 and 2 rated as resistant (Table I and Fig. 1).

The varieties Pelican, Hawaii-7746, Hawaii-7747 were found resistant to *M. incognita*, with a root-knot index of 1.5, 1.17 and 1.17 respectively, whereas *Lycopersicon pimpinellifolium* and the variety Pusa Ruby with a root-knot index of 4.00 and 5.00 were susceptible.

Dropkin *et al.*<sup>1</sup> have shown that *L. pimpinellifolium* was susceptible to *M. hapla* and *M. incognita acrita*. Khan *et al.* have reported in their

TABLE I

Root-knot index of tomato varieties that show differences in resistance after transplanting in soil infested with *Meloidogyne incognita*

Variety	Root-knot index <sup>a</sup>
Pelican	1.50
Hawaii-7746	1.17
Hawaii-7747	1.17
Pusa Ruby	5.00
<i>Lycopersicon pimpinellifolium</i>	4.00

<sup>a</sup> : 1=no galling on roots; 2=1-25% galled; 3=26-50% galled; 4=51-75% galled and 5=76-100% of roots galled.

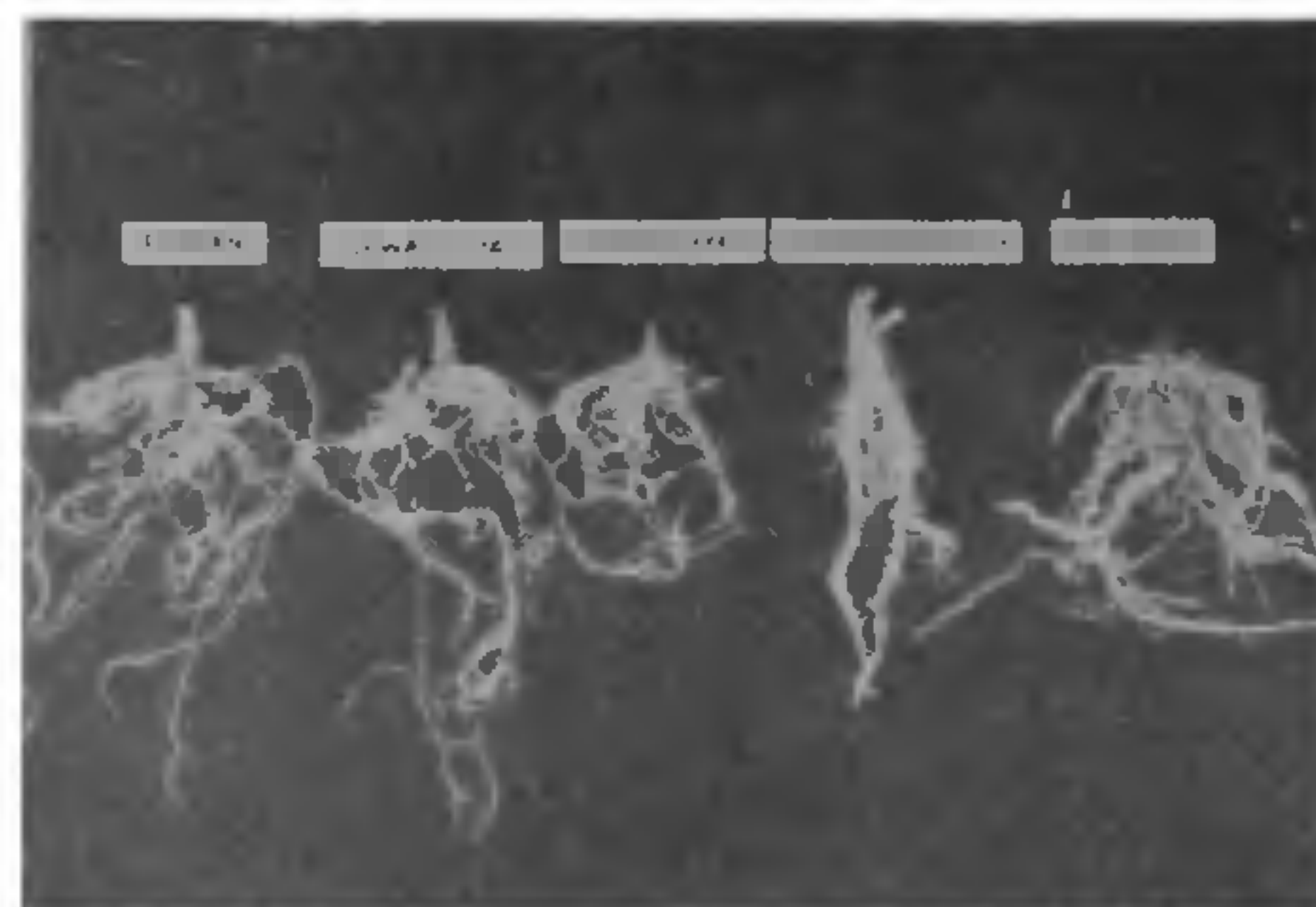


FIG. 1. Roots of different tomato varieties showing different degrees of infestation: Pelican, Hawaii-7746, 7747—Resistant. *L. pimpinellifolium* and Pusa Ruby—susceptible.

studies that *L. pimpinellifolium* to be resistant to *M. incognita* while here it has been recorded as susceptible. It is quite possible that there may be a variation in the species. *L. pimpinellifolium* or there may be existence of different strains in *M. incognita*. Sikora *et al.*<sup>5</sup> reported a similar observation with respect to screening of root-knot nematode resistant tomato cultivars against *M. javanica*. They observed that two resistant varieties VFN-8 and VFN-368 were found heavily galled to a Pant Nagar population. This shows that the known resistant varieties should be carefully screened against the local populations of root-knot nematodes before they are recommended for a particular area for cultivation or before their inclusion in a breeding programme.

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