

RESEARCH NOTES

(I)

MELOIDOGYNE SPP.—CAUSE OF ROOT-KNOT OF IMPORTANT
FOREST TREE SPECIES IN NURSERIES

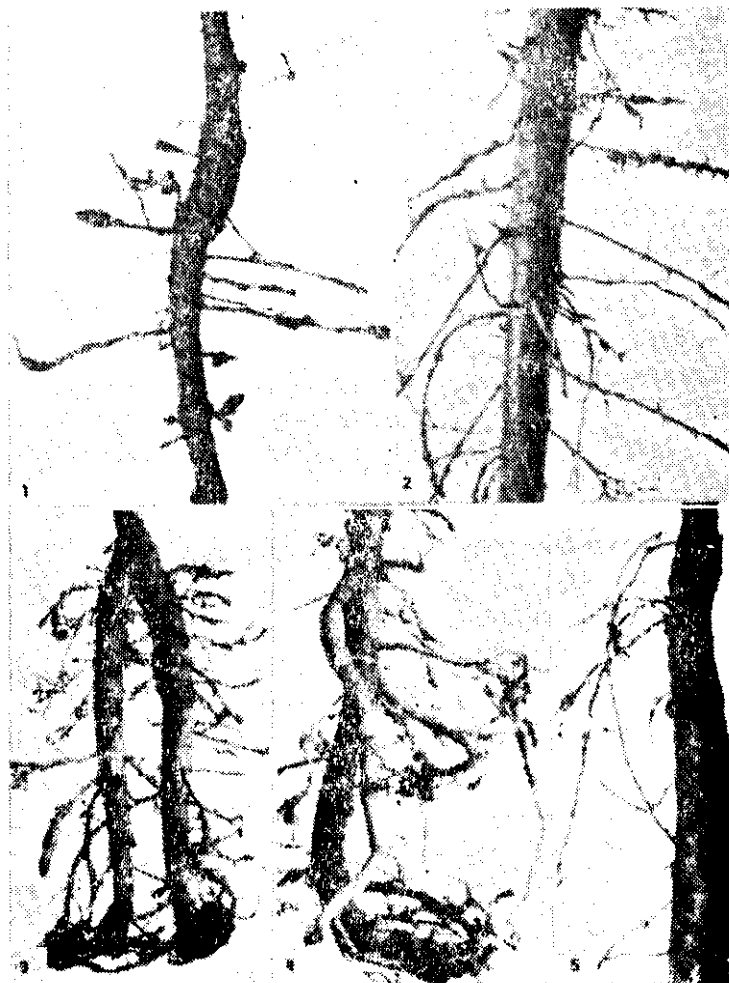
During forest disease surveys conducted in nurseries in and around Dehra Dun in 1990-91, the authors recorded root-knot nematodes parasitizing important tree species namely *Acacia catechu* Willd., *Albizia procera* Benth., *Pongamia pinnata* Pierre and *Tectona grandis* Linn. The infected plants exhibited galling and relatively poor growth. Three species of *Meloidogyne* were identified as *M. arenaria* (Neal) Chitwood, *M. javanica* (Treb) Chitwood and *M. incognita* (Kofoid and White) Chitwood based on their perineal pattern. *Meloidogyne javanica* attacked root of *Pongamia pinnata* seedlings both at Lacchiwala and Kalsi nurseries. However, the incidence of root infestation at Lacchiwala was more (40%) than at Kalsi (10%). On the other hand, *M. javanica* was recorded on *Albizia procera* at Kalsi and it was absent at Lacchiwala. The infection in this tree species varied from 15-20%. The incidence of *M. javanica* infestation in *Acacia catechu* varied from 10-30% in nurseries at Lacchiwala, Kalsi and Karuapani.

It was of interest to note that three species of *Meloidogyne* were associated with

Tectona grandis. *Meloidogyne javanica* was recorded from nurseries at Karuapani whereas *M. arenaria* occurred in nurseries at Lacchiwala and Satyanarayan. On the other hand, *Meloidogyne incognita* occurred in nurseries at Lacchiwala, New Forest and Kalsi. Out of three root-knot nematode species recorded, *M. javanica* appeared to be the most commonly occurring in forest nurseries in Dehra Dun and *Pongamia pinnata* appeared to be the most preferred host for this species as both number and size of galls produced were more than recorded in other tree species parasitized by the nematode (Plate 1, Figs. 1-5).

In all the tree species fresh infection started after a few monsoon showers in July and by October end seedlings showed maximum infection as was evident from galling in roots. However, the infection started declining and the number of galls was greatly reduced during summer. All the three species are new host records for *M. javanica* whereas *T. grandis* is recorded for the first time parasitized by *M. arenaria*.

Plate 1



Figs. 1-5. Nematode galls. 1. Galls incited by *Meloidogyne arenaria* on *Tectona grandis*. Galls incited by *Meloidogyne javanica* on 2. *Pongamia pinnata*, 3. *Tectona grandis*, 4. *Albizia procera*, 5. *Acacia catechu*.

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