



Army ant, *Dorylus* sp. (Dorylinae: Formicidae), a threat to coconut nursery

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The army ants are found mostly in Tropical countries especially in laterite soil. They remain in galleries underground or on fallen wood. Each colony contains lakhs of ants, consisting of queen, wingless females with undeveloped ovaries (workers) and winged males.



Fig.1

In some of the coconut nurseries in Kasaragod district, most of the coconut sprouts and seedlings were found dried. It was told by the farmers that the first visible symptom noticed was drying up of the spindle and innermost leaves, followed by drying of the seedlings(Fig.1).

One of the nurseries was examined thoroughly. The nursery was inside the coconut plantation under shade, mulched with grass. The farmer had lost 400 seedlings during the last year and during the current year, out of sixty seedlings, majority were dried.

The wilted spindle and leaves were coming out easily with a slight pull. The outer leaves look green and healthy (Fig. 2). Dried seedlings were taken out and examined. The absorbing portion of the roots were eaten away. Then the seed nut was cut open and observed that it was full of a species of big ants (Fig.3). The ants had fed on the haustoria and since the haustoria was fully exhausted the spindle and leaves lost connection with the seed nut and were devoid of nutrient supply. Hence subsequently the seedlings dried up (Fig.4). It was evident that the ants entered inside the seed nut piercing the stigma of the nut. The kernel was in a decayed condition with foul smell.

The ants were got identified from the Department of Entomology, Calicut University as the Army ant, *Dorylus* sp. Fab.(Dorylinae : Formicidae) (Fig. 5). The army ants are found mostly in tropical countries especially in laterite soil. They remain in galleries underground or on fallen wood. Each colony contains lakhs of ants, consisting of queen, wingless females with undeveloped ovaries (workers) and winged males. The workers form the largest proportion of the population of ant colony. They are reddish brown in color having very hard mandibles which are characteristic of this species of ants.

In the germinating seed nuts, haustoria are formed for providing nutrient supply to the sprouts. The ants are attracted to the sweet haustoria and they enter inside in



Fig.2

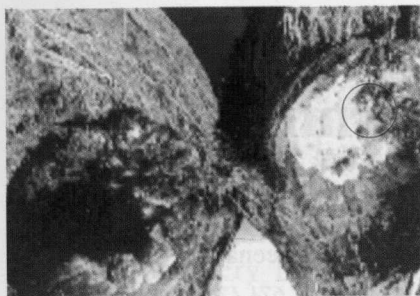


Fig. 3

large numbers piercing the stigma and exhaust the haustoria. Moreover they feed on the tip of the roots also. As a result, due to the lack of nutrient and water supply the sprouts/seedlings are dried. Earlier *Dorylus orientalis* Fab. were found damaging coconut seedlings in the nursery at Kidu seed farm of CPCRI, Kasaragod.

The following recommendations were given to the farmers to get rid of the ants in future. The army ants inhabits mostly in laterite soil. Hence

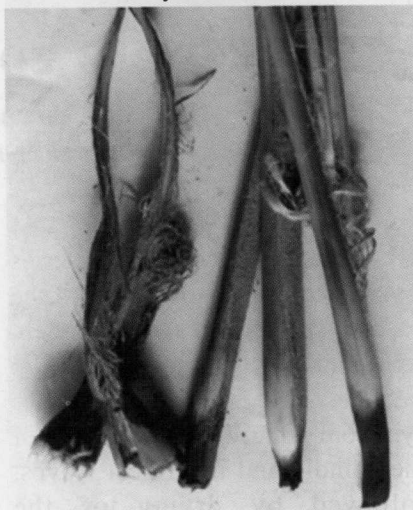


Fig. 4

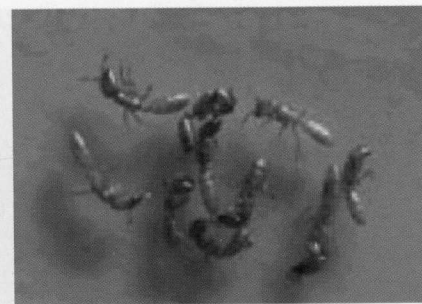


Fig. 5

in such places when nurseries are established, if water stagnation is there, raised beds (on an average 15 cm height) are to be made. Then the soil is to be drenched twice with 0.05 per cent Chlorpyrifos (at 20-25 days interval). Then sand is to be spread to a thickness of 20 – 30 cm height. Then only the seed nuts are to be sown to get rid of the army ants.

Coconut eating rats plague Pacific Islands

The United Nations will funnel \$200,000 to a tiny Pacific Island country to help fight the biggest threat its local economy faces - tree leaping rats.

Young coconuts are at risk on the nine coral islands of Tuvalu, where nimble black rats jump between palms and gnaw through the shells, as reported by the UN Food and Agriculture Organization. Coconuts and copra are major island exports.

The rats whose scientific name is *Rattus rattus* are not only eating the country out of the prized crop, their insatiable appetites are also destroying the diet of the world's largest land invertebrates.

Coconut crabs, usually the size

of a small cat, dine on fallen coconuts. Once ubiquitous in the Pacific Islands, their numbers are dwindling because of their slow growth rates and their popularity on some islands as a culinary delicacy.

The FAO is bringing Tuvalu's rodent expert out of retirement to oversee its pesticide plan. The agency will fill recycled Australian pineapple cans with poisoned bait and dangle the cans just above the ground- too high for coconut crabs but within reach of the rats, who can leap up to a meter into the air. The agency will also wrap the island's palm trunks in metal sheets, to keep rats from scurrying to the top.

(www.upi.com)

RESEARCH HIGHLIGHTS

Genetic Resources

Germplasm exploration trips were undertaken by the CPCRI in Porbander, Junagadh, Amreli and Bhavanagar districts of Gujarat and six diverse coconut accessions and seven arecanut accessions were collected and included in the germplasm holding of the Institute. Two collections from the Indian Ocean and three collection from Indian ocean planted at NCGB commenced flowering.

Studies on pollen production in coconut accessions showed that pollen production per inflorescence was higher in tall like Ordinary Tall (9.28g) and Benaulim Tall (9.27g) and less in dwarfs like Chowghat Orange dwarf (4.76g) and Gangabodam dwarf (4.14 g)

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