



# TRI UPDATE

Published by the Tea Research Institute of Sri Lanka  
Vol. I No. I January 1996

## KILLER ANT IN DENIYAYA

One killer insect of tea, an ant, has drawn our attention.

The TRI has identified the species as *Acropyga acutiventris* Roger (Hymenoptera: Formicidae: Formicinae). Bush casualties due to its activity is so far confined to Deniyaya, Indola, Batadura, Pitabeddara, Kosmilgoda and Alapaladeniya in Morawak Korale (=Deniyaya). Casualties start with a few bushes and spread in a radial manner.

*A. acutiventris* has been recorded from Sri Lanka, Western India, Myanmar (Burma) and Nicobar Islands.

The ant nests underground (Fig. I-4). The nest is a ramification of tunnels underneath tea bushes and other trees and the tunnels open to the surface of the ground at the base of the tea bush.

The colony comprises workers (Fig. I-10), the egg-laying female and male. At any given time, a nest may also contain the immature stages i.e., eggs, larvae, pupal cocoons (Fig. I-11, b.c.d). One colony may have several egg-laying females. The males die after the mating flight. One colony can expand underground covering a large extent of land before new colonies are founded by winged forms.

The worker (♂) and the egg-laying female (♀) are deep brownish yellow or reddish yellow all over with two prominent jet-black eyes. The worker is about 4.0-5.5 mm long and a colony has workers of different sizes, each performing a different function. The egg-laying females (♀) are about 6.5 mm long.

Very occasionally, other vegetation can pose a problem to tea as in this case. The ant is symbiotically associated with a species of root-feeding "bug" (Fig. I-9). Tunnels of the ant nest follow the roots (Fig. I-5 to 7) of the other plants (Fig. I-2) on which the "bug" feeds (Fig. I-8). The ant feeds on the honey dew excreted by the "bug". Also, it stores colonies of the "bug" in its tunnels in order to supplement the diet of its adults and larvae.

The food plants of the "bug" include Jack, Mango, Coffee, Coconut, Kitul Palm, Arecanut, Anthurium, Banana and Guatemala grass. The ant transports the "bug" to new feeding sites from time to time.

The damage to tea is two-fold. First, the ant feeds on the roots of the tea plant. Second, due to its nesting activity, the feeder roots are exposed to air pockets of the tunnels and they die due to dehydration.

The Institute can report on control aspects, at this stage, as follows:

Carbaryl, a carbamate having contact and stomach poison action, used at a dilution of 1.5 g of 85% WP formulation in 1 litre of water per bush, could be applied as a

drench at the base of the affected tea bush. One application can bring about total eradication of the "bug" and about 90% mortality of the ants. A second or third application at 2-week intervals can eradicate the ant colonies totally. The "bug" does not survive in the absence of the ant. Thus, eradication of the ant in its own nest is adequate to manage the problem.

However, in the case of lands already with infestation pockets, it is necessary to keep vigilance for fresh outbreaks and treat them at detection.

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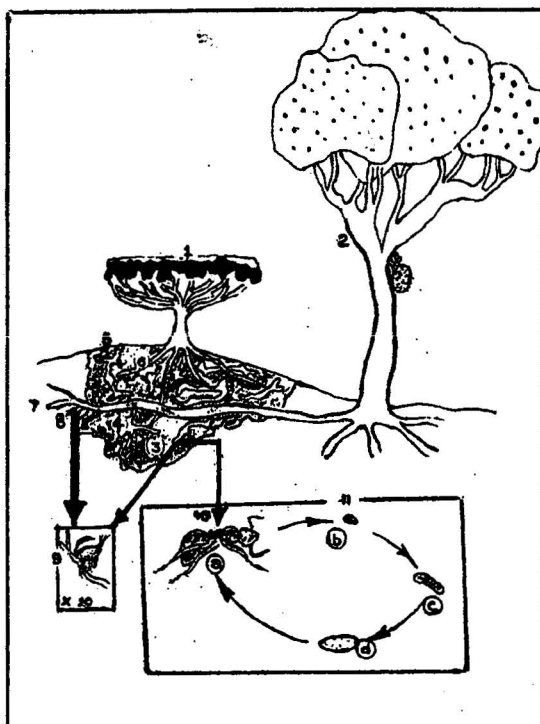


Fig. I