

STUDIES ON THE RING-BARKING OF YOUNG TEA PLANTS BY  
WHITE GRUBS AND THE FUNGI *PHOMOPSIS*  
AND *ROSELLINIA*

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Many plants are lost annually in young clearings, specially during the first two years, due to the ring-barking of these plants at the collar region. In the past, these deaths have been mainly attributed to the fungus *Phomopsis theae*, which is known to cause collar and branch canker in young tea. The role of *Rosellinia arcuata*, the fungus which causes black root disease of tea and the larvae of the Scarabaeid beetles, commonly known as 'White grubs', in the ring-barking of young tea plants have been overlooked.

Correct identification of the cause of these deaths, because of the similarity of the symptoms, is important from the point of view of the control measures to be adopted to prevent the spread of the diseases, because the control measures are different in each case.

It was found that deaths due to *Phomopsis* occur with the onset of the monsoon although infection takes place during the dry season. This has often been confused with the ring-barking caused by *Rosellinia*, which also occur during the early part of the monsoon. But in this case it was found that infection takes place during wet weather. By microscopic examination of the fruiting bodies and spores found on the dead region it was possible to identify the causative organism. Attack by white grubs was found to be seasonal, irrespective of weather, occurring during August to December. The callus, in the case of white grub attack was found at soil level with the bark below being completely eaten by the grub and no spores were found on the dead region. Heavy thatching during dry weather, was found to reduce the incidence of *Phomopsis*. Whereas, if this thatch is not thinned out or removed during wet weather, then the incidence of *Rosellinia* and white grubs was found to be enhanced. From these studies it appears that *Rosellinia* causes more deaths in young plants than hitherto believed.