

BIONOMICS OF THE GENUS



The eggs are laid in batches of ten to thirty in the partly dried-up dung heap, each egg being deposited individually and covered over with dung material. They will hatch in very short time. The larvae are found in the heaps of farmyard manure, decaying vegetable matter, such as dead coconut trunks and stumps, decomposing refuse, heaps of wet sugar cane trash (Cherian and Anantanarayanan, 1939), saw dust that was exposed to rains and it had been kept dry, and almost any kind of compost in fermenting condition. The full grown larva is clumsily heavy and sluggish in its movements. The larvae are found at a depth of two to twelve inches in the refuge. During periods active feeding, large quantity of dung material and decomposing vegetable matter are ingested and thrown out as conspicuous pellets and castings. The mature grubs when handled exudes large quantities of liquid through its mouth, and semi-solid black matter through its anal opening. The grub preparatory to pupation. The cocoon is usually found at depth of six to twelfth inches below surface level. The pupa period being 21 days, with a minimum period of 18 days. Emerging from the pupa, the beetle is yellowish in color, gradually brown

and finally black. The cocoon is not immediately vacated, the beetle remaining quiescent for a few days and waiting for the body wall to harden (Doane, 1913).

The adult beetle lives in concealment during the day time in the crowns of coconut trees. It flies at night, and sometimes comes to lights (Mackie, 1917). The beetle usually attacks the leaf in the unopened and opened stages. In the unopened stage of the leaf the beetle tunnels into the central spindle and feeds on the juice by chewing up the tissue of the leaf, when the leaves open they present a very characteristic appearance looking as if they had been cut by shears. It reduces the photosynthetic area of the leaf and may affect the normal physiological activity of the trees. Moreover, the presence of a large number of beetles on a single palm may result in the beetles boring deeper down and getting access to the growing tip or cabbage area. This may lead to the mortality of the palm (Nirula, Antony, Menon, 1950).