A NOTE ON A NEW PEST OF THE ARECANUT CROP

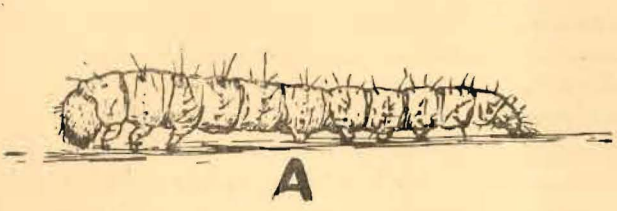
(Contributed)

A new pest has been noticed on the arecanut crop at the Central Arecanut Research Station, Vittal, and some of the arecanut gardens around the Vittal Kasba of South Kanara District of Mysore State. This is a lepidopterous pest and capable of doing a great deal of damage, even to the extent of completely destroying the crop.

The moth seems to gain entry into the spathe through punctures made thereon by slugs or snails (which are common occurrence in arecanut gardens) and deposits its eggs on the inner surface of the spathe. Sometimes, masses of eggs are also seen on cavities made on the fleshy base of the spathes by the slugs or snails or other insects. Promptly on hatching out of the eggs, the young caterpillars move towards the tip of the inflorescence or work their way into the inflorescence through the spathe and commence feeding on the tender tips of the rachii and the tender unopened male flowers. When they become slightly larger in size they move down to the female flowers and bore into these without exception and completely eat up the contents. Some caterpillars stay inside the female flowers for sometime, while the others retrace their stops immediately after consuming the contents. The caterpillars web together with the branches of the inflorescence and large wet masses of frass (plant residue) thrown out by them with silky threads and take shelter in the clumps thus formed, and eventually pupate.

Well-grown caterpillars also often crawl from their shelters to an unopened spathe or a freshly opened inflorescence on the same tree and set about to damage it. In such cases, as soon as they reach the inflorescence they attack the female flowers. As the insect stays inside spathe, its presence or the destruction cannot be easily detected until at a very late stage. However occasionally, wet masses of frass dropping down at the punctures on the unopened spathe or wet masses thrown out as the caterpillars bore into the spathe on emergence from the eggs or from the shelter give an external indication of the presence of the insect in the spathe.

Due to the absence of the natural pressure, that a healthy developing inflorescence exerts on the spathe, the opening of the spathe in this instance is delayed, as a result of which the pest is kept protected from man as well as from its natural enemies (such as birds and ants) and gets a long spell of time to do its depredations. When the spathe finally opens it will be seen that almost the entire inflorescence has been converted into a mass of frass.



A

B

1. 2.

C

D

A—Caterpillar C—Adult
B Cocoon D—Affected inflorescence

The young caterpillars are dull white in colour and gradually turn brownish to blackish brown as they grow. A fully developed caterpillar measures 1.5 to 2.0 x 0.2 to 0 4 cm. The head is chitinous and darker and distinct in colour from the body. The cocoon is deep brown and 0 9 to 1·0 x 0 2 to 0.4 cm. in size. The adult has a wing-expanse of 1.5 to 2 cm. The wings are dull white in colour.

Control Measures

The spathes which show signs of damage by snails or slugs or show traces of frass should be forced open promptly and examined for the insects If all the female flowers have been damaged, then the inflorescence should be removed completely and burnt with a view to destroy the insects. If only a portion of the inflorescence is affected and there are still some

unaffected female flowers the affected portions alone should be cut out and destroyed and the inflorescences should be given a drenching spray with a 0.125% solution of Endrex 20 E. C (28.35 c. c. in 22.75 litres of water) to kill any insects found thereon.

As the slugs or snails play an important part in encouraging the development of the pest, they should be kept completely under control. Hand picking and destroying is a very effective method of controlling slugs and snails. Where incidence is heavy poison baits, made up as follows, may be laid.

Bran	454 gms.
Molasses or Jaggery	100 gms.
Lead arsenate	28.35 gms.
Water	568 c.c.

Thoroughly mix the dry ingredients, dissolve jaggery or molasses in the water and pour slowly on the dry ingredients, mixing thoroughly so that all flakes will become moist. Scatter the preparation where the snails or slugs are known to crawl.

The red ant, *Monomorium gracillimum*, feeds on the young caterpillars, and in this respect is therefore beneficial.