SOME NEW INSECTS AND MITES ON ARECA PALM IN MYSORE - IV

PRELIMINARY OBSERVATIONS ON A LEPIDOPTEROUS BORER (NEW) DAMAGING ARECA FRUITS.

By

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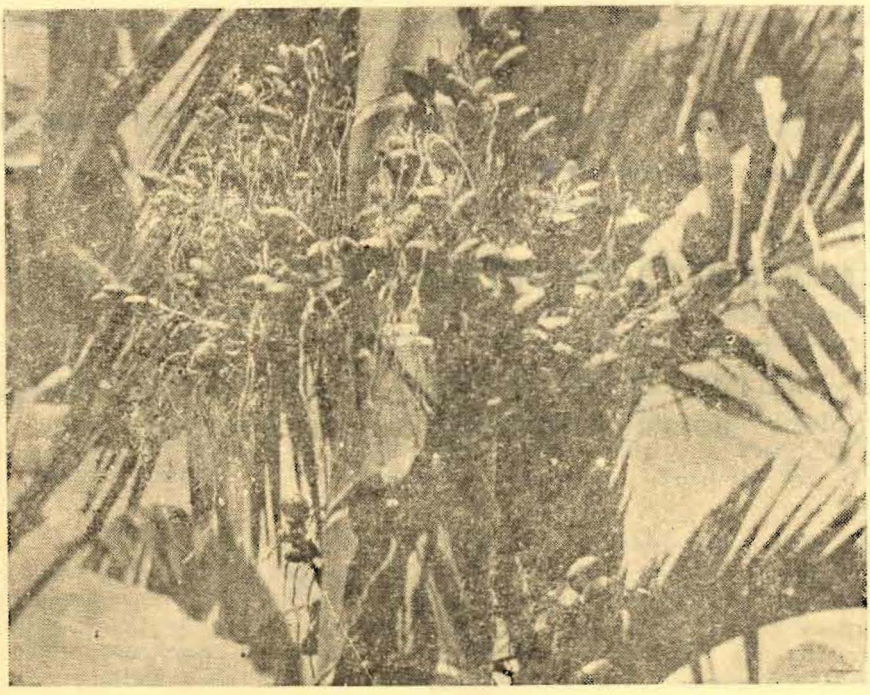
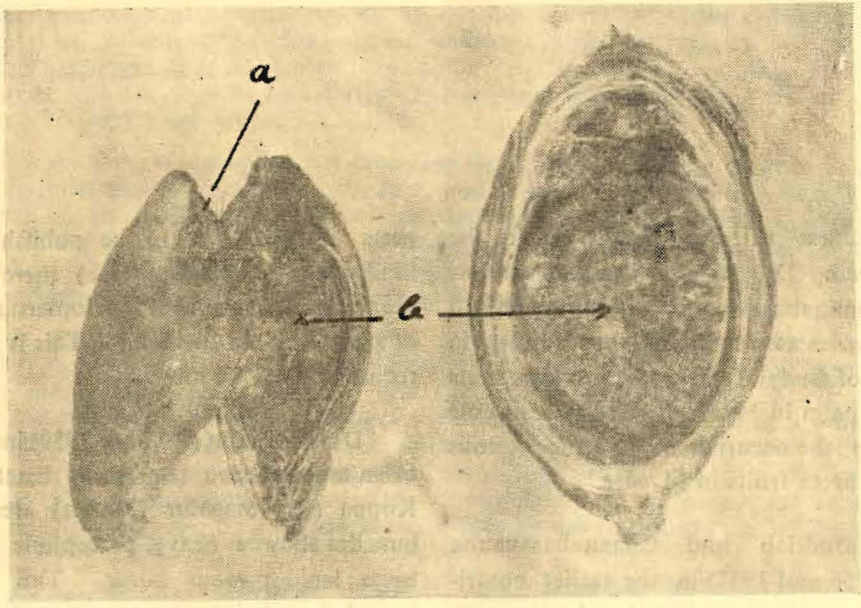
The first three contributions in the series are by Dr. M. Puttarudriah and Sri G. P. Channabasavanna. It is intended to run the series as such to get a continuity in the field of study of the insect and mite pests of areca palm in Mysore. The present note relates to the occurrence of a lepidopterous borer of areca fruits in Mysore.

Puttarudriah and Channabasavanna (1953, 1956 and 1957) in the earlier contributions have listed the insect and mite pests damaging the crop in the different stages of its development. In their monograph on pests of areca (yet to be published, but kindly made available to me) there has not been any reference to a lepidopterous borer of areca fruits in the field. This is the first record of such an insect.

During recent (October 1959) inspection of an areca garden (Berekody Estate) near Koppa (Chikmagalur District) areca fruit bunches showed heavy, perceptible damage by a lepidopterous borer. This note is intended to give an account of general observations made so far in the field and laboratory on the damage by the insect.



Photograph 1.
Infected Areca bunch showing vacancies.



Photograph 2.

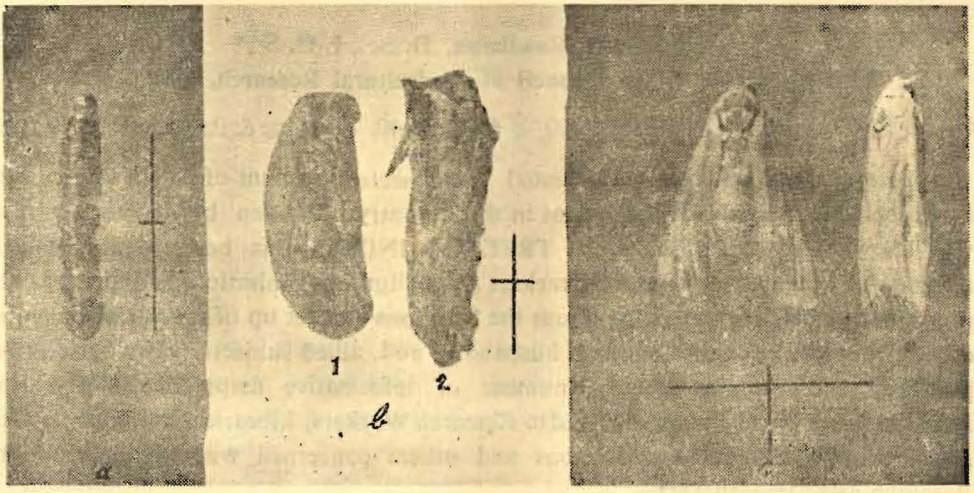
a) Spot showing the hole made by larva for entry into the nut.
b) Kernel eaten and converted to frass.

Damage. (Photographs 1 and 2). The damage to areca fruit seems to be specific. The caterpillar bores into the ripening fruits mostly underneath the calyx and feeds on the inner contents. The inner content is excavated and the nut becomes hollow. Instances of the entry of the borer into the fruit at other places were also observed. The excreta is thrown out of the holes. Such fruits, when pressed, yield and break open, revealing the damage and the caterpillar within most of the fruits.

As a result of the attack, there is seen premature drying of the fruits. A gentle touch would make the attacked fruits fall down. The external symptoms of the attack by the borer are:—(1) Lot of brownish excreta (webbed together) on the fruits and pedicel, (2) Small circular hole 1/16" dia. on the fruit, if the entry is on the open surface, (3) Drying of immature fruits and (4) Fruit bunches showing good number of vacancies due to attacked fruits falling down from the bunches.

The Insect. (Photograph 3). *The adult* is a medium-sized moth with a wing-expanse of 25 mm. The anterior pair of wings is greyish green with the green being predominant at the marginal ends. On each wing are observed three black markings placed one behind the other more near the margin almost parallel to it. Antennae are whiplike. In the resting position, the moth looks thin and linear. The moths emerged in the laboratory (from collections made in October) in November. Perhaps this is the season (October-November) for its emergence in the field.

The caterpillar in the young stage is greyish white and becomes dark slate-coloured as it advances in age. The fully grown caterpillar is 25 mm. in length and 3 mm. thick. The segments are clearly seen. Each segment possesses a row of tubercles, 8 in number; these being placed horizontally towards the anterior region. Of these, 6 are placed - 3 on each side - and the two bigger ones - one on either side of the mid-dorsal



Photograph 3.

a) Fully grown larva. b) Pupa (1) Dorsal View (2) Ventral View c) Moth.

line. The central tubercles are beset with hairs, one on each of them. The caterpillar is active and when disturbed hangs down by means of a silken thread.

The pupa, enclosed in a cocoon, is seen inside the hollow, made by the larvae in the nuts It is 15 mm. long and 5 mm. broad at the widest region, resembling the margosa seed. On the outer surface the pupa looks fibrous, brown on the rounded surface and greyish white on the opposite flat surface. The moth emerges by rupturing the pupal case at the broad end.

Further studies on the bionomics and the identity etc., of the insect are in progress.

A consignment of areca fruits received from Mangalore through the Plant Pathologist revealed the presence of the same caterpillar causing similar damage to fruits.

Thanks are due to Sri P. R. Raghuram, Senior Artist, Department of Agriculture for the photographs.

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