

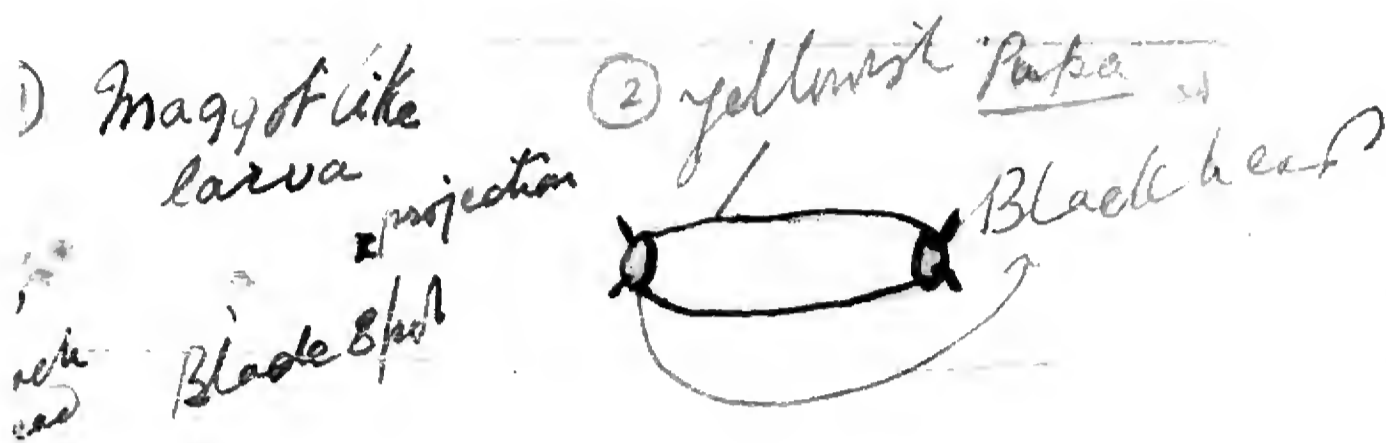
No. 27

| | |
|----|---|
| 27 | Investigation & reports on econ plants 1919-1921 |
|----|---|

This clearly indicates that the insect has brood cases which
 develop at the top of the plant. (Mar. 22 & 29.)

The seedlings were very badly attacked, and many of them seem
 to be speckled, and dead.

It is in that way that water will have a good effect.



A Cycloprocha fly.
 Imago emerging by
 breaking open either of
 the black tops.

The colour of the insect is creamy white, and transparent.
 The insect has no legs and the chitinous rings of its body -
 are joined by a thin membrane which is a joint like fold.
 While in rest the insect is curled these folds helping the
 movement.

The effect on the plant.:- The insect enters into the pith, and
 goes up through the crack out through the pith. It is seen in the
 petiole also. The result of this is to wound the plant and
 give out new roots above the soil, in the first internodes or upper
 ones.

The petiole splits up and the sugar is exhausted. The part decays
 rapidly. The top root does not develop to its normal size.

Further as a response to the loss of the pith, the seedling
 flowers before it is even a month old.

The larval period is from 10 - 15 days.

The pupal period. -

8 - 10 days.

The imago period. -

Eggs -

seems to be an *Aproniza* sp.

Rough diagram of
 Imago



The seedlings were watered with soap water (1 lb - 10 gallons).
 for 15 days morning & evening for the first week after and harvest
 alternate 2 days. Effect obvious. The plants grew well & ^{harvest} reaped.

The fly emerged through either of the tubular tops, and hence a cyclocephala. The fly is very sluggish and does not care to fly though disturbed. They were caught very easily. They after emerging cut rest on the plant itself or on earth, and lay eggs there. The tiny larva could be seen moving on, or in the stem. Visible to the naked eye.

The fly is noted on *Lausium Domesticum* v. r. duku. Here the bark is eaten by the pest. The maggots lie under the bark and pupate also there. The flies hover about the affected parts.

Effect on the plant:— The bark is becomes a putrid mass and checks the vigor of the tree. It is renewed but takes a long time and by the time it is so they again attack it and destroy.

Treatment:— The treatment is as under. The bark is scraped off and the maggots removed with the pupae in the drying bark. Afterwards it is brushed with carbolic soap.

Another trouble noted in connection with this pest is that of ~~xxxx~~ a species of ant eating the bark. The ants eat the bark in company and not alone. But sometimes they do so.

They were prevented from damaging the tree by tying coir soaked in ~~xxxxxxxxxxxx~~ soap. (tied just at the bottom of the trunk.)

No ants were observed at the tree.

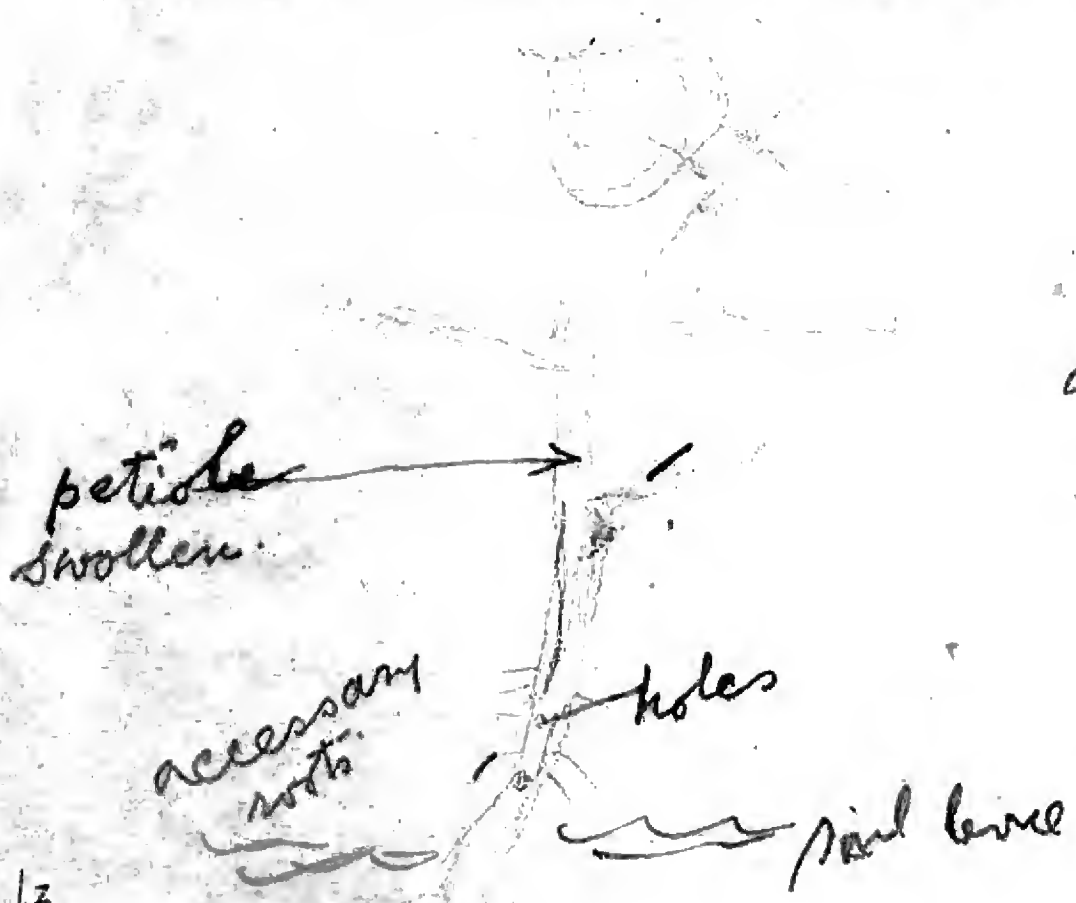


Diagram denoting the injury done to the plant. Caused by the fly maggot + the Rhizoctonia

Bean borer(a moth caterpillar).

This is a destructive pest though ~~xxxx~~ minor one seems to promise to be one of major importance when the crop of beans spreads through the whole of the peninsula. The acclimatized variety of the bean which is widely spreading and favoured by the Europeans is a promising asset to the non-food producing country. It has admirably adapted to the island and yields abundantly with little attention.

With all this the pest -- a bean borer may check its career. The caterpillar is pink colour with five rows of brownish spots with hairs on them. The row on the back is obliquely double.

The brown head ~~xxxxxxx~~ has strong mouth parts with big ~~xxxxx~~ pointed mandibles. It bores into the ~~xxx~~ bean and eats the embryo and lies crouching in the hole thus bored. Within a short time it is seen that it is nothing but ~~xxxx~~ mass of the excreta of the insect. The larva generally bores just near the micropyle ~~xxxxxxxxxxxx~~ and then the embryo and afterwards the starch. Thus its importance in the culture of the beans will be noted.

The Bean Borer.

This Lepidopteran insect though of minor importance, at any rate, may prove to be one of the most serious pests of the introduced and well acclimatized plants.

The life history apparently covers 45--60 days (not worked out but stated from the appearance of the caterpillars in the field). The eggs are laid on the pod or in the flowers. In the case of the

maize pod a hole through which the insect enters is ~~not~~ soon; while in that of the immature ones, the hole is blocked up by the

excreta of the caterpillar. The caterpillar migrates from pod to pod on the common stalk. The work of eating the bean commences from the embryo and then it proceeds to eat the cotyledons. Dried beans

afford little chance to let them go on with their work; and while

feeding it is noted that the caterpillar ~~take~~ ~~change~~ ~~its~~ ~~colour~~ ~~from~~ ~~creamy~~ ~~to~~ ~~pale~~ ~~orange~~ ~~and~~ ~~also~~ ~~reduced~~

the size of its body. Pupation is favoured. Many cases of death in this state.

Egg period

Larval period

Pupal period.... 10-12 days.

Imaginal period..... 3-5 days. They died apparently not having eaten any food in the breeding cages.

Des.

F 27/4

F 27/4

Sept. 12, 1919.

~~XXXXXXXXXX~~

The borer is getting virulent and nearly all the pods will show the sign of the pest. As a moderate estimate of 25-30% of the beans will be damaged due to the pest.

Mr. Mathieu says that the damage due to the fungus and the pest amounts to full 50%. Out of the 30 pods I shelled I could get only a dozen of good uninjured ones. This will give the idea as to the virulence of the pest.

Regarding the death of the Crithopsis macrophylla seedlings
During the latter half of the Feb., it came to my notice that
there were a lot of deaths in the potted seedlings of the S.M.
The work was at once taken up to investigate the cause of the
same.

The appearance of the seedlings was just like that of those
attacked by wilt or those suffering from lack of water.

The examination of the roots, stem, and the leaves gave a
clue to the solution of the investigation.

Starting with the exam. of the roots, I could not find anything
wrong with them. There were a lot of fibrous healthy roots/
which filled the pots. The stem was the next one for exam.
and one could distinctly see the mischief was done to it.
In certain places, it presented a wirly elled appearance
with a hole or two either in the centre or at the side of the
withered spot. The lvs. except in some cases, had a hole in
the axil/bored.

The stem was cut open and there were a lot of round-headed
beetles which when identified were found to be Scolitids.
(Cannot say which spp.) (Possibly Xyleborus sp.) . They had
cut either longitudinal canals through the pith and part of
wood only/ or transversal. With the magn. could be seen —
larvae and pupae. (without any case) This shows that the
beetles, once got into the plants, reproduce there. As these beetles
are said to be ambrosia, sections were cut to see whether they
had done so. (i.e. cultivated fungus). The culture showed
that hyphae could be seen emerging out from /// round// bodies.

Insects that may which chamber)

Scolitid beetles are reported to bore in the dead wood, but
rarely in the living plants. (Lefroy. Vines & other. See in Coyler
(Apple. Entom. Oct. 1910 284. 285.)

This adds one more entry to the list of the living plants.

The Asst. Curator was requested ^{to} ~~to~~ ^{stop the} sale of the plants.

The affected lot was isolated from the non-affected one. Out of 7 1/2 the 100 plants, 50 were suspected to be attacked by the beetles.

TREATMENT. I cannot say where ~~the~~ and how the insect enters the stem but possibly by directly attacking the stem and propagating inside. With a view to protect the stem from the ravage of the insect, it was painted with GUM in which was put some NAPHTHALIN powder. This might prevent the entry (in the absence of any other in the store.) Wash oil soap. tried in Ceylon. releasing the bushes.

This (gum and naphthalene) is defective in that it dissolves is washed out in the rain. Addition of resin or any other ~~stick~~ adhesive / will improve the point. ~~Onkka~~ examined a few days after the point, it was found out that the paint was washed out, ~~hairs~~ In a few plants cut open, I found the holes vacated. (I cannot say more of the parasites unless some more are tried.

Similarly, bait, a bundle of ~~rice~~ sticks, was kept ^{putting baits} to attract the insect to the bundle. (This is done in Viticulture in Bombay.) I ~~did not~~ find any being attracted to the n.

Imag.

Larva

Pupa (without pupal case.



soft & white

Round-headed with spines

It is a curious sight to see the pupa, moving the free part of the abdomen,

(Insect in all stages preserved in Rectified spirit)

The seedlings (in pots.) of *Suaeda macrophylla* are damaged by a Scolitid weevil. (*Xyleborus* sp.) The weevil enters through the soil, it seems to bore the axils of the leaves, or by boring a hole on the stem a little above the ground. Then it makes inside galleries either longitudinal or horizontal, and makes a colony in the stem.

At first sight, it seems the plant is suffering from water but on closer exam. the true cause is noted. The lvs. don't die but remain or reappear for a long time. The stem at the point of the attack shrivels and either in the middle or on the side of the shrivelled spot the hole may be found.

Inside the injury inflicted by the borer is as follows. The beetle eats the pith, as well as the wood which is the favourite food of the insect. It is said to cultivate a fungus, on which the larvae feed. With this object, of ascertaining this fact, scrapings from the cavity were put in gelatine solution for germinating. They did well only few germinating. (Applied Microbiol. Soc. 1918, p. 434)

The larvae are soft white while the pupae are without pupal cases. The imago is very small, and is always found with its head deep in the burrow.

Remedy Tried, with the material at hand. Painting the stems with gum mixed with Naphthalene.

Nature of injury.

Imago

Pupa

Grub.

The insect is observed to feed on dead and dying wood only,
but in this case it feeds on living timber. Murray reports
(p. 10) that it feeds on living wood.
and the German Mythenbägenweber (which feeds)

It is not one more case of the kind of insects which live
in the wood.

Remedy. Bait was used to attract the insects.

These consisted of dried wood -- which -- without any holes.

After a fortnight it was noted that the dried wood was
bored into the hollow characteristic of the insect, but

I could not find the insect. The paste used seems to have a disinfectant
effect on the wood of the plant. In *many* cases it is observed that
it is wanted.

Both of these seem to prove good for the insect.

Sept. 5, 19.

Hibiscus sabdariffa ~~γ---~~ Host.


The flea beetle ----- pest. (polymorpha).

Out of the four ~~xxxxxxxxxxxx~~ plots in wherein this plant is grown, those in the nursery are seriously attacked by the pest.

Elsewhere no insect is seen ~~but~~ ^{though} the plants have ^{leaves with} shot-hole ~~like~~ ~~lar.~~

The beetle feeds on the leaves and floral buds as well. On the latter, the point of attack is near the base of the st bud, while in the former case the start is made from any place, either the base, or top or the middle part.

The main injury is done to the floral buds which drop in large quantity, or else do not develop.


fall like
caterpillars on
the side.

F57/7

Sesuvium caterpillar.

Acherontia atys (Death's head moth).

This is a pest on the plant. The caterpillar eats the leaves and sometimes the whole plant is stripped of its foliage. This feeds on the capsules.

A very large green caterpillar, with slanting bands and a long tapering horn at the end of the abdomen. In the very young larvae the slanting bands are not observable.

Life history.

The moth is a dusky and beautiful to look at.

Remedy:-- Picking the larvae, trapping the moths at light which is most effective.

Caterpillar
resting

Moth resting
n

Another species is seen feeding on the leaves of Phytolacca tetragynia. The larva is a deep yellow with brown stripes. It was parasitised by a fly and died. The fly maggots were unknowingly thrown away.

Sweet potato.

Leaf roller of the crop:-----

This seems to be the only pest of the crop so common in the island of Singapore and the ~~island of Singapore~~.

The growth is very vigorous and within a few days it produces ^{of vegetation} a lot of foliage. This pest is not so voracious and of such type is not so taxing because of the rapid growth of foliage.

The pest is conspicuous and the rolled leaf is the sign of the presence of the pest. All leaves of the plant are susceptible to the attack of the pest and there is no preference shown. It will be found on young plants and old as well.

The caterpillar rolls the leaf after the fashion of the common or hairy common leaf roller, the leaf being tied up with the silky secretion of the insect. The caterpillar is a tiny one of pale green colour and quite transparent one, with two to three white transparent bands on the sides and the back. The mouth parts are horny and the insect devours the leaf ~~xxxxx~~ only the palisade tissue and leaves the veins intact, giving the leaf appearance of the lattice leaf of *Ouvirandra fenestralis*, the inside being filled in with the excreta of the insect. It jumps on disturbance and hence care in collecting otherwise it is lost and again a trouble ~~xxx~~. While breeding it is observed that the colour changes from that of green to orange and the size small, This, I think is due to the irregularity in feeding and heat. This is thought to ^{hasten} ~~hasten~~ the pupation period.

Larval period seems to cover a fortnight. Collected 12 Aug. 19. pupal period. 26 inst. The caterpillars were small ~~xxxx~~ or it may be taken to 3 weeks. or so.

pupal period 6-10 days. The pupal cases are of pale yellow colour

The imago is 7c.m. in length and nearly double the length in

XX

Sweet-potato. (could).

across . The wings are characteristic of the moth . The well
set and conspicuous fringe and the wavy lines --- lines fold & on
themselves before touching the border and doubling on themselves.

The border line is also worth attention and a means to know the moth.

On death, the wings either close on themselves and the moth cannot
be held definitely. They wings are then held vertically.

The antennae are long and filig. The whole body is covered over
with silvery scales XXXXX.

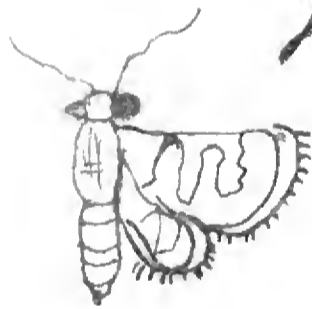
The only remedy we are affected by this practice is to cut the leaf
folded and kill or burn them. Spraying with a. of the moth.

Folded leaf

Caterpillar

Pupa

Small.



Briagal leaf eating caterpillar.

Briagal has a very bad pest in this caterpillar of a moth which is always not-ed on the shoots of the plant. They feed in swarms and prepare web like inhabiting place for their protection. They enclose the whole top portion and bind it with the thread, this being theirxxxxxx secreted. If they are thrown down they produce this thread and climb up by means of this thread. The caterpillar is blackish with interrupted whitish strips.

The life history is follows:----- Larval period pupal period. 10-15 days. imago period. 6-8 days as observed in the cage.

The moths seem^{are} to be nocturnal in habit. They/ small in size. with dusky wings. (wings with two big black spots on the outward side of the same.

~~xxxxxxx~~ The caterpillars do a lot of damage, and eat the leaves and the buds. Their point of attack is easily noticed.

. Remedy :--- picking up the bound leaves and destroying or burying them. At night time, light trap serves best to attract the moths.

Caterpillar

Pupa

Moth



Brinjal fruit borer and the flower borer.

WOM

2.9

no. 100

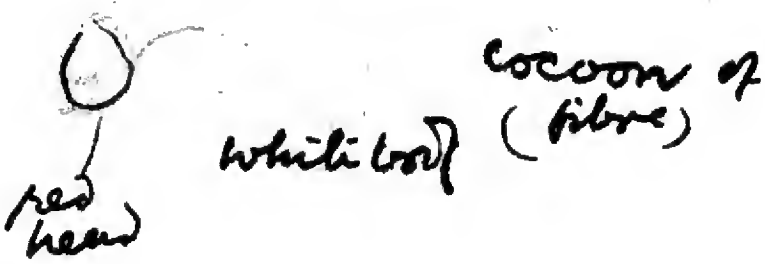
Plantain stem borer(Odontopus glabricollis)

This is the bane to the banana growing here. The grub larva feed in the stem and does a good deal of damage. The outward symptom of the presence of the larva feeding is the exudation of gum through the hole. This gum is found through out the whole canal of the larva. The tissues at and by the side of the canal rot and give out a bad smell. The larva goes up the stem feeding and pupates in the stem, in the cocoon of the ~~stem~~ ^{Plantain} fibre. The weevil is generally found in the stem. This is a shining black creature with the final joints of the abdomen visible. The weevil lives for a long time without air. Over 15 days.

Remedy:--- No other remedy but uprooting the affected plants seems to be possible. The larva is seen to go even to the true stem of the banana.

Larval (grub)

Imago. weevil.



Plantain Leaf roller. (Butterfly. *Erionota thrax*.)

Butterflies except a few are mostly harmless, the exceptions are rice, lemon, mango, castor, the pulse butterflies and many others, are of ~~xxxxxxx~~ importance, to the economic zoologist. The Banana butterfly which seems to be absent from ~~the~~ India is very common not only on the banana but it is said to feed on the palms such as Livistonia and many others, it being its common food plant.

This pest is common throughout the Island of Singapore, and can be held to be responsible to damage the plants to a great extent. The leaves are the object of attacks which are shredded and torn and made into rollers for the protection of the caterpillar. The roll of the leaf is very strong and is pasted as it were by the gummy substance of the larva. The larva is pale green copiously covered with waxy powder (white). It is 2-3 in. long when fully grown and .5 in. through. It is narrowed towards the front side and thickened towards towards the anal side. The mouth is a big black horny structure which helps the larva to cut the leaf very effectively and devour ~~the same~~ quite readily. The sight of the banana plant is characteristic to what this feeding. The rolls of the leaf hang down as if stuck to the mid rib. This may be mistaken for the injury ~~caused~~ due to the Wind. It is said that crows are very effective in picking these larvae, and hence it is absent from the Indian tracts. Here crows ~~xxxxxx~~ except those introduced by the president of Pahang? were reported to be preying on these and have done a ~~great~~ good clearing of these pests.

The larva makes a very close tight roll which is not accessible to a beetle or any other insect except the same eats the parts of the same (roll).

Plantain leaf roller. (contd.)

The life history is as follows:---

Eggs cream yellow are laid by the female which dies after this operation. They hatch out about a days, and the larva begins to roll the leaf and commence the work of eating. The larval period lasts for days. It pupates in no special case but in the last moult of the larva/ in the leaf roll , and emerges out after about 12-15 days.

It commences laying eggs after 4-6 days and continues till it dies. In the field it is seen hovering about the plants (banana) and resting on the under side of the leaf, where eggs are laid. The butterfly is a big one with an expanse of 2-2½ in. dusky colour with yellow stripes at the ends of the wings. . The eyes are big red at the top of which can be seen the long knobbed antennae. Eggs are of the size of the mustard. The body is densely hairy.

The plant suffers much owing to the labor tory being being brought down by the pest.

Remedy:-- cutting the shredded leaves and keeping watch on the insects. They can be caught by nets or other wise. Crows as it is suggested above seem to have a beneficial effect on the plants.

Caterpillar

Butterfly

Yellowish
stripe

Big red eyes

Mango shoot borer.--- a caterpillar, of a moth.

It seems to be reasonable to attribute the the unfruitfulness of the mangoes in Singapore to this caterpillar. The moth is very wise to lay eggs on the shoots of the new season's growth. A small hole is bored in the shoot and a small brownish egg is laid individually in it. The caterpillar on hatching enters the shoot and by boring a hole either at the top or down on the new growth. In no case it is observed that a hole exists on the old years growth. The caterpillar commences the work of boring and stays there for not more than 7-8 days, in some cases for even 3 days. The larva bores a well cut round canal leaving the outer bark untouched. While she it is working in no symptoms develop until the work of boring has gone too far. At this time the lvs. begin to wither and then it is only possible to say that the grub is working in the stem. This is noticed

* from a distance, because the top shoots all ~~dry up~~ ^{wither} and can be seen very easily. But on close examination a hole or two can be seen/ with excreta at the mouth of the hole.

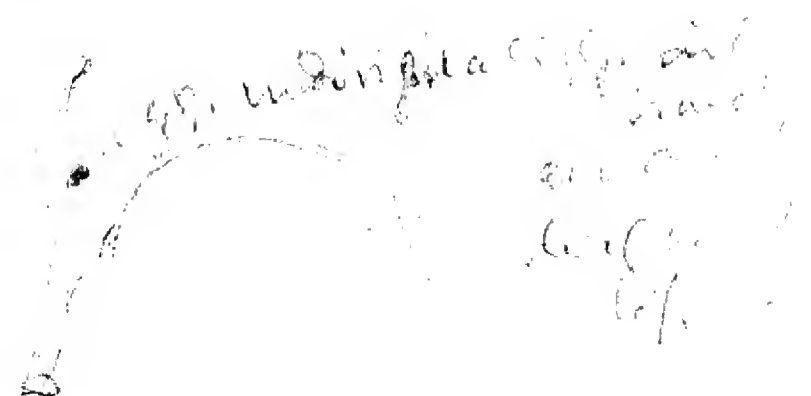
On opening the hole, a caterpillar is invariably can be in the hole.

This observation does not hold good in a few cases. In the majority of cases 2 holes are noticed.

The caterpillars either purplish or pinkish with ^{transparent} longitudinal strips on the back and on sides. Head red. Length 2.1c.m. full mature larva. This pupates outside of the canal. ~~xxxx~~
~~xx~~

The caterpillar pupates in the soil. It was put in a 6in pot and covered with a wire netting. It went down into the crevices and formed a cocoon.

*Brown
8 - much of pupa*



The time of breed seems to coincide ~~with~~ the season of growth of the plant. Still, it is observed that if the season of growth is early or late then ~~the~~ before the injury advances the tree puts forth its fruit. But if it is late then the caterpillar eats the whole shoot and all dry. Shoots being the parents of the fruit.

The mangifera Feetida sprouts earlier and hence escapes the injury to the extent of having the chance of producing ~~the~~ a few fruits, the rest being dropping and if formed falling.

secondary

The effect on the plant:--- ~~There is a~~

Dormant buds on the ripe wood which are never observed to wake up are seen sprouting all over the branch. 2 After the top shoot dries ~~the~~ three to four shoots come up from the base of ~~the~~ dried shoot. No opportunity ~~is~~ for the tree to propagate its species. The tree becomes stunted and ~~is~~ bears many fungi and loses strength. It is observed (June last week 1919)

that M. feetida was again flowering at an unnatural season because of the pest and the strong reproductive force of the nature.

LIFE History (from only one caterpillar) :jjj

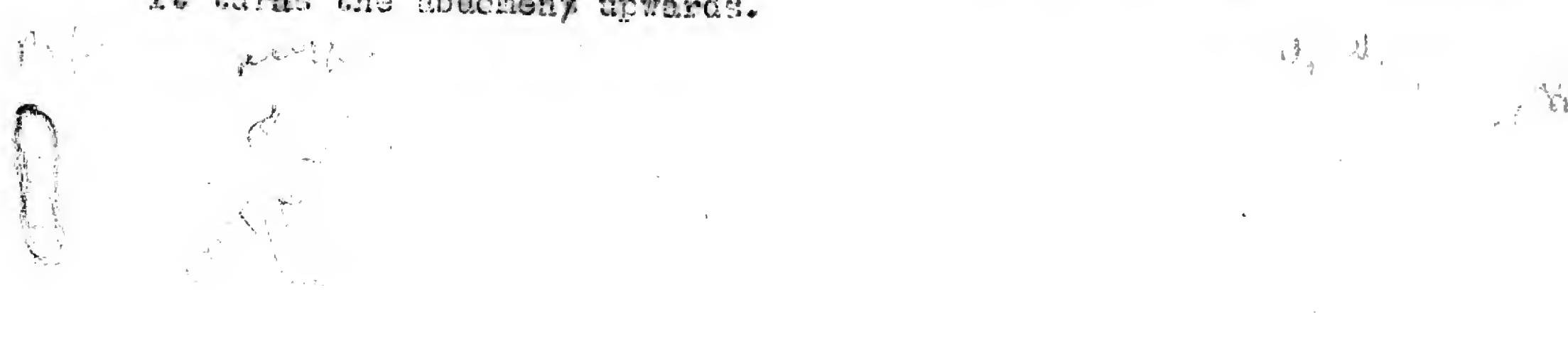
April 11, 19. caught,

" 15 pupa.

May 12 Image cut.

~~There is a~~

The moth is 1c.m. long and 1.4c.m. across. The hind wings greyish with blackish wavy lines across. The wings have fringes. When dead it turns the abdomen upwards.



Citrus fruit trees and seedling pests.

Caterpillar of a butterfly (papilio Democleus)

This seems to be a very bad pest of the orange and other plants when they are small. The caterpillars are cryptic in colour and feeds on the ~~upper~~ upper surface of the lvs. and in hot hours lies on the midrib, having the appearance of the excreta. Pupation on the plant by hanging itself on to the stem, by a silk thread. There are two horns at which give out bad smell.

Life history:--

The butterfly is a large sized one coloured in black with yellow spots. There are two red spots on the hind wings.

Remedy :-- Picking the caterpillars, which may be very expensive in a big plantation but on a small scale it is the most effective one. Spraying will be effective.

Catching the butterflies.

(For full description .CF. Lefroy. pp.425)

Malvaceous and Boehmeria ^h nevea, pest.

A leaf roller of this --- a caterpillar of a moth Sylepta derogata is very voracious on the leaves of these plants. From this it ~~is~~ appears that it is pest of the fibre plants, rarely or not at all. Its arena of activities is noted beyond these.

It is a pale green caterpillar with a dark line at the top of the abdomen. It is found feeding on the leaves of the said plants, rolling the leaves and fixing them by the silk. The eggs seem to have been on the lower side of the leaf and then it first enters the epidermis and then the pest enters from the upper side. It is seen to pupate in the leafroll but generally it does so in the soil.

The life history:--- The eggs are laid on the lower side of the lvs. The larva then makes a roll and commences its work. It pupates after days, either in the soil or in the leaf roll.

Pupation period.

The moth a dusky straw colour with the wings striped lightly with ~~a~~ black ^{case} dots are seen on the edges of the ~~pinkish~~ wings. The pupal is brown one.

Remedy :- picking the leaf rolls seem to be the only feasible one. Light trapping may prove effective. In India, if necessary arsenate is sprayed.

Caterpillar

moth with purple wings
wavy stripes of black
brownish colour.

Mr. Bushmiller

to note.

Ans.

F27/16

18 June 1917

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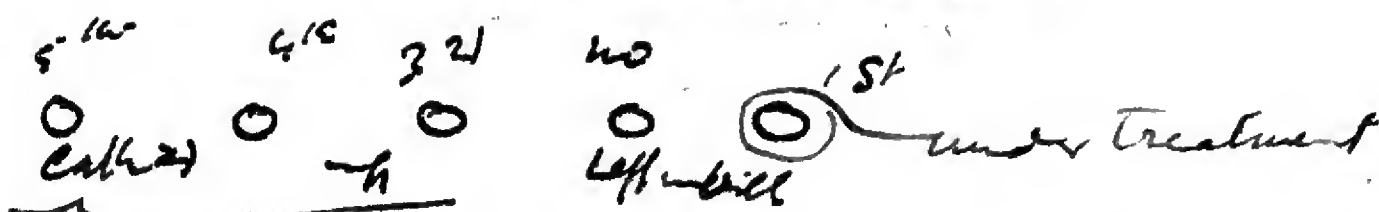
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About the bark disease of tree. *Lansium domesticum*

Causative factor seems to me to be a fly. (similar to the one already sent for identification.) Ants, secondary factor. observations by Prof. Baker. *Arbovial -*

The experiment and observations are—



A

Scraping the bark (as far as possible within the reach of the ladder. Removing the ants and killing by spraying with a jet of of the Knapsack. Tree painted with soap, soft and carbolic. Tying coil soaked in the solution of the soap, at the base of the trunk. Treatment ~~with~~ for the 1st tree.

The second tree left untouched.

Third, fourth and fifth earthed up to block up the inlets of the antholes. (*ants found out an outlet from the holes.*)

After 5-6 days it was observed ~~with~~ only one or two ants on the first tree. I cannot say how they get on the tree. The bark was ruptured in many places and had the flesh like that of an apple. On ~~this~~ these pustules flies were noticed with maggots ~~and~~ buried in the same.

~~Second~~

(2) On all other trees similar pustules were noticed and the flies hovering caught. (maggots and pupae also in the decaying part.) It is also noticed that ants do eat the bark. ~~and~~ This is or may be due to the scarcity of food. ~~or~~

The new pustules on the first tree were scraped out and in 8 cases out of ten I ~~at~~ found maggot in them. In some pustules I did not see any maggot but instead I could see a small hole

hole with a brownish spot at its base. I did not see any thing with the adequate power of my hand lens.

From the above it may be safely (as far as I have observed) be concluded that the fly is ~~the~~ at the root of the rotting of the bark.

DES.

They is Agromyzidae.

" Ants are arboreal. They have nests (mud, in some cases in this cases ~~the~~ dry logs rolled together), on the tree. Aphides are reared. (found ⁱⁿ ~~under~~ mud nests).

{ on the 4th tree, purple aphides are found. The sp. of ants rearing them is different from that rearing white.

These observations, may, if you think, worth intimating Prof. Baker, be passed on to him.

aphids can be sent for determination (in vial of alcohol) to
Mr. R. van der Goot
Experiment Station
Salatiga, Java

Memorandum

If the flies turn out to be of the genus *Agromyza* it is possible they may attack the living tissues but if of the fam. *Agromyzidae*, these are feeding on the sap exuding from other caudex. Wounds made exuding sap and gummosis produced are usually invaded by maggots of various flies and by larvae of *Nitidulidae* and other beetles. Each of this the original gummosis may be induced by a variety of causes.

Ants are known to actively attack and destroy the juicy susceptible cambium of a variety of trees. A case of considerable economic importance is that of citrus trees in Cuba being severely injured by ant attack.

It is therefore, necessary, to investigate these features, one by one and determine their relationship.

(over)

In the meantime, the treatment
mentioned under paragraph A
offers a good alternative to
attack. Use of gum resin
to a specific organism
present, the cleaning and treating
with an antiseptic wash
very good. In the latter case
Bordaux paste is used.

It is suggested that
watching of the trees, especially
on trees where the trouble
is most frequent.
In that event, it is suggested
that a number of trees be
marked in the orchard
to see how they progress
and to see if any other
trees are affected.

(over)

