

ENTOMOLOGY BULLETIN: NO. 24

PESTS OF COCOA -

GREY WEEVILS

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INTRODUCTION

Grey weevils are becoming a serious pest of young cocoa in Papua New Guinea. They chew the young growing shoots of the trees. The trees become stunted and sometimes die. They also damage the new leaves and growing stems of *Gliricidia* trees which are often used as a shade for cocoa.

DESCRIPTION

There are many kinds of grey weevil that damage cocoa. The most important ones are called *Paratactus*, *Hypotactus*, *Cyphopus* and *Oribius*. They are similar in shape and size being about 7 mm long and 3 mm wide. They have strong bodies and legs but no wings and so move from one area to another by walking. *Paratactus* is dark grey with four white patches on its back. *Hypotactus* is light grey over the whole body. Different kinds of *Oribius* vary in colour from light to dark grey. *Cyphopus* is also light grey but can be recognised by the presence of two small knobs on the back of its body.

Another larger grey weevil (about 15 mm long and 5 mm wide) called *Exophthalmida* can be sometimes be found eating cocoa stems but this pest only occurs in low numbers and is not considered to be a serious problem.

BIOLOGY

Grey weevils lay their eggs at the base of plant stems or on blades of grass which they fold over the eggs. The larvae hatch out and feed on plant roots in the soil. For this reason they can be a serious problem in poorly managed blocks where grass is not controlled. The larvae also like to feed on the roots of legumes.

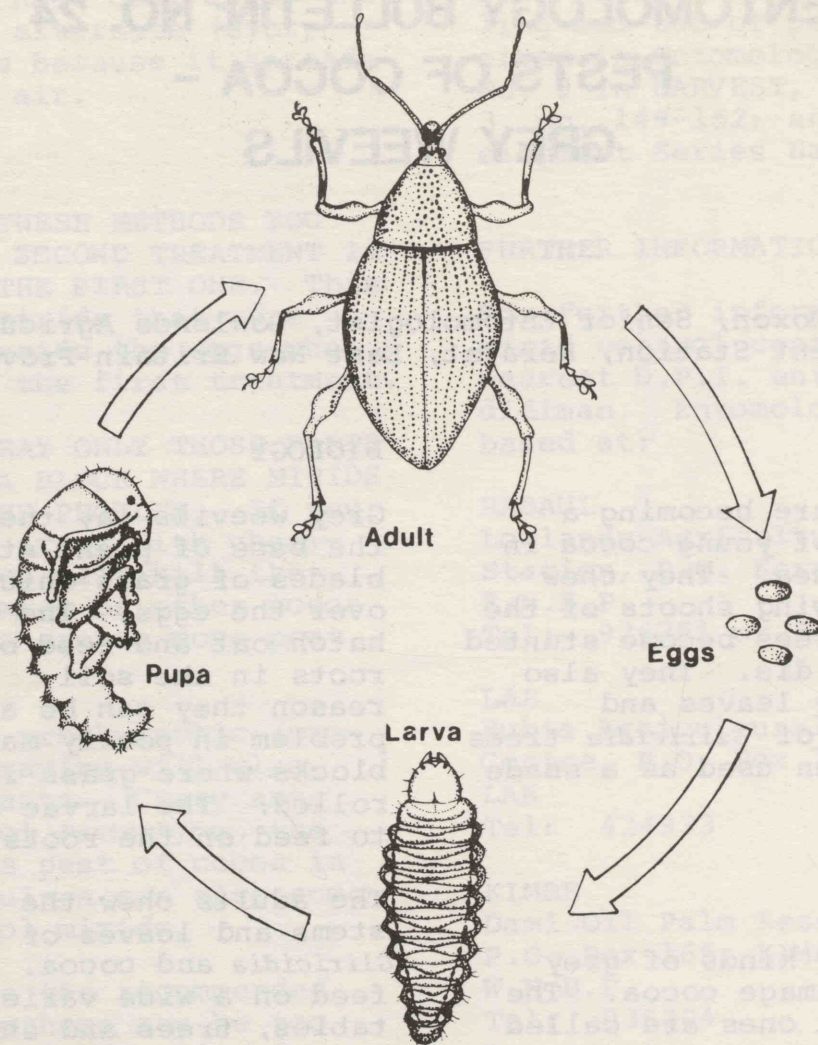
The adults chew the growing stems and leaves of both *Gliricidia* and cocoa. They also feed on a wide variety of vegetables, trees and shrubs.

These pests dislike shaded conditions and so as the trees grow and shade the ground below the grey weevil problem disappears; this usually takes about two years.

Long periods of dry weather also reduce grey weevil numbers.

ECONOMIC IMPORTANCE

Grey weevils are becoming one of the most important pests of young cocoa in Papua New Guinea. The growing shoots of cocoa and *Gliricidia* can be so badly damaged that the trees become deformed and may die. On some occasions it has been impossible to establish the *Gliricidia* shade trees and cocoa could not be planted.



Life cycle of the grey weevil

Grey weevils occur in most cocoa growing areas of Papua New Guinea, but serious attacks have so far occurred in only a few places. They may become more of a problem when larger areas are planted with *Gliricidia* shade.

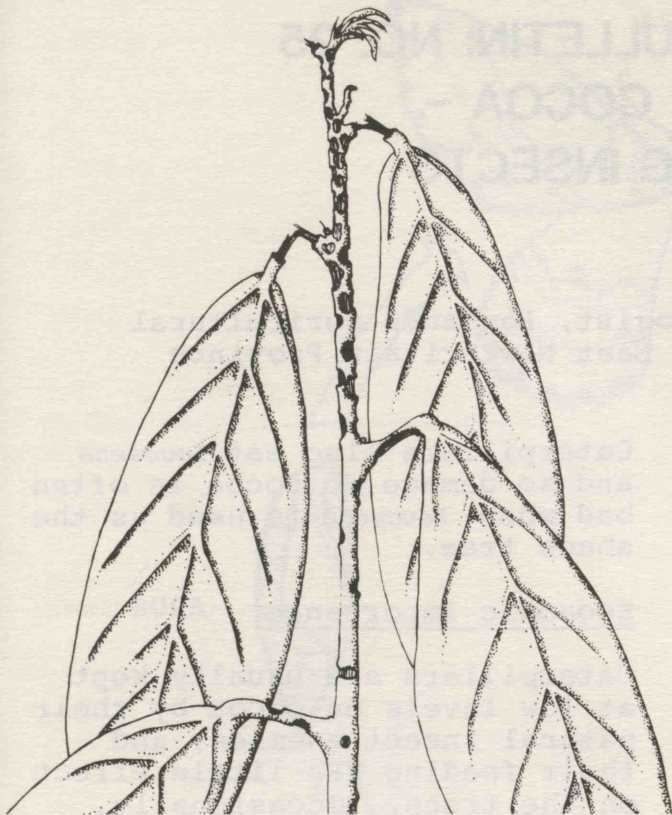
CONTROL

Keep grass cut short or, better still, use herbicides. Proper weed control will help protect the cocoa trees from other pests such as longicorns and also provide healthier growth by reducing competition from the weeds.

The pests are very difficult and expensive to control using chemicals as both the *Gliricidia* and the cocoa trees must be treated. However, a 0.3% solution of acephate (Orthene) or 0.01% solution of permethrin (Ambush) applied with a knapsack sprayer or mist blower should give good results. To obtain the solution mix together:

40 g 'Orthene 75'
5 ml washing up liquid
10 litres water

OR



Grey weevil damage

10 ml 'Ambush 10' 5 ml washing up liquid 10 litres water
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Several spray treatments may be necessary to reduce the pest to low levels.

NOTE:

All spraying should be done in fine weather and several hours before any rain, preferably in the early morning or late afternoon so that the young leaves are not burnt by the sun. Only use recommended chemicals - others may be too poisonous or ineffective. Never use the pesticide containers for other purposes. Read the labels carefully and only mix up enough chemical for immediate use as diluted chemical soon loses its strength. Wear rubber gloves when handling the concentrate. Store in a safe place out of the reach of children and animals and away from food. Do

not throw away unwanted chemicals near a drinking water supply. Wash with soap and water immediately if you spill insecticide on your skin, and after you have finished spraying for the day. If you feel sick after using the chemicals, see a doctor.

Full details on the safe handling and use of pesticides are given in Entomology Bulletin No. 9 in HARVEST, Volume 6, No. 3, pp. 149-152; and Rural Development Series Handbook No. 18.

FURTHER INFORMATION

For further information about insect control in cocoa contact your nearest D.P.I. entomologist or didiman. Entomologists are based at:

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