

EPHESTIA CAUTELLA Wlk.

Moth Pest of Stored Cocoa Beans and Copra.

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Complaints have been received over a considerable period from consignees in Australia, that cocoa beans from this Territory were arriving at the port of destination infested with "grubs".

Arrangements were made with consignors and consignees whereby samples of beans found to be infested both at ports of shipment and destination, were forwarded to the Entomologist, Rabaul, for observation and to enable breeding work to be done. It may here be stated that the samples received showed a considerable variation in the quality of the beans, but this was not a factor governing the insect infestation.

The same moth was bred out from all samples received, and specimens submitted to the Imperial Institute of Entomology, London, were identified as *Ephestia cautella*, Wlk. (family *Pyralidae*).

The adult is a small moth measuring about three-tenths of an inch in length over the folded wings, and is dark silvery grey in colour. The eggs are laid on the beans, and possibly on the outside of sacks containing beans, while in storage, and the small brown larvae burrow into and feed on the bean, ultimately leaving little more than a shell, in addition to creating a considerable amount of frass. Although only a comparatively small percentage of the beans are actually infested, the commercial value of the consignment is greatly impaired.

As this moth is a common pest of many dried foodstuffs, investigations were instituted to determine any possible sources of infestation. All suppliers of cocoa beans concerned were also suppliers of copra, which, at times, is also heavily infested with moth larvae. Samples of copra, so infested, were collected and kept under observation, and again *Ephestia cautella* was found to be causing the infestation.

It is thus feasible to conclude that dried cocoa beans had been stored in, or adjacent to, copra sheds, which was found, on inquiry, to be correct.

In the course of the breeding work, it was proved that infestation had occurred before shipment from the plantation, although infestation of clean beans, or re-infestation, could easily occur in transit, or in storage elsewhere than on the plantation.

Care in the storage of cocoa beans away from copra should, therefore, reduce infestation by this pest to a very great extent.

Fumigation could be resorted to, but if carried out in Rabaul, would possibly cause delay in despatch, and if carried out on the plantation would necessitate the erection of proper fumigation plant and insect proof storage space for after treatment.