

Proc. Fla. State Hort. Soc. 92:275. 1979.

THE *STENOMA CATENIFER*, A SERIOUS AVOCADO PEST

D. O. Wolfenbarger

*University of Florida (Retired),
IFAS, Agricultural Research and Education Center,
29220 SW 187 Avenue, Homestead, Florida 33030*

Burt Colburn

Harold E. Kendall Industries (Retired) 115 N.E. 12th Street, Fort Pierce, Florida 33450

Additional index words. Quarantine, twig and fruit injured by the avocado moth, fruit shipments into the United States presage dangers to its industry.

Abstract

Exclusionary measures have been successfully preventing entry and establishment of the very serious moth, *stenoma catenifer* Walsingham, and of the avocado seed weevils into the United States. The avocado moth burrows into twig terminals and the fruit. Concerns are expressed for talked about shipments of fruit into the United States from other countries and dangers involved.

Quarantines have been enforced to prevent intrusion of various pests into the United States for over 60 years. Federal corps of men works constantly to prevent the entry of insect and disease pests. The Florida Division of Plant Industry is effectively engaged in the detection and destruction of unwanted organisms with a great record of success.

A tiny brown colored moth, *Stenoma catenifer* Walsingham, and three beetle species of avocado seed weevils have been denied entry into any State although specimens have been taken at quarantine stations. It has been hinted that these avocado insect pests cannot initiate an infestation north of the Mexican-United States border owing to unfavorable conditions. This has not been proved nor has the suggestion been acceptable to the authors.

The *Stenoma catenifer* was observed by the authors a number of years ago several miles southeast of Mexico City, as it was seriously damaging trees and destroying fruit. Moth larvae burrowed into the twigs and so many had died that the results suggested that a flame had seared the trees.

Moth egg deposition is in or on the terminal twigs, Larvae hatch and burrow downward killing the leaves and buds as they feed in the heartwood tissues for about two or three inches before they depart to pupate.

Dead twigs remain for months or years as mute evidence of past infestations and appear more numerous in the upper and outer parts of the tree crown. Beneath the dead twigs a bud sprouts and grows another twig. This second twig is likely to be infested and die, often followed by a third and a fourth twig growing proleptically

beneath the initially infested twig. These growth formations present a "broom" or a "club" growth monstrosity.

Eggs of the moth are deposited on or in the fruit, hatch into larvae which burrow into the fruit often into or on the surface of the seed.

The three species of seed weevils burrow into the seed after tunneling through the flesh. *Stenoma catenifer* has been referred to as the avocado seed moth. Inasmuch as the moth larvae feed in the fruit and in the twigs we shall refer to it hereafter as the "avocado moth".

Reports and our observations suggest that 90% or more of the fruit from an infested area may be expected to contain one or more avocado moth larvae regardless of what or how many enemies are present. Such an incidence of wormy fruit is so high that it would have unacceptable standards of American consumers.

During a recent trip to Costa Rica only single, two and at most a group of 16 avocado trees was observed. These trees were sparsely foliated, suggestive of poor growth resulting from one or more devitalizing factors. The fungus *Phytophthora* causative of severe root rot is common in many soils. Closer examination of the trees showed (1) many ambrosia beetles in the trees and (2) many dead and wilting terminal twigs.

Lepidopterous larvae taken from the wilting twigs were identified by Dr. D. H. Habeck, Professor, Entomology and Nematology Department, IFAS, Univ. of Fla., as a species of *Stenoma* other than *catenifer*. It is larger than *stenoma* although its infestation and twig feeding habits are the same.

The low vitality tree may be theorized as results of (1) possibly *Phytophthora* root damage, (2) *Stenoma* larval feeding which reduced the tree vitality to the extent that (3) ambrosia beetles burrowed into the trees without repulsion by the sap (transpiration) flow of high vitality trees.

Efforts have been made on both sides of the Mexican-United States border, possibly by entrepreneurs from the United States, to move large commercial quantities of avocado fruit into the United States. Such movements, it is contended would (1) assist in trade between the two countries (2) provide cheaper fruit for United States markets and (3) would favor negotiations for petroleum. What a pity to bargain for these factors to bring in the damaging or limiting avocado feeding insects as a living, permanent ongoing memorial to American avocado producers.