

PEST ALERT

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Florida Department of Agriculture and Consumer Services Division of Plant Industry

Maruca vitrata (Fabricius), bean pod borer moth

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INTRODUCTION: *Maruca vitrata* (Fabricius) (Lepidoptera: Crambidae) is considered to be a major pest of legumes. Feeding by caterpillars can severely damage bean pods and flowers of representative hosts. An adult bean pod borer was collected on March 13, 2018, at a light on Big Pine Key (Monroe County), and the division's entomology section confirmed the identification. DPI personnel surveyed Big Pine and neighboring Keys, but they did not find any additional moths or larvae in potential host plants. DPI is continuing to monitor the detection area with traps. Specimens were rarely collected in the Florida Keys in the 1980s, and subsequent observations have not found any since 1992. The species is pantropical, occurring in Mexico southward, and in the Antilles. Specimens have been collected rarely in Louisiana and Texas.

HOSTS: The caterpillars feed on a wide range of legumes (Fabaceae), especially in the subfamily Faboideae (Papilionoideae). Host plants include species of *Arachis*, *Canavalia*, *Cajanus*, *Crotalaria*, *Dolichos*, *Erythrina*, *Glycine*, *Lablab*, *Mucuna*, *Phaseolus*, *Pisum*, *Pithecellobium*, *Poinciana*, *Sesbania*, *Tephrosia*, *Vicia*, and *Vigna*. The suitability for larval development and severity of damage vary among different hosts. There are occasional records on plants outside of Fabaceae.

BEHAVIOR: Eggs are laid on flowers. Young caterpillars bore into flowers and buds, causing bloom and bud drop. One caterpillar may feed on multiple flowers. Older caterpillars bore into bean pods to feed on the developing seeds, and they push wet frass out an exit hole. The caterpillars pupate in various places, often on the ground. The moths are nocturnal, skittish, and are somewhat attracted to nighttime lights. There are multiple generations occurring within a year. Much information is published under the synonym *Maruca testulalis* (Guenée).

SURVEY: The moths can be trapped at lights placed near host plants, and there is a pheromone lure known. Inspect plants for bored pods, fallen flowers, and parts silked together. The caterpillars are cream colored with brown spots. Look for pods with a hole, extruded frass, or signs of internal decay. Cut open pods and put the larvae and pod into 70% alcohol. Professional identification is necessary because other species of pod-boring caterpillars exist in Florida. Do not move live specimens. Contact the DPI Helpline (1-888-397-1517) for information on how to submit suspect specimens.



Figure 1. *Maruca vitrata* (F.) collected on Key Largo, FL, 1986.

Photograph credit: James Hayden, DPI



Figure 2. Live female on Big Pine Key.

Photograph credit: David R. Fine



Figure 3. Caterpillar in pod.

Photograph credit: M. Shepard, G.R. Carner, and P.A.C Ooi. Insects and their Natural Enemies Associated with Vegetables and Soybean in Southeast Asia. Bugwood.org. Creative Commons



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