Box tree moth (*Cydalima perspectalis*)

Pest Fact Sheet

CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

Introduction: Box Tree Moth (BTM) (Crambidae) causes significant damage to boxwood (*Buxus* spp.) which is a popular ornamental plant in the United States. This pest has not been found in California but it is present in Canada and Northern Eastern States of the USA.



Adult Box Tree Moth

Distribution: Native to East Asia, BTM was first reported in 2007 in Europe in areas with native boxwood. In North America, it was first reported in Canada in 2018, and subsequently in New York in 2021. With its range expanding, BTM is presently found in the Eastern US from the Mid-Atlantic States to Ohio and Michigan, and in Canada around Toronto and in Nova Scotia (Boggs *et al.,* 2025).

Description: Adults typically have vivid white wings with a purple sheen, dark brown along the wing borders and on the end of the abdomen. There is a less common form that is all brown with a white spot on the front wing. Eggs are flat, yellow and 1.0 mm in size, found in clusters from 5 to 20 on undersides of leaves. Emerging caterpillars have black heads and bodies that are green to yellow. They will reach a size of around 40 mm with black and white stripes, and black dots along the borders outlined with white along the length of the body. Pupation occurs inside a silk cocoon, 15 to 20 mm long, changing from green with black stripes to brown when mature.



Box tree moth caterpillar

Biology: Box tree moth caterpillars are defoliators that switch to bark when food is scarce; this can kill the plant. The rapid spread of the moth in Europe has been due to movement of infested plants. Moreover, there are many native boxwoods that BTM can feed on which contributes to the difficulties in controlling this pest. The adults are considered to be strong fliers. In China BTM has been found to have up to five generations, while those in the New York and Ontario have two overlapping generations.

Economic importance: The potential economic impact of the BTM in the United States is estimated at $126 million given that boxwood accounts for up 15 percent of broadleaf evergreen sales (USDA-NASS, 2015). The trees are used as hedges and often groomed into topiaries. Heavy defoliation of leaves and bark, if left unchecked, is highly destructive to this popular evergreen. BTM can also feed on burning bush (*Euonymus alatus*), Japanese spindletree (*E. japonicus*), purple holly (*Ilex chinensis*), and orange jessamine (*Murraya paniculata*).

References:

Animal and Plant Health Inspection Service (APHIS). (2022). *Pest alert: Box tree moth* (*Cydalima perspectalis*). U.S. Department of Agriculture.

Boggs, J.F., A. Kulhanek, A.K. Stone, K.I. Perry, and S.F. Ward. 2025. Box Tree Moth: Range and Spread.

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