

Boxwood (*Buxus spp.*) pests and diseases

Box Tree Caterpillar (*Cydalima perspectalis*)



Introduction

The box tree caterpillar, *Cydalima perspectalis*, has become a significant concern for gardeners and horticulturists. It poses a serious threat to boxwood (*Buxus spp.*) plants. Its voracious caterpillars can quickly defoliate and devastate box hedges and topiary, leaving behind unsightly webbing and damage. Recognizing the signs of infestation is crucial for timely intervention.

The caterpillar originated in East Asia. However, the invasive moth has rapidly spread across Europe and, more recently, into North America [[see current distribution](#)].

Box tree caterpillars, with their distinctive green bodies and black and white stripes, can cause extensive harm. Understanding their life cycle, from egg to adult moth, is essential for effective management strategies. Gardeners must remain vigilant, as early detection and prompt action are key to protecting these beloved ornamental plants.

Host

Most species of Boxwood (*Buxus spp.*), including Balearic box (*B. balearica*), Common box (*B. sempervirens*) and Faulkner's box (*B. microphylla*).

Biology

Cydalima perspectalis undergoes complete metamorphosis. Eggs are laid on boxwood leaves, hatching into green, striped caterpillars that voraciously consume foliage. Larvae spin webbing, creating cocoons for pupation. Adults are white moths with brown borders, primarily active at night.

Multiple generations occur annually, accelerating damage during warmer months. Overwintering occurs as larvae in cocoon silk shelters. The caterpillar's rapid lifecycle and high reproductive rate contribute to its invasive success and the significant damage inflicted on boxwood plants.

Effective control requires understanding these biological stages to interrupt the pest's development during the first generation.

Symptoms

For details of the symptoms, scan or click on the QR code to access the accompanying poster.



More information

- EPPO Global Database: <https://gd.eppo.int/taxon/DPHNPE>
- DEFRA Plant Health Portal: https://planthealthportal.defra.gov.uk/assets/factsheets/Box_tree_caterpillar_Factsheet_2024.pdf
- UK Plant Health Risk Register: <https://planthealthportal.defra.gov.uk/pests-and-diseases/uk-plant-health-risk-register/viewPestRisks.cfm?csref=26378>

Acknowledgements

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Boxwood Psyllid (*Psylla buxi*)



Introduction

Boxwood psyllid or box sucker (*Psylla buxi*) is a common, though often overlooked, pest that can impact the aesthetic appeal of boxwood shrubs and topiary. While not as devastating as box blight or box tree caterpillar, the presence of boxwood psyllid results in distinctive, cupped or curled new growth (gall), detracting from the plant's formal appearance.

These tiny, sap-sucking insects lay eggs in the leaf buds, and the nymphs, upon hatching, feed on the developing foliage, causing the characteristic distortion. The white, cottony wax they produce further mars the plant's look. Although generally not fatal, severe infestations can weaken plants and impede new growth.

Gardeners should be aware of the psyllid's signs and understand its life cycle to implement effective control measures and maintain healthy, attractive boxwood. Regular inspection, especially during spring, is vital for early detection and intervention.

Host

The main hosts are boxwood plants (*Buxus spp*) particularly Common box (*B. sempervirens*).

Biology

Psylla buxi, is a small, sap-sucking insect specific to boxwood. Adults overwinter as eggs in boxwood buds. In spring, nymphs hatch and feed on emerging leaves, causing characteristic cupping and curling of new growth.

These nymphs secrete white, waxy coverings for protection. They undergo several nymphal stages before maturing into winged adults. There is typically one generation per year. Adults mate and lay eggs in summer, completing the lifecycle.

While not usually fatal, heavy infestations can stress plants. The distinctive leaf distortion is the most obvious sign, enabling identification of the pest. Understanding this annual life cycle allows for targeted control measures, focusing on disrupting nymph development in spring.

Symptoms

For details of the symptoms, scan or click on the QR code to access the accompanying poster.



More information

- Royal Horticultural Society: <https://www.rhs.org.uk/biodiversity/box-sucker>
- CABI Digital Library: <https://www.cabidigitallibrary.org/doi/10.1079/cabicompendum.45340>
- British Bugs: https://www.britishbugs.org.uk/homoptera/Psyloidea/Psylla_buxi.html

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Boxwood blight (*Cylindrocladium buxicola*)



Introduction

Box blight, caused by the fungal pathogens *Calonectria pseudonaviculata* and *C. henricotia*. Commonly referred to as *Cylindrocladium buxicola*, it is a devastating disease affecting boxwood (*Buxus spp.*). It's characterized by dark spots on leaves, rapid defoliation, and black streaks on stems, leading to significant dieback and even plant death. Warm, humid conditions favour its spread, making dense plantings with poor air circulation particularly vulnerable. Spores are easily dispersed by wind, rain, and contaminated tools or clothing.

Once established, the fungus is difficult to eradicate. Early detection is crucial, involving the removal of infected material and careful sanitation practices. Choosing resistant varieties and ensuring proper spacing can help minimize risk. Protecting prized boxwood from this aggressive disease demands vigilance and proactive management.

Symptoms can be confused with the much less aggressive fungal blight caused by *Volutella*. Although it causes similar dieback symptoms, defoliation is rare and there are no black streaks on the stem. The fungal sporulation is pink for *Volutella* and white for *Cylindrocladium*. *Volutella* is not a particularly serious disease and plants will usually recovery.

Host

Mainly Boxwood plants (*Buxus spp.*), including Balearic box (*B. balearica*), Common box (*B. sempervirens*), Faulkner's box (*B. microphylla*) and other varieties of Box.

Biology

Cylindrocladium buxicola is a fungal pathogen causing box blight. It thrives in warm, humid conditions, producing sticky spores that spread via wind, rain, and contaminated tools. Infection begins with leaf spotting, progressing to defoliation and stem lesions.

The fungus penetrates plant tissue, disrupting vascular flow and causing dieback. It produces microsclerotia, enabling long-term survival in soil and plant debris. Rapid disease progression and persistent spores make control challenging. Effective management relies on sanitation, resistant varieties, and fungicide application to disrupt the fungal lifecycle.

Symptoms

For details of the symptoms, scan or click on the QR code to access the accompanying poster.



More information

- Royal Horticultural Society: <https://www.rhs.org.uk/problems/box-problems>

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