

Pine Bark Adelgid

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Pine bark adelgid (PBA), *Pineus strobi*, infests pines in the eastern half of the US and may cause injury to young trees. The primary and preferred host is eastern white pine (*Pinus strobus*), but Scots (*Pinus sylvestris*) and Austrian (*Pinus nigra*) pines are occasionally attacked.

Description and Life Cycle

PBA adults are all female and about 1–2 mm long. They produce white, waxy strands around themselves and their eggs. Maturing PBAs settle in large masses on a pine trunk and the white, waxy coverings provide protection (Figure 1). This can be an aesthetic nuisance to mature trees but can result in severe damage to young trees.

Immature PBAs overwinter on their host and resume activity in the early spring. Once mature, they begin laying eggs within their protective covering. Eggs hatch within a month and newly emerged adelgids (crawlers) disperse to find suitable feeding sites (Figure 2). Some immature adelgids will drift with the wind across vast distances to new hosts. Once crawlers are ready to feed, the crawlers molt to the next immature form (nymphs) and will remain in place for the remainder of their life.

Up to five generations may occur per year in the northern range, but it is unclear how many more occur in the south. These generations often overlap so that multiple life stages are present at the same time throughout much of the growing season. Large populations can develop rapidly on newly infested plants.

Figure 1: Dense infestation of PBA on eastern white pine



Figure 2: Newly emerging crawler



Damage

Adelgids insert their mouthparts into the phloem of woody tissues or at the base of needles to consume sugar-rich plant sap. Feeding impedes the flow of water and nutrients, resulting in needle yellowing (chlorosis) and dieback. Larger, mature trees can often tolerate this feeding damage, but young trees are less resilient to damage and may exhibit dieback and decline.

If large infestations occur along the trunk of a young tree, significant internal damage can develop. External symptoms may not be evident until the tree is severely stunted or near death.

The accumulation of woolly masses can be unsightly and may persist on the plant long after the adelgids are dead (Figure 3). Removing this material via pruning or with streams of water may improve aesthetics even when treatments are not warranted.

Figure 3: Cottony residue from a previous or active infestation



Management

Effective therapeutic treatments are available to manage pine bark adelgid infestations, when they are warranted. Multiple treatments may be necessary to control the overlapping generations of this pest. In areas affected by heavy pest pressure, it is recommended to avoid planting eastern white pine. Many naturally occurring predators will attack this pest and may help suppress population outbreaks.

Promoting plant health through mulching and irrigation can improve tree resiliency. Nitrogen fertilization should be avoided until the pest is managed. Please contact your Bartlett Arborist Representative to learn about management strategies.



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