



## Oak Skeletonizer

*Bucculatrix ainsliella* Murtfeldt; Family: Bucculatricidae



Early damage on oak leaf.

Photo from [www.forestryimages.org](http://www.forestryimages.org)  
Ronald S. Kelly,  
Vermont Department of Forests,  
Parks, and Recreation.



Leaf damage.

Photo from  
[www.forestryimages.org](http://www.forestryimages.org); James  
Solomon, USDA Forest Service.



Mature larvae and cocoons.

Photo from  
[www.forestryimages.org](http://www.forestryimages.org)  
James Solomon,  
USDA Forest Service.

## Injury

The oak skeletonizer, a native species, feeds on the leaves of oaks and chestnut, but shows a preference for red oak. It occurs from southern Canada and the Lake States to North Carolina and Mississippi, the same as the range of the host oaks.

As a result of the feeding of the larvae, oak leaves are reduced to their upper surface only, often becoming almost translucent and eventually drying out. Populations of the oak skeletonizer vary greatly from year to year, indicating that natural factors such as predators, parasites, or weather may influence them. Depending on population numbers, damage may be slight or even go unnoticed, except in outbreak years. Occasional outbreaks can cause damage over large areas. Several successive defoliations result in a reduction of tree growth, and sometimes part of the crown is killed.

## Description

The adult moths have a wingspan of 7 to 8 mm; the forewings are largely blackish with some paler areas in them.

The larvae are yellowish green and when mature are 5-6 mm in length. Small white patches of silk are often seen on the leaves where these insects are present. The larvae spin these silken pads as a protective cover under which to molt. When the larvae are disturbed, they spin down from the foliage on a silken thread and seem to hang in mid-air. These suspended larvae are a nuisance when the tree is located over a sidewalk or lawn area.

The pupal stage occurs inside a small, 3 mm long, white cocoon that is longitudinally ribbed. The pupa is black and when the moths have emerged it may be seen protruding from the empty cocoons.

## Life History

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Adults emerge from the overwintering cocoons in late April and May, and deposit eggs on the undersides of newly expanded oak leaves, near the mid-vein. The larvae at first feed by tunneling within the leaves, causing blotch or serpentine mines, but from the third instar on, they feed externally on the lower leaf surface. As a result of this later feeding, leaves appear skeletonized. As the larvae grow and molt, they spin silken pads on the undersides of the leaves under which molting occurs. After several molts, the larva spins a characteristic white, ribbed cocoon on leaves, branches, twigs, or nearby objects.

In most of the northeast there are two generations of this insect a year. The second generation adults fly in late July and August, with larvae usually reaching maturity by late October.

## Management

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Where damage is likely to be heavy, the foliage of oaks may be treated with insecticide. A professional applicator may be needed for large trees; other products may be available for professional use.

One application of insecticide in late May or early June (448–707 GDD \*) should be sufficient to control the first generation. If the first generation is adequately controlled, sprays for a second generation are not usually needed. However, if the first generation is missed, the insecticide can be used for the second generation in early August (1798–2155 GDD).

\* GDD = Growing Degree Days. Your local radio station may make this information available, or see this website: <http://www.nrcc.cornell.edu/grass/degreedays/degreedays.html>

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**This publication contains pesticide recommendations. Changes in pesticide regulations occur constantly and human errors are still possible. Some materials mentioned may no longer be available and some uses may no longer be legal. All pesticides distributed, sold or applied in New York State must be registered with the New York State Department of Environmental Conservation (DEC). Questions concerning the legality and/or registration status for pesticide use in New York State should be directed to the appropriate Cornell Cooperative Extension Specialist or your regional DEC office. READ THE LABEL BEFORE APPLYING ANY PESTICIDE.**

<http://idl.entomology.cornell.edu>