



## Catalpa Sphinx Caterpillar

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### Introduction

The catalpa sphinx caterpillar (Fig. 1) is the larval stage of a native moth (*Ceratomia catalpa*) found in the eastern US. The caterpillars feed only on catalpa trees, also known as catawba (*Catalpa bignonioides* and *C. speciosa*). The catalpa sphinx belongs to the family Sphingidae in the order Lepidoptera.



Figure 1. Catalpa sphinx caterpillar (Sturgis McKeever, Georgia Southern University, Bugwood.org).

### Identification

Catalpa sphinx caterpillars have a distinctive slender black "horn" on the end of their abdomen (Fig 1). Young caterpillars are mostly white with black spots on their body. Mature caterpillars measure up to 7.5 cm (almost 3 inches) in length. They have black heads and a broad black stripe running the length of their back (Fig. 1). The sides of the caterpillars are white or pale yellow and sometimes have black spots or vertical bands. There are pale forms that are more greenish, and sometimes the caterpillars will have a row of black spots down the back or will lack the black stripe. The adult is a large, nondescript brownish-gray sphinx or hawk moth with a 65-95 mm (2.5-3.75 inch) wingspan (Fig. 2).

### Damage

Catalpa sphinx caterpillars, also known as "catalpa worms", are major defoliators of catalpa trees, their only host. The caterpillars feed gregariously,

stripping away large portions of the leaves (Fig. 3). Heavy infestations of these caterpillars can completely defoliate an entire tree. Depending on the region, many catalpa trees will have all their leaves stripped away by the end of summer in some years. This can be followed by years with no noticeable defoliation at all. The fluctuation between years of defoliation and no defoliation is largely regulated by parasites attacking the caterpillars. Catalpa trees on high ground with poor soil are seldom attacked.



Figure 2. Adult catalpa sphinx (Herbert A. 'Joe' Pase III, Texas A&M Forest Service, Bugwood.org).



Figure 3. Catalpa sphinx caterpillars feeding gregariously on catalpa (Lacy L. Hyche, Auburn University, Bugwood.org).

## Life History

Catalpa sphinx has a complete life cycle of egg, larva, pupal, and adult stages (Fig. 5). It overwinters as a pupa in the soil and adults emerge in May. After mating, adult females lay eggs in clusters of up to 1,000 eggs on the underside of new leaves. Each caterpillar feeds and molts five times. Before molting into the pupal stage, full grown caterpillars leave the host tree and burrow into the soil. There are usually two generations a year in Virginia. The second generation is usually larger in numbers and can cause defoliation by the end of summer. In some years even a partial third generation is seen before cold weather arrives in the fall.

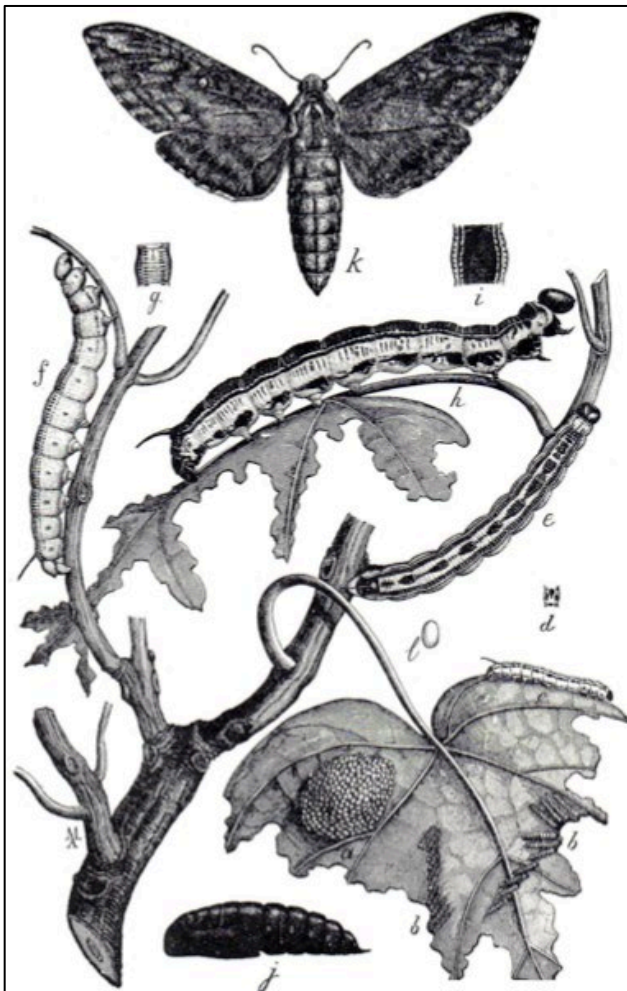


Fig. 4. Life stages of the catalpa sphinx (USDA).

## Control

Although catalpa sphinx caterpillars can cause complete defoliation, control is usually not warranted because the caterpillar populations fluctuate from year to year and infested trees are easily able to re-leaf after defoliation. Catalpa trees hardly ever show any negative effects from defoliation, even over consecutive years.

If chemical control is desired, follow the recommendations for general caterpillar defoliators in the Virginia Pest Management Guide for [Home Grounds and Animals \(PMG 456-018\)](#) or [Horticultural and Forest Crops \(PMG 456-017\)](#), depending on homeowner or commercial production use.

## Remarks

“Catalpa worms” make excellent fish bait. At one time catalpa trees were grown in Florida in order to harvest the caterpillars from the trees and sell them to fishermen.

## Revised

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