

Walnut Caterpillar

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Distribution:

The walnut caterpillar, *Datana integerrima* Grote & Robinson, occurs throughout the eastern United States and is common in parts of Canada. It attacks a variety of deciduous trees, preferably walnut, pecan, butternut, and hickory

Description and Life Cycle:

The adult walnut caterpillar is a stout-bodied moth with a wingspread of 1½ to 2 inches (Fig. 1). The forewings are dull brown to chestnut in color and are crossed by dark irregular lines. The hindwings are lighter without lines.

The immature caterpillars are reddish-brown with narrow yellowish lines that extend the length of the body (Fig. 2). Fully grown larvae are black with grayish lines on the body and are covered by numerous long gray hairs (Fig. 3). From a distance they appear purple, and when disturbed frequently hold their bodies in a characteristic C shape (Fig. 3).



Figure 1. Adult walnut caterpillar.



Figure 2. Colony of immature walnut caterpillars feeding



Figure 3. Mature walnut caterpillar

Adult walnut caterpillars are found throughout the spring and summer. The females deposit eggs in masses on the undersides of the leaves (Fig. 4). Upon hatching, the larvae feed in colonies (Fig. 2) but do not construct tents or webs. As they grow, the caterpillars molt several times. Often, they are found in masses on the trunk and larger limbs where they congregate to molt (Fig. 5). Later, they return to the foliage to continue their feeding. Upon completion of feeding, larvae crawl from the tree and pupate in the soil.



Figure 4. Walnut caterpillar egg mass.



Figure 5. Immature walnut caterpillar larvae preparing to molt.

If environmental conditions are favorable, as many as three generations of walnut caterpillars may develop each year. After the final summer generation, the insect overwinters in the pupal stage in the soil.

Damage:

Defoliation caused by the caterpillars feeding on pecan leaves can reduce the quality of the current season's nuts, and if defoliation is extensive, reduce crop yields the following season. There have been reports of serious injury or even death to trees which suffered heavy defoliation two or more years in succession; however, repeated outbreaks of the pest have been sporadic and are relatively rare.

Control:

In managed orchards the walnut caterpillar is seldom a pest. Sprays routinely applied to control other pecan insect pests such as hickory shuckworm and pecan nut casebearer, will also control walnut caterpillars. However, there are times when periodic outbreaks may require separate treatment.

In residential areas, the walnut caterpillar can be an important pest because of its capability of defoliating a tree. Control can be difficult for homeowners because they rarely have the type of spray equipment required to adequately cover large pecan trees. When only a few colonies of the pest are found on the lower part of the tree, it is more practical to just physically remove them from the trees (e.g. pruning the limbs containing the larvae). Periodic inspection of the trees will allow for removal of the insects before they do extensive damage. Frequent observation may also permit destruction of the larvae as they cluster on the trunk or lower limbs to molt. If a homeowner should choose to spray, either by hiring a professional or doing it themselves, there are several insecticides that are effective and safe to use in residential areas.

For a listing of insecticides that can be used for controlling walnut caterpillar, refer to the Louisiana Recommendations for Control of Pecan Insects. This can be found at www.lsuagcenter.com. When using insecticides, be sure to check the pH of the water being used for spraying. The pH needs to be between 5.5 and 6.5 for optimum insecticide efficacy. Use of a buffering agent will help to maintain the desired pH once pesticides have been added to a solution.