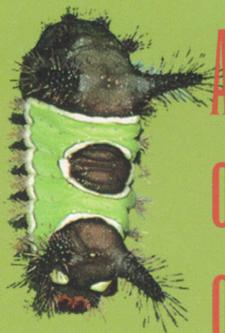




Bulletin 633  
February 1998  
Alabama Agricultural Experiment Station  
James E. Marion, Director  
Auburn University, Alabama

The title 'Stinging Caterpillars' is centered on the page. 'Stinging' is in a red, serif font, and 'Caterpillars' is in a larger, orange, sans-serif font. The 'C' in 'Caterpillars' is stylized as a large orange circle. To the left of the title is a green leaf with a prominent vein pattern. To the right is a yellow, spiky caterpillar. On the far right edge, a vertical illustration shows a green caterpillar with red and white markings and small black spines.

# Stinging Caterpillars



A Guide to Recognition  
of Species Found  
on Alabama Trees



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First Printing 3M, February 1998

*Information contained herein is available to all persons  
regardless of race, color, sex, or national origin.*

# Stinging Caterpillars

## A GUIDE TO RECOGNITION OF SPECIES FOUND ON ALABAMA TREES

L. L. HYCHE<sup>1</sup>

### INTRODUCTION

CATERPILLARS are larvae (the “worm” forms) of insects in the order Lepidoptera—the butterflies, skippers, and moths. In number of species known, Lepidoptera is the second largest of all insect orders. Consequently, caterpillars are numerous; more than 11,000 species occur in North America, with over 5,000 species in the eastern United States alone. Most caterpillars are plant feeders. They occur on a wide variety of plants, and many are serious pests. Caterpillars are among the most common of all insect forms found on foliage of forest, shade, and ornamental trees.

The typical caterpillar has a distinct head and a cylindrical body composed of 13 segments. The anterior three body segments constitute the thorax, and each thoracic segment bears a pair of jointed legs. The remaining 10 segments make up the abdomen. Typically, abdominal segments three, four, five, six, and 10 each bears a pair of unjointed, fleshy projections called prolegs. In some caterpillar groups, however, prolegs may be absent (slug caterpillars) or occur only on segments five, six, and ten or six and ten

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<sup>1</sup> Associate Professor, Department of Entomology

(loopers). Prolegs are equipped with rows or circles of small hooks called crochets which aid caterpillars in crawling and clinging to surfaces.

Caterpillars come in a variety of shapes, colors, and sizes. Some species are bare, others sparsely to densely clothed with fine setae (hairs); some are drab, others brightly multicolored; some have smooth bodies, others bear one to many tubercles, bristles, spines, and/or horn-like projections. Within the group are found some of the largest and most striking representatives of our native insects. Also, within the group are found CATERPILLARS THAT "STING".

Stinging caterpillars do not sting in the familiar manner of bees, yellowjackets, hornets, and wasps (Order Hymenoptera). In the bee-wasp group, females (only females sting) are equipped with venom glands and stingers (modified ovipositors) with which they penetrate skin and introduce venom. Among the lepidopterans, neither the adult nor the caterpillar possesses this type of sting apparatus. Instead, stinging caterpillars bear specialized nettling or urticaceous setae or spines. These structures are hollow and contain toxins from poison-gland cells to which they are joined. These are primarily defensive structures for protection of caterpillars from predators and other enemies. The sting inflicted on humans is not from a deliberate attack by the caterpillar, but the result of contact, usually inadvertent, with toxin-bearing setae or spines. When brushed against, these structures break away, releasing toxins. In some cases, broken setae may penetrate the skin; in others, toxins spill out to spread on the surface of the skin.

Reactions to contact vary and include: slight to intense nettling, stinging, itching, or burning sensations; development of dermatitis, rash, lesions, or pustules; inflammation, swelling, and numbness at or around the area of contact; fever and nausea; and, in some cases, intense pain. The type of reaction depends on the species of caterpillar, degree of contact, type of toxin, and susceptibility of the individual. Reactions may be especially severe for individuals with allergies or sensitive skin.

The irritation usually results from direct contact with a live caterpillar. However, in some species, urticating setae may retain nettling capabilities for some time after death of the caterpillar. Molted skins and silk cocoons bearing toxic hairs from last-stage larvae may also cause nettling if handled. Nettling caused by contact with dead caterpillars, cast skins, and cocoons is generally milder than that produced by live caterpillars.

Many species of caterpillars are variously armed or clothed with setae and spines; however, only a relative few actually possess venomous or urticating structures. Thus, there are "stingers" and harmless "look-a-likes", and

distinguishing one from the other solely on appearance is difficult. Determining which is which by “hands-on” personal bio-assay is foolproof but could be foolhardy and painful.

During years of study of tree insects at the Alabama Agricultural Experiment Station, several species of urticating caterpillars have been encountered and identified. Represented are nine families that contain one or more species known, or reported, to be urticaceous or otherwise capable of causing irritating reactions on contact with human skin. The following is offered as a guide to recognition of stinging caterpillars found on Alabama trees. Also included are some common “dangerous-looking” but harmless caterpillars found on trees and shrubs.

## “STINGERS”

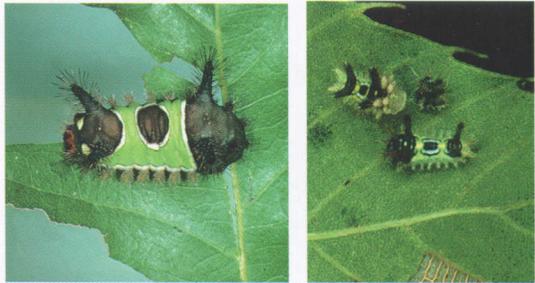
### SLUG CATERpillARS - FAMILY LIMACODIDAE

Slug caterpillars bear little resemblance to the typical caterpillar. The head is hidden within the thorax; thoracic legs are reduced; and prolegs are modified to sucker-like lobes without crochets. Movement is slow, gliding, slug-like. Most species tend to be solitary feeders, and seldom occur in sufficient abundance to cause serious loss of tree foliage. Several species of slug caterpillars possess urticating setae or spines. The following are known to occur in Alabama.

#### Saddleback Caterpillar

##### *(Sibine stimulea)*

The saddleback is one of the most common of slug caterpillars occurring in the area. Its conspicuous form and markings make it nearly unmistakable, even in the early stages of development. The full-grown caterpillar is about one



**Saddlebacks: fully grown larva at left; young larvae at right. In some sections of Alabama, saddlebacks are most likely called “packsaddles”.**

inch long. The anterior and posterior areas of the body are dark brown with prominent brown "horns" that bear numerous spines. The middle of the body is green. The green area has a white or cream margin and a large oval to oblong dark brown spot in the center, also with white margin. The appearance is that of a saddle and blanket, thus the common name. Small clumps of spines occur in a row along the lower margin of the green area and at the rear of the caterpillar.

The saddleback is generally a solitary feeder; however, early stage larvae may be somewhat gregarious. The caterpillar occurs on a wide variety of trees, shrubs, and other plants, including corn. Common tree hosts are apple, basswood, cherry, dogwood, elm, maple, oak, and plum. It is most often encountered in late summer and fall. The sting of the saddleback is the most severe of the slug caterpillars.

### Hag Moth Caterpillar (*Phobetron pithecium*)

The hag moth larva, sometimes called the monkey slug, is distinctive in form and easy to identify. The full-



**Hag moth caterpillars (monkey slugs); lateral and dorsal views.**

grown caterpillar is brown, hairy, and about 5/8 inch long. Along the body there are nine pairs of fleshy lateral processes which bear hidden urticating setae. The third, fifth, and seventh pairs of processes are long and sometimes twisted. These have been described as resembling "disheveled locks of a hag", apparently the basis for the common name.

The caterpillar is generally a solitary feeder, and will feed on foliage of several trees including apple, ash, birch, dogwood, hickory, oak, and willow. It has been collected from July into fall, but is usually most common in August and September. The specimens pictured were collected from oak in September.

### Stinging Rose Caterpillar (*Parasa indetermina*)

The full-grown caterpillar is  $3/4$  to  $7/8$  inch long; basic color is yellow. The body bears pairs of long, horn-like, bristly spines and clumps of smaller spines which are characteristic of several of the slug caterpillars. A useful identifying characteristic is the broad



**Stinging rose caterpillar.**

purplish band down the midline of the back. Within the band are narrow whitish longitudinal lines, which may be interrupted by constrictions in the band. Reddish, white, and purple lines occur along the sides.

Hosts of the stinging rose caterpillar include apple, cottonwood, dogwood, hickory, oak, redbud, sycamore and rose bushes. Larvae are usually found in August. Specimens have been collected in Lee County from cottonwood and oak at the end of August.

### Spiny Oak Slug (*Euclea delphinii*)

The full-grown larva is about  $3/4$  inch long. Basic color is yellow-green but color, especially of the pattern on the back, may vary. There are three pairs of large horn-like spines with black-tipped bristles at the front and two pairs at the rear. Clumps of smaller spines occur in rows along



**Spiny oak slug on redbud leaf.**

the back and sides. There are four dense clumps of small dark spines at the rear end; these are important characteristics for identifying the species.

The caterpillar feeds on foliage of several woody plants including beech, cherry, maple, oak, redbud, sycamore, and willow. It is usually found in late summer and fall. The specimen pictured here was collected from redbud in late September.

### *Isa textula*

This species has no known common name. Information available on its habits is limited and makes no reference to whether or not the species has stinging capabilities. However, being a slug caterpillar well-equipped with bristled spines, it seems suspect.



*Isa textula* larva on sawtooth oak.

The full-grown caterpillar is flattened and about 5/8 inch long. Color and markings are as pictured. Tree hosts include cherry, maple, and oak. The species is not common in our area. The specimen pictured was collected in Lee County from sawtooth oak in mid-September.

### Nason's Slug (*Natada nasoni*)<sup>2</sup>

The form of Nason's slug differs from that of the foregoing slugs in that there are no large, conspicuous, horn-like bristled spines present. There are, however, rows or tufts of small spines, some of which are urticating, along the back and sides. The nettling sensation produced is mild and short-lived.



Nason's slug on oak.

<sup>2</sup>Identification of Nason's slug supplied by Dr. Marc Epstein, National Museum of Natural History, Smithsonian Institution, Washington D.C.

The full-grown caterpillar is 3/4 to 7/8 inch long. Basic color is green; markings are as pictured. Food trees include beech, hickory, hornbeam, oak, and several other trees and shrubs. This caterpillar is not common in our area. The specimen pictured here was collected in Lee County from sawtooth oak in early October.

## FLANNEL MOTHS - FAMILY MEGALOPYGIDAE

Flannel moth caterpillars, like slug caterpillars, do not exactly fit the description of the typical lepidopterous larva. Structurally they differ in having seven pairs of prolegs rather than five (or less) pairs common to typical caterpillars. Most are clothed with fine, long, silky hairs. There are no conspicuous large, threatening, bristle-bearing "horns" to warn of danger; however, concealed within the hairy coats are venomous setae capable of producing severe reactions.

Larvae of flannel moths feed on a variety of trees and shrubs. Young larvae feed gregariously; older larvae are often found feeding singly. In most years, populations are low and foliage loss minimal; however, some species can become abundant and cause extensive defoliation of trees. Three species of flannel moths are known to occur in the Southeast. Two of these, the puss caterpillar and white flannel moth, are common in Alabama.

### Puss Caterpillar (*Megalopyge opercularis*)

The puss caterpillar (the adult is called southern flannel moth) is our most "dangerous" stinging caterpillar. Contact may produce severe reactions including: intense burning and nettling of the skin; severe pain; reddening and inflammation; development of



**Puss caterpillars.** The caterpillar at the left is fully grown; the one at right is still developing, note the recently shed (and still urticaceous) skin beside the larva.

pustules and other lesions; numbness; swelling, which may sometimes be extensive; and nausea. Pain may persist from one to 12 or more hours. In some instances, victims have required medical attention. The larva is urticating in all stages, but severity of the reaction is generally proportional to size. Also, newly molted skins retain stinging capabilities.

The caterpillar is thickly covered with fine, long, tan, grayish to brown hairs, among which are hidden venomous setae. Hairs peak roof-like over the back and taper rearward to form a "tail". Hairs along the "ridge" of the back occur in small tufts; on each side are small patches of white. The full-grown larva is about one inch long, but with its hairy coat, appears to be much larger. The overall length of the specimen shown at left in photo on page 7 is 1 5/8 inches.

Puss caterpillars feed on foliage of a variety of broadleaf trees and shrubs. Some common tree hosts are apple, elm, hackberry, maple, oak, pecan, and sycamore. Two larval broods likely occur each season in Alabama, one in spring and early summer and one in late summer and fall. It is the caterpillars of the second brood that are most often encountered. Specimens pictured here were collected in Lee County during September.

### White Flannel Moth (*Norape ovina*)

The full-grown caterpillar of the white flannel moth is 1 to 1 1/4 inches long. The body is basically pale yellow with a broad, dark brown to black band on the back. Within the band is a double row of raised, pale yellow spots or tubercles which bear clumps of short setae. Similar clumps of setae occur along each side. Overall, the body is sparsely clothed with longer hairs.

This caterpillar is known to feed on redbud, hackberry, beech, mimosa, and honeylocust. In Alabama, it is found most often on redbud and occasionally on honeylocust. Larvae generally begin to appear during the first half of August, and are present into October. Young larvae often feed side-by-side in rows; older larvae tend to scatter and feed individually. The species is sometimes a serious defoliator of ornamental redbud.



**Caterpillars of the white flannel moth: early stage larvae (above) full-grown larva (below).**

## GIANT SILKWORMS - FAMILY SATURNIIDAE

Among the members of this family are some of the largest and most striking and fearsome-looking of our native caterpillars. Some species spin large, thick cocoons of silk, thus the name silkworm. Many are brightly multicolored and variously armed with conspicuous "horns" and spines. Several species are equipped with urticating structures. Two species, the buck moth and io moth, occur in Alabama.

### Buck Moth Caterpillar (*Hemileuca maia*)

All species of caterpillars of the genus *Hemileuca* are reported to bear urticating spines; only one species, the buck moth, is known to occur in Alabama. The full-grown caterpillar is about 2 3/8 inches long. The head is dark reddish-brown to black. The body is brown to grayish black, and sprinkled liberally with small yellowish dots. There is a double row of short, tannish tufts of spines down the back and rows of larger, longer, bristled, red to black spines along each side. Young larvae are solid black.



**Buck moth caterpillars: full-grown larva (above), early stage larvae (below).**

In Alabama, buck moth infestations are found primarily on oak. Caterpillars are usually encountered during May and the first half of June. Severity of sting ranks behind that of the puss caterpillar and is probably about equal to that of the saddleback. Welts raised on the skin may remain visible for a day to more than a week.

### Io Moth Caterpillar (*Automeris io*)

This caterpillar is a general feeder. Food plants range from grasses and herbs to foliage of some hardwood trees. Some trees reported as hosts include apple, black locust, cherry, dogwood, elm, hackberry, hickory, maple,

oak, sycamore, and willow. The full-grown larva is 2 1/4 to 2 1/2 inches long and fairly easy to recognize. The head and body are yellowish green; thoracic legs and prolegs are red. There is a broad white line along each side, bordered above by a similar reddish line and below by a thinner (sometimes broken) reddish-purple line. Raised tubercles, each bearing a whorl of green branched spines, occur on each segment along the back.



*Io moth caterpillar* (Photograph provided by Dr. Gary Mullen, A.U. Department of Entomology).

Two generations probably occur each season, with larvae present during June-October. This caterpillar is scarce in Alabama, and is only rarely encountered on foliage of trees.

## TUSSOCK MOTHS - FAMILY LYMANTRIIDAE

Several species of the tussock moth family are important defoliators of trees. Caterpillars of three species are reported to bear urticating setae; one of these, the whitemarked tussock moth, is common in Alabama.

### Whitemarked Tussock Moth (*Orgyia leucostigma*)

The full-grown caterpillar is about 1 3/8 inches long. The head and upper surface of the segment behind the head are red. There are two long black "pencils" or tufts of hairs on the first segment of the thorax; a single, similar



*Whitemarked tussock moth larvae on willow.*

“pencil” occurs at the rear on the eighth abdominal segment. The back is mostly black. There is an erect, brush-like tuft of short, white or yellowish hairs on each of the first four abdominal segments, and a conspicuous red dot on segments six and seven. The sides of the body are yellow, cream, or grayish with fine whitish hairs arising from each segment.

Larvae of the whitemarked tussock moth feed on a wide variety of trees and shrubs. Some common tree hosts are apple, basswood, cottonwood, elm, maple, oak, sycamore, and willow. At least two larval broods occur each season in our area. Caterpillars are generally present from early April into October.

## DAGGER MOTHS - FAMILY NOCTUIDAE

The noctuid family contains some of the most common and destructive plant-feeding caterpillars. Many species are major pests of field crops, gardens, and pastures (e.g., armyworms and cutworms), but some species commonly feed on foliage of trees. Most noctuid caterpillars are relatively smooth, and generally lack setae or spines. However, several species of dagger moth larvae possess conspicuous setae. Two species are reported to be urticaceous. One of these, the smeared dagger moth, occurs in Alabama.

### Smeared Dagger Moth (*Acronicta oblinita*)

This caterpillar is a general feeder. Food plants include smartweed (the larva is sometimes called the smartweed caterpillar), strawberry, corn, cotton, grasses, clover, and occasionally apple, boxelder, cottonwood, elm, oak, and willow. Cottonwood and willow seem to be the preferred tree hosts in our area.



*Full-grown larva of the smeared dagger moth.*

The full-grown caterpillar is 1 5/8 to 2 inches long. The body is

basically black with a broad, bright yellow, broken line along each side, and a double row of yellow spots down the back. There are rows of black tubercles (some may be red) from which arise numerous yellowish to brown bristly spines.

Two larval broods may occur each season; spring and early summer, and late summer and fall. In Lee County the caterpillar is most often found on its tree hosts in September and October.

## TENT CATERpillARS - FAMILY LASIOCAMPIDAE

The tent caterpillars are best known as important defoliators of forest and shade trees. Two species, eastern tent caterpillar and forest tent caterpillar (genus *Malacosoma*), are common in Alabama. Larvae of some groups within the family are reported to cause irritation when handled, apparently from contact with urticating setae. However, the principal "stinging" agent associated with the two Alabama species, and other members of the genus, is a substance produced by pupating caterpillars. Pupation occurs in a white to yellowish silk cocoon. During cocoon construction, caterpillars smear the structure with a thick, white to yellowish fluid. Subsequently this dries and becomes a fine powder which, if cocoons (See photo on page 13) are handled, sifts out on the skin. Contact with the skin may cause an allergic reaction that appears as reddening and itching of the contact area. This reaction seems to occur only among allergy sufferers or individuals with very sensitive skin.

### Eastern Tent Caterpillar (*Malacosoma americanum*)

The eastern tent caterpillar is responsible for the grayish-white tents or webs commonly seen in wild cherry trees each spring. Wild cherry is the primary host, but larvae feed also on apple, crabapple, peach, and pear. The full-



*Eastern tent caterpillar.*

grown caterpillar is about two inches long. The head is black; the back is mostly black and the sides bluish. There is a continuous light line down the midline of the back, bordered on each side by reddish-brown lines. Caterpillars are present in March and April.

### Forest Tent Caterpillar (*Malacosoma disstria*)

The forest tent caterpillar, although classified as a tent caterpillar, does not make a tent. Larvae feed on foliage of a variety of trees, but the primary hosts in Alabama are water tupelo, blackgum, sweetgum, and the oaks. The full-grown caterpillar is about two inches long. The head is blue, mottled with black. The body is blue to bluish black. The primary identifying characteristic for the caterpillar is a row of whitish diamond- or keyhole-shaped spots down the midline of the back. Larvae are generally present in April and May.

Both species construct similar cocoons for pupation at the end of the larval period. Cocoons (right) are spindle-shaped and 3/4 to 1 1/4 inches long. They are usually found in semi-protected situations such as crevices of bark of trees, under leaves and other objects on the ground, sometimes in folded leaves, and in cracks or crevices in walls of nearby buildings.



**Forest tent caterpillar.**



**Typical tent caterpillar cocoon. Fine powder from cocoons may irritate the skin of susceptible individuals.**

## SMOKY MOTHS - FAMILY ZYGAENIDAE

Smoky moths, by classification, are closely related to the flannel moths. Three species are reported (there may be more) to occur in the southeastern United States. One species possesses stinging capabilities.

### Laurelcherry Smoky Moth

Specific identity of this caterpillar has not yet been established. Laurelcherry is its primary, perhaps only, host. The full-grown larva is about 1/2 inch long. The back is black with a row of small elongate white spots along the midline, bordered by a double row of larger white segmental bars that form broken



*Caterpillar of the "Laurelcherry smoky moth".*

lines. The sides are pale yellow, and bear small tufts of short setae. The caterpillar is most common in late summer and fall; the specimen pictured was collected in Lee County during the first week of October. Nettling produced is mild and short-lived; however, small reddish welts may develop at points of contact and remain visible for a few hours.

## PROMINENTS AND DATANAS - FAMILY NOTODONTIDAE

The notodontid family contains a large number of some of our most common caterpillars found on foliage of broadleaf trees. Some are solitary feeders, some feed as colonies. Some species are clothed with numerous long hairs; some bear conspicuous horn-like spines; some are essentially bare, without conspicuous hairs or spines. As far as known, these caterpillars are not equipped with hollow, poison-bearing setae or spines typical of true urticating species. However, several species possess a specialized gland from which a chemical spray containing formic acid can be ejected. The gland is

located on the ventral surface of the first thoracic segment just behind the head. This is apparently a defensive mechanism for protecting caterpillars from predators and parasites. The spray from one species, the variable oakleaf caterpillar, is reported to blister or severely irritate human skin.

### Variable Oakleaf Caterpillar (*Lochmaeus manteo*)

The full-grown caterpillar is approximately 1 1/2 inches long. The head is greenish with a vertical black stripe on each side, bordered on the outside by a cream to white stripe. The base color of the body is green. There is a narrow yellowish, cream, or white line down the midline of the back, and wider cream or white lines along the edges of the back. Coloration of this back area is highly variable (thus the common name), and ranges from green to reddish brown with gradations between.



**Variable oakleaf caterpillar. An acidic spray released by larvae may irritate or blister skin.**

The caterpillar is most commonly found on various oaks, but also occurs on basswood, birch, boxelder, elm, and a few other hardwoods. There are two larval broods each season in Alabama, May-June and mid-August to mid-October.

## NYPHALID BUTTERFLIES - FAMILY NYMPHALIDAE

Reference to butterflies generally brings to mind the large and colorful adults seen active during the day. However, larvae of butterflies, like those of most lepidopterans, are plant feeders and several species feed on foliage of trees. Several species of nymphalid larvae bear conspicuous bristled or multi-branched spines similar to those found on some stinging caterpillars. One species, the spiny elm caterpillar (larva of the mourning cloak butterfly), is reported to possess urticating spines.

### Spiny Elm Caterpillar (*Nymphalis antiopa*)

The full-grown caterpillar is about two inches long. Its body is black with numerous white flecks and a row of red spots down the back; prolegs are red. Larvae feed on foliage of elm, cottonwood, hackberry, and willow. In our area, it is most often found on elm and willow. In Lee County, caterpillars are usually seen in April and May; however, a second brood may occur, with larvae possibly present again in August-September.



*Spiny elm caterpillar; the larva of the mourning cloak butterfly.*

## “NON-STINGERS”

### DANGEROUS-LOOKING, BUT HARMLESS CATERPILLARS

Two of the largest and most frightening-looking “non-stingers” found on Alabama trees are the **hickory horned devil** and **imperial caterpillar** (see photos page 17). The **hickory horned devil** is the larva of the regal moth (*Citheronia regalis* - Saturniidae). The full-grown larva is 4 to 5 inches long. It is a solitary feeder on pecan, hickory, walnut, butternut, sycamore, ash, and sweetgum. The caterpillar is normally present from July through September. The **imperial caterpillar** (*Eacles imperialis* - Saturniidae) is the larva of the imperial moth. The full-grown caterpillar is 3 to 4 inches long, and appears in two color forms, green (pictured) and reddish brown. The larva is a solitary feeder and is found on a variety of trees, both conifers and hardwoods. Some common hosts are pine, baldcypress, basswood, elm, maple, oak, hickory, sweetgum, and sycamore. Two broods likely occur each



**Hickory horned devil; harmless larvae of the regal moth.**



**Imperial caterpillar; ominous-looking, but harmless.**



**Spiny oakworm.**



year. The caterpillar may be present in early summer but is usually more common in August and September.

The **spiny oakworm** (*Anisota stigma* - Saturniidae) (photo this page) is sometimes common and abundant on oak, particularly open-grown ornamental and shade trees. The full-grown larva is 1 3/4 to 2 1/2 inches long, and bears a pair of long, dangerous-looking but harmless spines on the thorax. Young larvae feed in groups; older larvae tend to scatter and feed singly. The caterpillar is generally most common in August, September, and October. The spiny oakworm is representative of a small group of similarly "horned" caterpillars; the two long, curved spines behind the head (inset) are characteristic of the group. Three other species are common: pinkstriped oakworm, orangestriped oakworm, and greenstriped mapleworm.



**Hornworms: Upper - catalpa sphinx (catawba worm); lower - waved sphinx.**



**Sycamore tussock moth.**

The common name essentially describes each of these and denotes its primary host.

**Hornworms** (photos this page) are larvae of sphinx moths, sometimes called hawk moths or hummingbird moths (Family Sphingidae). These are rather large caterpillars, 2 to 4 inches long. Bodies are generally smooth, except for the characteristic sharp, but harmless, spine or "horn" arising from the top of the eighth abdominal segment. Several species of hornworms feed on foliage of trees. Two examples are **catalpa sphinx** (catawba worm), *Ceratomia catalpae*, (upper photo) on catalpa, and **waved sphinx**, *Ceratomia undulosa* (lower photo) on ash.

The **sycamore tussock** moth (*Halysidota harrisii* - Arctiidae), **fall webworm** (*Hyphantria cunea* - Arctiidae), and **walnut caterpillar** (*Datana integerrima* - Notodontidae) are

good examples of non-stinging "hairy" caterpillars frequently found on trees. The **sycamore tussock** moth larva (photo this page) feeds on leaves of sycamore and London plane trees. The full-grown caterpillar is 1 to 1 1/8 inches long. It is generally present from early June through September. The **fall webworm** is responsible for the silken webs seen surrounding leaves of pecan, persimmon, willow, sweetgum, mulberry, and several other trees. Webs and caterpillars begin to appear in spring but are most abundant in late summer

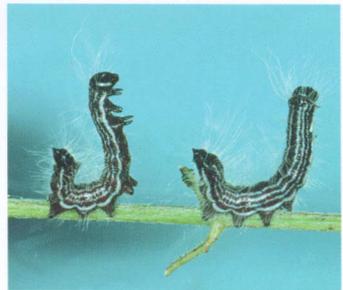


**Fall webworm.**

pictured below in the photo is not that of a caterpillar preparing to “strike”, but rather is the typical stance assumed by this and other *Datana* caterpillars when disturbed or alarmed.

and fall. The full-grown caterpillar is about 1 1/4 inches long. The **walnut caterpillar** is 1 3/4 to 2 1/4 inches long when fully grown. Larvae feed in groups on foliage of pecan, walnut, hickory, and butternut. There are two broods each year, with caterpillars present in May-June and again in July-August.

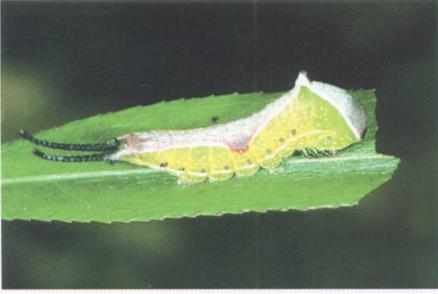
The menacing, upright pose



**Walnut caterpillars; caterpillars at right are in the typical alarm pose characteristic of *Datana* caterpillars.**

Reaction to disturbance, such as that exhibited by *Datana* larvae, is not uncommon. Several species of caterpillars respond in various ways to noise or motion; some, in so doing may utilize unique specialized structures. Response to disturbance is commonly associated with defense against predators or parasites. Whatever the purpose, action taken often appears ominous and threatening. Two such examples follow.

In one group of notodontid caterpillars, prolegs on the last abdominal segment are long and form tail-like structures called stemapods (upper photo on page 20). In some species, these are extensible and, when the caterpillar is disturbed, are extended and waved about in a threatening manner (lower photo on page 20). The caterpillar pictured at the top on page 20 is the larva of the **black-etched prominent**, *Cerura scitiscrupta*; the lower



**Black-etched prominent caterpillar (upper) showing stemapods when at rest; larva of the gray furcula (lower) with stemapods extended.**

photo is the larva of the **gray furcula**, *Furcula cinerea*. Both feed on cottonwood and willow and are usually found in late summer and early fall.

The "big-eyed" specimen with swollen "head" and colorful "forked tongue" (below, left) is the harmless larva of the common **spicebush swallowtail butterfly** (*Papilio troilus* - Papilionidae). The "eyes" are merely spots on the thorax. The "forked tongue" (called osmeterium) is a specialized structure common to papilionid caterpillars. It is normally concealed in the first segment of the thorax, but is extended when the larva is touched or disturbed. The full-

grown caterpillar (below, right) is 1 3/4 to 2 inches long. It is commonly found on spicebush, saffrafrs, and yellow-poplar.

Neither the stemapods of notodontids nor osmeteria of swallowtails are known to be harmful to humans; however, osmeteria, when extended, give off a musty odor.



**Spicebush swallowtail butterfly larvae; left - disturbed larvae with osmeterium extended; right - fully grown larva at rest.**

## CAUTION

Discovery that some caterpillars possess “stinging” structures should not give rise to undue fear of caterpillars. The number of species with stinging capabilities is small. Most of these, including those referred to as common, are seldom numerous; consequently, encounters with stinging caterpillars are not every-day occurrences. For most people, the sting produced by most species, while sometimes painful, is generally minor, mild, and short-lived but, in some cases, evidence of contact may remain visible on the skin for a few days. However, the severity of sting or other reaction depends on the species of caterpillar, degree of contact, and susceptibility of the individual. Allergy sufferers and individuals with sensitive skin should regard stinging caterpillars with caution.

Among the caterpillars reviewed, the saddleback, buck moth caterpillar, and puss caterpillar are considered our most serious stingers. And among these, the puss caterpillar produces the most severe reaction (See description under the species). Treatment of sting areas with ice packs or ammonia may give some relief from pain. However, for severe reactions, victims should promptly seek medical attention.

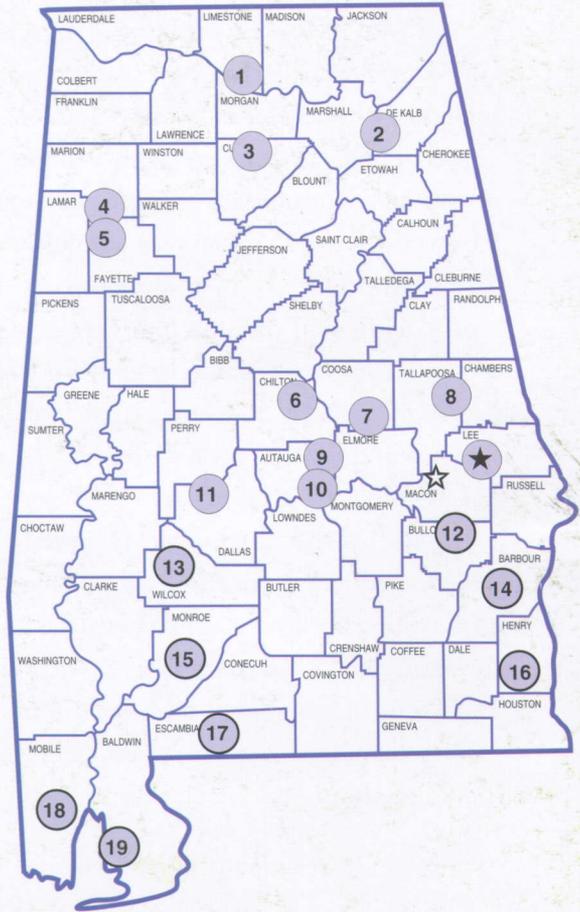
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# Alabama's Agricultural Experiment Station System

## AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the state has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



### Research Unit Identification

- ★ Main Agricultural Experiment Station, Auburn.
- ☆ E. V. Smith Research Center, Shorter.

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| <ul style="list-style-type: none"> <li>1. Tennessee Valley Substation, Belle Mina.</li> <li>2. Sand Mountain Substation, Crossville.</li> <li>3. North Alabama Horticulture Substation, Cullman.</li> <li>4. Upper Coastal Plain Substation, Winfield.</li> <li>5. Forestry Unit, Fayette County.</li> <li>6. Chilton Area Horticulture Substation, Clanton.</li> <li>7. Forestry Unit, Coosa County.</li> <li>8. Piedmont Substation, Camp Hill.</li> <li>9. Forestry Unit, Autauga County.</li> <li>10. Prattville Experiment Field, Prattville.</li> </ul> | <ul style="list-style-type: none"> <li>11. Black Belt Substation, Marion Junction.</li> <li>12. The Turnipseed-Ikenberry Place, Union Springs.</li> <li>13. Lower Coastal Plain Substation, Camden.</li> <li>14. Forestry Unit, Barbour County.</li> <li>15. Monroeville Experiment Field, Monroeville.</li> <li>16. Wiregrass Substation, Headland.</li> <li>17. Brewton Experiment Field, Brewton.</li> <li>18. Ornamental Horticulture Substation, Spring Hill.</li> <li>19. Gulf Coast Substation, Fairhope.</li> </ul> |
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