

Dryocampa rubicunda

19 languages

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Dryocampa rubicunda, the **rosy maple moth**, is a small North American moth in the family **Saturniidae**, also known as the great silk moths. It was first described by **Johan Christian Fabricius** in 1793. The species is known for its woolly body and pink and yellow coloration, which varies from cream or white to bright pink or yellow.^[2] Males have bushier antennae than females, which allow them to sense female **pheromones** for mating.^[2]

As the common name of the species implies, the preferred host trees are maple trees. Adult females lay their yellow oval eggs in groups of 10 to 40 on the underside of maple leaves.^{[2][3]} The emerging caterpillars, also known as the **greenstriped mapleworm**, mainly feed on the leaves of their host **maple trees**, particularly **red maple**, **silver maple**, and **sugar maple**. Since the caterpillars eat the entire leaf blade, in dense populations, caterpillars have been known to defoliate trees, resulting in aesthetic rather than permanent damage. However, like all other **Saturniid** moths, the adult moths do not eat.^[4]

Description

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The rosy maple moth is the smallest of the silk moths; males have a wingspan of 3.2 to 4.4 centimeters (1.25–1.75 in); females of 3.8 to 5 centimeters (1.5–2 in). The species can be identified by their unique, but varying, pink and yellow coloration. They have reddish-to-pink legs and antennae, yellow bodies and hindwings, and pink forewings with a triangular yellow band across the middle.^[2]

Geographic range

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The rosy maple moth lives across the eastern and northern United States and adjacent regions of **Canada**. Their northernmost range includes the southern regions of Canada, including **Ontario**, **Quebec**, **New Brunswick**, **Nova Scotia**, and **Prince Edward Island**.^[2] Their range extends south along the Atlantic coast of North America to **Dade County, Florida**, and extends west from eastern Texas through Minnesota.^[5]

Habitat

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The rosy maple moth can be found in temperate **deciduous** forests and nearby suburban areas and urban landscapes.^{[2][6]} Their common name derives from the fact that they can primarily be found on maple trees, including red maples (*Acer rubrum*), sugar maples (*Acer saccharum*), silver maples (*Acer saccharinum*), and box elder maples (*Acer negundo*). They can also be found on oak trees, particularly turkey oaks (*Quercus laevis*), especially when they are found dispersed among maple trees.^{[2][7]}

Home range and territoriality

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Larvae hatch and live on the same tree through their development, then **pupate** in the soil beneath the same tree. The larvae primarily eat the underside of leaves, therefore preferentially staying in that location of their home tree. The adults do not eat, so they can have a sizeable home range.^[2]

Behavior

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Feeding

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The rosy maple moths preferentially lay their eggs on maple trees, and sometimes nearby oak trees. Since the larvae remain on the same tree upon which they hatched, most larvae feed on the underside of maple leaves or oak leaves. In early **instars**, the larvae feed together in groups, but beginning in the third or fourth instar the caterpillars begin to feed individually.^{[8][9]} The larvae eat the entire leaf blade and are capable of consuming a few leaves each. Thus, large populations of greenstriped mapleworms are capable of defoliating trees. This damage is mostly harmless and the leaves will grow back.^[10] As with all **Saturniid** moths, adult rosy maple moths do not feed.^[2]

Parental care

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Oviposition

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Female rosy maple moths lay their eggs one day after **fertilization**. During those 24 hours, the eggs are protected inside the body of the female. Besides this, rosy maple moths exhibit little **parental care**, as the female leaves after depositing her eggs. Females typically lay around 150 to 200 eggs in groups of 10 to 40 on the underside of leaves of maple trees and occasionally oak trees. Females typically only reproduce once, but in southern regions they can lay eggs up to three times.^{[2][9]} Egg laying typically occurs in the warmer months, with a peak in July, although precise timing depends on the region. In northern regions, one brood is laid between May and August. Further south, two broods are laid between April and September. In Florida, between March and October three broods are laid.^[2]

Social behavior

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Caterpillars live and feed in groups until the fourth **instar** when they become solitary. Adult rosy maple moths are mostly solitary besides during mating.^[2]

Life cycle

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Individual rosy maple moths typically live for about two to nine months. Between hatching and adulthood, the species undergoes five instars. For moths with longer life spans, much of this time is spent as a pupa over the winter months.^[2]

Eggs

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Eggs are laid 24 hours after fertilization. The eggs are oval and about 1.4 mm in diameter, with a thin smooth yellow shell.^[3] Eggs hatch after about ten days to two weeks.^{[2][7]} After hatching, a transparent egg shell is left behind.^[11]

Caterpillar

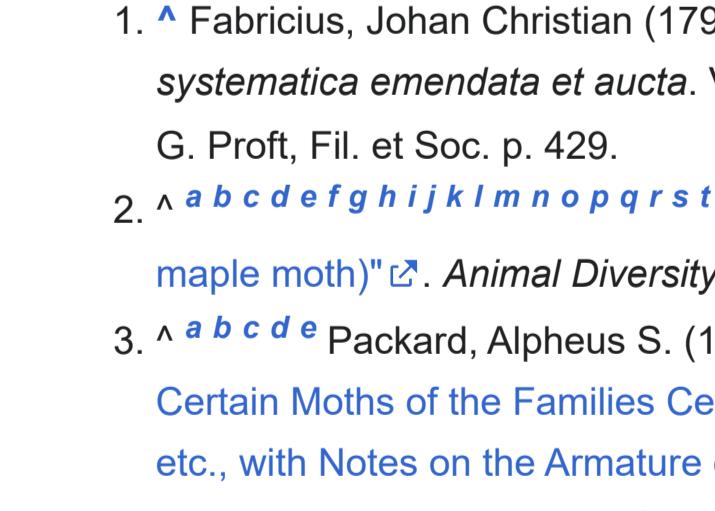
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Rosy maple moth **larvae** are known as **greenstriped mapleworms**, and they undergo five instars prior to adulthood, during which their coloration and eating behavior changes. In early instars, the larvae have relatively large black heads and pale yellow-green bodies with faint green stripes. They have two large dark-green to black **tubercles** on the second **thoracic** segment and three rows of smaller spines, or **setae**, on each side of their body.^{[2][3]} The larvae undergo their first **molt** around 6–11 days after hatching, their second molt approximately 12 days after hatching, and their third molt around 19 days post hatching.^[2] In the next instars, the black head becomes smaller relative to the diameter of the body and the longitudinal stripes darken and become reddish.^[3] In later instars, the head becomes yellow, and in the final instar, becomes bright red. By the final instar, the body is yellow green with longitudinal stripes that range from white to green to black.^[3] The two prominent horns on the second thoracic segment are accompanied by two rows of short spines found along both sides of the body.^[3] At maturity, the caterpillars reach lengths of about 2 inches.^[12] Until the fourth instar, the larvae live and feed together, but in their final two instars they are **solitary**.^[12]

Pupa

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After about a month, full-grown caterpillars crawl to the bottom of the **host tree** and **pupate** in shallow underground chambers. The pupae are very dark, elongated, and have small spines. The pupa ends in a small forked point.^[12] The pupal stage lasts at least two weeks and up to the whole winter.^{[7][11]} If the moths pupate over winter, the majority of their lives are spent in the pupal stage.^[2] When the **Imago** (adult) **ecloses**, it has small wings which it has to pump full of fluid in order to expand them and allow for flight.^[12]



Rosy maple moth



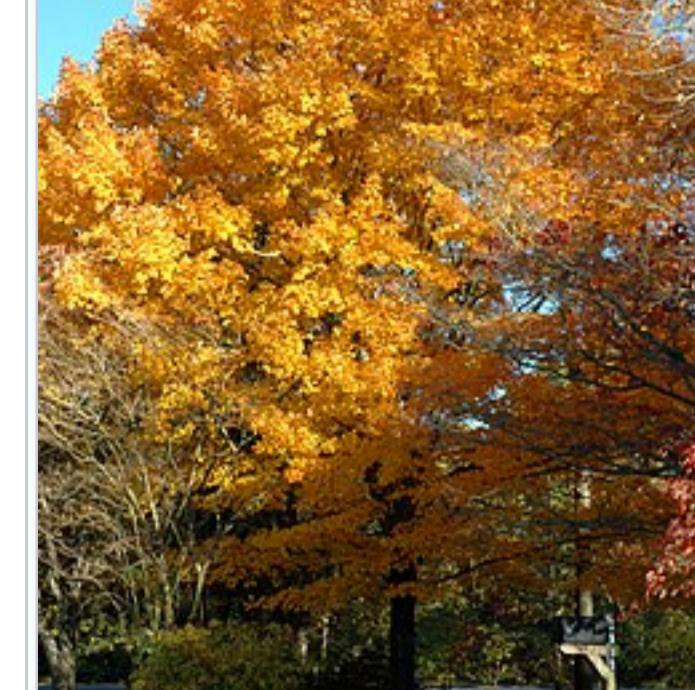
Rosy maple moth

Scientific classification	
Kingdom:	<i>Animalia</i>
Phylum:	<i>Arthropoda</i>
Class:	<i>Insecta</i>
Order:	<i>Lepidoptera</i>
Family:	<i>Saturniidae</i>
Genus:	<i>Dryocampa</i>
Species:	<i>D. rubicunda</i>

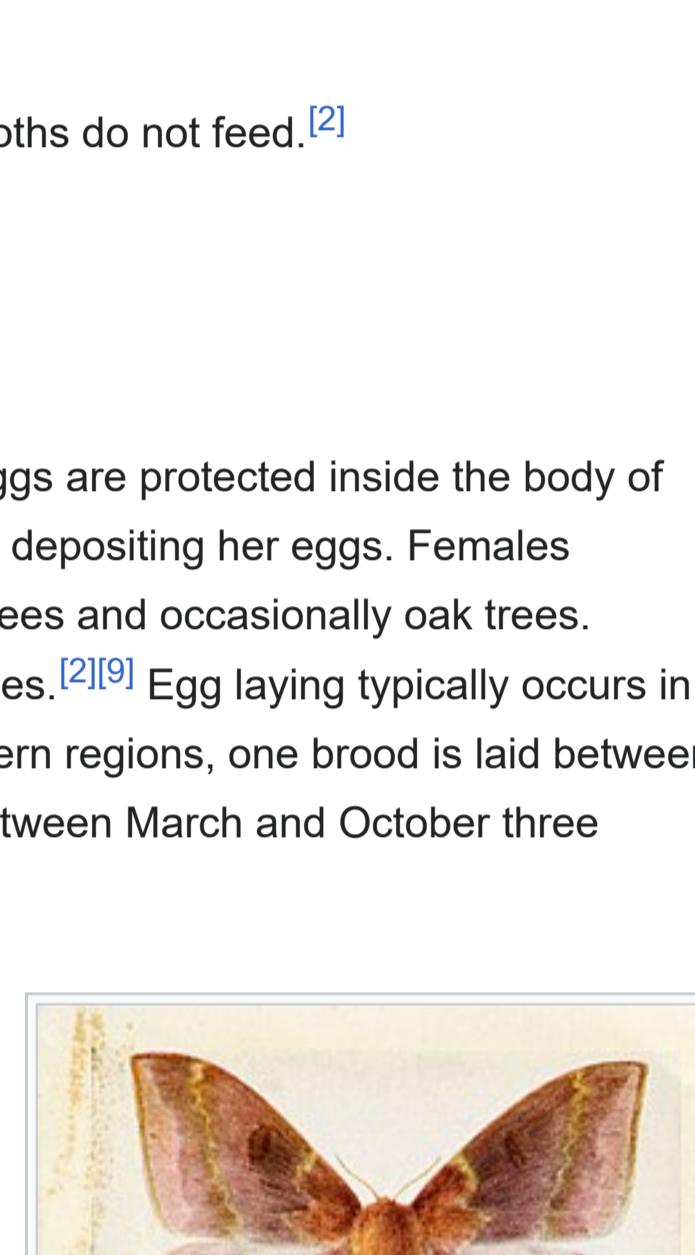
Binomial name

Dryocampa rubicunda

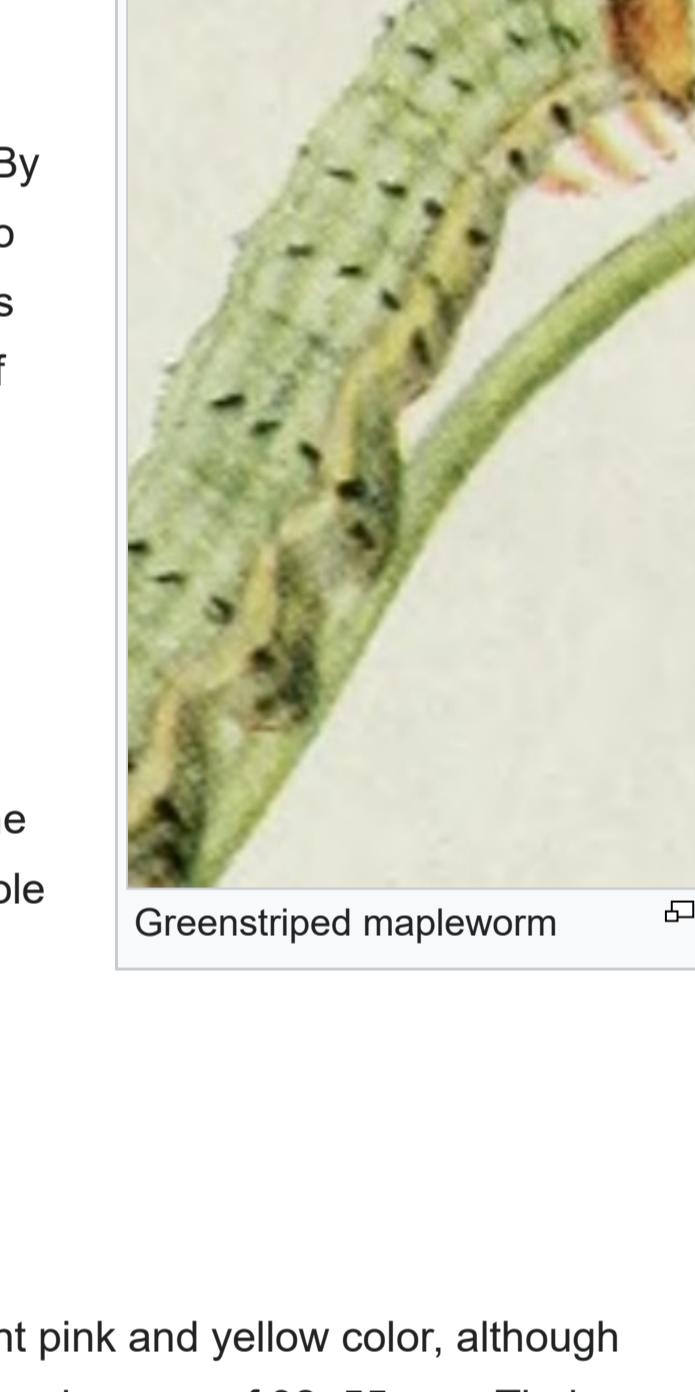
(Fabricius, 1793)^[1]



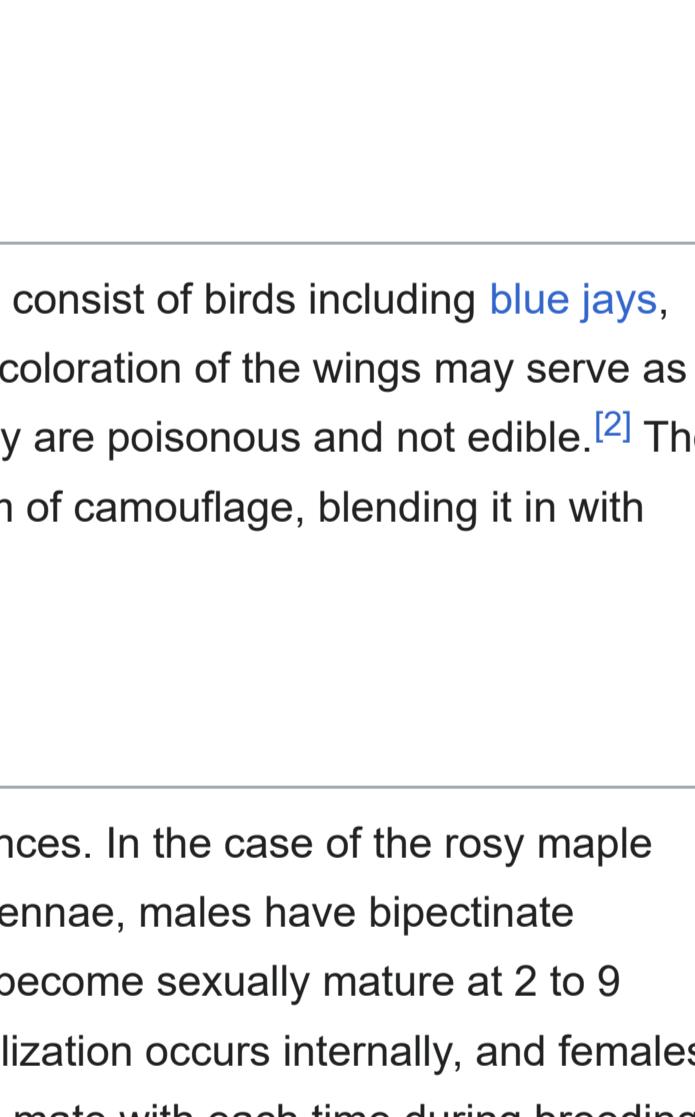
Rosy maple moths are the smallest of the silk moths



Sugar maple



Life cycle of a rosy maple moth



Greenstriped mapleworm

Adult

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Adult rosy maple moths are distinguishable by their bright pink and yellow color, although exact coloration can vary significantly. Both sexes have a wingspan of 32–55 mm. Their bodies are woolly, and typically yellow on the top and pink on the underside, but can range to cream or white. Their legs and antennae are also pink. The forewings can be yellow to white with varying amounts of pink along the edges. The *alba* subspecies, found in **Missouri**, is completely white or white with faint pink markings.^[2]

Predators

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The predators of the rosy maple moth and larvae mostly consist of birds including **blue jays**, **black-capped chickadees**, and **tufted titmice**. The bright coloration of the wings may serve as a defense mechanism to trick predators into thinking they are poisonous and not edible.^[2] The coloration of this moth rather surprisingly acts as a form of camouflage, blending it in with maple seed cases.

Mating

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Rosy maple moths exhibit **sexual dimorphism**, that is males and females have different appearances. In the case of the rosy maple moth, males have narrower and less rounded wings. Additionally, while females have simple antennae, males have bipectinate (comb-like on both sides) antennae to sense females' **pheromones** during mating.^[2] The moths become sexually mature at 2 to 9 months of age. Mating occurs at night, when females release pheromones to attract males. Fertilization occurs internally, and females lay their eggs 24 hours after mating. The moths are **polygynandrous**: females find a new male to mate with each time during breeding season when multiple broods are laid per season in warmer regions.^[2]

Thermoregulation

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Adults become active in the warmer months of the year. In a study that compared *D. rubicunda* with *Actias luna*, the prevalence of the rosy maple moth was found to vary with changes in temperature, with highest counts at the highest temperature, perhaps due to the tropical origin of the subfamily **Ceratocampinae**. Their small size, preventing more effective body temperature control, may also contribute to their preference for warm weather.^[13] Adult moths are generally **nocturnal**, preferentially flying throughout the first third of the night.^[12]

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