



UNIVERSITY OF
FLORIDA

Cooperative Extension Service
Institute of Food and Agricultural Sciences

Fact Sheet ENY-810

Orangedog¹

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The orangedog, *Papilio cresphontes* (Cram.), is a beautiful swallowtail butterfly common throughout central and south Florida. The larva is an important pest of young citrus trees; it feeds on foliage, with orange varieties being its favored host. While it is seldom present in large enough numbers to be a threat to trees of bearing age, it can be highly destructive to nursery stock, where intense spray programs reduce biological control agents of this pest. Two or three caterpillars can defoliate a young tree in a few days by eating the leaves down to the mid-rib.

PHYSICAL DESCRIPTION AND LIFE HISTORY

Adult - The orangedog adult, sometimes called "The Giant Swallowtail," is predominantly velvet black in color with a double series of large yellow spots across the wings. The hind wings have a pair of red eye-spots, edged with black and blue, and end in a distinct "tail".

Pupa - The orangedog pupa resembles a lichen-covered twig or stub of a dead branch. This stage of development is grey and brown in color and lasts approximately 10 to 14 days before the adult emerges. However, if it is the last generation of the year, the insects will overwinter in the pupal case.

Larva - The immature orangedog is a brown and white caterpillar, with occasional cream or pale yellow patches that closely resembles a bird dropping. It

grows to approximately 1 1/2 to 2 1/2 inches in length. The orangedog receives its name from this stage because the front segments of the body are enlarged, and when not feeding the caterpillar can pull its head back into these segments, making the front part of the body resemble a dog. When alarmed, the caterpillar can force out of its head two long, forked, red, horn-like projections. A strong, disagreeable odor is emitted from these projections as a defense against natural enemies.

Egg - The adult female produces approximately five hundred eggs which are laid singly on tender shoots or on the tops of emerging leaves. The eggs are spherical, smooth and pearly white, with a dull red or reddish-yellow tinge. The first eggs hatch as early as February with the start of the spring flush.

Each generation lasts about two months, and there are four generations per year. However, it is the last generation, present during the period August through October, which is the largest in numbers and is most destructive to citrus.

CONTROL RECOMMENDATIONS

A tachinid fly, *Lespesia rileyi* (Will.), is a very efficient parasite of the orangedog. This fly lays elongated, oval, white eggs on the orangedog larva. The newly hatched maggots enter the larva and emerge as adults when the orangedog attempts to pupate. A predacious stink bug and a wasp parasite,

1. This document is Fact Sheet ENY-810, a series of the Entomology and Nematology Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Publication date: October 1993. Revised: March 1996.
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Brachymeria robusta (Cress.), also play minor roles in controlling this pest. The larval state is also susceptible to a virus disease.

Except in instances where large populations are present, it is not feasible to control this pest by chemical means. As stated previously, larvae are seldom present in large enough numbers to be a threat to trees of bearing age. However, in nursery situations intense spray programs can reduce the above mentioned natural control agents. A simple and effective method of control is to pick the larvae off by hand and destroy them. *Bacillus thuringensis* products are currently recommended by the University of Florida for control of this pest. Consult the latest copy of the Florida Citrus Spray Guide for timing and mixture recommendations.