

# Orange Dog Caterpillar

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FIG. 1

## Type Pest: chewing insect (*Papilio cressphontes* Cramer)

- Caterpillar stage commonly known as orange dog caterpillars or orange dogs or orangedogs
- Adult stage is the giant swallowtail butterfly; feeds on nectar (Fig. 4)

## Type Metamorphous: complete (egg, larva, pupa, adult stages)

Period of Primary Occurrence: April through September

## Plants Affected

- Caterpillars feed on leaves of citrus
- Caterpillars also feed on leaves of other plants including rue (*Ruta graveolens*), fennel (*Foeniculum vulgare*), and prickly ash (*Xanthoxylum* sp.)

## Identifying Characteristics of Insect Pest

### EGG STAGE (Fig. 2 & 3)

- Mated females usually lay their eggs singly on the upper surface of leaves of hostplants
- Eggs are very small, spherical, and cream to brown (Fig. 2)

### CATERPILLAR / CHRYSALIS STAGE

- Caterpillar stage known as orange dog caterpillars
- Caterpillars are dark brown with creamy-white, mottled markings (Fig. 1)
- Looks similar to bird droppings
- Can grow 1½ – 2" long
- Caterpillars usually feed during the night
- The caterpillar has a special gland called an osmeterium that emits a foul odor when the caterpillar is threatened (smells like rancid butter) and is fatal to many insects
- The orange osmeterium looks like a forked snake tongue that retreats when threat is removed
- Caterpillars develop through several stages (instars) before forming a brownish chrysalis,



FIG. 2



FIG. 3



FIG. 4

which is attached to the host plant by the back end and held in an upright position by a silk thread around the middle (Fig. 5)

- Caterpillars may pupate on small twigs on the host plant on which they were feeding or they may travel a short distance to a vertically-oriented structure, such as a fence or other plant

#### ADULT STAGE (Fig. 4-7)

- Adult stage is a butterfly
- Adult butterfly is one of the largest swallowtail species, with a wingspan of up to 6"
- Wings are black with yellow markings near wing margins and spots forming a diagonal band across the fore wings (Fig. 6)



FIG. 5

## Description / Symptoms

- Large sections of leaves are consumed (Fig. 1)

## Other Facts

- Butterfly gardeners often plant citrus trees to provide food for orange dog caterpillars to produce giant swallowtail butterflies

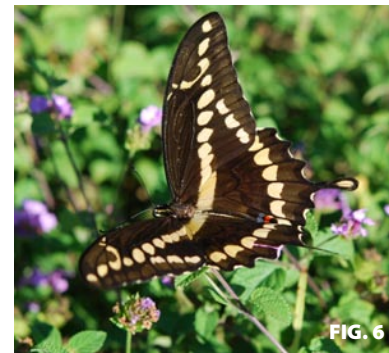


FIG. 6

## Best Management Practices (BMP)

- Maturing and mature citrus trees can easily withstand the loss of a few leaves
- Homeowners may find that just a few larvae of the giant swallowtail will defoliate small, potted citrus plants. It is recommended that caterpillars be hand picked from these small plants so that leaf production and fruit yield are not drastically reduced
- Young citrus trees grown in the landscape can become infested with numerous orange dog caterpillars on occasions, especially in instances where there is a single tree growing in a landscape

#### CULTURAL CONTROL

- Orange dog caterpillars can be controlled on small trees by finding and crushing eggs and caterpillars
- Pick off by hand or tweezers and place in a container of rubbing alcohol or very soapy water

#### BIOLOGICAL CONTROL

- When present, several parasites and other natural enemies can provide satisfactory control
- The bacterium *Bacillus thuringiensis* (commonly known as Bt) is effective if it is used against young larvae. Spray applications should be made in April to control newly emerged caterpillars. Thorough coverage of all foliage is needed

#### CHEMICAL CONTROL

- Several insecticides provided effective control of orange dog caterpillars. Thorough coverage of all foliage is needed. Early sprays against young caterpillars are more effective than later applications against older caterpillars
- Some common over-the-counter insecticides (including biological control sprays):
  - Green Light Bt Worm Killer
  - Ferti-lome Borer, Bagworm, Leafminer & Tent Caterpillar Spray
  - Green Light Lawn & Garden Spray Spinosad
  - Malathion
  - Carbaryl

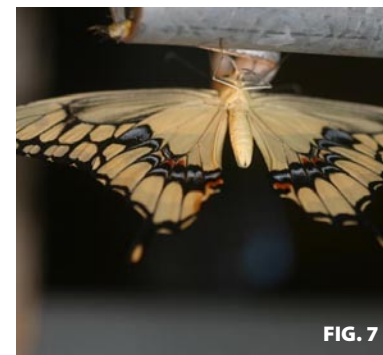


FIG. 7

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Use pesticides only according to the directions on the label. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. If the information does not agree with current labeling, follow the label instructions. The label is the law.

Always remember to read and heed six of the most important words on the label: "KEEP OUT OF REACH OF CHILDREN"

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