THE LARVA AND PUPA OF ORTHOSIA HIBISCI QUINQUEFASCIATA (NOCTUIDAE)

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In the group of moths listed by McDunnough (1938) under the genus *Orthosia* and in the *insciens-hibisci-quinquefasciata* complex, in particular, there has been much taxonomic juggling in past years by various authors. Along with this, there has been comparatively little life history work, and still less illustrating of the early stages.

The most helpful published note is that of William T. M. Forbes (1954) in which he speaks of the larva of *Orthosia hibisci* as one of the notorious "Green Fruit-worms," and gives a brief description of the larva. He pointed out that *hibisci* is not the typical insect, but is a variation of the normal form, *insciens*.

The form which seems predominant on the West Coast is *quinquefasciata*, a subspecies which was described by Smith in 1909 (Jour. N. Y. Ent. Soc., 17: 65). Later, Smith (1910), referring to its habitat, said, "I have at present four males and two females from Wellington and Vancouver, B. C., and Pullman, Washington."

Hampson (1905) lists *hibisci* Guen., and *insciens* Wlk., under *Monima* alia Guen., which he pictures in color on Plate 90, fig. 29.

S. E. Crumb (1956) described the mature larva in some detail, and stated that "no differences have been found between larvae of eastern *hibisci* and western *hibisci* var. *quinquefasciata* Smith." His comment on food plants was "a very general feeder, principally on woody plants." Other authors specifically mention *Quercus, Salix, and Prunus.* Prentice (1962) recorded numerous hosts for *h. hibisci,* with highest number of collections from *Populus, Salix, and Betula.*

A mature larva of this species was collected in the San Gabriel Mountain, northwest of Jackson Lake, Los Angeles County, June 10, 1964, elevation 5,800 ft. It was feeding on *Alnus rhombifolia* Nutt. An adult was reared from this larva, making possible the identification, and the following illustrations and descriptions.

LARVA

Final instar (Fig. 1 A): Length 35 mm. Greatest width, 5 mm. Head width 3 mm; glistening yellow-green. Ocelli, lower two or three black, remainder translucent. Labrum and antennae nearly white. Tips of mandibles brown.

Body ground color, alder-leaf green. First cervical segment, anterior margin white. A conspicuous middorsal longitudinal white band, a narrow longitudinal subdorsal white stripe, a wide white band just above the spiracles. Area between these bands and stripes profusely sprinkled with small white dots, as is subspiracular region, including venter.



Fig. 1. Orthosia hibisci quinquefasciata Smith; A, mature larva; B, pupa, ventral aspect. Drawing by J. A. Comstock.

Legs translucent light green. Prolegs concolorous with body. Crochets tinged with pink. Spiracles light tan, narrowly rimmed with brown. All spiracles located along the lower edge of the white surpraspiracular band except the last caudal, which is superior to the band.

Setae short and colorless.

Pupa

(Fig. 1 B) Length, 15.5 mm. Greatest width through middle of thorax, 5.3 mm. Eyes smooth, prominent. Maxillae reaching to wing margins. Metathoracic leg extending 0.5 mm short of prothoracic, antennae still shorter. Abdomen tapering to a point, from which a pair of short straight spicules protrude. Spiracles, small, concolorous with body, their centers slightly protruding, margins recessed.

Pupa nearly black, abdominal segments and thoracic appendages tinged with red-brown. Surface texture smooth and glistening over abdominal areas, very finely ridged or furrowed over most of the thorax and wings.

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A MELANIC FEMALE OF COLIAS EURYTHEME (PIERIDAE)

The capture of a black *Colias* is apt to be a once-in-a-lifetime experience. The collector knows almost instinctively that he has taken a phenomenal prize among butterflies. A melanic female of *Colias eurytheme* Boisduval was taken on August 7, 1965, in the front yard of an Ottawa, Kansas home. The butterfly was taken while in company with *Agraulis vanillae* (Linn.) and *Phoebis sennae eubule* (Linn.), but no other *Colias* were in evidence in the vicinity.

It will be noted from the illustration made from the specimen that the familiar black pattern edging so characteristic of both *eurytheme* and *philodice* is much in evidence, but the ground color of the upper surfaces is an even smoky gray on both pairs of wings. The deep orange hindwing cell spot of a normal female is, in this case, solid black. The veins are heavy and black. The lower surfaces are even more dramatically unusual. The basal portion of the forewing is a dark smoky blue– gray with black granules fading out toward the margin to a pale greenish yellow. In contrast to the black area of the forewing, the hindwings