

Perisama oppelii (Latreille, 1811)

Family Nymphalidae

Genus *Perisama*

Original Published Description:

Latreille, P. A. (1811). Humb. Bonpl. Obs. Zool. i. p. 237, t. 24. F. 1,5.



The following summary was written by Harold F. Greeney based on personal observations and the information published in:

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Species Overview: *Perisama oppelii*

General Description

The posterior four legs of this species are used for walking while the prothoracic legs are modified for other purposes. In females they are equipped with chemosensors and are generally used for “tasting” the suitability of potential food plants for oviposition. The forelegs of males are brush-like and are used predominantly for sexual interactions. Like others in the genus, the upper surfaces of the wings are dark brown to black and emblazoned with metallic, blue-green transverse bands on the forewings. The undersides of the hind wings are uniformly bright yellow and are crossed by two thin, parallel, zigzagging black lines. They can be distinguished from most other species of the genus which have yellow ventral hind wings by the lack of black spots associated with these lines.

Description

Reproduction & Life History

In general, the reproduction of *Perisama oppelii* is very poorly known but it appears to be rather seasonal in eastern Ecuador.

Young larvae. Head round to almost square, shiny black with a strong epicranial crease; body round in cross-section, roughly parallel sided, tapering slightly posteriorly; pale orange-brown upon hatching, darkening to green after feeding commences, and becoming orange with pale stripes on the sides as they get older; prothoracic shield well developed and broken into two black, roughly triangular sections; segments T1-A9 bear subdorsal, supra-spiracular, and spiracular tiny black scoli with single, short black setae arising from each; those on thorax are in-line, those on abdomen have the supra-spiracular scoli slightly offset posteriorly from other two.

Mature larvae. Head nearly square, narrowed epicranially and bearing two long, well developed scoli with four sets of whorled, lateral projections and sparse, long, dark setae, ground color red-brown with the shafts of scoli between whorls paler reddish in some individuals (Fig. 4d), posterior portion behind scoli greenish-white, anterior and lateral portions marked with large pale areas, scoli with tufts of soft dark setae near apices of spines; body soon after later in stadium (Fig. 3c) ground color becomes green but is entirely covered with sparse yellow granulations, body also has thin, indistinct, yellow-white supraspiracular and spiracular lines as well as a prominent, brighter ventrolateral stripe, venter chalky white, A9 spiracle prominent and pale, A10 bears a pair of short scoli, dark centrally and with a whorl of three dark spines basally.

Pupa. Pupa oriented horizontally, parallel to dorsal surface of substrate; shape robust with weak mid-dorsal keel, dorsolateral keel along edge of wing pad, small triangular lateral projections on meso-thorax, head with two short conical projections; ground color emerald green with small white punctuations wing pads paler with fine dark reticulations; several hours after formation pupae develop a supraspiracular line on abdomen behind wing pads and prominent white spots mid-dorsally on A2 and on apex of thoracic keel, lateral keeled portions white, dorsal surface of head projections white; 1-2 days prior to eclosion wing pads and abdomen darken, eyes become pale.

Behavior

Adult behavior. Males of *Perisama oppelii* conspicuously patrol perches from the mid to upper canopy of the forest and along its edges on sunny days near the tips of leaves, generally in bright sun patches, and hold their wings partially opened or folded over the back. They chase small to medium sized butterflies, but generally ignore the numerous species of dark-colored *Pedaliodes* butterflies which are common in their cloud forest habitats. Males are attracted to wet sand enriched with urine or mammal feces, and they are often found feeding on the cement on the sides of buildings. They are also frequently attracted to sweaty items of clothing and to freshly washed laundry hung out to dry. When feeding on such substrates they periodically curl their abdomen under their body and exude a droplet of liquid which is then re-ingested. In contrast, females are rarely observed and poorly studied, perhaps spending much of their time above the forest canopy.

Immature stage behavior. First and second instars rest on the skeletonized midveins of leaf tips that have been extended by silking their droppings into a chain. Molting occurs near the tips of these chains. Later instars rest on the dorsal surface of leaves with their head tipped forward pressed to the leaf surface. When not feeding, their body is held either straight or in a slight S-curve. When disturbed, larvae thrash their head and abdomen, attempting to brush the offending object away with their head horns.

Ecology and Distribution

Distribution

This species occurs at mid-elevations, generally 1900 to 2400 m.a.s.l., in the South American Andes from Venezuela to northern Peru.

Habitat

Montane humid forests: At appropriate elevations this species can be found in most available habitats, but is most frequently observed in areas of disturbance at forest edges and along streams. It is frequently found near human dwellings and in cleared areas but its larval food plant appears to be more common within mature forest and it is likely that adults spend much of their time there but are less frequently observed.

Associations

Adult *Perisama oppellii* feed on the flowers of many types of plants including *Rubus* (Rosaceae) and *Vismia* (Clusiaceae).

Trophic Strategy

The larvae of *Perisama oppellii* are phytophagous, feeding externally on plants in the genus *Paullinia* (Sapindaceae). Its larvae are attacked by parasitoid wasps in the family Braconidae.

Conservation

Conservation Status

Although there has been no official evaluation of the threat level of *Perisama oppellii*, its Andean cloud forest habitat is under continued threat of rapid deforestation due to encroaching human civilization, mining, and cattle farming.

IUCN Red List: Not evaluated

CITES: No special status

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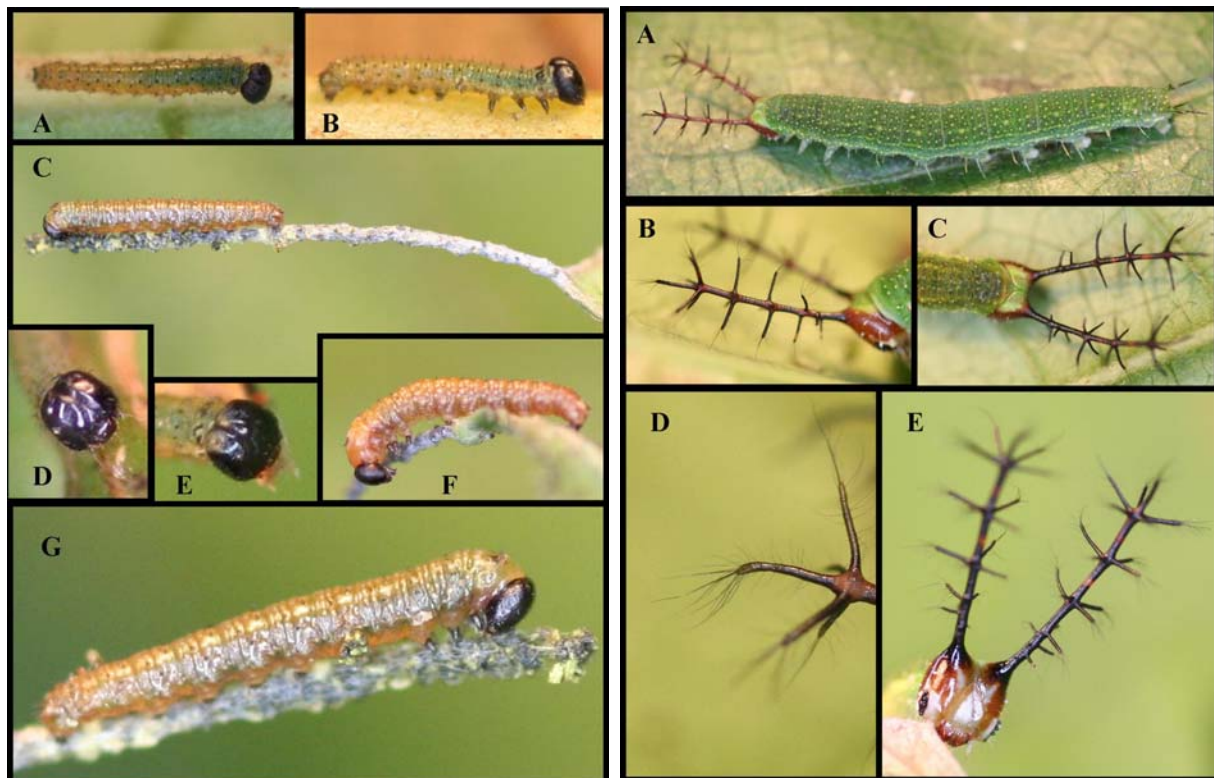
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LEFT: Young larvae of *Perisama oppelii* at Yanayacu Biological Station, Napo Province, 2100 m, Ecuador: a-b) just after hatching; c) several days after hatching; d-e) detail of head; f-g) just before molting. Photographer: Greeney, Harold F. **Figure from Greeney et al. 2010**

RIGHT: Mature larva of *Perisama oppelii* at Yanayacu Biological Station, Napo Province, 2100 m, Ecuador: a) typical resting position while not feeding; b-e) details of larval head. Photographer: Greeney, Harold F. **Figure from Greeney et al. 2010**