

Characters

Here, we present a brief description and illustration of the 66 characters used in the analysis. Autapomorphic states are indicated by having the single taxon included in parentheses in their description. Distribution of states on the final trees is presented in the *Character Support* section.

Larval Head

Mandible Characters. Wear potentially could obscure characteristics of the mandibles or cause environmentally induced similarities among them. Mandibular wear was shown to cause a decrease in tooth size in adult leaf beetles, and it took three weeks to be evident (Raupp 1985). It is unlikely that significant wear occurs in arctiid larvae because instars generally last only one week (N.L.J. and S.J.W. unpublished data).

0. *Mandible: Indentation in Dorsal Tooth.* (0) Not present (Fig. 2), (1) a right triangle (Figs. 3–5), (2) triangular but elongate (Figs. 6–15), (3) ovoid and elongate (Figs. 16 and 17), (4) ovoid but small (*Automolis*) (Fig. 18).

The mola (character 7) does not seem to obscure this feature because *Eilema mesosticta*, not included in the study, shows a small ovoid indentation in the dorsal tooth similar to the one seen in *Automolis*.

1. *Mandible: dorsal Fifth Tooth.* (0) Absent, (1) present (Fig. 5).

2. *Mandible: Distal Toothed Area.* (0) Medial portion of mandible more concave than toothed area (Figs. 16–17, 20–25), (1) medial portion of mandible not more concave than toothed area and with inner ridges (IR) transected by first transverse ridge (FTR), which is sometimes modified into pockets (Figs. 8–15), (2) medial portion of mandible not more concave than toothed area and inner ridges not transected by an FTR (Figs. 2–6, 27), (3) medial portion of mandible not more concave than toothed area and pockets formed differently than in state 1 (*Cycnia*; Fig. 7).

3. *Mandible: Second Transverse Ridge (STR).* (0) Absent, (1) present.

4. *Mandible: Morphology of STR.* (0) STR absent (Figs. 2–7), (1) two thin STRs with an IR connecting to each (Fig. 8), (2) one STR appearing to be formed from fusion of two separate ones, with an IR connecting to each (*D. marginalis*) (Fig. 9), (3) STR appearing to be formed from two, with only one IR adjoining the ventral STR (Fig. 10), (4) one STR partway across mandible, no IR