

Description of Characters

After examining the character state definitions in the manner stated above, we describe 52 morphological characters (195 states) unrelated to coloration or wasp mimicry (Table 2). Of these, 5 characters (12 states) were described from the head, 5 (10 states) from the wings, 7 (17 states) from the metathorax, 4 (9 states) from the abdomen, 23 (97 states) from the male genitalia, and 9 (50 states) from the female genitalia. We also examined the legs, ocelli, and prothoracic and mesothoracic structures. However, none of these provided any informative characters. Many characters were modified from those of Miller (1991) and Jacobson and Weller (2002). We also include some novel character systems (microtymbals, abdominal apophyses). The final data matrix is provided in Table 2.

Head

1. *Male antennae*: **(0)** basally serrate, distally filiform (Fig. 8) or **(1)** medially swollen, bipectinate (Fig. 9).
2. *Female antennae*: **(0)** basally serrate, distally filiform (Fig. 8), **(1)** basally serrate, medially swollen, distally filiform (Fig. 10), or **(2)** bipectinate (Fig. 9).
3. *Length of the second palpal segment*: **(0)** equal to or shorter than the first palpal segment (Fig. 11) or **(1)** longer than the first palpal segment (Fig. 13).
4. *Shape and length of third palpal segment*: **(0)** bulb shaped, less than one-fourth of the length of the second palpal segment (Fig. 12), **(1)** unmodified (Fig. 13), or **(2)** longer than three-fourths the length of the second palpal segment (Fig. 11).
5. *Shape of the tentorial crest* (Miller 1991): **(0)** extremely swollen medially (Fig. 14) or **(1)** slightly swollen medially (Fig. 15).

We also examined the ocelli and the proboscis. However, these structures were invariant. Jacobson and Weller (2002) characterized the ocelli of arctiines as possessing a large, melanized ring around the lens. The ocelli of euchromiines do not differ from those of other arctiines. The proboscis of all species is long (greater than the length of the head) and appeared to be functional. There are no observable differences at 100 times magnification.