

## Materials and Methods

### Species Examined – In-group

Forty species (Table 2) were selected to represent arctiid suprageneric groups. For convenience, these exemplars hereafter will be referred to by their generic names; we do not mean to imply that the attributes found in individual species are necessarily found throughout the genus.

We sampled across Arctiidae as thoroughly as possible, but were limited in a few instances by the availability of material. Larvae of *Belemnia*, *Belemniastis*, and *Diospage* (*Belemnia* group, Phaegopterini) were unavailable. Adults of *Acsala anomola* (Acsalini, Lithosiinae) are rare in collections; consequently, this species was omitted. However, its inclusion in the Lithosiinae is not in doubt because the larvae possess a mola on the mandible (Lafontaine et al. 1982). Only one representative of the Syntomini is included, the type species of the nominotypical genus *Syntomis*, now referred to as *Amata phegea* (L.). In the most recent work on the Pericopinae (Watson and Goodger 1986), a large number of species were placed under a broad concept of the genus *Dysschema*. Included in this broad concept are the three species of *Dysschema* used in this study.

### Species Examined – Out-group

Relationships among noctuid families are poorly resolved (Kitching 1984, Miller 1991, Weller et al. 1994, Kitching and Rawlins 1998). Selection of appropriate out-groups for the Arctiidae is therefore problematic. Characters often discussed with respect to groupings within the Noctuoidea are the fore- and hindwing venation (quadrifid versus trifid) and the abdominal counter-tympanal hood (pre- versus postspiracular).

Venation is considered quadrifid when M2 arises from the discal cell closer to M3 than to M1, making the cubital venation look four-branched. In trifid venation, the cubitus appears three-branched (M3, CuA1, CuA2), with M2 equidistant between M1 and M3. We limited our out-group sample to forewing quadrifids. The forewing trifids are not represented because they are monophyletic and not closely related to the Arctiidae (Miller 1991). Of the forewing