

# Review of the Australian genera of Coccinellidae

## Subfamily Microweiseinae

Microweiseini Leng, 1920: 213. Type genus: *Microweisea* Cockerell, 1903.

Scotoscymninae Duverger, 2003: 60. Type genus: *Scotoscymnus* Weise, 1901.

### Diagnosis

**ADULT.** Body minute (1–4 mm); head in repose usually deflexed and fitting closely under or against medially projected prosternum; dorsum usually with apparent dorsal vestiture. Clypeal and frontal regions usually prominent anteriorly; clypeus emarginate around exposed and rather narrowly separated frontally located antennal insertions. Mandible small, triangular, with single apical tooth and no mola or prosthema; maxillary palp long, geniculate; terminal palpomere elongate, about as long as strongly elongate segment 2; labial palps slender, narrowly separated at base and inserted on distal end of prementum. Antenna 8- to 10-segmented with 1–3-segmented club. Pronotum almost always with line or ridge separating anterior corners from the pronotal disc, and often extended along lateral edge. Prosternal process narrow; procoxal cavity almost always circular in outline. Winged or wingless; wing with reduced venation, never with anal lobe. Elytral punctures sometimes in apparent rows. Abdomen with 5–six ventrites; ventrite 1 distinctly longer than 2. Abdominal postcoxal line incomplete, usually with associated oblique dividing line, pits and pores. Tegmen always asymmetrical, parameres asymmetrical, short to reduced and fused to penis guide, with one or more setae apically; phallobase with additional basal piece. Ovipositor triangular, elongate, lightly sclerotised and bearing short styli; spermatheca small and well sclerotised, usually multi-cameral.

**LARVA.** Length 1–5 mm; body fusiform; cuticle of thorax and abdomen finely and densely granulate, bearing single minute seta on each granule. Head with frontal arms separated at base, lyriform, strongly divergent apically; epicranial stem absent. Antenna very short, comprising three sclerotised segments. Mandible simple, triangular with single apex and blunt non-projected molar area. Maxillary mala slender and distinctly narrowing apically (almost falcate). Maxillary palp longer than mala; 3-segmented; labial palps 2-segmented. Abdomen without defence gland openings. Legs short and slender; apex of tibiotarsus with a pair of flattened and frayed setae.

### Remarks

This subfamily is regarded here as a sister group to the Coccinellidae proper and is well characterised by several adult and larval synapomorphies as listed above.

Serangiini, Sukunahikonini and Microweiseini have been associated traditionally with Sticholotidini and some other groups in a large and diverse subfamily Sticholotidinae, characterised by their small size and terminal maxillary palpomere narrowed apically (with many exceptions). Duverger (2003) separated these three tribes along with exotic Carinodulini into a subfamily ‘Scotoscymninae’ and this grouping is followed here. The name he proposed, ‘Scotoscymninae’, is unnecessary as several family group names are available for this taxon, the oldest of them being Microweiseinae of Leng (1920).