

of the scapes, as is so generously accommodated in *Proceratium* and *Discothyrea*. Immediately behind this section the carina is laterally expanded and partly reflexed, to form an obtuse lobe, which appears to partially lock the scape into position when the antennae are folded (Arnoldi, Fig. 3). These modifications cause the frons and posterior parts of the clypeus to form a regularly convex, more-or-less triangular shield-like face to the cranium, a configuration not unlike that of other small cryptobiotic ants, such as some in the myrmicine tribes Dacetini and Basicerotini. The fronto-clypeal structure of *Aulacopone* is unlike that of any other ponerine ant, and thus immediately diagnoses the genus. The extent to which it might be associated with specialised trophic behaviour, like egg-feeding, is quite unknown. In addition the petiolar node (Figs. 3, 4), though relatively broad, is structured similarly to those of some *Discothyrea* females, and is quite unlike those of any *Heteroponera* species. The structure is somewhat like that typical of the primitive ponerine tribe Amblyoponini, and might represent a holdover from a remote amblyoponine ancestry. Abdominal segment IV is somewhat reflexed (Arnoldi, Fig. 1), though less strongly so than in *Proceratium*, *Bradoponera* or *Discothyrea*; or even some *Heteroponera* species (notably *H. leae* (Wheeler), in which segment IV is more strongly reflexed than in *A. relicta* and relatively short compared to segment III). Other descriptive details are covered by Arnoldi and illustrated in Figs. 1–4. Several points deserve further discussion. (1) The eyes are notably hairy (Figs. 1, 2). This might not be the case in workers. However, the only similar condition I have seen in tribe Ectatommini is that of a worker of an undescribed species of *Heteroponera* (aff. *H. leae*) from southwestern Western Australia. No other Australian *Heteroponera* has hairy eyes. (2) The scanning electron microscope has revealed an unusual structure on each pronotal humerus of the subject specimen, positioned as shown in Fig. 3. One of these structures is illustrated in detail in the stereoscopic pair of micrographs comprising Fig. 5. Each consists of a small shallow depression, without pilosity, enclosing several irregular troughs which each contain a number of minute pores. These are presumably the ducts of some previously unreported prothoracic gland. A detailed survey by stereoscopic light microscope has revealed no comparable structure in any other of the several hundred ectatommine species, of all known genera, represented in the Australian National Insect Collection.