diagnosis is attempted (see below under *D. concinnus*). New details of female structure are reported, including the wing venation (see discussion below under *D. wilsoni)*. The palpal formula of the alate castes is also *maxillary 2: labial 2.*

Workers and females of *Dacetinops* may be minimally diagnosed as follows: *Myrmicine ants; antennae 11-jointed; mandibles short, triangular, their masticatory borders finely crenulate and fully opposable; petiole and postpetiole bearing well developed masses of spongiform material.* The spongiform masses are well illustrated in the figures below. Such structures are found elsewhere among ants *only* in some genera of the myrmicine tribe Dacetini, notably those of its subtribe Strumigeniti. Almost all living dacetines have fewer than 6 antennal joints. The exceptions are two primitive Neotropical genera, *Daceton* Perty and *Acanthognathus* Mayr, which have 11-jointed antennae, like *Dacetinops*. They, however, have very different elongate mandibles, the generally edentate shafts of which carry several enlarged, spinose and interdigitating apical teeth. In addition, these genera, unlike *Dacetinops* and the more derived dacetines, lack spongiform material on the waist nodes (Brown and Wilson 1959). There can be little doubt that spongiform masses have evolved independently in *Dacetinops* and the higher Dacetini, providing a striking example of detailed evolutionary convergence.

Abbreviations and details of the measurements and indices used below are given in the caption to Table 1.

The following abbreviations are used for institutions: ANIC – Australian National Insect Collection, CSIRO, Canberra; BISHOP – B.P. Bishop Museum, Honolulu, Hawaii; BM(NH) – British Museum (Natural History), London; GM – Museum d'Histoire Naturelle, Geneva, Switzerland; HNM – Hungarian Natural History Museum, Budapest; KUB – Masao Kubota Collection, Odawara City, Japan; MCZ – Museum of Comparative Zoology, Cambridge, Mass., U.S.A.; SAR – Sarawak Museum, Kuching.

Illustrations

Figures 1–6 are by Mr. S.P. Kim, and I prepared the scanning electron micrographs of Figures 7–33, using a J.E.O.L. JSM U3 microscope. The subject specimens were gold or gold-palladium coated for this purpose.

Such micrographs are now standard in much insect taxonomy. Several matters regarding their use are not widely understood and require comment. The advice of Mr C.D. Beaton on these items is gratefully acknowledged.

The indication of absolute scale

The depth of field of the scanning electron microscope is enormous compared to the eye, the light microscope or the camera, so that specimens of considerable