

and labial palps is known elsewhere in only one other ponerine genus, *Onychomyrmex* (tribe Amblyoponini) (G. C. and J. Wheeler, 1959, p. 638); this is almost certainly a convergently developed specialisation. A posteroventral tail is known only in two other Ponerine genera, *Platythyrea* and *Proceratium*! The low boss-like tubercles of *Probolomyrmex* larvae somewhat resemble those of *Proceratium*; however, similarly distributed, probably homologous, tubercles of diverse shape frequently occur in ponerine larvae (G. C. and J. Wheeler, 1952, 1964) so that the possibility of convergence in this character is very likely. *Platythyrea* larvae have a series of paired protuberances on the ventral side of the body. These appear to be homologous with the mid-ventral series of tubercles in *Probolomyrmex* and other ponerines; they may possibly indicate that the ancestral platythyreine larva was more generally tuberculate. The finely spinulose and papilligerous cuticle of the *Probolomyrmex* larva resembles that of *Platythyrea*, but similar cuticular structure occurs elsewhere in the Ponerinae and this resemblance could be convergent.

Although considerable information on the characters of *Probolomyrmex* is now available, a decision on the taxonomic position and phylogenetic affinities of the genus must still be largely subjective, dependent on the bias involved in "weighting" the various characters that could possibly represent phylogenetic indicators. Like Brown, I favour a platythyreine relationship for the genus, thus giving less weight to the characters of its "proceratiine habitus" than to the similarities with *Platythyrea*.

III. MEASUREMENTS AND INDICES

In a genus as structurally reduced as *Probolomyrmex*, the use of detailed measurements and indices calculated from them is essential in providing objective characterisation of the various species. All measurements cited in this paper were made with a stereomicroscope fitted with an ocular scale reading in units of 0.1 and 0.01 mm. directly, at a magnification of $100\times$. The various measurements and indices are defined as follows:—

Head length (HL): maximum mid-line length of head in full-face view, from median occipital border to clypeal apex.

Head width (HW): maximum width of head in full-face view, excluding eyes in the female castes, but including them in the male.

Scape length (SL): maximum measurable length of scape, not including its articular boss and condyle.

Cephalic index (CI): $HW \times 100/HL$.

Scape index (SI): $SL \times 100/HW$.

Weber's length of mesosoma (WL): diagonal length of mesosoma in lateral view, from the anterodorsal pronotal margin (*i.e.*, point where pronotum joins cervix) to the posteroventral apex of the inferior lobe or flange on either side of the propodeal declivity.

Pronotal width (PW) (workers only): maximum width of pronotum viewed from directly above.

Mesonotal width (queens only): maximum width of mesoscutum viewed from directly above.

Dorsal petiole width: maximum width of petiolar node viewed from directly above.

Petiolar node index (workers only): dorsal petiole width $\times 100/PW$.

Petiole height: maximum height of petiolar segment in side view, measured vertically from the posteroventral corner of the subpetiolar process to the level of the petiolar apex.

Petiolar node length: maximum length of the node, measured longitudinally from the level of the spiracular process to that of the posteriormost extension of the petiolar tergum, where it surrounds the gastric articulation.

Lateral petiolar index: petiolar node length $\times 100$ /petiole height.