

Mouthpart Morphology of the Ant *Aneuretus simoni*^{1,2}

WILLIAM H. GOTWALD, JR.

Department of Biology, Utica College of Syracuse University, Utica, New York 13502

ABSTRACT

The mouthparts of the minor workers of *Aneuretus simoni* Emery (Hymenoptera: Formicidae) are examined morphologically and compared with the mouthparts of representative species from each of the presently recognized formicid subfamilies. While the labrum and mandible are relatively typical in design for a large number of ant species, the stipes resembles that of several species of Ponerinae and Dolichoderinae, and the galea and lacinia

closely conform to the types found in the Dolichoderinae. The lacinia is also similar to that of *Myrmecia auriventris* Mayr. The labium is dolichoderine in nature. These morphological similarities between *A. simoni* and the Ponerinae, Myrmeciinae, and Dolichoderinae confirm previous observations on various aspects of aneuretine morphology.

Aneuretus simoni Emery is the only living species of the tribe Aneuretini and is known only from Ceylon. Until 1955 only a few specimens could be found in museum collections. During that year, 20 nests were collected by Dr. E. O. Wilson (Wilson et al. 1956). This species is of particular phylogenetic interest because of its supposed position ancestral to the Dolichoderinae. Wheeler (1928) reported that the dolichoderines probably arose from the Ponerinae through the genus *Aneuretus*, and while Brown (1954) and Wilson et al. (1956) have likewise recognized the ancestral relationship of *Aneuretus* to the dolichoderines, they have emphasized that *Aneuretus* is more likely a descendent from *Nothomyrmecia*-like stock. The genera of Aneuretini (3 of which were described from fossil material) also resemble the newly described Mesozoic ant, *Sphocomyrma freyi* Wilson & Brown (Wilson et al. 1967).

While *A. simoni* shares many characters in common with the Dolichoderinae, it is most notably dif-

ferent from species in this subfamily in its possession of a well-developed exsertile sting. Based on anatomical evidence, Wilson et al. (1956) elevated the tribe Aneuretini to subfamily status. Additional aspects of aneuretine morphology have been investigated by Eisner (1957) and Hermann (1968). Although the mouthparts of ants have recently been examined in detail (Gotwald 1969), those of *A. simoni* were not included in the study.

MATERIALS AND METHODS

The mouthparts of a minor worker were examined (it should be noted that the worker caste is dimorphic). The specimen used came from the Museum of Comparative Zoology, Harvard University, and was collected at Ratnapura, Ceylon, in July 1955 by E. O. Wilson. The mouthparts were removed from the head capsule after the specimen was relaxed, and were dissected into component parts, stained, and mounted in Canada balsam on microscope slides. These preparation methods and the terminology used in the descriptions of the mouthparts are those

¹ Hymenoptera: Formicidae.

² Received for publication Sept. 10, 1969.