of the third abdominal segment are narrowly constricted posteriorly, it is difficult for the muscles Nos. 8 and 10 to run through the constricted part between the pre- and posttergum of the third segment (Fig. 26). In Amblyoponini this limitation may be circumvented by the secondary derivation of the broadly constricted condition of the third segment.

Consequently, the abdominal state of Amblyoponini represents neither the retention nor the reversion of plesiomorphic state of formicids. It should be considered as an apomorphic state for the tribe.

*The phylogenetic position of the ant subfamily Myrmicinae*

The phylogenetic position of the Myrmicinae has also puzzled students of formicid evolution (cf., WARD, 1990). Some authors relate the subfamily to Pseudomyrmecinae (WHEELER, 1920), while others to the ponerine tribe Ectatommini (BROWN, 1950; HASHIMOTO, 1991).

Recently, WARD (1990) concluded that Pseudomyrmecinae and Myrmicinae are sister groups mainly based on the unique configuration of the presclerites on the fourth abdominal segment. He mentioned that the presternum of the fourth abdominal segment was notably shorter than the pretergum and that the pretergum was protruding ventrally below the tergosternal junction. But this is only the case for Myrmicinae. In Pseudomyrmecinae, unlike the description by WARD (1990), the presternum appears to be subequal to the pretergum in length and the pretergum does not protrude ventrally.

On the contrary, the abdominal characters presented by this study indicate a close relationship between the ponerine tribe Ectatommini and Myrmicinae. Among the aculeates examined here, these formicid groups alone have a lobe developed on the pretergum of the third abdominal segment, which is an attachment of muscles No. 8. This character is an autapomorphy of Ectatommini and Myrmicinae.

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