

from the Ponerinæ and raised to the rank of an independent subfamily, between the Dorylinæ and Ponerinæ. A number of reasons may be adduced for making these changes.

In 1899 Emery, after a comparative study of the larvæ of several Formicid genera, concluded that "Those of *Sima* and *Pseudomyrma*, besides their extremely hypocephalic development, exhibit a very special character in the presence of rudiments of antennæ. I believe that this very noteworthy fact, together with the well-known peculiar characters of the head of the imagines, will justify the separation of these genera from the remainder of the Myrmicinae, to form the new subfamily of the Pseudomyrminæ." My study of numerous species of this group, which now embraces four genera, *Tetraponera* Smith (= *Sima* Roger), *Pachysima* Emery and *Viticicola* Wheeler of the Old and *Pseudomyrma* Lund of the New World, shows that Emery was far from realizing the full import of their larval characters. Not only have the larvæ peculiar long, straight, cylindrical, distinctly segmented bodies with blunt anterior and posterior ends, a large, usually subquadrate head, ventrally placed and with rudiments of antennæ (which are also present in the larvæ of many other ants, notably in the Ponerinæ), but the thoracic and first abdominal segments are furnished with peculiar exudatory papillæ (exudatoria), which form a cluster around the mouth. I have described and figured these organs in *Viticicola* and *Pachysima* (1918b) and have shown that they have the form of extraordinary appendages in the first larval stage (trophidium) of the two known species of the latter genus, and that the swollen ventral portion of the first abdominal segment, just behind the mouth, forms a pocket in which the workers place a pallet of food. The exudatoria, the pocket, which I call the *trophothylax*, and the unusual method of feeding are characteristic of all four genera and no distinct traces of such conditions have been found in any other ant-larvæ.

More recent study has added two very interesting facts, which, in advance of a complete account to be published in collaboration with my colleague, Prof. I. W. Bailey, may be briefly considered in this place. The food pellet proves to be merely the small pellet ("corpuscule enroulé," or "corpuscule de nettoyage" of Janet) which the worker ant moulds in its own infrabuccal pocket and consists of the solid food-particles from which the juices are