

the remainder of Forel's Cerapachysii). His reasons for this shift were based on characters of the male genitalia (cerci absent from dorylines, present in ponerines), and the male subgenital plate (forked apically in dorylines, simple in ponerines). On these criteria the cerapachyine groups fell into his concept of subfamily Dorylinae.

This apparently upset Forel who, later in the same year (Forel, 1901) defended his earlier classification, saying that Emery's male genitalia characters were insufficient to characterize a subfamily, and citing ethological characters in support of his thesis.

The following year Wheeler (1902) succinctly summarized the differing views of Emery and Forel, and introduced the term Cerapachyinae to cover the entire group. He repeated Emery's classification in his text but concluded that he was inclined to 'regard the Cerapachyinae as true Ponerinae'. He also made the interesting remark that in general 'comparatively little value can be attached to the conditions of the pedicel in the taxonomy of ants'; a statement which will be shown to be incorrect in this paper.

The next development came a few years later, when Emery (1909) introduced the term Prodorylinae to include the cerapachyines. This division, 'Ponerinae, sectio Prodorylinae' was presented in fuller detail in the *Genera Insectorum* series (Emery, 1911) and indicates that he had changed his opinion, switching the cerapachyines from Dorylinae back to Ponerinae. He defined this section, which is exactly the same as Wheeler's (1902) earlier Cerapachyinae, as follows. 'Larvae uniformly hairy, without piligerous tubercles. Males with mandibles well developed; genitalia entirely retractile and subgenital plate broadly forked; no cerci.' This 'sectio Prodorylinae' included the tribes Cerapachyini, Acanthostichini, and Cylindromyrmecini.

The production of *Genera Insectorum* stabilized the situation for a number of years. For instance, the classification was repeated by Forel (1917) in his synopsis of Formicidae. But then Wheeler (1920, 1922) upset the boat again. He rightly pointed out that the names Cerapachyinae and Prodorylinae covered exactly the same groups, and that the former was the correct name. He also (Wheeler, 1920) treated the Cerapachyinae as a separate, distinct, subfamily. Shortly thereafter Wheeler (1922: 636-640) produced a classification which used Cerapachyinae as a subfamily but which transferred the tribe Cylindromyrmecini to subfamily Ponerinae. No reason was given for this strange move, which is odd as *Cylindromyrmex* had been regarded as a cerapachyine since earliest times. Further, Wheeler himself (1922: 51) had said, earlier in the same publication, that the limits of his Cerapachyinae agreed with those of Emery's (1911) Prodorylinae. Nevertheless, the system again appeared stabilized, and it remained much as Wheeler left it for the next thirty years or so. Mention should perhaps be made here of a rather aberrant and idiosyncratic classification proposed by Clark (1951), where a number of poorly characterized and short-lived subfamilies were proposed and quickly rejected (see diagnosis of subfamily Cerapachyinae, below).

The next serious contribution to the debate was by Brown (1954), who said that it was possible 'to support the cerapachyines as a weak subfamily'. As proof of this he pointed out that in all the cerapachyine genera the worker pygidium (tergite of abdominal segment 7) was 'more or less flattened or impressed toward its apex, and is bordered apically, at least on the sides, by serially arranged small to minute spinules'.

The universality of this apomorphic character in the cerapachyine groups allowed Brown (1954) to return the Cylindromyrmecini to the Cerapachyinae, and thus rectify Wheeler's (1922) earlier error of excluding this tribe from the subfamily.

Finally Brown (1975) completed a world revision of the cerapachyine genera and species. His treatment, discarding numerous pointless 'genera' and 'subgenera', constituted a huge advance over all previous systems, and enormously increased our