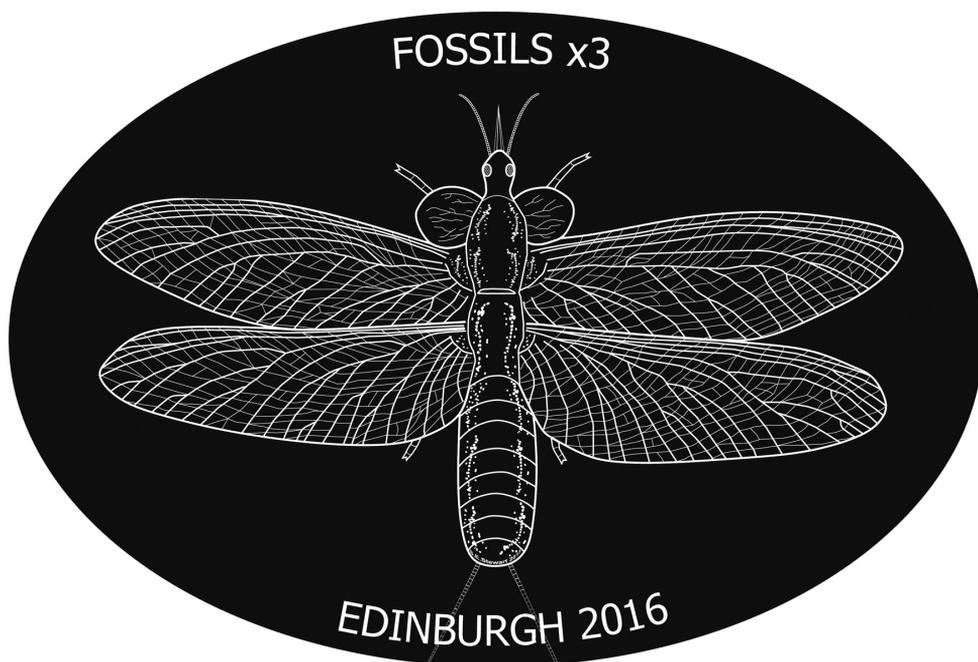


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ABSTRACTS

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On the constancy of the subfamily Cupedinae (Coleoptera: Cupedidae) in time: explanation and significance

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The generalised structural pattern seems to be most stable among members of the subfamily Cupedinae compared to any other archostematan subfamily represented by more than ten fossil members. Fossil specimens studied so far suggest that the structural cupedine type or cupedine morphotype evolved at a very early stage in the evolutionary development of the family, which originated close from the phylogenetic root of Archostemata. The *Priacma*-type of aedeagus is plesiomorphic for both the family and probably the order in general. The Middle/Late Triassic *Kirghizocupes* shares many structural characters with modern groups. The distinguishing characters of *Priacma* can preliminarily be recognised as apomorphic. However, the plesiomorphic aedeagus in *Priacma* supports an inherited continuity of its structural peculiarities from the ancestor of the Holometabola. Changes in food plants in the Mesozoic seem not to be reflected in structural features of the family. The ecology and bionomy of its fossil and Recent members were, and probably still are, more dependant on the structure of wood tissues, also on the fungal and microbial compositions associated with wood rather than the systematic position of food trees. Data on the Cenozoic pre-Pleistocene faunas of cupedines are still scant and many species already collected and deposited in scientific collections are still awaiting formal study. The difference in the male genitalia of *Priacma* and *Gracilicupes*, on one hand, and those of other genera with known male genitalia, on the other hand, seems to support the viewpoint that these lineages must be rather old. The combination of plesiotypic and apotypic characters available in the extant members of this group does not correspond to the sequence of diversifications. Hypotheses of relationships based on formal structural analysis of characters fail to correspond to the patterns which can be observed in the historical development of archostematans. The existence of *Priacma serrata* among the Recent members of the subfamily makes it possible to trace very old structural features of the family, suborder and order. Such studies permit the generation of hypotheses regarding the early diversifications of the order, particularly the appearance of the male aedeagi characteristic of each coleopterous suborder.