

Molecular phylogeny of common cibicidids and related rovaliida (foraminifera) based on small subunit rDNA sequences

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R sum  en anglais

To infer the phylogenetic relationships of cibicidids, we obtained small subunit ribosomal DNA (SSU rDNA) sequences of six common cibicidid morphospecies. In view of our results, the placement of cibicidids in different superfamilies, the distinction between planoconvex Cibicides and biconvex Cibicidoides, and the erection of genera such as Fontbotia and Lobatula are unjustified. Moreover, the superfamily Planorbulinacea, in which cibicidids are often placed, is polyphyletic and coiling mode cannot be used as a major taxonomic criterion. Our data suggest that all cibicidids examined here could be classified in one unique family, the Cibicididae, that includes Melonis, Hanzawaia, Cibicides (for *C. refulgens*), and Cibicidoides for the other five morphospecies studied (*C. kullenbergi*, *C. lobatulus*, *C. pachyderma*, *C. ungerianus*, and *C. wuellerstorfi*). Among the six sampled morphospecies, *Cibicides refulgens* is least closely related to any of the other cibicidids and forms a clade consisting of two different species, *Cibicides* sp. and *C. refulgens* clearly separated by geography (Antarctic and Mediterranean, respectively). The morphospecies *Cibicidoides kullenbergi* and *C. pachyderma* form a single clade representing the same species. The three other species, *Cibicidoides lobatulus*, *C. ungerianus*, and *C. wuellerstorfi* are closely related. *Cibicidoides lobatulus* possibly comprises two genetically distinct populations, one in the Mediterranean and the other in the North Atlantic.

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