ABSTRACT

Morphological and phylogenetic study of the subfamily Loricariinae (Siluriformes, Loricariidae).

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Among the Neotropical family Loricariidae or armoured catfish, the Loricariinae are characterized by a long and flattened caudal peduncle and by the absence of adipose fin. In order to characterize each genus of this subfamily to realise a determination key, multivariate analyses were performed on morphological data. In a first time, these analyses allowed to organize the information by grouping the genera on the basis of the sharing out of common features. Loricariinae are divided in two tribes, the Harttiini, including 9 genera, and the Loricariini, including 21 genera. The latter are divided in four groups called *Rineloricaria* group, *Loricariichthys* group, *Loricaria* group and *Pseudohemiodon* group. In a second time, a molecular study was performed on 14 genera. The subdivision in two tribes is partially confirmed, the genus *Harttia*, nominal genus of the Harttiini tribe, connecting to the basis of the subfamily. The Harttiini are then restricted to this single genus. Two sister tribes are named, the Sturisomini and the Loricariini. Finally, results of both approaches were compared by conversion of initial data into distances matrices and by looking for correlation and co-structure. The comparison of the two matrices shows a strong linear relationship between the two data sets. Moreover, this analysis confirms the cohesion of the morphological groups that are the Sturisomini, the representatives of the *Loricariichthys* and *Loricaria-Pseudohemiodon* groups, meaning in that way that the formation of these groups is linked to a phylogenetic reality and were not obtained by chance.