

## **Accounts on the phylogeny of the Muricidae (Caenogastropoda) based on comparative morphology of some representatives**

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As part of a wider study on the phylogenetic understanding of the Caenogastropoda higher taxa, samples of the more diverse branches of each taxon has been studied in their detailed morphology and anatomy. The comparative analysis of these samples, as representatives, has brought accounts on the phylogeny and taxonomy of the Caenogastropoda as a whole and its main branches. The project is now in the phase of refining the most diverse families. The main goal is to define each family phylogenetically, including their internal branches and their relationship with the other closer families. The present project is respect to the Muricidae, which is one of the more diverse of the caenogastropods. Samples of the all subfamilies and allies (as Thaididae, Coralliophilidae) were studied in their detailed anatomy. Although the study is still being developed, the analysis of the differences and similarities of the anatomy of the samples so far studied has revealing an interesting arrangement, sometimes unlike the present knowledge and systematics. The provisional results and the main implications of them in the phylogenetic and taxonomical knowledge will be presented, looking for suggestions, criticisms and additional material for fulfilling any strategic branch.