

TAXONOMIC STUDY OF MICRO-MOLLUSCS: A CASE STUDY USING THE CONDYLOCARDIIDAE

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ABSTRACT

Several taxa of small and taxonomically difficult bivalve families are currently being revised. This paper discusses the characters of the condylocardiids, superfamily Carditoidea, to highlight the methods and infrastructures used in the Australian Museum to revise this group. The revision includes the use of the database program Platypus to catalog the taxa and develop a bibliography. To examine characters, many of which are hardly visible under the stereomicroscope, Scanning Electron Microscopes (SEM) are used. This technique is essential to observe the fine detail of the hinge teeth, prodissoconchs and other microscopic sculptures that are necessary for separating many of the taxa. After an evaluation of the characters present in the taxon, a character matrix is set up in the program DELTA, which is later used to generate a description of each taxon and interactive keys or standard keys. Once all the material has been identified to species it is entered into the main database in the mollusc collection. From this database, distribution maps are generated. Geographic Information System (GIS) programs can then be used to evaluate the probability that the area of distribution actually does represent the species distribution by evaluating background sampling intensity.