PLATYBRANCH SPHAEROMATIDS (CRUSTACEA: ISOPODA) FROM THE AUSTRALIAN REGION WITH DESCRIPTION OF A NEW GENUS

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SUMMARY

Recent sampling off the eastern and south-eastern coasts of Australia has produced a number of specimens of platybranchiate sphaeromatid isopods, but the unfortunate lack of detailed keys has led to a number of misidentifications and the curation of unidentified material in museum collections. In an effort to prevent this, all known Australian platybranch species are redescribed and refigured here. The geographical ranges of *Paracassidina pectinata* Baker and *Syncassidina aestuaria* Baker are extended from Western Australia to south-eastern Australia and Queensland. The general biology of *P. pectinata* is discussed and adults of *S. aestuaria* are described for the first time. In addition, a new species, forming a new genus, *Platysphaera membranata* gen. nov., sp. nov., is described from the Coral Sea. A key for the identification of all known Australian platybranchs is provided.

INTRODUCTION

Survey work involving the sampling of benthic macrofauna off the Queensland coast of Australia is uncovering numerous marine invertebrate species, many of which are new to science and others which have only infrequently been recorded. Unfortunately, due to the lack of detailed keys to many of the common groups, a large number of specimens are not identified and after coding are stored in museum collections (Queensland Museum, 1974a & b; Stephenson and Cook, 1977). This is often the case with crustacean orders such as the Isopoda and Tanaidacea. This paper is one of a series intended to help survey workers and ecologists identify isopods and tanaids from various environments in Australia.

Sphaeromatid isopods are a common element of the marine fauna of the southern hemisphere (Hurley and Jansen, 1977) but little work has been carried out on species not considered to be of economic importance. Hansen (1905) devised a system for sub-dividing the Sphaeromatidae and although it is sometimes difficult to assign newly discovered species to these groups, his system is adhered to in the present paper. Most sphaeromatids belong to two sub-families: the Hemibranchiatinae, in which only the endopods of pleopods 4 and 5 have respiratory folds e.g. *Sphaeroma* Latreille; and the Eubranchiatinae, in which both rami of these appendages have respiratory folds e.g. *Dynamenella* Hansen. A third sub-family, the Platybranchiatinae, in which both rami of pleopods 4 and 5 lack respiratory folds, contains far fewer species and in Australian waters has previously only been represented by the genera; *Chitonopsis* Whitelegge, *Paracassidina* Baker, *Waiteolana* Baker and *Syncassidina* Baker. Very few records exist for these genera and none has previously been recorded off the Queensland coast.

Records of The Australian Museum, 1981, **Vol. 33 No. 12,** 617-643, Figures 1-10.