

**An unusual dendrodorid: redescription of the tropical nudibranch  
*Dendrodoris atromaculata* (Alder & Hancock, 1864)  
(Anthobranchia: Doridoidea: Dendrodorididae)**

GILIANNE D. BRODIE

*School of Marine Biology & Aquaculture, James Cook University, Queensland, Australia 4811*  
gilianne.brodie@jcu.edu.au

**ABSTRACT**

*Dendrodoris atromaculata* (Alder & Hancock, 1864) is a large, tropical nudibranch mollusc living in the Indo-west Pacific Ocean. A detailed description of the external morphology of the living animal and an investigation of internal anatomy are presented for the first time. In addition the microstructure of certain organs (i.e., notal tissue and the vestibular gland associated with the reproductive system) are compared with other *Dendrodoris* species. *Dendrodoris atromaculata* is unique among currently described species of *Dendrodoris* in three respects, the gill structure is “cross-like”, the notum possesses prominent spicules and the notum is covered in finger-like processes. These findings necessitate a reassessment of previously documented generic features of *Dendrodoris* and reveal a need for changes to future phylogenetic analyses of both porostome and cryptobranch dorids.

**Key words:** nudibranch, *Dendrodoris*, Dendrodorididae, histology, radula-less

**INTRODUCTION**

Indo-Pacific members of the genus *Dendrodoris* are in need of taxonomic review (Rudman 1998; Valdés & Gosliner 1999). At least twelve members of the genus are found in Australian waters (Brodie 2002). Several of these species, i.e., *Dendrodoris maugeana* Burn, 1962 and *D. carbunculosa* (Kelaart, 1858), are relatively rare and this has hindered interspecific comparison. An investigation of another such rare species follows; it provides new information of the morphological and anatomical characteristics of *D. atromaculata* (Alder & Hancock, 1864) a large tropical nudibranch first described from the south-eastern coast of India, and barely mentioned in the literature since (see Eliot 1906a; Willan & Coleman 1984).