



The Living Columbariinae (Gastropoda: Neogastropoda: Turbinellidae) of New Zealand

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Abstract

The Columbariinae have been represented in the fauna of New Zealand from the Paleocene until the Recent, providing the longest known continuous record for the subfamily. Seven living species, representing the genera *Columbarium*, *Coluzea*, and *Fulgurofusus*, are recognized, and include two species, *Fulgurofusus maxwelli* and *Fulgurofusus marshalli* that are described as new. The New Zealand columbariine fauna is unusually diverse at the generic level, and includes the largest members of the subfamily, as well as the only primarily sublittoral species. The morphology, anatomy, and distribution of the living species are discussed, as are their relationships to living and fossil congeners.

Key words: Neogastropoda, Turbinellidae, Columbariinae, *Columbarium*, *Coluzea*, *Fulgurofusus*, bathyal, new species, biogeography, New Zealand

Introduction

The bathyal to abyssal subfamily Columbariinae Tomlin, 1928, is the most diverse and geographically widespread clade within the family Turbinellidae Swainson, 1835. The remaining subfamilies, the Turbinellinae, and Vasiniae H. and A. Adams, 1853, have comparatively few genera and species, are circumtropical, and inhabit depths ranging from the intertidal to the outer continental shelf. Another bathyal clade, the Ptychactractidae Stimpson, 1865, until recently considered a subfamily of Turbinellidae (e.g., Cernohorsky 1973; Harasewych 1998; Kantor *et al.* 2001) has been segregated as a separate family related to the Pseudolividae de Gregorio, 1880 (Bouchet *et al.* 2005: 256). The Tudicliinae Cossmann, 1901, with a single living species endemic to shallow waters of southeastern India, has