



New species of Scissurellidae, Anatomidae, and Larocheidae (Mollusca: Gastropoda: Vetigastropoda) from New Zealand and beyond

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Abstract

Thirteen new species of Scissurellidae (*Scissurella regalis* n. sp., *Sinezona mechanica* n. sp., *Sinezona platyspira* n. sp., *Sinezona enigmatica* n. sp., *Sinezona wanganellica* n. sp., *Satondella azonata* n. sp., *Satondella bicristata* n. sp.), Anatomidae (*Anatoma amydra* n. sp., *Anatoma kopua* n. sp., *Anatoma megascutula* n. sp., *Anatoma tangaroa* n. sp.), and Larocheidae (*Larochea spirata* n. sp., *Larocheopsis macrostoma* n. sp.) are described, all of which occur in New Zealand waters. The greatest geographic source of new taxa is the islands and underwater features off northern New Zealand. The new shell-morphological term “sutsel” is introduced for the area between the SUTURE and the SELenizone.

Keywords: new species, shell, radula, New Zealand, Indo-Malayan Archipelago

Introduction

The molluscan fauna of New Zealand is relatively well-known, based on the monographs by Powell (1979), and the inventories by Spencer & Willan (1995) and Spencer et al. (2009, 2011). The scissurellids have received some recent attention by Marshall (1993, 2002). Extensive collecting in the New Zealand region and large scale sediment sorting (by B.A.M.) over the last 35 years have yielded over 20,000 specimens of scissurellids and anatomids, including a number of undescribed species, which are here described. The global revision of this group scheduled to be published in late 2012 (Geiger unpubl. data) serves as a basis for global comparisons.

Scissurellids are basal snails (Vetigastropoda) that are found in all fully marine environments from the intertidal to the deep sea and from pole to pole. They have small shells (0.54–11 mm) without nacre and most have a slit or hole in the shell. Several families of uncertain relationships are contained in this group (Geiger et al. 2008). This contribution concerns Scissurellidae s.s., Anatomidae, and Larocheidae, but does not include the hydrothermal vent taxa Sutilizonidae and Temnocinclidae, or Depressizonidae.

Materials and Methods

Standard methods for scanning electron microscopy (SEM) were employed (Geiger et al. 2007). The terminology as defined by Geiger & Sasaki (2009) is applied. A new term is introduced, the sutsel, which refers to the space between the *suture* and the *selenizone* above. It is a particularly important character to distinguish *Anatoma* species. Its width is measured in multiples of the width of the selenizone (0× = no sutsel, suture immediately below selenizone, 0.5× = half as wide as selenizone, 1× = as wide as selenizone, 2× = twice as wide as selenizone), usually at a particular whorl count. The term trochiform is used to indicate a shell that is approximately as tall as wide with multiple whorls; no further shape connotations are implied. Dimensions for the holotypes are given as width × height. Maximum dimension is the largest dimension, usually as width. Four standardized views are given: apertural, umbilical, apical, and enlargement of the protoconch. Specimens are cited in the following format