



## A new species of *Scissurella* from the Azores with discussions on *Sinezona semicostata* Burnay & Rolán, 1990 and *Sinezona cingulata* (O.G. Costa, 1861) (Gastropoda: Vetigastropoda: Scissurellidae)

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### Abstract

A new species of *Scissurella* d'Orbigny, 1824 from the Azores is described and compared to similar species from the eastern Atlantic and Mediterranean areas: *Sinezona cingulata* (O.G. Costa, 1861), *Scissurella costata* d'Orbigny, 1824, *Sin. semicostata* Burnay & Rolán, 1990, *Sci. lobini* (Burnay & Rolán, 1990) as well as two representatives from the Caribbean, *Sin. confusa* Rolán & Luque, 1994 and *Sci. redferni* (Rolán, 1996). The description and comparisons are based on shell and radula morphology examined by scanning electron microscopy. The species that are considered here are described by features including: shell shape, shell sculpture, shape of teleoconch I, which begins after the protoconch and ends at the onset of the selenizone and teleoconch II which extends from the selenizone to the aperture, presence or absence of a slit or foramen, details of the umbilical region and protoconch sculpture and width. *Scissurella azorensis* n. sp. is characterized by the protoconch sculpture, which contains axial cords on the outer margins only, having an open umbilicus region, teleoconch I being greater than one whorl and the amount of strong axial cords over the entire shell. The distributional range for *Sin. semicostata* is extended to the Salvage Islands. *Sinezona fayalensis* (Dautzenberg, 1889), *Sin. depressa* (Watson, 1897) and *Sin. crossei* (Folin, 1869) are compared to *Sin. cingulata* to show synonymy.

**Key words:** protoconch sculpture, slit, foramen, synonyms, eastern Atlantic, distributional range

### Introduction

The genera *Scissurella* d'Orbigny, 1824 and *Sinezona* Finlay, 1926 are marine gastropods that are usually smaller than 3 mm in size and are found worldwide from the shallow to the deep seas. In the North Atlantic there are currently 22 representatives of the family Scissurellidae s.s. (Geiger 2003), 19 of which are in the genera *Scissurella* and *Sinezona*. Recent molecular data show that Anatomidae is not part of Scissurellidae as once thought (Geiger & Thacker 2005) also suggesting that Larocheidae, Sutilizonidae and Temocinclididae are independent lineages. Anatomidae has the slit and selenizone at the periphery of the shoulder, Sutilizonidae and Temocinclididae are found exclusively on hydrothermal vents and Larocheidae lack a selenizone, slit or foramen.

*Sinezona* and *Scissurella* can be differentiated by the closure of the selenizone into a foramen (Geiger 2003). *Scissurella* has an open slit whereas the slit in *Sinezona* closes anteriorly to form a foramen. This feature can make it difficult to distinguish between juvenile *Scissurella* and *Sinezona*, both with an open slit. Mature specimens can be identified by the noticeable drop in the last quarter whorl at the aperture, which allows for discriminating between mature *Scissurella* and immature *Sinezona*. Radular diagnoses have not been found to be conclusive for differentiating between the genera within Scissurellidae s.s. (Geiger 2003). Radular features for the family include serrated rachidian, five serrated laterals, the last of which is usually enlarged and serrated marginal teeth (Geiger 2003). Protoconch sculpture is used for identification of species