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**ON THE OCCURRENCE OF *CYMATIUM MARTINIANUM*
(D'ORBIGNY, 1847) (GASTROPODA, RANELLIDAE)
IN THE ISLAND OF MADEIRA (NE ATLANTIC OCEAN)**

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With 1 figure

ABSTRACT. *Cymatium martinianum* (d'Orbigny, 1847) is recorded for the first time from the island of Madeira. This species has an ampho-atlantic distribution, ranging from the south of Florida to Brazil (including Bermuda) in the West Atlantic and from Madeira to São Tomé and Príncipe (including the Canary Islands, Sierra Leone and Cape Verde) in the East Atlantic. Some relevant morphological differences between Atlantic *Cymatium martinianum* (d'Orbigny, 1847) and Indo-Pacific *Cymatium pileare* (Linné, 1757) are highlighted.

KEY WORDS: Madeira, *Cymatium martinianum*, new record, geographical distribution, taxonomy.

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RESUMO. *Cymatium martinianum* (d'Orbigny, 1847) é pela primeira vez citado para a Ilha da Madeira. Apresenta uma distribuição geográfica anfiatlântica, desde a Flórida ao Brasil (incluindo as Bermudas), no Atlântico ocidental e desde a Ilha da Madeira até São Tomé e Príncipe (incluindo Canárias, Serra Leoa e Cabo Verde), no Atlântico oriental. São destacadas algumas diferenças morfológicas relevantes em termos de diferenciação entre *Cymatium martinianum* (d'Orbigny, 1847) do Atlântico e *Cymatium pileare* (Linné, 1757) do Indo-Pacífico.

PALAVRAS-CHAVE: Madeira, *Cymatium martinianum*, novo registo, distribuição geográfica, taxonomia.

INTRODUCTION

The genus *Cymatium* is represented in Madeira by three species: *C. corrugatum* (Lamarck, 1816), *C. nicobaricum* (Röding, 1798) and *C. parthenopeum* (Salis, 1793) (NOBRE, 1889, 1895, 1937; WATSON, 1891, 1897). During sampling in the framework of the study “Taxocoenosis of molluscs associated to soft bottoms in Madeira Island – tide-pools and shallow water biotopes” a specimen of *Cymatium* was obtained, which did not match with any of the above mentioned species. After detailed study and comparison it revealed to belong to *Cymatium martinianum* (d'Orbigny, 1847), a species here recorded for the first time from Madeira.

MATERIAL

One shell, 33,5 mm height (containing an unidentified hermit crab) collected by SCUBA diving on 9th June, 2005, at Quinta do Lorde (southeast coast of Madeira Island, 32° 43.289' N, 017° 10.621' W) at about 5 m depth. The specimen was deposit in the author's personal collection (MFC 460).

Cymatium martinianum (Fig. 1)

Shell thick, moderately heavy, elongate-ovate, high-spired, with five rounded whorls and deep sutures. The siphonal canal is short, broad and recurved and the aperture is narrow. It has thick spiral cords, the uppermost with strong nodules, which are sinuously aligned axially. Between the cords there are deep grooves. It has two pronounced varices in the last whorls. Crowded, paired teeth inside the outer lip (which remain restricted to its margin) correspond to the paired lirae in the aperture. Columella liriate throughout its length. The colour of the teleoconch, show shades of gray-brown variegated with white spiral bands. The aperture teeth and columellar lirae are white, surrounded by some blackness around the teeth and the edge of the outer lip alternately pale brown and violet tainted.



Fig. 1 - *Cymatium martinianum* (d'Orbigny, 1847).

DISCUSSION

WATSON (1897) referring to *Ranella olearium* (Linné, 1758) made an important remark: "A specimen from Porto Santo, presents the exact features of *T. martinianum* d'Orb., from the West Indies.". The material collected by Watson was not studied, but considering that these two species are well known and very distinct, one can only infer from Watson's words that it was indeed a specimen of *Cymatium martinianum*. Having found merely one specimen, he surely hesitated in recording this species for the Madeira Archipelago. Now, a century later, in the presence of another specimen, we are able to confirm the presence of this species in Madeira.

C. martinianum, has a long planktotrophic development, therefore it is not surprising its wide spreading along the North Atlantic currents and South Atlantic currents complex, from both sides of the Atlantic Ocean (amphi-atlantic distribution).

In an attempt to separate *Cymatium martinianum* (d'Orbigny, 1847) from the Indo-Pacific *Cymatium pileare* (Linné, 1757), the former has either been classified as a distinct species (BEU & KAY, 1988) or subspecies (POPPE & GOTO, 1991) for several years. On the other hand, ABBOTT & DANCE (1986) and DANCE (1992) considered the existence of a single species, *Cymatium pileare*, with a circumtropical distribution in the Atlantic and Indo-Pacific oceans, thus revealing a contradictory taxonomy.

When referring to specimens from Sierra Leone, ARDOVINI & COSSIGNANI (2004) used the name *Cymatium martinianum*. However, several authors such as ABBOTT & MORRIS (1995), ABBOTT & DANCE (1986) and ROLÁN (2005) when referring to the species distribution

in the West Atlantic, from south Florida to Brazil (including Bermuda) and in the Cape Verdes used the name *Cymatium pileare*. POPPE & GOTO (1991), NORDSIECK & TALAVERA (1979) and FERNANDES & ROLÁN (1993) referring to the presence of this species in the Canary Islands and São Tomé and Príncipe, used the name *Cymatium pileare martinianum*.

In the present contribution, the argument presented by TALAVERA (1987), based on the analysis of the shell's morphological characters, allowing the distinction between the Indo-Pacific and Atlantic populations is accepted. According to this author, in Indo-Pacific specimens "(...) the aperture is longer and narrower, (...) the plicae on the internal lip project further in the interior of the aperture and the siphonal canal is slightly longer". Moreover, in the CLEMAM database, *Cymatium pileare* (Linné, 1757) is restricted to the Indo-Pacific, and *C. martinianum* (d' Orbigny, 1847) to the Atlantic.

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