

***Brachycthyra atlantidea* (Knudsen, 1952) (Gastropoda, Neogastropoda, Conidae), first report from the Western Mediterranean Sea**

Carlo SMRIGLIO

Via di Valle Aurelia 134, I 00167 Rome, Italy; csmriglio@tiscalinet.it

Andrea DI GIULIO

Dipartimento di Biologia, Università "Roma Tre", Viale Marconi 446, 00146 Roma, Italy;
digiulio@uniroma3.it

Franco GUBBIOLI

Urb. San Miguel, 102, 29602 Marbella, Malaga, Spain;
gubbel@terra.es

& Paolo MARIOTTINI

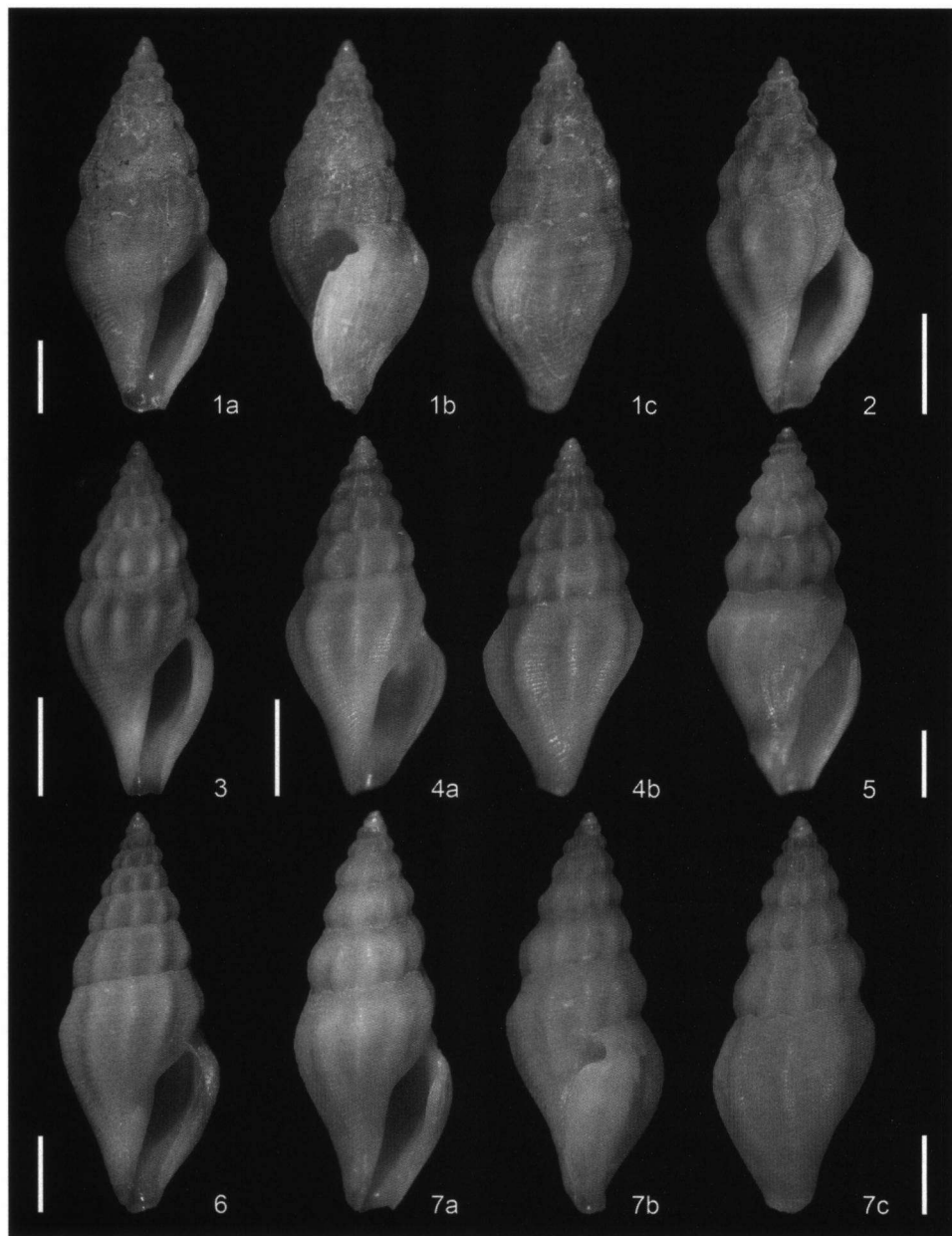
Dipartimento di Biologia, Università "Roma Tre", Viale Marconi 446, I 00146 Roma, Italy;
mariotpa@uniroma3.it [corresponding author]

The present paper records a noteworthy West African turrid species, *Brachycthyra atlantidea* (Knudsen, 1952), for the first time from the Western Mediterranean Sea (Alboran Sea). The unexpected presence within the Mediterranean basin of this amphiatlantic genus is discussed.

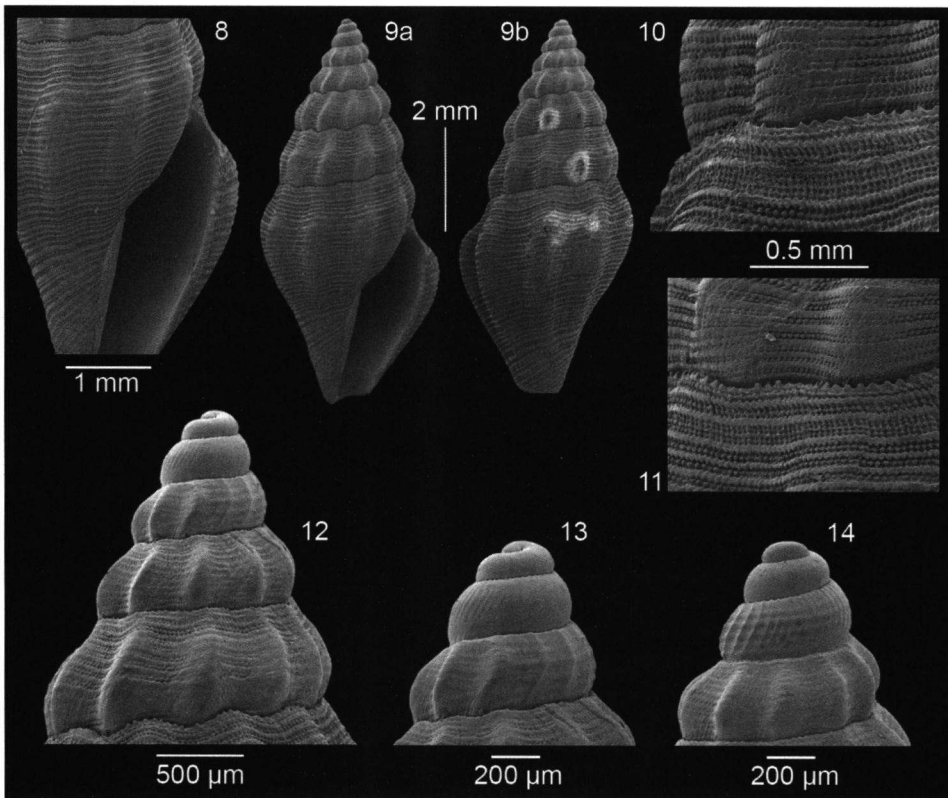
Key words: Gastropoda, Neogastropoda, Conidae, Mangeliinae, *Brachycthyra*, Mediterranean, Alboran Sea, Atlantic Ocean.

INTRODUCTION

The epithet 'turrid' was largely used as a very general term indicating a huge number of species belonging to the family-group Turridae H. & A. Adams, 1853 s. l. Among the numerous genera included within this large group of Neogastropoda, the genus *Brachycthyra* Woodring, 1928, has been redescribed by Powell (1966) and consists of small Recent and Tertiary turrids that mainly occur in the Caribbean area. *Brachycthyra atlantidea* (Knudsen, 1952) has been described on two shells collected during the 'Danish Expedition to the Coasts of Tropical West Africa, 1945-1946'. The type locality of this species is 10°22'N 16°22'W (Guinea) (Knudsen, 1952: 172); its distribution in the Eastern Atlantic Ocean has been subsequently enlarged by the report of Rolán & Otero-Schmitt (1999: 21), showing it to be ranging from Senegal to Angola. Surprisingly, eight shells of *B. atlantidea* have now been dredged along the coast of South Spain (Costa del Sol, Alboran Sea). This is the first record of this amphiatlantic genus from the Mediterranean Sea. Abbreviations used for collections: CS-PM, Carlo Smriglio and Paolo Mariottini (Rome, Italy); FG, Franco Gubbioli (Marbella, Spain).



Figs 1-7. Shells of *Brachycythara atlantidea* (Knudsen, 1952). 1-2, off Estepona ($36^{\circ}25'N$ $5^{\circ}09'W$), 150-250 m depth; 1, specimen A (10.2×4.1 mm); 2, C (7.5×3.4 mm); 3, off Adra ($36^{\circ}45'N$ $3^{\circ}01'W$), 80-150 m depth (E, 7.7×3.4 mm); 4-5, off Malaga ($36^{\circ}33'N$ $4^{\circ}22'W$), 50 m depth (4, F, 7.4×3.2 mm; 5, G, 10.2×4.4 mm); 6, off Marbella ($36^{\circ}28'N$ $4^{\circ}52'W$), 30-40 m depth. (H, 10.5×4.3 mm); 7, off West Sahara, 30-60 m depth. (L, 9.5×3.6 mm). Scale bars: 2 mm.



Figs 8-14. Morphological details of shells of *Brachyocythara atlantidea* (Knudsen, 1952), SEM photographs. Specimen F, Spain, off Malaga (36°33'N 4°22'W), 50 m depth (7.4 × 3.2 mm).

Conidae Fleming, 1822
Mangeliinae Fischer, 1887

Brachyocythara Woodring, 1928.

Type species (by original designation): *Cythara gibba* Guppy, 1896; Recent, Atlantic Ocean, Miocene, Pliocene.

Brachyocythara atlantidea (Knudsen, 1952) (figs 1-14)

Cythara atlantidea Knudsen, 1952: 172-173, pl. 3 fig. 5

Material. — Spain: off Estepona (36°25'N 5°09'W), 150-250 m depth (specimen A, 10.2 × 4.1 mm; B, 9.2 × 3.7 mm; C, 7.5 × 3.4 mm; D, 8.2 × 3.6 mm); off Adra (36°45'N 3°01'W), 80-150 m depth (E, 7.7 × 3.4 mm); off Malaga (36°33'N 4°22'W), 50 m depth (F, 7.4 × 3.2 mm; G, 10.2 × 4.4 mm); off Marbella (36°28'N 4°52'W), 30-40 m depth (H, 10.5 × 4.3 mm; I, 9.3 × 3.6 mm). West Sahara, dredged along the coast, 30-60

m depth (L, 9.5 × 3.6 mm; M, 6.3 × 2.6 mm). Specimens A-D were from muddy bottoms hosting the biocoenosis C (sensu Pérès & Picard, 1964). SEM photographs were made at the LIME (Interdepartmental Laboratory of Electron Microscopy), University of "Roma Tre", Rome, Italy. Specimens A-G are stored in the CS-PM collection, specimens H-M in the FG collection.

Discussion. — The prosobranch gastropod superfamily Conoidea (= Toxoglossa), shows extreme diversity, according to the last classification proposed by Taylor, Kantor & Sysoev (1993). The family Conidae has been subdivided into seven subfamilies and the genus *Brachycthyara* Woodring, 1928 (redescribed by Powell, 1966: 117, pl. 18 fig. 7) is classified in the Mangeliinae. This is an amphiatlantic group of Recent and Miocene/Pliocene turrids which distribution ranges from Caribbean to West African coasts. In the Check List of European Marine Mollusca [CLEMAM: Gofas & Le Renard (eds), home page, <http://www.mnhn.fr/base/malaco/html>] the genus *Brachycthyara* is not shown. The Mediterranean shells are identical to the ones figured by Rolán & Otero-Schmitt (1999: 23, figs 73-78), including the holotype (fig. 74), and to the specimens collected from West Sahara (fig. 7a-c). We assume that the Mediterranean specimens of *B. atlantidea* derive from the nearby Atlantic Ocean, passively drifting through the Straits of Gibraltar by the eastwards surface current as meroplanktonic larvae and metamorphosing when favorable conditions are encountered. The planktotrophic protoconch of this turrid (figs 13-14) fits well within this hypothesis. The finding of eight specimens of *B. atlantidea* from four localities off the Spanish coast (Alboran Sea) implies an extension of the range of this species, that can now be added to the Recent Mediterranean malacofauna. The collecting depth and the hosting biocoenosis are suggesting that it is a circalittoral species.

ACKNOWLEDGEMENTS

We would like express our deep gratitude to Mr Jose Martin (Malaga, Spain) for kindly supplying *Brachycthyara atlantidea* specimens.

REFERENCES

- CLEMAM: Gofas & Le Renard (eds), home page, <http://www.mnhn.fr/base/malaco/html>.
 KNUDSEN, J., 1952. Marine prosobranchs of tropical West Africa collected by the Atlantide Expedition, 1945-46. — Videnskabelige Meddelelser fra Dansk naturhistorisk Forening i Kjobenhavn 114: 129-185.
 PÉRÈS, J.M., & J. PICARD, 1964. Nouveau manuel de bionomie benthique de la Mer Méditerranée. — Recueil de Travaux de la Station Marine Marine d'Endoume 31: 1-137.
 POWELL, A.W.B., 1966. The molluscan families Speightiidae and Turridae. — Bulletin of the Auckland Institute and Museum 5: 1-157.
 ROLÁN, E., & J. OTERO-SCHMITT. 1999 – The Family Turridae s.l. (Mollusca, Neogastropoda) in Angola, 2. Subfamily Mangeliinae Fischer, 1883. — Argonauta 13 (1): 5-26.
 TAYLOR, J.D., Y.I. KANTOR & A.V. SYSOEV, 1993. Foregut anatomy, feeding mechanisms, relationships and classification of the Conoidea (=Toxoglossa) (Gastropoda). — Bulletin of the Natural History Museum of London (Zoology) 59 (2): 125-170.