

Report of *Coralliophila guancha* Smriglio, Mariottini et Engl, 2003 in the Mediterranean Sea (Gastropoda Muricidae)

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ABSTRACT

With this note the status and distribution of *Coralliophila guancha* Smriglio, Mariottini et Engl, 2003 (Gastropoda Muricidae) are assessed, based on published and unpublished records. The range of the species is extended to the Mediterranean Sea, where it had previously been recorded as a distinct species, *Coralliophila ahui* Cossignani, 2009, which is here regarded as a synonym.

KEY WORDS

Coralliophilinae; Mediterranean Sea; marine currents.

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INTRODUCTION

Coralliophilinae Chenu, 1859 is a subfamily of Muricidae comprising c. 250 accepted species worldwide, of which 14 are recorded with certainty from the Mediterranean Sea. We report here a taxonomic assessment and new records of *Coralliophila guancha* Smriglio, Mariottini et Engl, 2003, originally described from Lanzarote Island (Canary Islands, Atlantic Ocean) (Smriglio et al., 2003).

MATERIAL AND METHODS

Coralliophilinae specimens have been studied in public and private collections, as detailed under Type Material and Other material examined.

Photographs have been taken with a Nikon D3300 digital camera mounted on a Carl Zeiss 475052 stereomicroscope. Scanning electron Mi-

croscopy (SEM) photographs were taken at the Interdepartmental laboratory of electron Microscopy (LIME, University “Roma Tre”, Rome, Italy), by using a Philips XL30. Current systematics is based on the World Register of Marine Species (WoRMS, 2023).

We have used a standardised format for the citation of specimen data in the “Type material” and the “Other material examined” sections, as described by Chester et al. (2019), with the following data-fields: COUNTRY (or major geographic area) • number of specimens (lv and/or dd); locality data (from largest to smallest); geographic coordinates (in decimal degrees); depth; date (format “16 Jan. 1998”); other collecting data (e.g.: habitat); collection and catalogue code. Missing data were reported in the respective field as NA (= not available).

ACRONYMS AND ABBREVIATIONS. Collections: BAU, Department Biology and Biotechnologies “Charles Darwin”, Sapienza Uni-

versity of Rome, Italy; JAG, José Ahuir Galindo collection, Malaga, Spain; CS-PM, Carlo Smriglio-Paolo Mariottini collection, Rome, Italy; WE, Winfried Engl collection, Düsseldorf, Germany; MCZR, Museum of Zoology of Rome (Malacology), Italy; MMP, Museo Malacologico Piceno, Cupra Marittima, Italy; MO, Marco Oliverio collection, Rome, Italy; MZB, Laboratory of Malacology, Bologna University, Italy; ZSM, Zoologische Staatssammlung München, Germany. Other acronyms: L, length; H, height; LIME, Interdepartmental Laboratory of Electron Microscopy; SEM, Scanning Electron Microscopy; sh, empty shell(s); lv, live collected specimen(s).

RESULTS

Systematics

Familia MURICIDAE Rafinesque, 1815
Subfamilia CORALLIOPHILINAE Chenu, 1859
Genus *Coralliophila* H. Adams et A. Adams, 1853
Type species: *Coralliophila violacea* (Kiener, 1836), by subsequent designation (Iredale, 1912, p. 221). Recent. Indo-Pacific.

Coralliophila guancha Smriglio, Mariottini et Engl, 2003

Coralliophila guancha Smriglio et al. 2003: 39–42
Coralliophila ahui Cossignani, 2009: 14–15
Coralliophila squamosa - Crocetta & Spanu, 2008: 71–72, figs H, I (not *Fusus squamosus* Bivona et Bernardi, 1838)

TYPE LOCALITY. *Coralliophila guancha*: Canary Islands, Lanzarote Island, off Puerto del Carmen, 28°55'22"N, 13°38'58"W; 45–50 m depth.

Coralliophila ahui: Morocco, Strait of Gibraltar, 120 m depth.

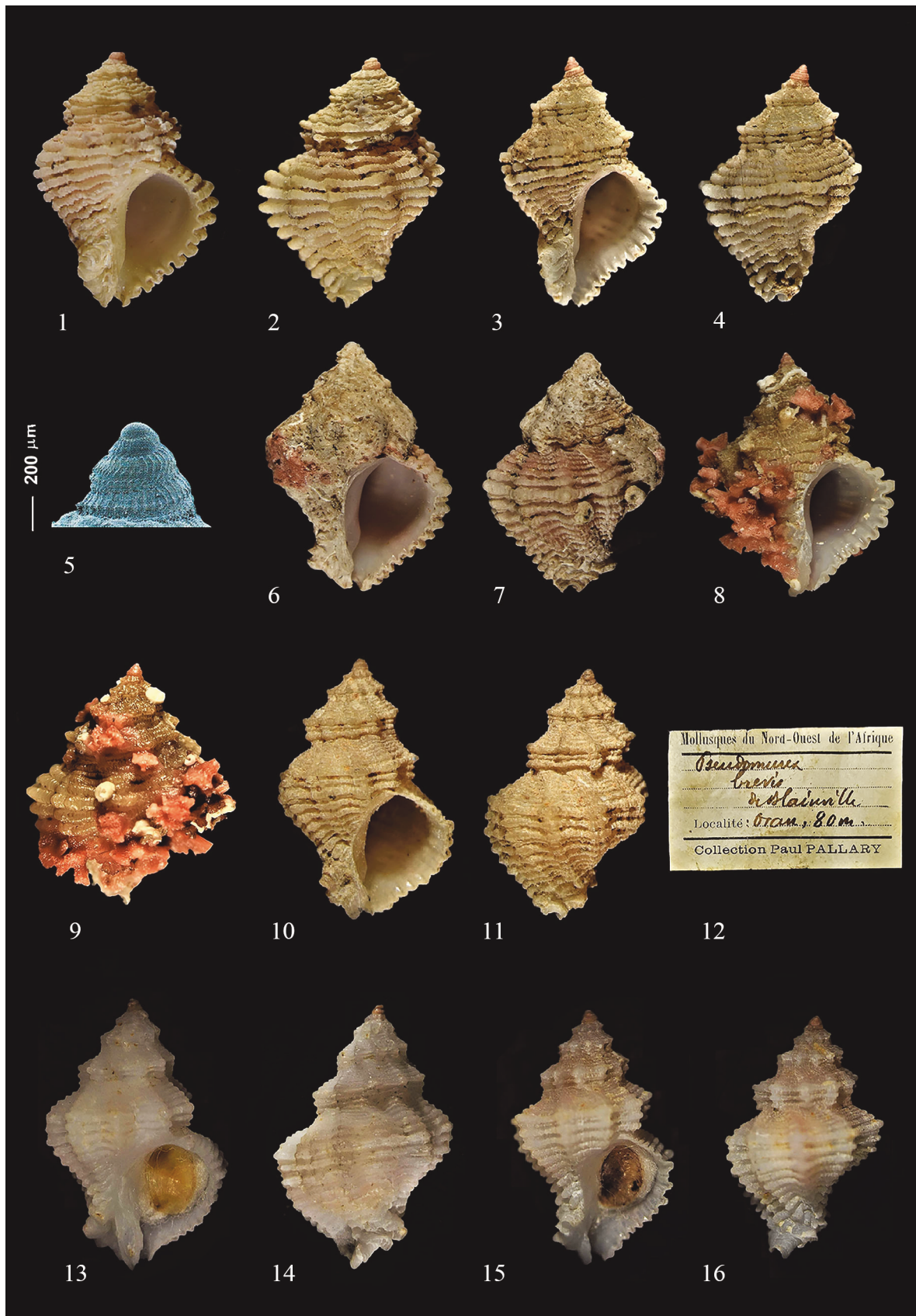
TYPE MATERIAL. *Coralliophila guancha*. Holotype. CANARY ISLANDS • sh (11.5 x 8.0 mm); Lanzarote Island, off Puerto del Carmen; 28°55'22"N, 13°38'58"W; 45–50 m; NA; NA; ZSM20030866. Paratypes. CANARY ISLANDS • 1 sh; Lanzarote Island, off Puerto del Carmen; 28°55'22"N, 13°38'58"W; 45–50 m; NA; paratype A; MZB42943 • 29 sh; Lanzarote Island, off Puerto del Carmen; 28°55'22"N, 13°38'58"W; 45–50 m; NA; NA; WE • 16 sh; Lanzarote Island, off Puerto del Carmen; 28°55'22"N, 13°38'58"W; 45–50 m; NA; NA; CS-PM • 2 sh; Lanzarote Island, off Puerto del Carmen; 28°55'22"N, 13°38'58"W; 45–50 m; NA; NA; MO.

Coralliophila ahui. Holotype. IBERO-MOROCCAN GULF • sh (11.28 mm); Strait of Gibraltar; 120 m; NA; NA; MMP. Paratypes. IBERO-MOROCCAN GULF • 10 sh; Strait of Gibraltar; 120 m; NA; NA; JAG.

OTHER MATERIAL EXAMINED. CANARY ISLANDS • 14 sh; Lanzarote Island, off Puerto del Carmen; 28°55'22"N, 13°38'58"W; 45–50 m; NA; NA; CS-PM. IBERO-MOROCCAN GULF • 4 sh; Strait of Gibraltar; 80 m; NA; bioclastic sediment samples, with red coral; MO. ALGERIA • 2 sh; off Oran; NA; 80 m; NA; P. Pallary leg.; MCZR. ITALY • 1 lv; Ponza Island; 40°56'48"N, 13°01'28"E; 10–12 m; 2017; on caryophyllid scleractinian; BAU-3164 • 1 lv; S. Stefano Island, 'Molo IV'; 38°42'56"N, 13°09'21"E; 15 m; 19.Aug.2020; on caryophyllid scleractinian; BAU-3760.

DIAGNOSIS. Shell small for the genus (length 8.3–12 mm), strongly biconical in juveniles, more rounded in adults. Protoconch multispiral, reddish. Teleoconch of 4–5 convex whorls. Sculpture of 15–17 spiral cords, and 6–7 axial ribs. Aperture oval, half of the total height. Coloration whitish; often pinkish, reddish, or light brown in juveniles, with a lighter band on the shoulder.

Figures 1–16. *Coralliophila guancha*. Figs. 1, 2: paratype, off Puerto del Carmen, 45–50 m, Lanzarote Island, Canary Islands, Spain, H 9.9 X D 7.1 mm (CS-PM). Figs. 3, 4: paratype, off Puerto del Carmen, 45–50 m, Lanzarote Island, Canary Islands, Spain, H 8.3 X D 5.4 mm (CS-PM). Fig. 5: paratype, protoconch, off Puerto del Carmen, 45–50 m, Lanzarote Island, Canary Islands, Spain (CS-PM). Figs. 6, 7: S. Stefano Island (40°47'22"N, 13°27'15"E), 15 m, H 11.0 X D 7.3 mm (BAU-3760). Figs. 8, 9: Ponza Island (40°56'48"N, 13°01'28"E), 10–12 m, H 11.6 X D 8.2 mm (BAU-3164). Figs. 10, 11: labelled "*Pseudomurex brevis*", Oran, Algeria, 80 m, H 12 X D 7.2 mm, MTS (ex Paul Pallary collection; MCZR). Fig. 12: original label handwritten by P. Pallary, MTS (ex Paul Pallary collection; MCZR). Figs. 13, 14: off Morocco, Gibraltar Strait, 80 m, H 12 X D 8.2 mm (CS-PM). Figs. 15, 16: off Morocco, Gibraltar Strait, 80 m, H 10.9 X D 7.1 mm (CS-PM).



REMARKS. *Coralliophila guancha* was originally described from Lanzarote Island (Canary Islands) (Smriglio et al., 2003). We believe that *Coralliophila ahui* Cossignani, 2009, described from the Moroccan coasts of the Strait of Gibraltar, 120 m depth, is the same species, as already suggested by Crocetta in Montesanto et al. (2022). There are no diagnostic morphological characters between the two nominal taxa as can be seen in the respective original descriptions and type materials (Figs. 1–5).

It has been recently reported from Madeira, 220–290 m depth, and the Azores, 0–18 m depth (Garrigues et al., 2022, as *C. ahui*). In the Mediterranean, this taxon was reported (as ‘*Coralliophila squamosa*’) from Sardinia, off Alghero, 100–120 m depth, in bioclastic sediment with red coral (Crocetta & Spanu, 2008). Then, it has been further reported (as *C. ahui*) from Scilla, Strait of Messina (Vazzana, 2015), based on two living specimens and one empty shell, all found in a submerged cave at 52 m depth; a fourth specimen of the species has been reported from Lazzàro, Capo dell’Armi, south of Reggio Calabria, 70 m depth, sorted from a sample of bioclastic sediment with

presence of *Corallium rubrum* (Vazzana, 2015). Two living specimens were collected in the Central Tyrrhenian Sea (Pontine Islands) at Ponza Island and Santo Stefano Island, both under overhangs, associated with caryophyllid scleractinians (Figs. 6–9).

Finally, some specimens of this species have been found (labelled as “*Pseudomurex brevis*”) in a lot of the Monterosato collection (MCZR), from Oran, Algeria, 80 m depth, ex Pallary collection (Figs. 10–12). This can be considered the first documented historical finding of *C. guancha* in the Mediterranean Sea, since Pallary sampled molluscs in Algeria at the end of the nineteenth century (Pallary, 1900).

All specimens examined in this work, perfectly fit the diagnostic characters of the Type material of *C. guancha*, considering the coloured protoconch, the teleoconch outline (strongly biconical in juveniles, more rounded in adults), the sculpture of 15 major spiral cords and 9–10 axial ribs, and the colour (whitish in adults, pinkish to light brownish in juveniles) (Figs. 13–16).

The geographic range of *C. guancha*, originally described from the Canary Islands, is here ex-

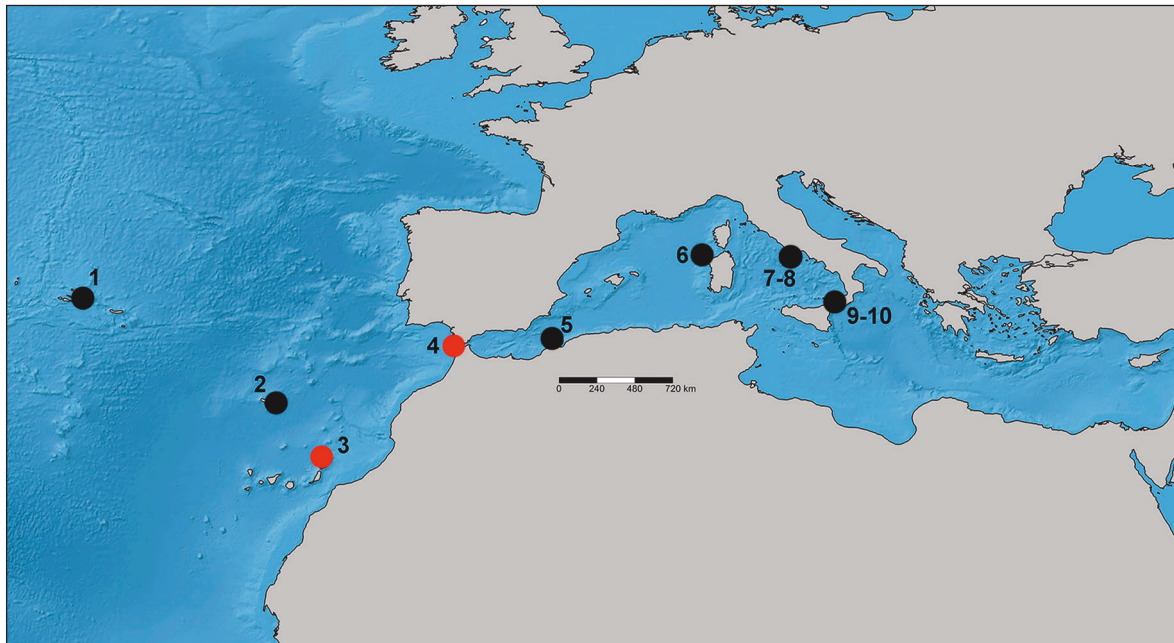


Figure 17. Documented records of *Coralliophila guancha*. 1) Azores (unprecised locality: Garrigues et al., 2022). 2) Madera (Garrigues et al., 2022). 3) Lanzarote (Smriglio et al., 2003). 4) Off Moroccan coasts (Cossignani, 2009). 5) Off Oran (MCZR). 6) Alghero (Crocetta & Spanu, 2008). 7) Ponza Island. 8) Santo Stefano Island (this work). 9) Scilla (Vazzana, 2015). 10) Lazzàro (Vazzana, 2015). Red circles, type materials.

tended, based on literature (and the new synonymy with *C. ahui* Cossignani, 2009) and new material, to Madeira and the Azores (thus potentially to the entire Macaronesia), and to the Ibero-Moroccan Gulf; then, it is also present in the western Mediterranean, from the northern Africa (Algeria) to western Sardinia, the area of the Messina Strait and the Tyrrhenian Sea (Fig. 17).

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