

On the distribution of some Mediterranean *Cerithiopsis* Forbes et Hanley, 1850 (Caenogastropoda Cerithiopsidae)

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ABSTRACT New records extend the distribution range of some *Cerithiopsis* Forbes et Hanley, 1850 (Caenogastropoda Cerithiopsidae): *C. ladae* Prkic et Buzzurro, 2007, *C. pulchresculpta* Cachia, Mifsud et Sammut, 2004 and *C. iudithae* Reitano et Buzzurro, 2006.

KEY WORDS *Cerithiopsis*; Cerithiopsidae; distribution; Mediterranean Sea; new records.

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INTRODUCTION

The genus *Cerithiopsis* Forbes et Hanley, 1850 (Caenogastropoda Cerithiopsidae) gathers a large pool of species consistently associated with sponges (Marshall, 1978), it appears heterogeneous and possibly polyphyletic (Cecalupo & Robba, 2010; Prkić & Mariottini, 2010; Modica et al., 2013). Currently the genus is intended conservatively and only recently some species have been assigned to the new genus *Nanopsis* Cecalupo et Robba, 2010 relying on subtle differences of the protoconch (Cecalupo & Robba 2010). Otherwise Scuderi & Criscione (2011) stated that the description of a new genus could not depend on protoconch features only.

In this respect more than 20 species of *Cerithiopsis* occurs in the Mediterranean Basin (Campani 2014, pers. comm.; Gofas, 2013; Gofas & Le Renard, 2014), many of which have been described during the past few years with apparently narrow ranges. Here we provide new data on distribution of three *Cerithiopsis* species recently described in order to give a little contribution to the knowledge

of this complex group. A thorough global revision taking into account not only shell morphology but also anatomical and genetical features will be necessary to reveal the actual relationships among them.

MATERIAL AND METHODS

Cerithiopsis ladae Prkic et Buzzurro, 2007 from Ile Rousse and Livorno were collected by algal washing. *C. pulchresculpta* Cachia, Mifsud et Sammut, 2004 from Argentario by brushing *Posidonia* rhizomes. All other specimens were picked up from shell grit samples collected by SCUBA diving.

ACRONYMS. CA = collection P.G. Albano (Bologna, Italy); CB = collection S. Bartolini (Firenze, Italy); CP = collection A. Pagli (Lari, Pisa, Italy); CRL = collection L. Romani (Lammari, Lucca, Italy); CRA = collection A. Raveggi (Firenze, Italy); CSC = collection C. Sbrana (Livorno, Italy); CSF = collection F. Siragusa (Livorno, Italy); sh = empty shell(s); sp: specimen(s) collected alive.

RESULTS AND DISCUSSION

Cerithiopsis ladae Prkic et Buzzurro, 2007

EXAMINED MATERIAL. Ile Rousse (Corsica, France), 30 m, 1 sp (CB); Livorno (Tuscany, Italy), 0.5 m, 1 sh (CRA); Calafuria (Livorno, Italy), 31 m, 1 sp (CRA); Elba island (Livorno, Italy), 40 m, 1 sh (CB); Punta Ala (Grosseto, Italy), 0.5 m, 1 sh (CB); Palinuro (Salerno, Italy), 05-2006, 30 m, 1 sh (CSF); Lampedusa island (Agrigento, Italy), 60 m, 1 sh (CRA); Malta, 60 m, 1 sh (CSC).

C. ladae “ribbed form”: Cannizzaro (Catania, Italy), 40 m, 1 sh (CB); Getares (Algeciras, Spain), 15 m, 1 sh (CB).

REMARKS. The present species (Figs. 2–5) has a dark brown, pupoid shells with a blunt cylindrical protoconch, smooth and white. It was described from Dalmatian coast (Prkic & Buzzurro, 2007) and subsequently recorded from Spain (Peñas et al., 2006; Oliver, 2007; Gofas et al., 2011; Oliver et al., 2012), Brindisi, E-Apulia (Scuderi & Terlizzi, 2012) and Eastern Sicily (Scuderi & Criscione, 2011). Our records extend its range to the Tyrrhenian Sea and Strait of Sicily.

We would like to take the opportunity of signaling some specimens from Cannizzaro (Sicily) and Getares (S-Spain) with axial riblets on the lower whorl of the protoconch (Figs. 4, 5). This feature wasn't reported in the original description but it was already noticed (Prkic 2008, pers. comm.). It confirms that the protoconch variability in *C. ladae* is wider than previously recorded, both in sculpture and in whorls morphology.

Cerithiopsis pulchresculpta Cachia, Mifsud et Sammut, 2004

EXAMINED MATERIAL. La Herradura (Granada, Spain), 30 m, 1 sh (CRA); Ile Rousse (Corsica, France) 40 m, 2 shs (CB); Castelsardo (Sassari, Italy), 45 m, 2 shs (CB); Calafuria (Livorno, Italy), 31 m, 3 shs (CB); Capraia island (Livorno, Italy), 70 m, 1 sh (CP); Capraia island (Livorno, Italy), 31 m, 1 sh (CRL); Giannutri island (Grosseto, Italy), 55 m, 1 sh (CRA); Secca delle Murelle (Viterbo, Italy), 27 m, 1 sh (CSC); Punta Campanella (Naples, Italy), 50 m, 1 sh (CB), 1 sh

(CRA); Palinuro (Salerno, Italy), 50 m, 1 sh (CB); Palinuro (Salerno, Italy), 30 m, 1 sh (CSF); Prvić island (Krk, Croatia), 40 m, 2 shs (CB); Corfu island (Greece), 15 m, 1 sh (CB); Corfu island (Greece), 58 m, 1 sh (CRA).

REMARKS. The species (Figs. 6, 7, 11, 12) has a brown conical-pupoid shell with a cylindrical bicarinated protoconch, crossed by close thin and dense axial riblets, hazelnut brown- hazelnut in colour. The present species was described from Malta (Cachia et al., 2004) and then reported from Calabria (Vazzana, 2010) and Sicily (Scuderi & Criscione, 2011). Our records widely extend its range to the north-central Tyrrhenian Sea, Corsica, Sardinia, NE Adriatic, NE Ionian and S Spain.

Cerithiopsis iudithae Reitano et Buzzurro, 2006

EXAMINED MATERIAL. Calafuria (Livorno, Italy), 31 m, 1 sh (CRA); Elba island (Livorno, Italy), 40 m, 1 sh (CB); Argentario (Grosseto, Italy), 15 m, 1 sh (CA); Secca delle Murelle (Viterbo, Italy), 27 m, 1 sh (CSF); Punta Campanella (Naples, Italy), 50 m, 1 sh (CB); Prvić island (Krk, Croatia), 40 m, 1 sh (CB).

REMARKS. The species (Figs. 9, 10) has a brown conical-pupoid shell with a white protoconch sculptured by two spiral chords crossed by thin and undulated axial riblets. It was described from eastern Sicily (Reitano & Buzzurro, 2006) and then reported from Apulia (Trono & Macri, 2013). Our records extend its range to the Tyrrhenian Sea and NE Adriatic.

The difficulty to correctly recognise many different species, which share a close similar teleoconch and protoconch morphology, is often due to the general status of the collected specimens. If they are not found in perfect conditions, important characters, as the protoconch morphology, could not allow the identification of the materials collected. Moreover the particular habitat and the small size of all the species of this family of gastropods has probably contributed to misidentifications and lack of data of many species. Putting together all these facts, in our opinion new examinations of specimens of collectors and further collecting materials could lead researchers to re-evaluate the distribution range of many species and their real diffusion status.

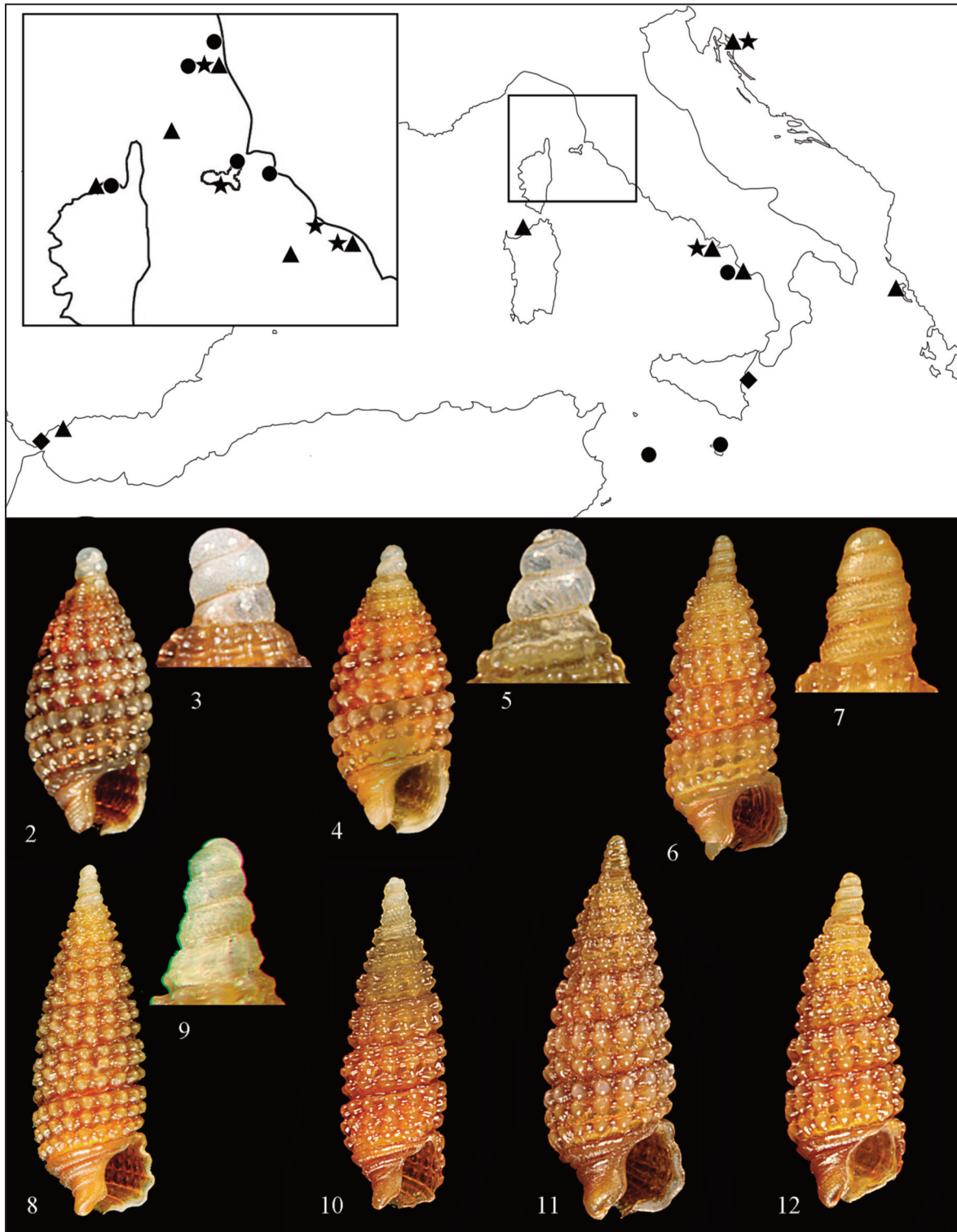


Fig. 1. Sampling localities of *Cerithiopsis iudithae* (black stars), *C. ladae* (black circles), *C. ladae* “ribbed form” (black diamond), *C. pulchresculpta* (black triangles). Figs. 2, 3. *C. ladae* and protoconch, Ile Rousse, Corsica, France, 2 mm. Figs. 4, 5. *C. ladae* “ribbed form” and protoconch, Getares, Spain, 1.9 mm. Figs. 6, 7. *C. pulchresculpta* and protoconch, Calafuria, Tuscany, Italy, 2.8 mm. Figs. 8, 9. *C. iudithae* and protoconch, Punta Campanella, Naples, Italy, 2.9 mm. Fig. 10. *C. iudithae*, Prvić, Croatia, 2.8 mm. Fig. 11. *C. pulchresculpta*, La Herradura, Spain, 3.2 mm. Fig. 12. *C. pulchresculpta* (Prvić, Croatia), 2.8 mm.

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