

Scientific note

On the occurrence of *Porpita porpita* in the Tyrrhenian Sea: COI and ITS2 DNA barcoding identification

(Cnidaria, Hydrozoa)

Giulia Furfaro*, Andrea Di Giulio*, Cristina Mantoni* & Paolo Mariottini*

The record of the Blue Button *Porpita porpita* (Linnaeus, 1758) (Cnidaria, Hydrozoa) in the Tyrrhenian Italian Sea (41°16'06.72" N, 13°01'34.13" E), is reported here for the first time. A single specimen was collected in the Latium (Central Italy) coast, and firstly identified on the base of its morphology (Fig.1). DNA barcoding analysis, with the use of the COI mitochondrial marker, unambiguously confirmed its identification (100 % homologous to the GenBank sequence with accession number GQ 120060). Additionally, the nuclear ITS2 genetic marker (Oliverio & Mariottini 2001) was used as a further barcoding sequence that revealed a high homology (ranging from 99 to 100 %) with sequences already present in GenBank but which were, surprisingly, never assigned until now (accession numbers: GU941198, GU941346, GU942419, KJ182875, KX113716, KX113680, KX115166, KX115168 and KX115212). The *P. porpita* COI and ITS2 nucleotide sequences were deposited at the EMBL/GenBank with the accession number LT795124 and LT795123, respectively (voucher RM3_747). With this record the range of *P. porpita* within the Mediterranean basin is extended and furthermore, the use of the ITS2 as a valid DNA barcode marker for this group was here confirmed. This study represents a good example of an inverse molecular route for the identification of unassigned environmental samples (Lee et al. 2010).

Acknowledgements. Authors sincerely acknowledge the University of Roma Tre for financial support (CAL/2017). GF was granted by the PhD school of the Department of Science, University of Roma Tre.

References

- Lee, S. R., Oak, J. H., Chung, I. K. & Lee, J. A. 2010. Effective molecular examination of eukaryotic plankton species diversity in environmental seawater using environmental PCR, PCR-RFLP, and sequencing. *Journal of Applied Phycology* 22(6): 699-707.
- Oliverio, M. & Mariottini, P. 2001. A molecular framework for the phylogeny of *Coralliophila* and related muricoids. *Journal of Molluscan Studies* 67: 215-224.

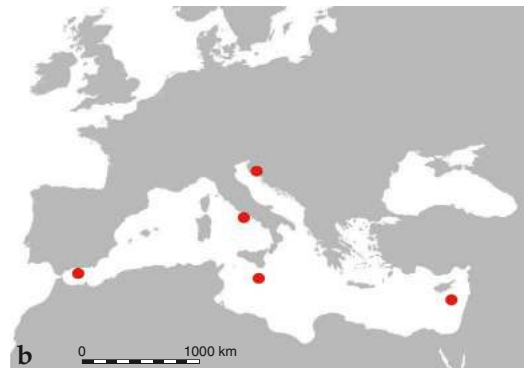


Fig. 1a. *Porpita porpita* specimen (voucher RM3_747) collected at the coast of Latium (Central Italy). **b.** Distribution of *P. porpita* in the Mediterranean Sea.

* Giulia Furfaro (corresponding author), Andrea Di Giulio, Cristina Mantoni & Paolo Mariottini, Department of Science, University of Roma Tre, Viale G. Marconi 446, 00146 Rome, Italy; e-mail: giulia.furfaro@uniroma3.it