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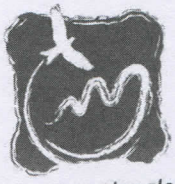

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FIRST MEDITERRANEAN RECORD AND DNA-BARCODE OF *EULALIA ORNATA* (PHYLLODOCIDAE, ANNELIDA) ASSOCIATED TO *SABELLARIA ALVEOLATA* (SABELLARIIDAE, ANNELIDA) REEFS

Sabellaria alveolata (L., 1767) reefs are commonly found along the NE Atlantic coast at temperate latitudes. *Sabellaria* reefs provide structural complexity in otherwise extensive sandy bottoms, thereby providing shelter to several reef-dwelling species. For this reason, *Sabellaria* reefs are considered to be diverse and valuable habitats deserving protection in EU. As a rule, the faunal composition of *Sabellaria* reefs is a composite of the species inhabiting the surrounding habitats. However, *Eulalia ornata* Saint-Joseph, 1888, is a Phyllodocidae species characteristically associated to *Sabellaria* reefs along the northern European coast (Pleijel, 1993). Compared to the NE Atlantic, Mediterranean *Sabellaria* reefs are smaller, less outspread, and poorly studied. In the framework of a study carried out to characterize the *S. alveolata* structures along the Sicily Channel, samples of *Sabellaria* reefs were collected at 3 Sicilian locations (Donnalucata, Eraclea Minoa, Triscina). Unexpectedly, phyllodocid specimens clearly belonging to *Eulalia* and characterized by a distinct colour pattern (body with two pairs of transverse olive-green bands and brown spots medially on each) were found in great number at each location living inside and among *Sabellaria* tubes. The specimens appeared different from *E. viridis* (L., 1767), already recorded in *Sabellaria* reefs of the Tyrrhenian Sea, while they appeared morphologically identical to the description of *E. ornata* by Pleijel (1993), as also confirmed by the above mentioned Author. As a consequence, *Eulalia ornata* is herein recorded for the first time in the Mediterranean Sea. Alive specimens were photographed and immediately stored in absolute ethanol for molecular analyses. Total DNA were extracted and the mitochondrial *cytochrome c oxidase subunit I* (COI) gene amplified using universal primer pairs. The COI data were integrated with the nuclear 28S rRNA gene barcode. The molecular identification through DNA barcoding enhances the prospects for species-level identifications globally using a standardized and authenticated DNA-based approach, and strongly supports the species delimitation between *E. ornata* and *E. viridis*. Our records confirm strong association of *E. ornata* with *Sabellaria* reefs also in the Mediterranean Sea.

References

Plejel F. 1993. Polychaeta. Phyllodocidae. *Marine Invertebrates of Scandinavia,* 8: 1-159.