

HOW MANY *CARYOPHYLLIA* SPECIES LIVED IN THE PLIO- PLEISTOCENE MEDITERRANEAN? SEGUENZA'S TAXONOMY REVISED

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The low biodiversity of the present-day deep-water corals from the Mediterranean is well known. It's also known that, during the Plio-Pleistocene, the deep waters of this semi-enclosed basin were inhabited by an higher number of species, most of them similar to the Recent north-eastern Atlantic ones. However, how many deep-water coral species indeed thrived in the Mediterranean? How many among them are still living?

We can't answer these questions without clarifying the taxonomy of the Mediterranean Plio-Pleistocene corals, which dates back to the 19th century. In fact, at that time the scanty data on the scleractinians intraspecific variation led scientists to „split” taxa.

According to Seguenza (1864, 1880), about 20 *Caryophyllia* species would characterize the bathyal Plio-Pleistocene deposits cropping out along the Messina Strait sides. In order to evaluate the intraspecific variation of the species Seguenza analyzed, we examined many *Caryophyllia* specimens collected in the stratigraphical layers he mentioned, and we compared them with the Recent species from the Mediterranean and the north-eastern Atlantic. Besides the conventional macroscopic skeletal characters, generally used to distinguish living species, we focused on some microscopic skeletal features and realized that the outer thecal micromorphology is important in identifying some *Caryophyllia* species.

From the comparison between the Plio-Pleistocene and Recent specimens turns out, as previously suggested by other Authors, that some species of *Caryophyllia* established by Seguenza (1864) are morphotypes of the same taxon rather than true species. But, at the same time, the early results of our revision lead us to consider some living north-Atlantic species as synonyms of some fossil taxa previously established by Seguenza (1864). In particular, according to the ICZN Priority Principle, we propose to consider the living species *C. calveri* and *C. sarsiae* respectively junior synonyms of two Plio-Pleistocene Seguenza's taxa: *C. aradasiana* and *C. coronata*.

References

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