

{rokbox title=|Underwater image of a *Dendrophyllia ramea* colony from study area (scale bar = 5 cm) :: Image:

Authors|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-reproductiv-characteristics-gametogenic-anton-2023-thumb-et-al.jpg|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-ieo-csic-reproductiv-characteristics-gametogenic-anton-2023-et-al.jpg{/rokbox}

Covadonga Orejas, **Silvia Antón-Sempere**, Alexis Terrón-Sigler, Amalia Grau, 2023. [Reproductive characteristics and gametogenic cycle of the scleractinian coral *Dendrophyllia ramea*](#).

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Abstract: The present study marks a pioneering investigation into the reproductive cycle of the scleractinian coral *Dendrophyllia ramea*. This is one of the first reproduction studies conducted in the Mediterranean Sea for a colonial azooxanthellate coral. Coral samples were collected in 2017 (May and October) and 2018 (February and July) in the Alborán Sea (SW Mediterranean). This location was selected due to its rarity as one of the few sites where this species thrives at depths shallower than 40 m. These samples were used to study the sexual patterns, fertilization mechanisms and gametogenic cycles by means of histological techniques. To broaden the scope, Sea Surface Temperature (SST) and Chlorophyll-a (Chl-a) data from open access databases have been considered to explore the potential influence of these environmental factors as triggers for gamete development and spawning time. The findings cast

D. ramea as a gonochoric species, since no hermaphroditic specimens were observed among the analysed samples. Additionally, the lack of larvae and embryos in any of the analysed polyps, suggest that this species is fertilised externally. Two oocyte cohorts have been detected simultaneously, hinting at a yearly reproductive cycle, characterised by a prolonged oocyte maturation and seasonal spawning period taking place between August and October. Nevertheless,

D. ramea display a low fecundity compared to other scleractinians inhabiting deep waters. Lastly, the early stages of gametogenesis seem to be coupled with the highest Chl-a values (i.e., March and December), whereas spawning takes place throughout the warmest period of the year (August to October).

Keywords: Mediterranean, Reproduction, Gametogenic cycle, Gonochoric species, *Dendrophyllia ramea*.