

{rokbox title=|Ejemplar de la gorgonia Paramuricea clavata, especie objeto del estudio :: Foto: Eduardo Obis|
thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-paramuricea-clavata-covadonga-orejas-2013-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-paramuricea-clavata-covadonga-orejas-2013.jpg{/rokbox}

Andrea Gori, Cristina Linares, Nuria Viladrich, Ana Clavero, **Covadonga Orejas**, Ida Fiorillo, Stefano Ambroso, Josep-Maria Gili, Sergio Rossi, (2013).

[Effects of food availability on the sexual reproduction and biochemical composition of the Mediterranean gorgonian *Paramuricea clavata*](#)

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Abstract: Food availability strongly affects the ecology and physiology of coral and gorgonian species, as well as their resistance to stress factors. Since the resources available to these species must be allocated among the energy-costly processes of maintenance, regeneration, growth and reproduction, a reduction in food availability is expected to negatively influence these processes. Here, we show evidence that starvation induces a significant decrease in the gonadal volume produced by the Mediterranean asymbiotic gorgonian *Paramuricea clavata*, with a differential effect on male and female colonies. Fed and starved female colonies produced the same number of oocytes per polyp, but the oocytes were significantly smaller in the starved colonies. Conversely, the spermaries showed the same size in fed and starved male colonies, but fewer spermaries per polyp were produced in the starved colonies. The percentage of organic matter in the coenenchyme of the fed colonies did not change during the experiment, and its composition showed an increase in the relative amount of lipids. In contrast, the starved colonies showed a decrease in the percentage of organic matter, and a constant proportion of lipid. These results confirm a direct link between food availability and both reproductive output and biochemical composition in this organism, and underscore the potentially important role of food availability in explaining the spatial variability in the reproduction and energy storage of suspension feeders.

Keywords: Biochemical composition, Energy storage, Gorgonian, Mediterranean Sea, Reproduction