{rokbox title=|Dendrophyllia cornigera :: Figure: Eduardo Obis| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-capturas-zooplancton-coral-aguas-frias-dendrophyllia-cornigera-gori-et-al-2015-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-capturas-zooplancton-coral-aguas-frias-dendrophyllia-cornigera-gori-et-al-2015.jpg{/rokbox}

Andrea Gori, Stephanie Reynaud, **Covadonga Orejas**, Christine Ferrier-Pagès, 2015. **The influence of flow velocity and temperature on zooplankton capture rates by the cold-water coral *Dendrophyllia cornigera***. Journal of Experimental Marine Biology and Ecology. Volume 466, May 2015, Pages 92–97.

Abstract: Food supply is one of the main factors driving cold-water corals (CWC) distribution, which often concentrate on ridges where local near-bed turbulence/strong currents enhance food availability. However, efficiency in food capture is strongly dependent on current velocity. Moreover, seawater temperature may also affect feeding success, since polyp contraction or nematocyst function could be slower at temperatures below the natural thermal range of a species. The non-reef forming CWC *Dendrophyllia cornigera* occurs in areas at temperatures from 11 to 17 °C, but is apparently absent from most CWC reefs at temperatures constantly below 11 °C. This study thus aimed to assess if a reduction in feeding capacity may contribute to understand the absence of this CWC from strictly cold environments. The efficiency of *D. cornigera* to capture meso- and macrozooplankton was assessed under different flow speeds (2, 5 and 10 cm s – 1) and temperatures (8, 12, and 16 °C). Flow speeds did not significantly affect the capture of mesozooplankton, whereas capture of macrozooplankton was significantly enhanced with increasing flow speed. Both meso- and macrozooplankton captures were not significantly affected by temperature in *D. cornigera*. Overall, this CWC species is efficient in capturing zooplankton under a larger range of flow velocities than the widespread CWC *Lophelia pertusa*, whose capture efficiency significantly decreased from low to high flow speeds. Even if temperature does not directly affect the capture rates of *D. cornigera*, it may still influence the feeding capacity of this CWC since the capture rates at 8 °C were always in the lowest range of the observed values at each flow speed, and corals maintained at 8 °C required a much longer time to fully expand their polyps once they were placed in the incubation chambers, than corals maintained at 12 and 16 °C.

Keywords: Cold-water coral, Feeding rate, Flow speed, Temperature