{rokbox title=|Comunidad bentónica dominada por gorgonias del género Thouarella en el Mar de Weddell (Antártida) :: Foto: J. Gutt and W. Dimmler. © AWI/Marum, University of Bremen| thumb=|images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-covadonga-orejas-gorgonias-elias-piera-et-al-2013-thumb.jpg|}images/stories/ieo/imagenespublicaciones/centro-oceanografico-baleares-covadonga-orejas-gorgonias-elias-piera-et-al-2013.jpg{/rokbox}

Elias-Piera F., Rossi S., Gili J.M., **Orejas C.**, (2013). **Trophic ecology of seven Antarctic gorgonian species** . Mar Ecol Prog Ser 477:93-106.

Abstract: The trophic ecology of Antarctic anthozoans and their role in benthic-pelagic coupling processes is poorly understood. We studied 7 gorgonian species (*Primnoisis sp., Fannyella nodosa, Ainigmaptilon antarcticum, Notisis sp., Primnoella sp., Dasystenella sp. and Thouarella sp.*) in 2 Antarctic regions: the Eastern Weddell Sea and the Bransfield Strait (Antarctic Peninsula) in austral autumn 2000, a period in which primary productivity drastically decreases. We aimed at finding the main food sources for these gorgonians and to elucidate the strategies of the 7 species in this season, relating the obtained data with their biology and ecology. Stable isotope data of the 7 gorgonian species was virtually the same as that measured in the phytodetritus of the so called 'green carpets' and in microzooplankton (δ13C from -27.7 to -24.8‰; δ15N from 4.1 to 7.5‰). A large proportion of the gorgonian's diet seems to be based on sedimented and resuspended material, which supports the hypothesis that some suspension feeders deal successfully with the Antarctic winter by consuming phytoplankton sedimented in the 'green carpets'. While stable isotope analysis suggested similar food sources for 7 species, the biochemical balance indicated different energy storage as lipid values (mean ±SD) ranged from 105.1 ± 99 to 776.4 ± 354.1 µg lipids mg-1 organic matter depending on the species. Our results contribute to a better understanding of the trophic ecology of benthic Antarctic gorgonians and their strategies for coping with autumn conditions in this polar environment.

Keywords: Weddell Sea, benthic–pelagic coupling, stable isotope, biochemical balance, lipids, energy storage, octocoral, passive suspension feeder.