

**Biomass size-spectra of the bathyal decapod crustaceans community in the Canary Islands.**

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In the framework of the European Initiative Interreg III-B project PESCPROF-1 (MAC/4.2/M12), the deepwater epi- and benthic decapod crustaceans occurring off the Canary Islands between 150 and 3000 m of depth were studied. Specimens were collected using three types of baited traps (bottom and floating) during eight cruises along the slope of the island of Gran Canaria in 2003 and 2004. Collecting was carried out following a strategy based on experimental fishing operations.

A total of 23596 individuals were identified to be pertaining to 35 decapod species. Pandalids were the most diversified family with nine species followed by Oplophorids, Homolids and Geryonids with three species. Only one or two species were assigned to the rest of the 16 families. Pandalids were distributed between 120 and 1630 m depth, Oplophorids between 260 and 2160 m depth, Homolids between 120 and 670 m depth, and Geryonids between 410 and 2160.

Normalized biomass size-spectra of decapod community of the Canaries were similar to those also known from other ecosystems. Normalized biomass versus individual weight followed a linear relation on a log-log scale. The y-intercept values for the upper slope were always higher than those for lower areas, indicating an initially higher biomass at the beginning of the island slopes. The slope values for the four assemblages were different from 1 in all cases, indicating that biomass did not tend to remain constant across the size classes.

The slope values for the upper slope assemblage and for the ENACW assemblage were significantly higher than 1, indicating that biomass was not distributed uniformly over different size classes and tended to decrease with size. However, in the MW?AIW assemblage and in the DNAW assemblage, the slope values were less than 1, indicating that biomass increased with size. The slopes of the curves showed a clear relationship to the biomass of the smallest size classes. The biomass of the smallest individuals was greatest in those cases in which the slopes were steepest and productivity highest. The lowest biomass values in the smallest size classes were recorded in those cases in which the slopes of the curves were flattest and productivity lowest (NADW assemblage)