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MICROPLASTIC IN HIGH TROPHIC LEVEL MARINE SPECIES

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Abstract

The ingestion of microplastics has been reported in various marine species, however, the degree of contamination in the systems and the biota associated with them is little known. This study presents the results of the presence of microplastics in seven species of pelagic fish and one species of benthic crustacean, all of high trophic level from the National Park Marino Las Baulas.

By chemical digestion and visual inspection, microplastics were extracted from the digestive system of 56 individuals. A total of 90 pieces were extracted from 89% of the fish (93% fibers) with 3.75 ± 1.70 (SD) microplastic / fish. A significantly lower quantity was obtained in crustaceans with a total of 58 pieces extracted from 76% of the individuals analyzed with 2.64 ± 1.36 (CF) microplastic / crab. Physicochemical tests using SEM / EDS corroborate the presence of synthetic parts with C-O bonds.

It should be noted that during the processing of the samples methodological limitations were faced, therefore, a final section is made where these limitations and the ways in which they were addressed are described. The presence of these pollutants in high trophic level marine species is reported for the first time on the Pacific coast of Costa Rica.

Keywords: Microplastic, Biota, Histology, SEM / EDS, Mangrove

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