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# PLASTIC INGESTION AND ORGANIC POLLUTANTS IN SEABIRDS OF GRAN CANARIA (CANARY ISLANDS, SPAIN)

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## Abstract

Ocean pollution is one of the greatest threats facing seabirds today. Plastics are ubiquitously distributed in the marine environment and their fragmentation into small particles facilitates their incorporation into food chains. The hydrophobic surface of microplastics, which facilitates the adsorption of organic pollutants present in the environment, as well as the use of additives in the manufacturing process of plastics, make these particles potential vehicles of pollutants to wildlife. In the Canary Islands, the literature is still scarce regarding the impact of plastics on seabirds. In this work, the carcasses of 88 animals of 14 species of birds (mainly marine, with the exception of some freshwater birds) were examined. The presence of plastics ( $> 1$  mm) in the digestive tracts was studied and the livers were analyzed in order to determine the concentrations of PAHs, OCPs, BDEs and PCBs. A high prevalence of plastic ingestion was detected in Cory's shearwaters (88.9%,  $n = 45$ ) and Madeiran storm-petrels (100%,  $n = 5$ ) and a lower frequency in yellow-legged gulls (30%,  $n = 20$ ). Plastic items were also observed in the only cattle egret analyzed and in one of the two black-headed gulls sampled. The most frequently reported contaminants were PCB 153, p,p'-DDE, hexachlorobenzene, PCB 138, naphthalene, fluorene and PCB 180. Our results illustrate the impact of plastic pollution and organic pollutants on seabirds in the archipelago. We consider that biomonitoring would be useful to assist in the conservation of these species.

**Keywords:** Seabirds, microplastics, Canary Islands, waterbirds, chemical pollutants

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