
Plastic waste in Yellow-legged gull (*Larus michahellis atlantis*) nests in Biosphere Reserves of the Canary Islands (Spain)

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Abstract

Plastic waste is the cause of the death of thousands of birds due to ingestion, starvation or entanglement, with marine species being the most affected by this problem (1). Several articles have shown a growth of bird species that use plastic waste to make their nests (2). This behaviour has a dangerous repercussion: once the plastic is placed in the nest, it becomes part of the ecosystem, generating pollution in an area where this threat did not exist before (3). One of these species is the Yellow-legged gull (*Larus michahellis atlantis*), widely distributed throughout the Macaronesian region. Considering the above, in this work the determination of plastic residues (macro, meso and microplastics) in abandoned yellow-legged gull nests located in two Biosphere Reserves of the Canary Islands (Fuerteventura and Lanzarote) has been carried out. For this purpose, a total of 48 abandoned nests were studied: 15 nests from Lobos island, belonging to Fuerteventura's Biosphere Reserve, and 33 nests from different areas of Lanzarote's Biosphere Reserve (12 from Los Hervideros, 3 from Montaña Clara islet, 8 from the Timanfaya National Park and 10 from Risco de Famara). In total, 803 plastic items were found in the nests: 66 items were separated from the nests taken from Lobos island (4.4 ± 4.6 items/nest), 386 items from those of Los Hervideros (32.2 ± 13.7 items/nest), 25 items from those of Montaña Clara islet (8.3 ± 13.6 items/nest), 324 items from the nests of Timanfaya National Park (40.5 ± 61.6 items/nest) and 2 items from those of Risco de Famara (0.2 ± 0.6 items/nest). The total mass of plastic waste was 17.40 g, 17.07 g corresponding to meso and macroplastics, and 0.26 g to the microplastics fraction. The items most frequently found were nylon lines, fishing nets and wipes.

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