

## FISH PATHOLOGY ASSOCIATED TO THE RECENT VOLCANIC ERUPTIONS IN THE CANARY ISLANDS

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**Abstract:** This work reports the results of pathological studies of fish specimens found dead during the recent volcano eruptions in the Canary Islands. These include: the submarine eruption on the island of El Hierro in 2011, and the terrestrial eruption of La Palma, in 2021, with the impact on marine fauna after the arrival of lava flows to the sea. Fish necropsies were performed at the Fish Pathology Unit of the Institute of Animal Health and Food Safety (IUSA) of the ULPGC.

During El Hierro's underwater volcanic eruption, lasted 145 days, 70 fish specimens of different species were analysed. In most of them, generalized congestion in the gills, liver, heart and rete mirabile of the swim bladder was observed. Some specimens also presented exophthalmia and gastric eversion. In addition, this study allowed us to describe a less frequent pathological condition, affecting only to deep-sea fish species, characterized by the severe formation of gas bubbles detected mainly on the skin and cornea.

The recent eruption of La Palma volcano was terrestrial and with the longest duration registered on the island with 85 days. It was characterized by the deposit of large amounts of pyroclastic material both, on land and the sea. Lava flowed initially on land and, eventually, arrived the sea water creating volcanic lava deltas in different coastal locations. 14 fish specimens of different species, coming from these locations, were analysed. The results showed the presence of ash particles in the opercular/oral cavities, in the gills and, even in several fishes, an intense intestinal impaction was observed, composed of volcanic material including ashes and hyaloclastites fragments.

**Key words:** gas bubbles, intestinal impaction, ash, lava flows, volcano, El Hierro, La Palma

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