

HE05

First assessment of organochlorine compounds levels in sperm whales (*Physeter macrocephalus*) stranded in the Canary Islands (Atlantic Ocean) and a comparison with the Mediterranean Sea specimens.

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Marine mammals are known to accumulate organochlorine contaminants in their tissues and although many studies have been performed in different species and areas, data on sperm whale are lacking. In this study, we analyzed for the first time the levels of DDTs, PCBs and HCB in sperm whales (*Physeter macrocephalus*) stranded along the coasts of Canary Islands (Atlantic Ocean) from 2006 to 2015 and we compared these results with the organochlorine levels of Mediterranean sperm whales stranded along the Italian coast from 2008 to 2016. Among the Mediterranean specimens, five males in 2009 and three females in 2014, died in two mass stranding events along the Adriatic coasts of Italy. Subcutaneous blubber was collected from twenty specimens from Canary Islands and from seventeen specimens from Adriatic coast (3 analyzed in this study and 14 obtained from existing literature) and analyzed by gas chromatography after an extraction in a Soxhlet apparatus followed by sulphuric acid cleanup and Florisil chromatography. The specimens were separated by sex and sexual maturity and the results show that total levels of DDTs and PCBs were higher in males than in females (the differences were not statistically significant with non-parametric test Kolmogorov-Smirnov). Although any statistically significant difference was detected between sexually mature and immature specimens, the young females showed the highest concentrations of organochlorine compounds analyzed. Comparing the two areas the DDTs were the main contaminants both in the Atlantic and Mediterranean specimens, followed by PCBs and HCB. The levels of DDTs and PCBs detected in the Mediterranean sperm whales were higher than those found in the Atlantic sperm whales. Future studies are needed to deeply investigate any possible correlation between contaminant levels, immunosuppression and pathological diseases.