



Conference Abstract

Comparison between aluminium bioaccumulation in samples of the Muscovy duck *Cairina moschata* (Aves: Anatidae) from the city and the country

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Abstract

Cairina moschata (Linnaeus, 1758) is an anatid originating from South America, easily adapted to the European climate. In this work, we used blood and feathers samples from living individuals to evaluate the bioaccumulation of aluminum. The determination was performed by Inductively Coupled Plasma Mass Spectrometry (ICP-MS). The analysis was conducted in the Istituto Zooprofilattico Sperimentale della Sicilia with validated methods (accredited by ACCREDIA) for biodiversity monitoring and analysis of fauna samples. We tested 20 individuals of *C. moschata*, ten samples coming from a park in the city center of Palermo (Southern Italy, *Parco D'Orleans*) and ten from the field of Monreale (PA). Field samples showed a higher level of aluminum than city samples. Al median value determined in blood was $\pm 4,27259$ ppm and $\pm 2,61815$ ppm respectively for city and Monreale. In feathers, median value was $\pm 402,24218$ for samples collected in city and $\pm 1260,75603$ for samples collected in Monreale. Despite our expectations, concentration levels were higher in countryside than in a park in the center city. This is probably due to the fact that the individuals that live in nature attend the reservoirs where pollutants are poured.

Keywords

Anatid, aluminum, bioaccumulation, *Cairina moschata*

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Conflicts of interest

The authors declare that they have no conflicts of interest.