



Conference Abstract

Testing heavy metals biomonitoring through birds of prey as top predators

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Abstract

The Experimental Zooprophyllactic Institute of Sicily has great opportunities and validated methods (accredited by the national control unit ACCREDIA) for biodiversity monitoring and analysis of fauna samples. The fauna recovery centers of Bosco di Ficuzza (Palermo) and Colli San Rizzo (Messina) routinely send dead specimens to the Institute to perform every category of analysis for both medical and veterinary purpose. Measuring heavy metals concentrations in top predators is a strong indicator for territory and biodiversity health monitoring to take management and conservation actions for natural systems. In this study, two specimens of the Common buzzard (*Buteo buteo* L., *Accipitridae*) were investigated for Cd, Fe and Pb content by an Inductively Coupled Plasma Mass Spectrometry (ICP-MS) method. Results show that in one sample only Pb levels exceed cut-off values in organs like the liver, kidney and muscle with a concentration of 0,005 mg/Kg. This is probably a cause of prey ingestion killed by lead pellets. In the other sample the only high level was for Fe with a concentration of 0,386 mg/Kg. According to literature (Scheuhammer 1987), Pb present in plumage is probably a reflection of external pollution and it not depends on diet, while its high concentration in internal organs is directly related to ingestion of lead pellets during consumption of preys killed by them.

Keywords

Heavy metals; *Buteo buteo*; top predators; bioaccumulation

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Conflicts of interest

The authors declare that they have no conflicts of interest.

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