



## QUANTIFICATION AND ASSESSMENT OF VARIOUS ENVIRONMENTAL TOXICANTS FROM FEATHER OF BLACK KITE (*MILVUS MIGRANS GOVINDA*): A PRELIMINARY STUDY

SANDHYA GODSHE, BHAVNA BHARUCHA AND GEETA PADATE\*

*Division of Avian Biology, Department of Zoology, Faculty of Science, The M. S. University Of Baroda, Vadodara-390002, Gujarat, India.*

### ABSTRACT

As top consumers in food chains, birds of prey forage over large geographical areas and so might be expected to accumulate environmental contaminants which are distributed in the environment. In this study, we investigated the concentration of Toxic elements (Cd, Hg, Ni, Pb and Cr) and essential elements (Zn, Cu and Co) in the outermost tail feathers of Black kite by ICPMS after wet digestion of the sample. Six out of eight metals were positively correlated with body weight, while two (Cr and Zn) are negatively correlated with weight. With length of feather Cd, Hg, Ni, Cu, Cr and Co were positively correlated and Pb and Zn were negatively correlated. Although feathers have been used intensively as a biomonitoring tool, few studies have addressed the effect of gender on the metal accumulation. We did not observe any significant gender difference in the metal concentration. Feathers are suitable indicators for monitoring heavy metal pollution and give us information about incorporation paths and ecotoxic effects. In this preliminary study, an attempt is made to compute and assess the impact of various trace elements from feathers of Black kite (*Milvus migrans govinda*) in arid zone of Gujarat.

**KEY WORDS:** Black kite, Heavy metals, Feathers, ICPMS, Bio-indicator.



**GEETA PADATE**

Division of Avian Biology, Department of Zoology, Faculty of Science, The M. S. University  
Of Baroda, Vadodara-390002, Gujarat, India.