**Bioaccumulation with lichens in urban green areas of Asunción, Paraguay: Preliminary results**

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Air pollution is one of the main impacts associated with urban growth processes. Lichens have been widely used for the detection of polluting substances due to their bioaccumulative capacity. The aim of this work is to quantify the air pollution level through lichens in urban green areas of Asunción, Paraguay. Parmeliaceae family lichens were collected and identified following regional taxonomic keys and routine methods. Quantification of Zn, Ni, Pb, Cu, Cd, Cr were conducted by atomic absorption spectroscopy, and S by turbidimetric methods previously treated for its mineralization. 18 samples were collected in urban green areas of Asunción, Paraguay. Two Samples from the Parque Nacional Ybycuí were selected as the control. Correlograms, Pearson correlation tests, and RDA multivariate analysis were carried in order to assess the general correlation patterns between the variables. S (250 - 3615 mg/kg) and Zn (16.00 - 87.32 mg/kg) concentration values were the highest. A positive correlation was found between Zn, Cu, Cd and Cr. Sites with significant contamination levels show high values of more than one pollutant, as RDA stands (R2 = 82%; P-value = 0.05). Preliminary results suggest that sites have significant difference of bio-accumulated pollutants between urban green areas and control site. Taken together, these results provide evidence that urban green areas could be exposed to contamination sources in common. Further research should be undertaken to investigate the possible environmental factors associated with the observed pattern.