**LICHENS AS BIOINDICATORS OF AIR QUALITY IN COMMUNES ONE AND THREE OF THE CITY OF POPAYÁN- COLOMBIA**

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The research evaluated the state of air quality through the use of lichens as bioindicators, in communes one and three of the city of Popayán, Colombia. The lichen communities were sampled in ten stations each with 15 phorophytes, through a quadrant of 0.50 x 0.20m2, the percentage of coverage was estimated, taking data on frequency and richness of lichen species. To know the concentration of heavy metals, the Atomic Absorption Spectrophotometry (EAA) technique was used. The Atmospheric Purity Index (IPA) and the Environmental Classification Factor (FCA) were determined for the sampling areas. Using Non-Metric Multidimensional Scaling (NMS), the relationship between the measured variables was evaluated and an analysis of indicator species was performed to detect site preferences. 112 species were registered, distributed in 28 families and 47 genera, of which 35 were identified to genus, 66 to species and 11 were not identified. Three isocontamination zones (poor in lichen, transition and normal) were classified according to IPA and FCA and 11 species were considered resistant and nine sensitive to contamination. The NMS yielded groupings for different stations allowing to establish differences in the richness and diversity of species. Fourteen species were found with a high level of significance and 4 with a lesser degree, both from stations of good and regular air quality. Species with importance of sensitivity were found for sites with good air quality (*Parmotrema austrosinense*, *Ramalina complanata* and *Hypotrachyna costaricensis*), as resistant for areas of regular air quality (*Parmotrema tinctorum*, *Parmotrema* sp. and *Physcia erumpens*). The city of Popayán in communes one and three generally has good air quality, but it is necessary to adopt emission control strategies, especially in stations belonging to the classification of poor in lichens, which limit the frequency and coverage of species.