

Heavy Metal Accumulation in *Pseudevernia furfuracea* (L.) Zopf from the Karabük Iron-Steel Factory in Karabük, Turkey

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Pseudevernia furfuracea (L.) Zopf lichen specimens were collected every 5 km starting from around an iron-steel factory located in the central area of Karabük province, up to Yenice Forest. Zn, Cu, Mn, Fe, Pb, Ni, Cd, Cr contents were analyzed in the samples collected from polluted and unpolluted areas. A *Pseudevernia furfuracea* (L.) Zopf sample from Yenice Forest was used as a control. The reason for this choice was the abundance of species diversity, and therefore sample collection might cause a very low impact on natural population density. The forest is among the 100 forested areas that must be urgently taken under protection according to WWF (World Wildlife Fund) researches. Results of the current study manifested significant variations among the contents of these elements between stations. As expected, the pollution sources, such as iron-steel factory, roads and railroads, industry, heavy traffic, and waste treatment plants, have major impact on the heavy metal accumulation in *P. furfuracea* (L.) Zopf, and, in accordance to their location, samples 8 and 10 displayed high element accumulation. Surprisingly, although Yenice Forest is under protection, results of our study showed that the region is becoming polluted by the influence of many pollution sources in the area. The present study also confirms the efficient metal accumulation capacity of lichens.

Key words: Lichen Monitoring, Heavy Metal, Iron-Steel Factory