Microplastic Contamination in Montana's Mountains

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A microplastic is a plastic that is the size of 5 millimeters or less. They are pervasive pollutants that are being identified in environments and organisms throughout the world, however, the majority of studies focus on aquatic environments. There are few studies providing data on microplastic concentrations in terrestrial environments. The purpose of my research is to study Montana’s snow and observe whether microplastic contaminants are detectable in the various mountains throughout the central/ north-central region of Montana. The question for my project was, is there microplastic contamination in the snow of Montana’s mountains and, if so, what is the geographic prevalence and relative concentrations of microplastics at the contaminated sites? I went around Montana and collected samples of snow from different mountain ranges and filtered them through a vacuum filtration system to isolate the microplastics. I found microplastic contamination in all samples tested. However, the sample on Whitefish Mountain had the highest concentration of microplastic contaminants. My microplastic counts indicate two conclusions: (1) microplastic contamination is present in Montana’s mountains and (2) the levels of contamination correlate with the population size of the area.

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