ASSESSMENT OF MICROPLASTICS IN CLAMS FROM THE ESTUARY OF KINNIYA

Banu F. D.[1*], Ahamed A. M. R.[1], Harris M. J. M.[2]
[1]Department of Biological Sciences, Faculty of Applied Sciences, South Eastern University of Sri Lanka, Sammanthurai, Sri Lanka.
[2]Department of Zoology, Faculty of Science, Eastern University of Sri Lanka, Vantharumoolai, Sri Lanka.
[*]dhilthar98@gmail.com

Microplastic contamination is a growing environmental concern that affects not just the ocean's depths but also the lives of those living in areas such as Kinniya, Trincomalee, near the Periyatrumunai Estuary. The present study focuses on comparing the levels of microplastic contamination between four clam species, so as to determine possible differences in exposure levels. We will also sort the different categories of microplastics excreted by these clams and analyze their chemical composition using FTIR techniques. We expect that from these efforts, we will establish more firmly how microplastics have impacted this vital ecosystem and what that could mean for human health and marine life. We gathered samples of clams from different areas of the estuary and examined them closely to determine the type and quantity of microplastic particles present. Through the use of methods such as FTIR spectroscopy and microscopic analysis. We observe these microscopic intruders, but we could also determine which types of plastic are most common. Our findings were concerning: almost every clam we examined contained microplastics, with some regions exhibiting extremely high contamination levels. The majority of these microplastics were fibers and fragments, suggesting pollution from routine activities like fishing and garbage disposal. There are major worries over the occurrence of microplastics in clams. In addition to potentially harming marine life by building up in their bodies, eating these clams could also unintentionally expose humans to microplastics. In order to safeguard the environment and the health of people who depend on it, this study emphasizes the critical need for improved waste management and pollution control in the Kinniya area.

Keywords: *Clams, Kinniya, Microplastics.*