

**MICROPLASTICS IN SAND BURROWER CUNEATE WEDGE SHELL,
DONAX CUNEATUS OF NILAVELI, TRINCOMALEE BEACH SRI LANKA**

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Microplastic (MPs) is a ubiquitous pollutant in both the waters and sediment of marine environments. Its small size (< 5mm) has made it readily available for the marine organisms to ingest during foraging and burrowing. Investigating the potential of MPs intake by burrowing sandy shore (SS) bivalves could be considered as a crucial experimental spectacle in screening of MPs in beach sediment. Further, it would assist in comprehend the trophic transfer of MPs from beach sediments to molluscs and the possibility of transferring MPs through the coastal food chains. A 100 m stretch of SS was sampled for *Donax cuneatus* (n=9) which were trapped in washed away slender wart weed, *Gracillaria lemaneiformis* on the SS by random quadrat sampling at Nilaveli beach, Sri Lanka, followed by stored frozen for MPs detection. Bivalves were defrosted; wet weight of the tissue samples was measured and alkaline tissue digestion was performed (10% KOH) to extract MPs. The filtered tissue samples were oven dried at 40° C overnight and exposed to microscopic observation under a stereoscopic microscope. Tissue samples of the *D. cuneatus* had MPs and the majority were threads (2.928±1.176 items/g, mean tissue wet weight = 3.077±1.176 g). The SS burrowing bivalves were contaminated with MPs trapped among the sand particles which eventually would act as a bridging biotic vector for MPs from beach sand to the higher trophic levels in the coastal food chains. Thus, it is recommended to take measures to avoid polluting the SS shore with single used MPs and to employ adequate beach cleaning to remove macro plastics which eventually weathered to MPs with the time in order to conserve the unseen lives in sandy shores.

Keywords: *Donax cuneatus*, Sandy Shore, Microplastics, Sri Lanka

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