



## Simple and Effective Undisturbed Core sampling in Mudflats

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Mudflats of creek and estuarine system posses fine sediments which preserve historical record of various changes in the associated environment due to natural and anthropogenic activities. Undisturbed core sediment sampling from the undisturbed mud flat ecosystem is a difficult task due to following factors. Navigation by ship or boats to mudflats is restricted due to less water depth or no water conditions in the intertidal regions. Manual entry is the only available simpler option to reach undisturbed mudflats. Manual sampling in mudflats involve difficult long walks over soft slushy sediments prevailing in the various ecological zones of creek and estuarine system. Hence, undisturbed sediment coring necessitates simple light weight corer without any heavy operative machinery and associated accessories.

This manuscript details a simple undisturbed core sediment sampler and operations involved in successfully collecting 22 undisturbed short cores in mudflat environment. The used corer is manual push-sampler type with piston. 1.5 meter long corer is of transparent acrylic body with cylindrical cross section and 2mm thickness. In spite of the sampler being thin walled type, core recovery length could not be much longer due to available limited manual force to push-in and pull-out operations of the corer in the mud and very sticky and stiff nature of the sediment at the termination depth of the core. Though this corer is not the ultimate, this manuscript will definitely pave way for developing best corer and operational practices for such sampling in such difficult environments.