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SCREEN CONE FOR WASHING BENTHIC GRAB SAMPLES

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ABSTRACT

Removal of large amounts of substrate from bottom grab samples is easily accomplished by use of a cone-shaped screen with detachable bottom collecting bucket

for the organisms. This screen cone is a quick and easy way to reduce voluminous substrate while preventing loss of organisms and reducing stress and damage to the benthos.

INTRODUCTION

Bottom grab samples taken in sand, mud, or clay have presented substrate cleaning problems, as well as allowing organisms to escape or become damaged, in many surveys. The device described below (based on a Petite Ponar sampler) enables a dredge sample to be washed clear of substrate in a few minutes while preventing organism loss or stress.

DESCRIPTION

A 38 cm diameter steel top ring is connected to a 7.6 cm diameter bottom ring by 3 flat steel side supports. A 7.0 cm diameter, 2 cm high threaded steel pipe is welded onto the bottom, to which a detachable screw cap or collection bucket similar to zooplankton buckets is attached. Stainless steel bolting cloth is placed between each side support with overlying aluminum strips held down by pop rivets. The rivets allow easy removal to change screen sizes. Three rods arranged triangularly across the top support the sampler during opening and washing. Detachable top ring braces allow use on boats or in laboratories. After emptying the grab sample into the screen cone, the substrate is washed through the screen while the organisms are collected in the detachable cap and are emptied into a container. Washing of the substrate can be accomplished by use of a pump and hose or oscillation directly in the water body.

A similarly designed screen cone was originally used by Kathman, *et al* (1973) to quickly reduce the volume of pumped benthic samples collected by divers in Lake Ontario.

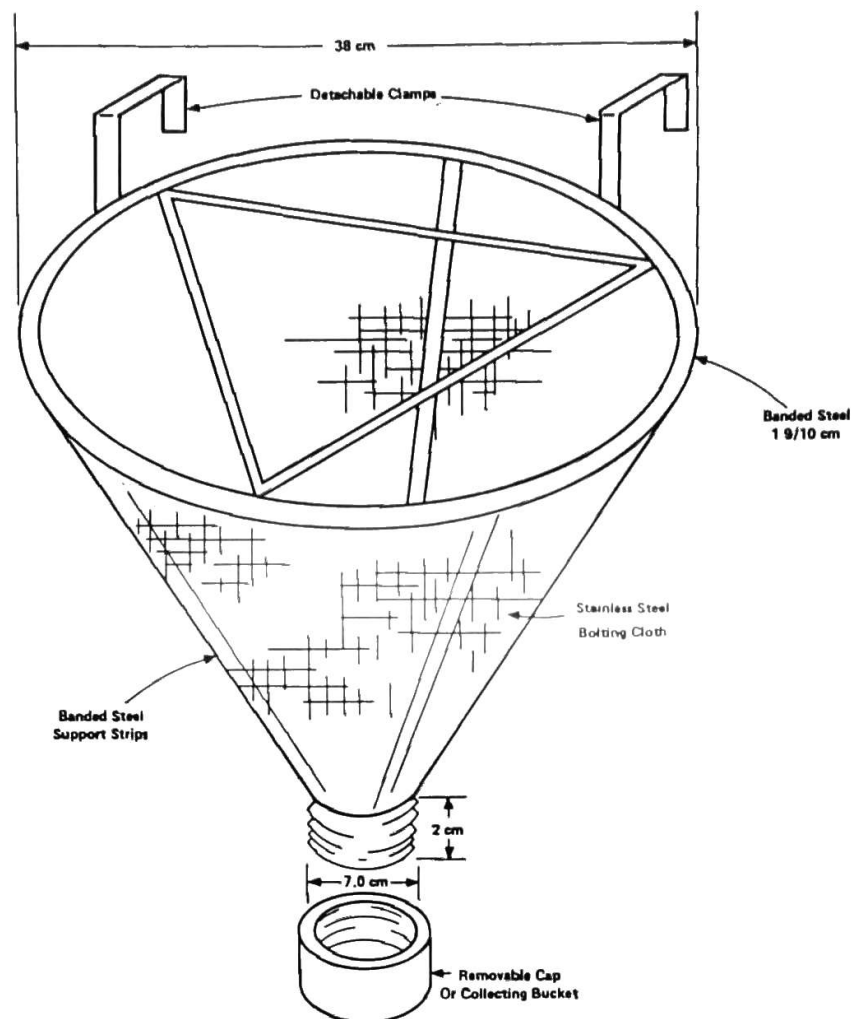


FIG. 1. Screen cone for washing benthic grab samples.

LITERATURE CITED

Kathman, D., S. Shearer and R. Williams. 1973. Lawler, Matusky, and Skelly Engineers, Oswego, New York (unpublished data).