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Screened pail for sifting bottom-fauna samples

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into the bag, was restricted mainly to the upper surfaces and on the nylon netting. The growth, mainly a hydroid in our experiments, could be kept in check by throwing coarse crystals of copper sulphate onto the netting every few days.

We have used the above equipment successfully at Departure Bay (near Nanaimo, B. C.) where it was anchored some 300 ft from the end of a pier in water having a depth of at least 11 m at low tide. Full details of this work will be published later. In our experiments the bag was filled with water (32,000 U. S. gal) taken from a plastic pipe from a depth of over 20 m and filtered through a commercial diatomaceous earth filtration unit which removed all plant and animal life. The same water-line as that used to power the stirring motor was used for transporting water to the bag. The container was “innoculated” with a few hundred gallons of surface water, filtered through a 300-μ nylon net to remove most zooplankton. No animal populations were found to develop in the ensuing weeks. The temperature of the water in the bag kept to within 1°C of the temperature of the surrounding sea and the assembly appeared to be “seaworthy” to a remarkable extent, although it clearly should be used only in relatively sheltered waters.

We have reported the construction of this equipment so as to point out its proven feasibility. The apparatus is a most valuable tool for the study of primary productivity and could have many other applications, such as a study of zooplankton growth and grazing rates. We would be pleased to provide more detailed information to anyone contemplating the construction of a similar apparatus.

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SCREENED PAIL FOR SIFTING BOTTOM-FAUNA SAMPLES

Rawson (1953) described a screened pail which he used to process bottom samples.

The following modified version of Rawson's pail has proved very satisfactory during 3 years of bottom fauna work on the Mississippi River. The metal paddles which were mounted on the inside of Rawson's pail have been replaced by a stationary propeller beneath the screen bottom of the pail (Fig. 1). Three screen windows increase the working surface of the pail and also prevent it from becoming too full of water. The propeller circulates water rapidly in and out of the four screen surfaces when the pail is swirled in the water.

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REFERENCE