



## **BOTTOM SAMPLING DREDGE**

**CODE 1097**

### **INTRODUCTION**

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The LaMotte Bottom Sampling Dredge, a modification of the well-known Peterson dredge, provides a convenient method for collecting bottom sediments. It is used for collecting bottom sediments which may contain mud, sand, ooze, and gravel; however, it is not designed to collect samples from rock bottoms. By using a bottom sampling dredge, a number of different analyses can be made. Since the bottom sediments represent a good area to find macroinvertebrates and benthic algae, the communities of organisms living on or in the bottom can be easily studied quantitatively and qualitatively. A chemical analysis of the bottom sediments can be conducted to determine what chemicals are available to the organisms living in the bottom habitat. Also, the structural characteristics of the bottom may be examined and related to the biological and chemical analysis. All of these different studies are made possible through the use of a bottom sampling dredge.



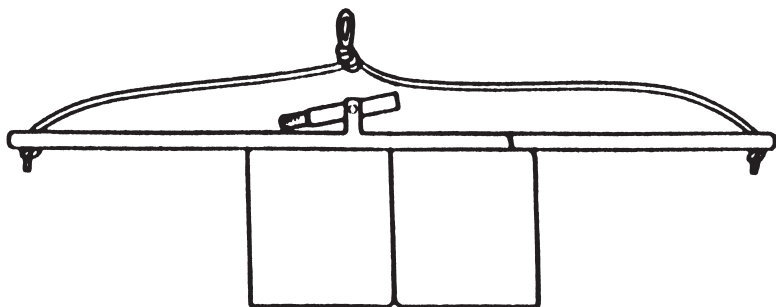
Whenever samples of the bottom are taken, every effort must be made to insure that the samples are truly representative of the whole area. Much of this depends upon the judgment of the individual taking the sample and their individual study objectives. Ordinarily, take as many samples as practical, since one sample has no value statistically. The time interval between sampling and analysis is not critical for a mechanical or physical analysis, but analysis is recommended for both biological and chemical examinations.

## **INSTRUCTIONS FOR USE**

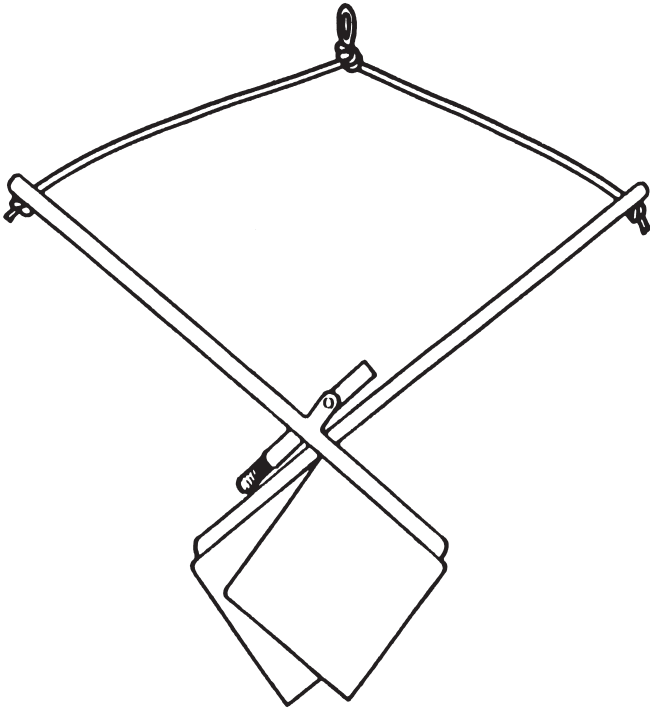
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The Bottom Sampling Dredge is shipped completely assembled. The dredge has a bridle that reaches between the tips of the stainless steel arms of the dredge. A line should be securely attached to the middle of the bridle to retrieve the dredge from the bottom. When the dredge is lifted by the bridle, the jaws of the dredge draw shut. When the arms are pushed apart, the jaws of the dredge open. A rocking trigger mechanism attached to the arms holds the dredge open. Holes in the upper part of the collection chamber let air escape from inside the chamber as it is lowered through the water.

1. Push arms apart, opening the dredge. Raise the rounded end of the locking trigger mechanism and place tension on the retrieving line, raising the dredge arms until the trigger catches in the notch on one of the arms. The dredge will remain open as long as tension is maintained on the bridle.
2. Lower the dredge through the water, keeping tension on the retrieving line, until the dredge contacts the bottom.



3. When the dredge contacts the bottom, release tension on the retrieving line to release the trigger mechanism. Pull up with a smooth, steady, hand-over-hand action to close the dredge jaws and raise the dredge until it is above the water surface. Hold the dredge by the retrieving line or by the middle of the bridle until you are ready to place the contents of the dredge into a collecting container. A white enameled metal or plastic pan provides an excellent receptacle for examining the sample.
4. Pull arms apart to open dredge and release contents into collecting container.



## **LaMOTTE COMPANY**

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