

Collection of Sediment samples

Two types of sediment samplers (grabs and corers) are used for collecting sediment from coastal and off-shore waters. The following samplers are commonly used in oceanographic surveys.

1. Petersen grab

It is consisting of two hinged pincer like buckets which are sent down to the sediments in open condition. As the drawing line slackens, the release mechanism is activated. In retrieval, the two buckets come together and thus a semi-circular section of sediment is cut and entrapped. The drawing line is then pulled off and the grab which is now in a closed condition is made open in a tray or bucket. As in the case of Van Veen's grab, this grab is also not activated by a metallic messenger.

2. Ekman-Birge grab

This is the first and commonest grab devised for use in muddy bottom by Ekman (1911) and Birge (1922). The two shovels which are kept open against very strong spring action by means of two chains are closed from above by means of a drop weight. (metallic messenger). Immediately after this operation, one can pull the grab out of the bottom and finally out of the water column. It is very heavy and is made of brass in order to avoid rusting in the water. The upper portion is box shaped and is closed by two movable covers which fall in under the pressure of the water when the grab is sent down. The basal surface of this grab is about 250cm².

3. Van Veen's grab

It is also a very convenient and reliable grab devised by Van Veen (1936). The working [principle](#) of this grab is more or less similar to that of Ekman-Birge. However, it is held open by a small bar and is not operated open by a metallic messenger. During operation, the grab is sent down the bottom when the two shovels spread out so that the bar is released automatically. The draw rope is attached in such a way that with the pull from above, the two shovels of the grab are made to close tightly.