Comparison of Corers

Introduction to core samplers

A core, in marine research, is a cylindrical section taken from sediments underlying a water body. Core samplers range from the simple to the complex. The variety of corer types reflect the breadth and variety of marine research. The simplest corers are hand-operated for use in shallow waters to collect sediment cores containing fauna. For biological studies, a core 20-25 cm (8-10") in length is usually sufficient. The most complex corers are used in oceanographic research. These are generally large and require winches, power sources and other gear. If done properly, core sampling is a reliable method for obtaining data for many types of studies concerning water-and-bottom interface of marine bodies. It is often the only practical way - and therefore the best way - to sample underwater strata. Wildco® core sampling equipment ranges from light, hand-operated corers used in shallow water to gravity corers relying on weight such as the K-B™ corer. Interchangeable parts serve as **"building blocks"** to construct equipment for your particular project. For example, the heads can attach to more than one type of core tube.

Features of good corers:

- **Perpendicular placement**: Must make a vertical or straight entry into sediments.
- **Penetration**: Must penetrate the sediments you expect to find, be adaptable for field situations.
- **Core retention**: Minimal loss of any part of the sample during return to the surface.
- **Maximum sample validity**:
  (1) In layered sediments, cores should not be compressed or displaced.
  (2) For bottom sediments, there should be minimal displacement or escape of fauna.
- **Simplicity**: Choose the simplest instrument able to produce the sample type you need

Soft to medium sediments  2424-B	Hard sediments  2427-B	Soft to medium sediments  2400/ 2401	Soft to medium sediments  2416-B45	Soft to medium sediments 2460-F20 
Corer Type	**Hand Corer**	**Ogeechee™**	**K-B® Corer**	**Ballchek™**	**Flag Sampler**
Where used	**Shallow salt/fresh water (to 15') or deeper water with hand line. Usually used with handle. Fast sampling with handle.**	**For firm or sandy bottoms in salt/ fresh, swift waters (to 15') or deeper water with cable. Where gravity alone insufficient.**	**Best corer as the heaviest. Good for deep lakes (100'+) where bottom interface important. Medium can be used in salt water.**	**Shallow or deep ocean water (10' - 600') where bottom interface is not important. More stable than K-B®.**	**Soft sediments (silt, clay, sand, loamy, woody, decayed matter, peat), shallow water, below groundwater.**
Accessories needed	**Core catcher, liner tube, liner, nose-piece, core sample removal tool, extension handle.**	**Nosepiece, liner, core catcher, cable, winch/mount, handle, slide (or drive) hammer.**	**Nosepiece, liner, core catchers, cable, messenger, winch/ mount, can add a stabilizing fin.**	**Core tube, nosepiece, liner tube, core catcher, cable, winch/mount.**	**Extension handle. Needs no liners. Cannot be used on line.**
Comments	**Maintains core layering. "Quick and dirty", quantitative. 19 - 41lb**	**Use in deep water. Can drive by hand. Can pull in/out with slide hammer. Fast sampling with handle. 28 - 46lb**	**Undisturbed samples of bottom interface. Free-drop to 30'. Messenger activated valve. 2 sizes: medium/ heavy. 35lb/ 56lb**	**Automatic valve provides good seal. Primarily oceanographic use. 34lb**	**Cutting edge twists into sediments. Uncompressed, undisturbed, full length samples. Chambered. 21lb**