Comparison of Grabs

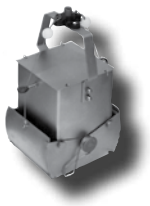
Introduction to benthic (or bottom) samplers

The idea is simple - like a giant pair of hands, these samplers "grab" a mass of mud out of a stream or lake bed for later analysis in the lab. Types of benthic grabs include: **center pivot** grabs, whose scoops make minimal disturbance of bottom sediments; **clamshell pivot,** whose scoops cause structural disturbance of bottom sediments; and **drags, sleds** and **scoops** with mixed samples. The center pivot design is important when studying sediment structures or the depth of parts of the sediment sample and includes: *Ekman, Shipek®, Van Veen* and *Ponar® grabs.* The clamshell design includes *Petersen grabs.*

Make sure you have a representative sample and have chosen the right instrument for your project. This depends on the kind of bottom you are sampling; the types of analyses to be made; and how you will use the results. No two projects are identical. Use the chart below for a quick comparison of grabs made to Wildco®'s high standards. *Each photo depicts the relative size. The grab's "footprint" (or box size) indicates the amount of space it takes up as it sits in the field.*

Standard Ekman

Tall Ekman Grab



Large Ekman

Petite Ponar®

Ponar® Grab

Catalog Number	Ekman, Standard 196-B12 Kit	Ekman, Tall 196-F62 Kit	Ekman, Large 197-C12 Kit	Ponar®, Petite 1728-G30	Ponar®, Standard 1725-F10
Box Size (footprint)	15 x 15 x 15 cm [6 x 6 x 6"]	15 x 15 x 23 cm [6 x 6 x 9"]	23 x 23 x 23 cm [9 x 9 x 9"]	15 x 15 cm [6 x 6"]	23 x 23 cm [9 x 9"]
Bite depth	152 mm [6"]	229 mm [9"]	229 mm [9"]	70 mm [2.75"]	89 mm [3.5"]
Screen mesh	none	none	none	500 µm	500 µm
Dry Weight	3 kg [7 lbs]	5 kg [11 lbs]	7 kg [15 lbs]	11 kg [24 lbs]	23 kg [50 lbs]
Weight with sample	16 kg [35 lbs]	21 kg [46 lbs]	38 kg [83 lbs]	14 kg [30 lbs]	34 kg [75 lbs]
Extra weights	3 kg [7 lbs]	3 kg [7 lbs]	none	4 kg [8 lbs]	4 kg [8 lbs]
Ship weight	7 kg [15 lbs]	8 kg [18 lbs]	15 kg [33 lbs]	11 kg [24 lbs]	23 kg [50 lbs]
Volume of Scoops	3.5 liter [214 in^3]	5.3 liter [323 in^3]	11.9 liter [726 in^3]	2.4 liter [145 in^3]	8.2 liter [500 in^3]
Sample area	232 cm^2 [36 in^2]	232 cm^2 [36 in^2]	522 cm^2 [81 in^2]	232 cm^2 [36 in^2]	522 cm^2 [81 in^2]
Length and width overall	24 x 22 cm [9.5 x 8.5"]	24 x 22 cm [9.5 x 8.5"]	35.5 x 33 cm [14 x 13"]	41 x 29 cm [16 x 11.5"]	55 x 25 cm [21.5 x 10"]
Accessories needed	**62-C15** poly line **66-A50** reel	**62-C15** poly line **66-A50** reel	**62-C15** poly line **66-A50** reel	**61-B14** cable **66-C10** winch or **62-C15** poly line	**61-B14** cable **66-C10** winch **66-C52** mount

↘ **Standard Methods suggests measuring the actual surface area sampled before first using a benthic grab**

Petersen Grab

Van Veen Grab

Shipek® Grab 860-A10	Petersen 1750-G30	Van Veen 1775-A10	Box Corer 191-A12
20 x 20 cm [7.8 x 7.8"]	30 x 30 cm [12 x 12"]	36 x 28 cm [14 x 11"]	15 x 15 x 23 cm [6 x 6 x 9"]
102 mm [4"]	140 mm [5.5"]	114 mm [4.5"]	229 mm [9"]
none	none	500 mm [23"]	500 mm [23"]
61 kg [134 lbs]	34 kg [75 lbs]	21 kg [46 lbs]	14 kg [31 lbs]
69 kg [152 lbs]	61 kg [135 lbs]	68-90 kg [150-200 lbs]	50 kg [110 lbs]
none	8 kg [18 lbs]	none	49 kg [108 lbs]
91 kg [220 lbs]	50 kg [160 lbs]	41 kg [90 lbs]	42 kg [93 lbs]
3 liter [183 in^3]	9.9 liter [604 in^3]	24 liter [1465 in^3]	5.3 liter [323 in^3]
400 cm^2 [62 in^2]	928 cm^2 [144 in^2]	993 cm^2 [154 in^2]	232 cm^2 [36 in^2]
56 x 109 cm [22 x 43"]	65.4 x 33 cm [25.75 x 13"]	56 x 38 cm [22 x 15"]	35.5 x 24 cm [14 x 9.5"]
61-B14 cable **81-A10** crane	**61-B14** cable **81-A10** crane	**61-B14** cable **85-E10** winch	**61-B14** cable **81-A10** crane

Accessories

Once you have your sample, rinse it in the field. Use these devices to sift out particles that are too small.

Wash Frame

For washing samples taken by the standard Ponar®, Petersen, large Ekman, Van Veen and Box Corer. Cross bars support and protect the replaceable screen. Heavy gauge stainless steel frame with 500 µm stainless screen. Fine sand and silt wash out, leaving larger particles. One person can carry it easily. *Wt: 14 lbs.* 356 x 508 x 102 mm (14 x 20 x 4")

188-E50 Wash Frame
188-E52 Screen *only*
▼ **Made-to-order** - Specify mesh.

190-E20

190-G10 on washbucket

Wash Bucket

Our heavy-duty bucket washes littoral samples from small grabs (Ekman, Petite Ponar®, hand corer). Stainless steel wire cloth bottom is reinforced with hardware cloth and welded to a stainless steel ring. 4 mesh sizes - or choose your own. Sifter screen sifts out sticks and leaves.

190-E10 #10 (2000 µm)
190-E20 541 µm mesh
190-E25 500 µm (EPA)
190-E28 242 µm mesh
190-J11 Custom mesh
190-G10 Sifter screen