

ADOPT-A-STREAM MONITORING EQUIPMENT BUILDING INSTRUCTIONS BENTHIC MACROINVERTEBRATE SAMPLING

FLAT-BOTTOMED DIP NET

The long-handled net has a flat bottom for use in sampling bottom-dwelling macroinvertebrates and small fish. This net is strong to withstand the rough bottom debris found in some streams.

Materials:

1	Broomstick	1" diameter
1	Aluminum flat stock	3/16" x 1" x 48"
1	Hose clamp	2" diameter
3	Bolts	1/4" x 2"
3	Nuts for bolts	
6	Washers for bolts	
	Tent poplin	24" x 45"
	Mosquito netting	30" x 36"
	Nylon thread	

Building Instructions:

1. Cut a 4' length of aluminum and measure 3" and 15" from either end. Mark the metal. Bend the aluminum into a triangle with an 18" base and two 12" sides. The two 3" ends are bent straight up perpendicular to the base as shown in the diagram on the next page. These ends fasten the frame to the handle.
2. Clamp the net frame to the broomstick handle and drill a 1/4" hole through the center of the 3" ends and the broomstick. Secure it with a bolt, nut, and two washers.
3. Remove the clamp and drill two more 1/4" holes (on either side of the first hole and about 3/4" from the first hole. Secure the bolts, nuts, and washers the same way you did the first one.
4. Attach the hose clamp around the assembly as far down the assembly as possible.
5. To make the net, first cut the poplin in two pieces, each 12" x 45". Line the pieces upon top of each other and fold the in half width-wise, making a four-layer 6" x 45" strip. Sew a double seam along the entire length of the four layers, 2" from the fold. The poplin should have a 2" wide tube down one edge and the remaining 4" of width should be free on all four layers.
6. Cut the netting into a 20" x 21" rectangle.
7. Cut the rectangle into a triangle-shaped piece. First, measure in 3" from a 20" side and mark this point on both the 21" sides. The netting is then cut on each side from this point 3" in on the 21" sides to the middle of the far 20" side. In other words the final product should be a rectangle, 20" x 3" with a triangle (with a base of 20" and a height of 18") lying below it.

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8. Cut two more pieces of netting - triangles with bases of 14" and heights of 18" with rectangles 14" x 3" below each base.
9. Sew the adjacent sides of the triangle together.
10. Sew the long lumpy piece of netting to the poplin. The 3" base rectangles are placed between the layers of poplin with two pieces on each side of the netting. Sew all four layers of poplin several times to secure the netting to the poplin.
11. Slide the frame through the 2" tube in the poplin. Position it so that the base of the frame corresponds to the large piece of netting.
12. With the net still on the frame, the third net seam is sewn, closing up the pyramid of netting. Fasten the frame to the handle with the bolts and the clamp.
13. Sew the ends of the poplin by hand.

The Flat-Bottomed Dip Net

