



US Army Corps  
of Engineers  
Waterways Experiment  
Station

# Zebra Mussel Research

## Technical Notes

Section 1 — Environmental Testing

Technical Note ZMR-1-04

July 1992

### Hand-Held Sampler for Zebra Mussel Collection

**Background** Personnel at the U.S. Army Engineer District, Buffalo have devised a hand-held device to make qualitative and semi-quantitative collections of zebra mussels. The sampler can be used by one person, is inexpensive to construct, and is suitable for determining quickly whether zebra mussels are at a site. For early reconnaissance it could replace the need for a dive team.

**Additional information** This technical note was prepared by Dr. Andrew C. Miller, U.S. Army Engineer Waterways Experiment Station (WES), and Mr. Gary Dye, U.S. Army Engineer District, Buffalo. Contact Mr. Dye, (716) 879-4427, for additional information on construction and use of the sampler. Dr. Ed Theriot, WES, (601) 634-2678, is Manager of the Zebra Mussel Research Program.

**Materials** The sampler was constructed from a 5- by 8-in. metal card-file box with the front lid removed (Figure 1). The back of the box was also removed and a screen (or perforated metal sheet) was installed. A 1/2- or 3/4-in. floor flange was attached to the top of the box. A 6-in. pipe nipple, then a 45-deg pipe elbow, was screwed into the flange. A 10-or 12-ft length of galvanized pipe (1/2 or 3/4 in. diameter, depending on the size of the floor flange) can be used as a handle.

**Use of the sampler** The sampler is extended to its fullest length and the open end of the box forced down onto the substrate. The handle is then slowly pulled back toward the operator. Firm pressure must be kept on the pipe so that the box will scrape up zebra mussels. On smooth vertical surfaces the sampler will collect zebra mussels where other common collecting devices (that is, benthic dredges) will not operate. Densities can be approximated by knowing the length of the scrape and the width of the box. However, this device should be used mainly for qualitative collections and to determine whether zebra mussels are present.

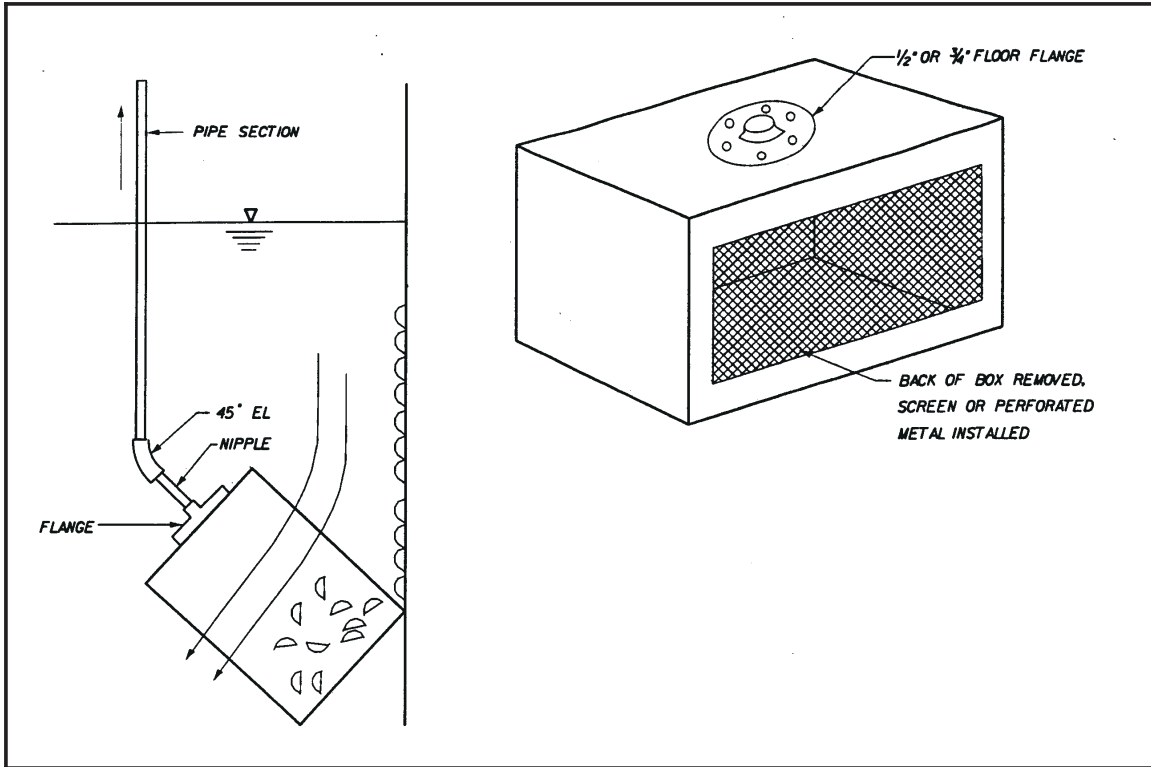


Figure 1. Hand-held sampler