

9.6 PROTOCOL FOR SAMPLING INVERTEBRATES WITH A SURBER SAMPLER

Overview

The Surber sampler consists of two interlocking frames that support a capturing net. One frame outlines the area of stream bed to be sampled while the other supports the net. The sampler is intended for use in shallow (30 cm or less) flowing waters. Use tent pegs (hooked) to anchor Surber in fast moving water. Repetitive sampling should be timed (i.e., 5 minutes each for more uniform sampling).

Sources

Alberta Environment (2006), British Columbia MWLAP (2003)

At a glance

1 Choose a wetted width location where substrate is fairly uniform. Provide a description of general habitat (e.g., is this a run, pool, or riffle section, etc.). Position the sampler securely at a random location on the stream bottom parallel to water flow with the net portion downstream. The mesh size of the net should be compatible with the goal of the program. Take care not to disturb the substrate upstream from the sampler.

2 Carefully turn over and lightly rub all rocks and large stones that lie within the frame. This process dislodges organisms that are clinging to the stones. Examine each large stone for organisms, including larval or pupal cases that may be clinging to the stone before discarding (downstream or to the side of the sampler). In order to maintain comparability between stations, a limit on time spent on handling and rubbing the substrate should be set (5 minutes recommended).

3 Stir remaining gravel with your hands to a depth of 5 to 10 cm.

4 Move the sampler upstream to a new randomly selected patch of stream bottom and repeat steps (1) through (3). Continue this process until five patches of stream bottom have been sampled, each upstream from the last. This creates a composite of the five samples. The total area sampled will depend on the size of the sampler (x 5) and should be calculated and recorded in the field logbook.

*repeat steps
1 through 3*

5 Return to shore and carefully invert the net into a shallow pan containing stream water. Ensure all invertebrates are rinsed from the net into the pan.

6 Transfer the organisms into a pre-labeled plastic sample bottle and preserve with 70% ethanol. Rinse sample net after each use.