

9.11 PROTOCOL FOR SAMPLING INVERTEBRATES IN WETLANDS

Overview

The grab sampling method yields a composite transect-kick-like sample for each pool and riffle transect in the sampling unit (Figure 19). Grab sampling is most often done in slow, deep, non-wadeable streams. See the protocol in the Manual for sampling in soft sediments.

Sources

Ontario Ministry of the Environment (2005)

Special safety concerns

Formalin is used as a preservative and has been identified as a suspected carcinogen. Formalin should be used with extreme care and the MSDS should be read.

At a glance

transfer net contents frequently

Travelling Kick and Sweep

- 1** Plan a set of transects within a Wetland Segment.
- 2** Use a net (commonly 500 µm mesh) and walk along wadeable transects, vigorously kicking the substrate to dislodge benthos and bottom materials. Sweep the net through the water column to catch dislodged material. Transfer net contents to a bucket frequently to prevent the net from clogging.
- 3** Continue to sample transects for 10 minutes or until 100 animals have been collected. At least one transect that spans the length of the Wetland Segment should be sampled. Record time spent sampling, distance covered, and any other information required on the field sheet.
- 4** Thoroughly rinse net contents into a bucket.
- 5** Repeat steps 2 to 4 for each replicate.

Jab and Sweep

3 or more jabs per replicate

- 1** Select locations for jab and sweep sampling within a Wetland Segment
- 2** Jab a D-net (commonly 500 µm mesh) into the substrate to a depth of 5 cm and sweep it forward until the net fills with disturbed material. Pool three or more jab and sweeps per replicate to ensure that at least 100 animals are collected.
- 3** Record the number of jab and sweep samples pooled per replicate as well as other information required on field sheet.
- 4** Thoroughly rinse net contents into a bucket.
- 5** Repeat steps 2 to 4 for each replicate.

Coring

- 1** Record corer specifications on the field sheet.
- 2** Probe the ground first with a small diameter steel wire to ensure the absence of large rocks or other materials that cannot be cored. Lubricate walls of corer with cooking spray. Twist corer to penetrate substrate to a depth of about 10 cm. Remove

*use rocking
motion*

the corer from the soil using a rocking motion until the bottom breaks free. Gently lift the corer, placing a hand over the bottom opening to prevent the sample from falling out. Pool a minimum of three cores per replicate to ensure at least 100 animals are collected. Take more samples if it appears that less than 100 animals have been collected.

- 3** Rinse the corer into a bucket.
- 4** Continue sampling until three replicate samples are collected.
- 5** Record the number of cores pooled per replicate, corer specifications, and other information required on field sheet.

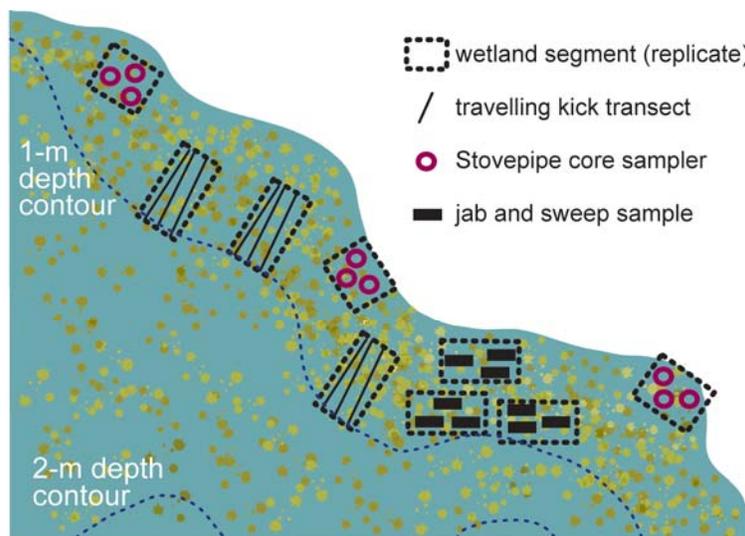


Figure 19. Wetland benthos collection methods
(Source: Ontario Ministry of the Environment (2005))