

Muddy Bottom vs. Rocky Bottom Streams

Surveying streams for macroinvertebrates helps to provide information about its overall health. It is important to know that there are two types of streams one could survey—muddy bottom and rocky bottom. Each of these stream types requires different tools and techniques to collect macroinvertebrates. What are the characteristics that separate these two stream types?



Muddy Bottom Stream

This stream type is usually slow-moving and low-gradient. There are four main habitats that can exist along a muddy bottom stream:

Steep banks/vegetated margins

This area along the bank and edge of the stream consists of overhanging bank vegetation, plants living along the shoreline, and submerged root mats.

Silty bottom with organic matter

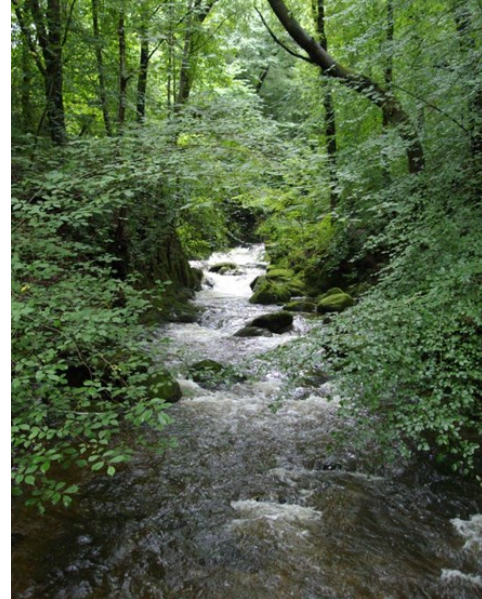
An area of slow-moving water which consists of overhanging vegetation or other organic matter.

Woody debris with organic matter

Consists of dead or living trees, roots, limbs, sticks, and other submerged organic matter.

Sand/rock/gravel substrate

Stream beds are generally composed of sand or mud. Due to slow-moving water gravel bars may build up along the bends.



Rocky Bottom Stream

This type of stream is composed of rocky substrate and/or riffles. It is generally made up of a high-gradient and faster-moving water.

Riffles

A shallow, fast-moving area of water with a depth of 3 to 12 inches and cobble-sized stones (2 to 10 inches) or larger. This is an ideal spot for monitoring.

Run

A stretch of water generally downstream of a riffle area. It is made up of a moderate current, deeper water and a smooth surface. This area will lack the exposed cobbles that produce riffles.

Pool

A slow moving, deeper portion of a stream. Typically found on the bends of streams.