

Clues for Identifying Macroinvertebrates

Stonefly Larvae

- Has not been found recently in the Chicago River.
- Easily distinguished from other macroinvertebrates by its color.
 - Stonefly larvae are YELLOW and black.
- Sometimes confused with Mayflies who have lost one of their tails.

Alderfly Larvae

- Has not been found recently in the Chicago River.

Dobsonfly Larvae

- Has not been found recently in the Chicago River.
- Sometimes confused with sowbugs (which are very common).
- Can be distinguished from sowbugs by looking at antennae and tail.
 - Dobsonflies have short (i.e. shorter than their head is long) antennae while sowbugs have long antennae (i.e. longer than their head is long).
 - Dobsonflies have single “tail”. Sowbugs have two “tails” (which are actually posterior legs).

Snipe Fly Larvae

- Has not been found recently in the Chicago River.
- Can be confused with Crane Fly and Midges.
 - Snipe fly does not have star shaped mouth of the Crane Fly.
 - Snipe fly is pointed at both ends while Midges are round at both ends.

Caddisfly Larvae

- Distinguished by the dark plates on the back of its thorax or by head which is darker than body.
- Also, several varieties build homes out of stones or sticks.

Mayfly Larvae

- Can be confused with damselfly larvae and stoneflies.
- Can be distinguished from Damselflies based on tail and shape of head.
 - Mayflies have 3 (though they can lose one or more) thread-like tail-like filaments. Damselflies have 3 (they can lose them too) feather like gills (which look like their tails).
 - See stoneflies on how to distinguish from mayflies.

Riffle Beetle Larvae

- Not seen often on the Chicago River.
- Can be confused with caddisfly larvae.
- Can be distinguished by the fact that riffle beetle larvae have long pincers on their head while caddisfly larvae do not.

Water Penny Beetle Larvae

- Might be confused with a mussel or clam.
- Can be distinguished by the presence of legs – water penny beetle larvae have them, mussels and clams do not.

Damselfly Nymph

- Can be confused with mayfly nymphs. See under mayfly nymph.

Dragonfly Nymph

- Look for 6 legs, a crown like “tail” and extending labium (mouth piece).

Crane Fly Larvae

Distinguished by its spiracular disk at rear – looks like a starfish.

Crayfish

- Distinguished by the pincers on its front legs.

Clams/Mussels

- The only hinged shelled macros.
- Remember – they have to be alive to count.

Black Fly Larvae

- Distinguished by bulb shape – it is wider at bottom than top.

Scud

- Often confused with sowbugs.
- Can be distinguished by movement and color:
 - Scuds swim fast fast fast on their sides (hence their other name – sideswimmer). Sowbugs walk slowly on their bellies.
 - Scuds are white/clear/greenish while sowbugs are brown.

Right Handed Snail

- To tell the “handedness” point the point upwards and look at the opening – if it is on the right it is a right handed snail, if it is on the left, it is a left handed snail.

Other Snail

- These are snails with flat, spiraled shells.

Midge Larvae

- These are easy to miss, particularly if you do not swish your net in your bucket/tray or if you do not place your collected rocks in the bucket/tray.
- Can be confused with aquatic worms. If you look very closely, the midge larvae have prolegs just below the head.
- Can be confused with blood worm midges. Blood worm midges are bright red, while midge larvae are white. Blood worm midges also have tubules at the end of their abdomen, while midge larvae have two more prolegs.



Sowbug

- Often confused with scuds.
- See scuds for distinguishing features.

Aquatic Worms

- These are easy to miss, particularly if you do not swish your net in your bucket/tray or if you do not place your collected rocks in the bucket/tray
- Can be confused with midge larvae, see midge larvae above.

Leech

- Can be confused with aquatic worms or planaria.
- Leeches are distinguished by their suckers on both ends. They are the only macro that will attach itself to a tray or view.

Left Handed Snail

- To tell the “handedness” point the point upwards and look at the opening – if it is on the right it is a right handed snail, if it is on the left, it is a left handed snail.

Blood Worm Midge Larvae

- Can be confused with midges and aquatic worms, see midge larvae for details.

Planaria

- Though they are not used as part of our macroinvertebrate water quality calculation, they are often seen.
- They are distinguished by their triangle head and white eye spots on the top of their head. Sometimes confused with leeches.