

# Young Macroinvertebrate Identification Key

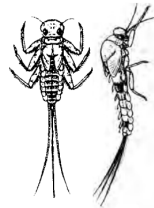
## VERY INTOLERANT OF POLLUTION

Stonefly Nymph



- 6 legs
- 2 long antenna
- Incomplete metamorphosis

Mayfly Nymph



- 3 long antennae
- Gills on side & top
- Incomplete metamorphosis
- Pollution police
- Sensitive to chemical pollution

Caddisfly Larva



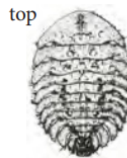
- 3 pairs of legs
- Makes DIY shell from twigs, sand, & debris
- Complete metamorphosis

Dobsonfly Larva



- Centipede-like
- 2 pinchers on head
- Complete metamorphosis
- Sensitive to pollution

Water Penny Larva



- Copper colored
- Round or oval
- Complete metamorphosis

Right-Handed Snail



- Right = gilled
- Incomplete metamorphosis

Riffle Beetle Larva



- Tiny & torpedo-like
- Usually grey or brown
- Complete metamorphosis

## MODERATELY INTOLERANT OF POLLUTION

Damselfly Nymph



- 3 long paddle-like tails
- 6 thin legs
- Incomplete metamorphosis
- Suggests slow moving water

Dragonfly Nymph



- Large eyes & small wing buds
- No tail
- Incomplete metamorphosis
- Suggests slow moving water

Scud



- Shrimp-like
- Flattened sideways
- Incomplete metamorphosis
- Indicate Ca & nutrient rich water

Crayfish



- Look like miniature lobsters
- Complete metamorphosis
- Lowered pH & dissolved oxygen content are stressful to crayfish

Sowbug



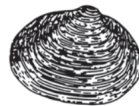
- Like a mini armadillo
- More wide than tall
- Incomplete metamorphosis
- OK with high organic material content & pollutants

Crane fly



- Caterpillar-like
- Ringed
- Complete metamorphosis
- Suggests decent water--some turbidity and stagnation

Clam/Mussel



- 2 shells attached with a hinge
- Complete metamorphosis
- Sensitive to habitat disturbance and pollution

## FAIRLY TOLERANT OF POLLUTION

Midge Larva



- Worm-like
- Head darker than body
- Complete metamorphosis
- Indicate poor water quality
- Tolerant to pollution

Planaria



- Flat and symmetrical
- Hermaphrodites
- Indicate poor water quality
- Tolerant to pollution

Black Fly Larva



- Worm-like
- Two fan-like structures by head
- Complete metamorphosis
- Indicate swift-flowing water and too many nutrients

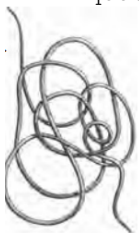
Leech



- Flattened and segmented
- Hermaphrodites
- Found in warm, stagnant bodies of water or running water of very poor quality.

## VERY TOLERANT OF POLLUTION

Aquatic Worms



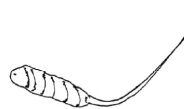
- Segmented and rounded
- No visible legs, head, or mouth
- Hermaphrodites
- Found in water more polluted and oxygen deprived than almost any other species

Left-Handed Snail



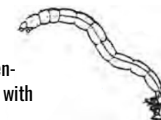
- Lunged snails breathe and store air
- Opening to the left
- Hermaphrodites
- Indicate nutrient enriched conditions and poor water quality

Rat-tailed Maggot



- Long tail used to breathe
- Complete metamorphosis
- Stagnant, oxygen-deprived water, with a high organic content
- Can live in sewage and cesspools

Blood Midge Larva



- Bright red
- Worm-like
- Complete metamorphosis
- Found in low-oxygen, nutrient-rich water
- Tolerant to pollution

Adult Macroinvertebrate  
Identification Key

**VERY INTOLERANT OF POLLUTION**

Stonefly Adult



Mayfly Adult



Caddisfly Adult



Dobsonfly Adult



Water Penny Adult



Right-Handed Snail



Riffle Beetle Adult



**MODERATELY INTOLERANT OF POLLUTION**

Damselfly Adult



Dragonfly Adult



Scud



Crayfish



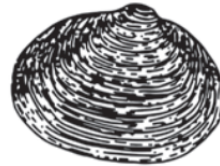
Sowbug



Crane fly Adult



Clam/Mussel



**FAIRLY TOLERANT OF POLLUTION**

Midge Adult



Planaria



Black Fly Adult



Leech



**VERY TOLERANT OF POLLUTION**

Aquatic Worms



Left-Handed Snail



Hoverfly



Blood Midge Adult

