


















Arlington Benthic Macroinvertebrates ID Overview

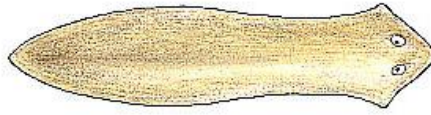
Note: COLOR IS NOT DIAGNOSTIC! Colors change from transparent to darker through their life cycle. Green, yellow, orange, or red colors can be a clue but never the sole identifier. Images not to scale.

Tolerance values range from 0 (most sensitive) to 9 (most tolerant).

Caddisflies	  <p>Netspinner caddisfly Order Trichoptera, Family Hydropsychidae 6 legs, 2 hooked tails, feathery gills on abdomen. Head and 3 thorax segments armored. Movement: head down, tail up, side-to-side swishing. Common in Arlington. Tolerance value 6.</p>	  <p>Fingernet caddisfly, Order Trichoptera, Family Philopotamidae 6 legs, 2 hooked tails, smooth abdomen. Head and 1st thorax segment armored. Movement: pulls head up and back. Common at Windy, Gulf, Donaldson Run. Tolerance value 3.</p>	 <p>Casemaker caddisfly Order Trichoptera, Various families 6 legs, found in stick, rock, leaf, or sand grain case. Tolerance values 1-4. Typically found only at reference site. Use Voshell book to identify to family level.</p>
	  <p>Left: Small minnow mayfly. Below right: Flathead mayfly</p> <p>Mayfly, Order Ephemeroptera 2-3 long hair-like tails, 6 legs, gills on abdomen, wingpads. Tolerance value 4. Small minnow mayfly: abdomen curved up; middle tail shorter/hard to see or curved down; circular gills; common in Arlington. Flatheaded mayfly only at reference site.</p>	  <p>Damselfly, Order Odonata 6 legs, large lower jaw, large eyes, wingpads. 3 oar-shaped tails (gills), middle tail held higher in water (like a propeller). Tolerance values 5-9.</p>	  <p>Dragonfly, Order Odonata 6 legs, large lower jaw, large eyes, wingpads. Wide, oval to round abdomen. Tol values 1-9.</p>
	    <p>Midge, Order Diptera Family Chironomidae 2 prolegs on each end, smooth abdomen. Head armored. Tolerance value 6. Red midge 9. Movement: snap, flip, head to tail.</p>	   <p>Black Fly, Order Diptera Family Simuliidae Bowling pin shaped, sucker on bottom end. Proleg near head. Head armored. Tolerance value 6.</p>	    <p>Crane Fly, Order Diptera Family Tipulidae Plump and maggot-like. Fleshy lobes at bottom end. May have prolegs along body. Head is not visible. Tol value 3.</p>



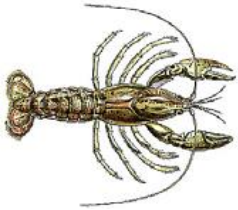
Aquatic Worm, Class Oligochaeta
Segmented, wormlike body, can be thin.
Tolerance value 8.



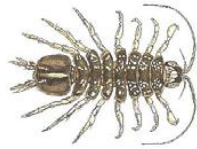
Flatworm/Planera, Order Tricladida
Flat, soft body, triangular head, cross-eyed eyespots. Tolerance value 8.



Leech, Order Hirudinea
Segmented body, suction cups on both ends.
Tolerance value 8.



Crayfish, Order Decapoda
Family Cambaridae
2 large claws, 8 legs, resembles a small lobster. Tolerance value 5.



Sowbug
Order Isopoda
Flat body (top to bottom), >6 legs, resembles a pill bug.
Tolerance value 8.



Scud
Order Amphipoda
Flat body (side to side), swims sideways, >6 legs, resembles a small shrimp.
Tolerance value 6-8.



Hellgrammite
Order Megaloptera
Six legs, large pinching jaws, 8 pairs of feelers along abdomen, 2 hooks on tail or 1 single spiky tail. Tolerance value 5.



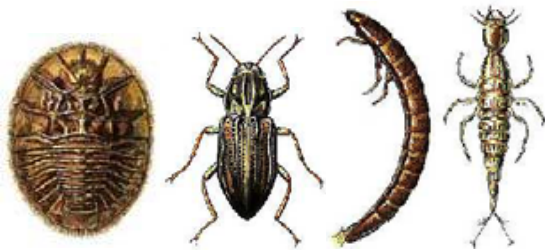
Lunged Snails, Class Gastropoda
No operculum. With helix pointed up, shell opens to the left. Tolerance value 7-8.



Gilled Snails, Class Gastropoda
With helix pointed up, shell opens to the right. Operculum covers shell opening.
Tolerance value 4.



Clams, Class Bivalvia
Fleshy body between two clamped-together shells. Tolerance value 8.



Beetles, Order Coleoptera
From left, water penny (oval body), riffle beetle adult (small black beetle) and larvae (armored body & 6 legs), predaceous diving beetle and others. Use Voshell book for family level ID. Tolerance values 4-7. Seen at reference site, sometimes Barcroft.

Rolledwing stonefly



Stonefly, Order Plecoptera (REFERENCE SITE)

6 legs, 2 hair-like tails, wingpads, no gills on abdomen. Tolerance values 0-2. **Rolledwing stonefly** (TV 0) on left. **Common stonefly** (TV 1) on right. Seen at reference site.

Common stonefly

