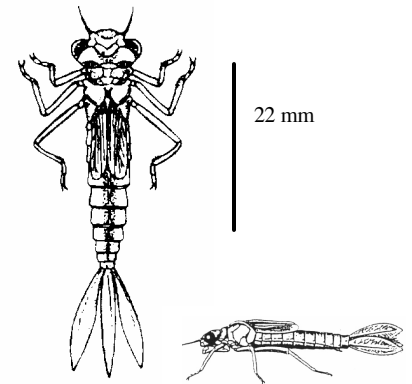


Group 2 ~ Moderately Intolerant to Pollution

(Average Actual Size)

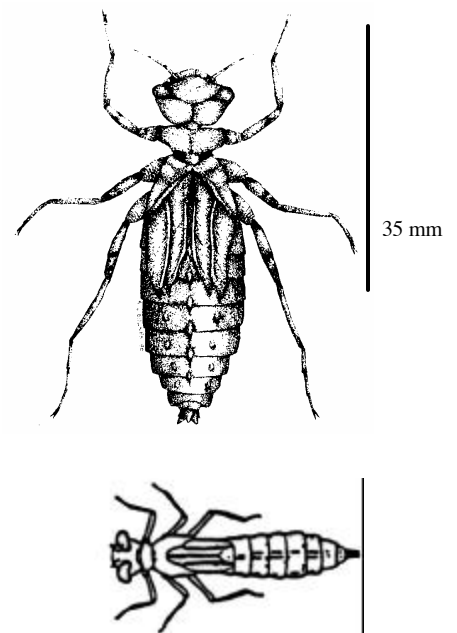
Damselfly nymph

Order	Odonata
Suborder	Zygoptera
Where to find	Overhanging/emergent aquatic vegetation
Body shape	Elongated, narrow, tapering rearward, resemble adults
Size	15 - 30 mm
Feeding group	Predator
Lifecycle	Incomplete metamorphosis, maturation in 1 to 4 years
Distinguishing Characteristics	No gills present on sides of abdomen Abdomen ends in 3 wide, oar-shaped gill-plates resembling tails Large eyes and long legs Grey, green, or brown in color <i>*May be confused with mayflies, but damselflies have no abdominal gills and "tails" are more paddle-shaped or feather-shaped</i> <i>*May be confused with dragonflies, but bodies are thin and narrow with long, spindly legs, and dragonflies have no tails</i>



Dragonfly nymph

Order	Odonata
Suborder	Anisoptera
Where to find	Bottom substrate, mud, vegetation
Body shape	Wide abdomen, oval, flattened, robust, large eyes, resemble adults
Size	20 - 50 mm
Feeding group	Predator
Lifecycle	Incomplete metamorphosis, maturation in 1 – 4 years
Distinguishing Characteristics	Large eyes No external gills Distinct scooping mouthparts that extend to catch prey Grey, green, or brown in color Body is generally rough No tails <i>*May be confused with damselflies, but distinguishable by wide, oval abdomen and no tails</i>

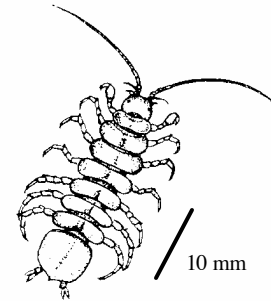


Group 2 ~ Moderately Intolerant to Pollution

(Average Actual Size)

Aquatic sowbug

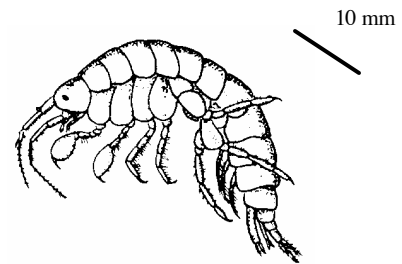
Class	Crustacea
Order	Isopoda
Where to find	Crawling on substrate, vegetation, and debris
Body shape	Hard bodied and flattened dorso-ventrally (top to bottom)
Size	5 – 20 mm
Feeding group	Collector



**May be confused with scuds, but sowbugs are wider than high, and walk slowly along surfaces*

Scud

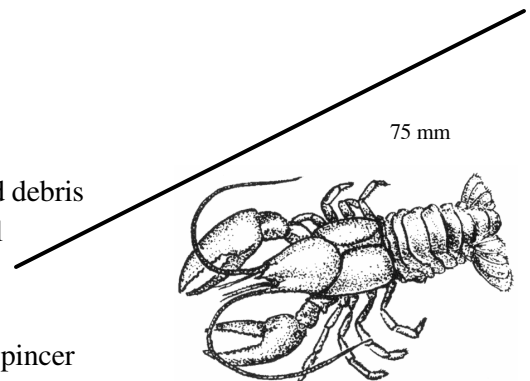
Class	Crustacea
Order	Amphipoda
Where to find	Aquatic vegetation
Body shape	Flattened laterally (side to side)
Size	5 – 20 mm
Feeding group	Filtering collector
Distinguishing	7 pairs of legs and swims on side
Characteristics	Shrimp-like, white to clear to pink in color with distinct black eyes



**May be confused with sowbugs, but are taller than wide and they swim rapidly on their side*

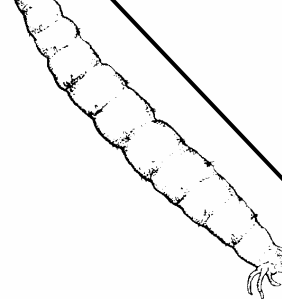
Crayfish

Class	Crustacea
Order	Decapoda
Where to find	Under stones, dense mats of vegetation, and debris
Body shape	Lobster-like, hard body with fan shaped tail
Size	3-15 cm
Feeding group	Grazer, predator
Distinguishing	5 pairs walking legs, 1st pair enlarged with pincer claws.
Characteristics	Eyes on stalks Well-developed antennae Yellow, green, white, pink or dark brown in color.

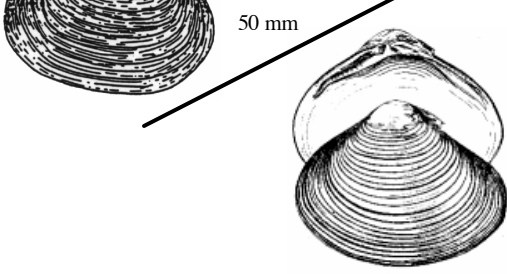


Group 2 ~ Moderately Intolerant to Pollution

Cranefly larvae

Order	Diptera (True Flies)	 <p>(Average Actual Size) 50 mm</p>
Family	Tipulidae	
Where to find	Under rocks, on aquatic vegetation, in leaf-packs	
Body shape	Caterpillar-like, “juicy” and segmented	
Size	10 – 100 mm	
Feeding group	Shredder	
Lifecycle	Complete metamorphosis, spends 6 weeks – 5 years in aquatic stage	
Distinguishing Characteristics	<p>No true legs or wing buds</p> <p>Milky, light brown, or greenish in color with digestive tract often visible</p> <p>Prolegs may be visible as small lobes</p> <p><i>*Distinguished from other fly larvae by finger-like appendages that extend from posterior end (if no appendages on hind end, probably a deer or horse fly larvae)</i></p>	

Clams and Mussels

Class	Bivalvia	 <p>50 mm</p>
Where to find	Substrate	
Body shape	Two shells attached by a hinge	
Size	Varies (very small to very large)	
Feeding group	Filtering collector	
Distinguishing Characteristics	<p>Only <u>live</u> clams and mussels may be counted in determining water quality</p> <p>If live native mussels or exotic zebra mussels are found, remember to mark the box at the bottom of the Biological Monitoring Data Sheet. In addition, remember to replace live native mussels exactly as you found them as described on page 83.</p>	