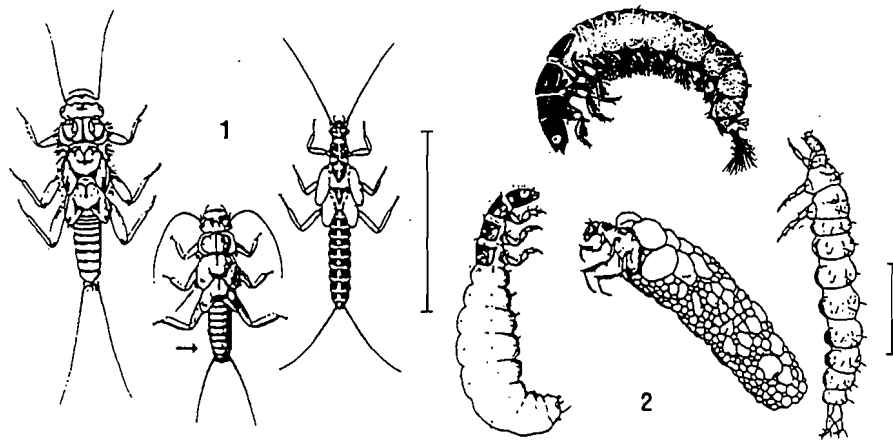


Stream Insects & Crustaceans

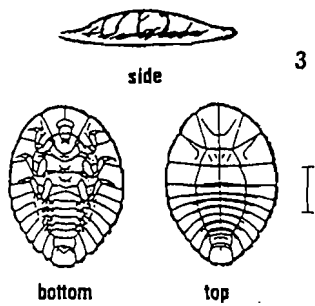
GROUP ONE TAXA

Pollution sensitive organisms found in good quality water.

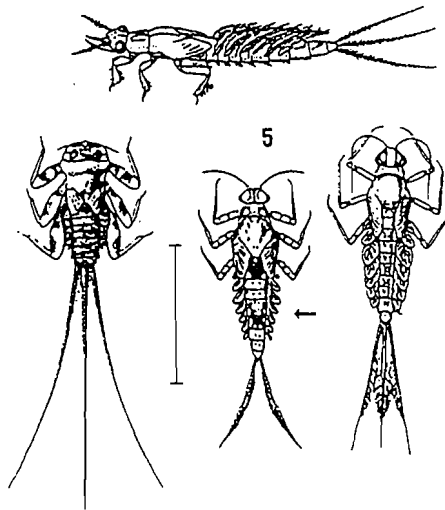


1 Stonefly: Order Plecoptera. 1/2" - 1 1/2", 6 legs with hooked tips, antennae, 2 hair-like tails. Smooth (no gills) on lower half of body. (See arrow.)

2 Caddisfly: Order Trichoptera. Up to 1", 6 hooked legs on upper third of body, 2 hooks at back end. May be in a stick, rock or leaf case with its head sticking out. May have fluffy gill tufts on underside.

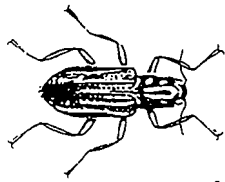


3 Water Penny: Order Coleoptera. 1/4", flat saucer-shaped body with a raised bump on one side and 6 tiny legs and fluffy gills on the other side. Immature beetle.



4 Riffle Beetle: Order Coleoptera. 1/4", oval body covered with tiny hairs, 6 legs, antennae. Walks slowly underwater. Does not swim on surface.

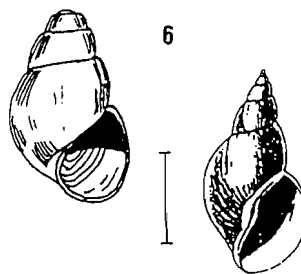
5 Mayfly: Order Ephemeroptera. 1/4" - 1", brown, moving, plate-like or feathery gills on sides of lower body (see arrow), 6 large hooked legs, antennae. 2 or 3 long, hair-like tails. Tails may be webbed together.



6 Gilled Snail: Class Gastropoda. Shell opening covered by thin plate called operculum. When opening is facing you, shell usually opens on right.

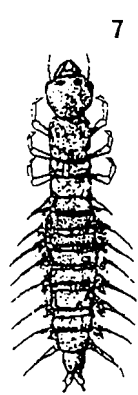


7 Dobsonfly (Hellgrammite): Family Corydalidae. 3/4" - 4", dark-colored, 6 legs, large pinching jaws, eight pairs feelers on lower half of body with paired cotton-like gill tufts along underside, short antennae, 2 tails and 2 pairs of hooks at back end.

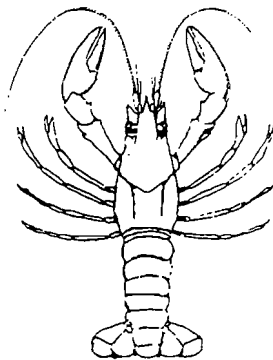


GROUP TWO TAXA

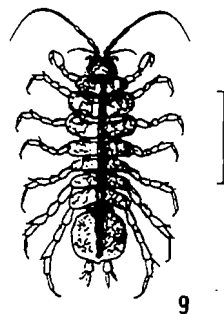
Somewhat pollution tolerant organisms can be in good or fair quality water.



8 Crayfish: Order Decapoda. Up to 6", 2 large claws, 8 legs, resembles small lobster.



9 Sowbug: Order Isopoda. 1/4" - 3/4", gray oblong body wider than it is high, more than 6 legs, long antennae.



Bar lines indicate relative size

Save Our Streams

Izaak Walton League of America
707 Conservation Lane
Gaithersburg, MD 20878-2983
1(800)BUG-IWLA

GROUP TWO TAXA CONTINUED

10 Scud: Order Amphipoda. 1/4", white to grey, body higher than it is wide, swims sideways, more than 6 legs, resembles small shrimp.

11 Alderfly Larva: Family Sialidae. 1" long. Looks like small hellgrammite but has 1 long, thin, branched tail at back end (no hooks). No gill tufts underneath.

12 Fishfly Larva: Family Corydalidae. Up to 1 1/2" long. Looks like small hellgrammite but often a lighter reddish-tan color, or with yellowish streaks. No gill tufts underneath.

13 Damselfly: Suborder Zygoptera. 1/2" - 1", large eyes, 6 thin hooked legs, 3 broad oar-shaped tails, positioned like a tripod. Smooth (no gills) on sides of lower half of body. (See arrow.)

14 Watersnipe Fly Larva: Family Athericidae (Atherix). 1/4" - 1", pale to green, tapered body, many caterpillar-like legs, conical head, feathery "horns" at back end.

15 Crane Fly: Suborder Nematocera. 1/3" - 2", milky, green, or light brown, plump caterpillar-like segmented body, 4 finger-like lobes at back end.

16 Beetle Larva: Order Coleoptera. 1/4" - 1", light-colored, 6 legs on upper half of body, feelers, antennae.

17 Dragon Fly: Suborder Anisoptera. 1/2" - 2", large eyes, 6 hooked legs. Wide oval to round abdomen.

18 Clam: Class Bivalvia.

GROUP THREE TAXA

Pollution tolerant organisms can be in any quality of water.

19 Aquatic Worm: Class Oligochaeta. 1/4" - 2", can be very tiny; thin worm-like body.

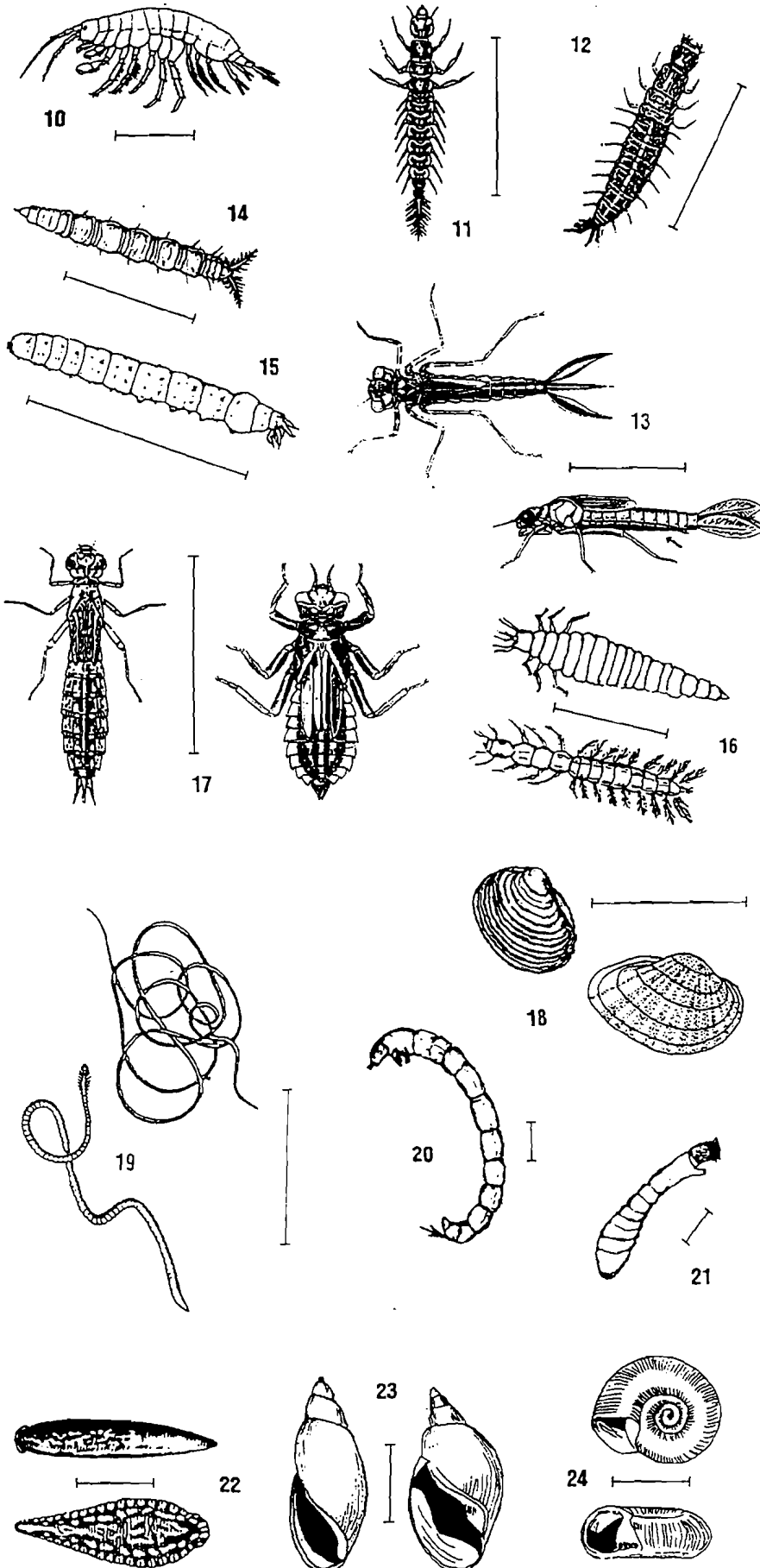
20 Midge Fly Larva: Suborder Nematocera. Up to 1/4", dark head, worm-like segmented body, 2 tiny legs on each side.

21 Blackfly Larva: Family Simuliidae. Up 1/4", one end of body wider. Black head, suction pad on other end.

22 Leech: Order Hirudinea. 1/4" - 2". brown, slimy body, ends with suction pads.

23 Pouch Snail and Pond Snails: Class Gastropoda. No operculum. Breathe air. When opening is facing you, shell usually opens on left.

24 Other Snails: Class Gastropoda. No operculum. Breathe air. Snail shell coils in one plane.



Bar lines indicate relative size



Stream Study: Sample Record and Assessment

Stream _____ Site Number _____

County or city _____ State _____

Collection date _____ Collectors _____

Weather conditions (last 3 days) _____

Average depth at site _____ Average width at site _____

Stream-water temperature F° _____ C° _____

Stream-flow rate High Normal Low

Stream appears Clear Cloudy Muddy

Macroinvertebrate Count

Sensitive	Somewhat Sensitive	Tolerant
<input type="checkbox"/> _____ caddisfly larvae <input type="checkbox"/> _____ hellgramite <input type="checkbox"/> _____ mayfly larvae <input type="checkbox"/> _____ gilled snails <input type="checkbox"/> _____ riffle beetle adult <input type="checkbox"/> _____ stonefly larvae <input type="checkbox"/> _____ water penny larvae	<input type="checkbox"/> _____ beetle larvae <input type="checkbox"/> _____ clams <input type="checkbox"/> _____ crane fly larvae <input type="checkbox"/> _____ crayfish <input type="checkbox"/> _____ damselfly larvae <input type="checkbox"/> _____ dragonfly larvae <input type="checkbox"/> _____ scuds <input type="checkbox"/> _____ sowbugs <input type="checkbox"/> _____ fishfly larvae <input type="checkbox"/> _____ alderfly larvae <input type="checkbox"/> _____ watersnipe larvae	<input type="checkbox"/> _____ aquatic worms <input type="checkbox"/> _____ blackfly larvae <input type="checkbox"/> _____ leeches <input type="checkbox"/> _____ midge larvae <input type="checkbox"/> _____ lunged snails
boxes checked x 3 = _____ index value	boxes checked x 2 = _____ index value	boxes checked x 1 = _____ index value

WATER QUALITY RATING

Total Index Value = _____

Excellent (>22)

Good (17-22)

Fair (11-16)

Poor (<11)