KENTUCKY WATER WATCH BIOLOGICAL MONITORING ASSESSMENT REPORT

RIVER BASIN			DATE		***************************************	TIME				
STREAM NAME			SUPERVISING SAMPLER .							
SAMPLING SITE			ORGANIZATION							
FLOW RATE 1Ponded 2	MAILING ADDRESS									
4Bank Full	NUMBER C		TELEPHONE #							
IN SQUARE FEET PARTICIPANTS										
	GEN	NERAL DESCRIPTION (OF WATER CO	NDITION	S					
	MA	(dro)(NVZ:a)		SIVANE	ĽΥ					
GROUP 1 TAXA	CODE	GROUP 2 1	ГАХА	CODE	GRO	OUP 3 TAXA	CODE			
WATER PENNY LARVAE		DAMSELFLY N	YMPHS		BLA	CKFLY LARVAE				
MAYFLY NYMPHS		DRAGONFLY NYMPHS			AQI	UATIC WORMS				
STONEFLY NYMPHS		CRANE FLY LARVAE			M	IDGE LARVAE				
DOBSONFLY LARVE		BEETLE LARVAE			PC	DUCH SNAILS				
CADDISFLY LARVAE		CRAYFISH				LEECHES				
RIFFLE BEETLE ADULTS		SCUDS								
OTHER SNAILS		CLAMS								
		SOW BUGS / IS	SOPODS							
Number of taxa present		Number of taxa	present		Numb	er of taxa present				
Times index value of (3) =		Times index valu	e of (2) =		Times in	ndex value of (1) =				
Cumulative Index Value										
BIOLOGICAL QUALITY ASSESSMENT SCALE										
POOR FAIR GOOD EXCELLENT										
0		10	1 15	20 20		25	30+			

SEND REPORT FORM TO:

WATER WATCH BIOLOGICAL STREAM ASSESSMENT TEAM

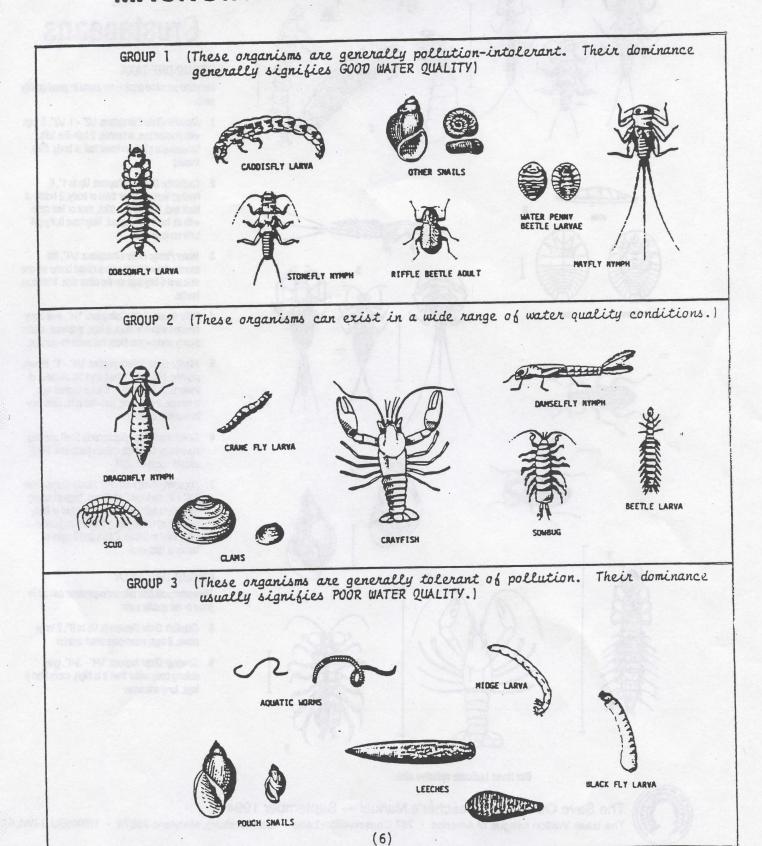
KENTUCKY DIVISION OF WATER

14 REILLY ROAD

FRANKFORT, KY 40601

502-564-3410 ATT: Ken Cooke

MACROINVERTEBRATE TAXA GROUPS



Bar lines indicate relative size

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 lower half.
- 3 Water Penny: Order Coleoptera. 1/4", flat saucer-shaped body with a raised bump on one side and 6 tiny legs on the other side. Immature beetle.
- 4 Riffle Beetie: 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.
- Gilled Snail: Class Gastropoda. Shell opening covered by thin plate called operculum. 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.



The Save Our Steams Teacher's Manual — September 1994

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12 17 20 19 21 24 22

Bar lines indicate relative size

GROUP TWO TAXA continued

- 10 Scuct 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 heligrammite 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 Damsetfly: 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 Lana: 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 Lana: Order Coleoptera. 1/4" 1", lightcolored, 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 Simulidae. Up to 1/4*, one end of body wider. Black head, suction pad on 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. Shell usually opens on left.
- 24 Other snails: Class Gastropoda. No operculum. Breathe air. Snail shell coils in one plane.



KENTUCKY WATER WATCH MACROINVERTEBRATE IDENTIFICATION KEY

r	Transfer Joseph			
		1.	No legs	go to # 2
		(MIS	Less than six legs	go to # 7
		100	Six legs present	go to # 8
			More than 6 legs	go to # 11
	7 <u>143</u>	2.	Body enclosed in shell	go to # 3
		9 080 1	Body wormlike	go to # 6
3.	Shell has two	halv	es 🕒 💮	Clams
agus Na na	Shell all one p	oiece	91 II — — 200 I 200 I	go to #4
4.	Snails - shell s	spira	ls down	go to #5
nartik K			ls on itself	Other snails
5.	Hold with top		hell pointing up left	Pouch snail
	openin	ig on	right	Other snails
6.	Large white.	ereer	or brown caterpillar-like body	Crane fly larva
	Thin wormlik	ke bo	dy se so	Aquatic worms
	Body wider a Black head Suction cup a			Blackfly larva
enda enda enda	Brown body Suction cups Body stretche			Leech
7.	Four tiny legs Wormlike boo Dark head Sometimes re	dy	ored	Midge fly larva

8.	Tail present	go to # 9
	No tail	go to #10
		90 00 11 20
9.	Two short tails Eight pairs of feelers and gill tufts on lower half of body Large pinching jaws	Dobson fly (hellgrammite)
	Two hairlike tails No gills on lower half of body	Stonefly
	Two or three long hairlike tails Gills on sides of body	Mayfly
	Three short, broad paddle-shaped tails Gills on lower half of body	Damselfly
10.	Gray, green or white soft body May have fluffy gills on body; Lives in stick, rock or leaf case stuck to underside of rocks	Caddisfly
	Flat, saucer- or disc-shaped body Found stuck to rocks	Water penny
	Tiny black beetle Walks on stream bottom	Riffle beetle
	Large body Round to oval abdomen Large eyes	Dragonfly
11.	More than 6 legs Oblong body Resembles terrestrial pillbug	Sowbug
	More than 6 legs Swims sideways Resembles shrimp	Scud
	Eight legs One or two large claws Resembles lobster	Crayfish