

MACROINVERTEBRATES INDOOR LAB

TEAM MEMBERS:

PART 1

Group 1: These are sensitive to pollutants. Circle each animal found.



Stonefly Larva



Dobsonfly Larva

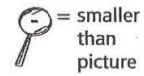
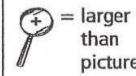


Alderfly Larva



Water Snipe Fly Larva

Relative Size Key:



Number of group 1 animals circled:

Group 2: These are semi-sensitive to pollutants. Circle each animal found.



Caddisfly Larva*

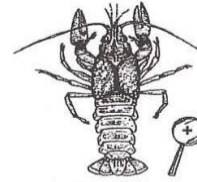
*All Caddisfly Larva = 1



Dragonfly Larva



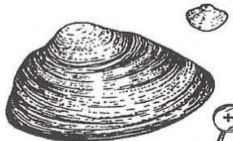
Water Penny



Crawfish



Crane Fly Larva



Freshwater Mussel or Fingernail clam



Mayfly Larva



Damselfly Larva



Damselfly tail (side view)



Riffle Beetle Larva*



Riffle Beetle Adult*

*All Riffle Beetles = 1

Number of group 2 animals circled:

Group 3: These are semi-tolerant of pollutants. Circle each animal found.



Black Fly Larva



Non-Red Midge Larva



Snails: Orb or Gilled (right side opening)



Amphipod or Scud

Number of group 3 animals circled:

Group 4: These are tolerant of pollutants. Circle each animal found.



Pouch Snail (left side opening)



Isopod or Aquatic Sowbug



Bloodworm Midge Larva (red)



Leech



Tubiflex Worm

Number of group 4 animals circled:

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Water Action Volunteers

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Collected samples of macros (5 pts) _____

PART 2

1. Calculate how many of each category of *benthic macroinvertebrates* you have counted and multiply by the designated number.

| | (A) | (B) |
|---|-------|-------------|
| Number of animal types from group 1: Sensitive | _____ | X 4 = _____ |
| Number of animal types from group 2: Semi-sensitive | _____ | X 3 = _____ |
| Number of animal types from group 3: Semi-tolerant | _____ | X 2 = _____ |
| Number of animal types from group 4: Tolerant | _____ | X 1 = _____ |
| TOTAL NUMBER OF ANIMAL TYPES (A) | _____ | |
| TOTAL VALUE AFTER MULTIPLYING (B) | | _____ |

Calculated Total Values (5 pts.)_____

2. Calculate the **Index Score**: divide the total value of (B) by the total number of animal types (A).

$$\text{Index Score} = \frac{(B)}{(A)} = \underline{\hspace{2cm}}$$

3. The **Index Score** will tell us how healthy our lake/river/wetland is. Circle the appropriate health:

- Excellent** (index score of 3.6 or higher)
- Good** (index score of 2.6 - 3.5)
- Fair** (index score of 2.1 - 2.5)
- Poor** (index score of 1.0 - 2.0)

Calculated Index Score (5 pts.)_____

4. How did the various types of macroinvertebrates in your sample support your evaluation of the lake?

Determined "Health" of lake area (5 pts.)_____

5. List some characteristics that may be affecting the health of the lake area based on the index score that you calculated.

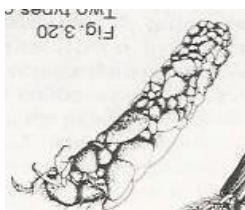
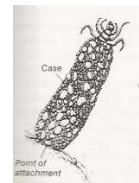
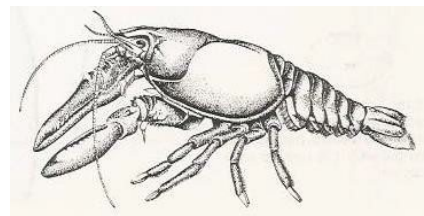
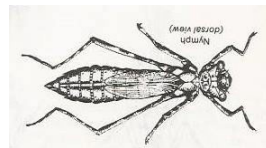
Comment about water resource (5 pts.)_____

TOTAL MACRO POINTS (25 pts.)_____

BENTHIC MACROINVERTEBRATE SAMPLES

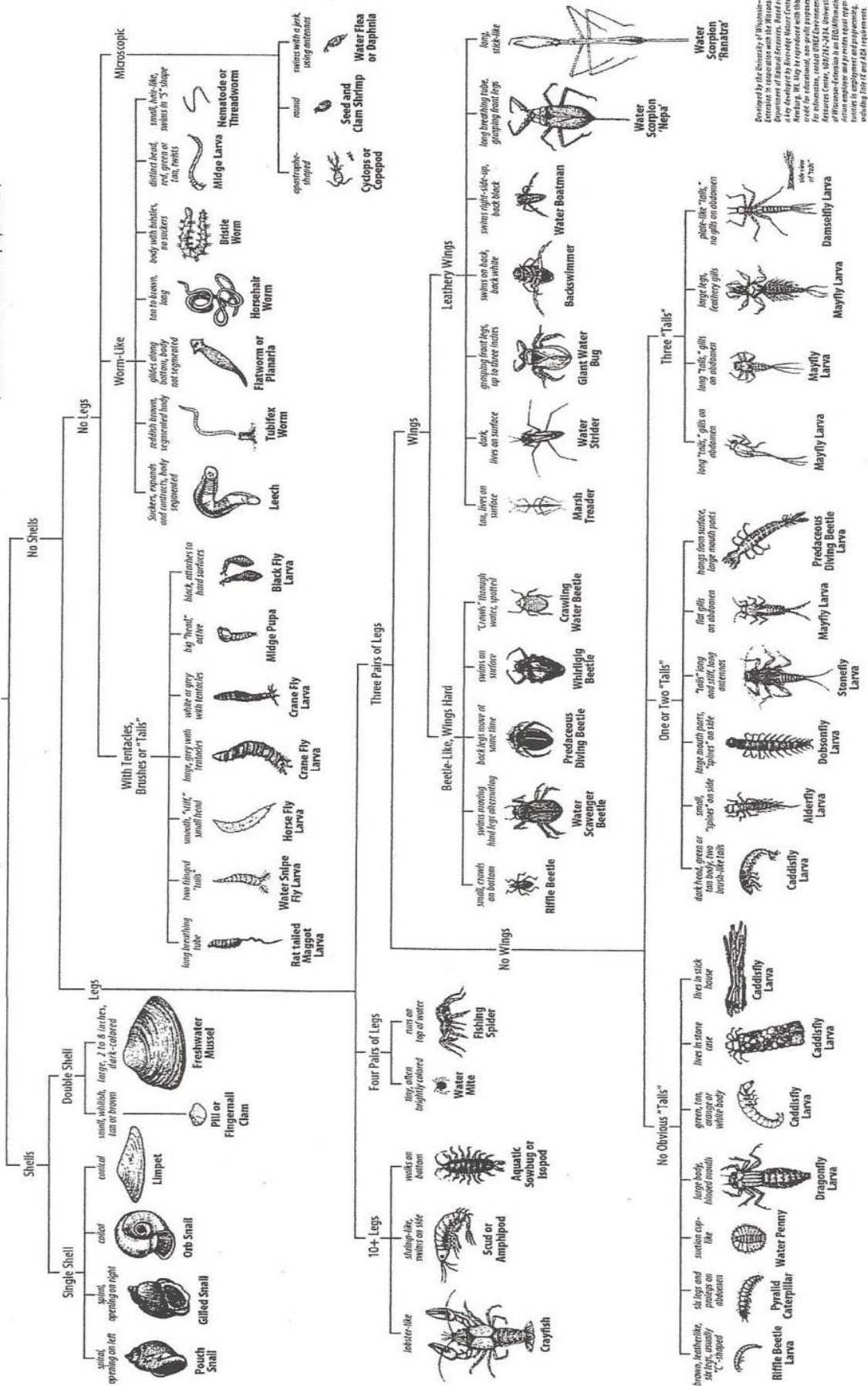


RED



Key to Macroinvertebrate Life in the River

(Sizes of illustrations are not proportional.)



Developed by the University of Wisconsin-Extension in cooperation with the Wisconsin Department of Natural Resources. Based on the key provided by Katherine Malarz Cook, and the illustrations by Katherine Malarz Cook. For references, contact UWEX Environmental Resources Center, 622/217-2124, University of Wisconsin-Extension, 1055 Linden Drive, Room 11600, University of Wisconsin-Extension, Stevens Point, WI 54481.