

## Study Guide – Aquatic Macroinvertebrate Quiz

### *Field Biology*

1. What are the different functional feeding groups we looked at in class? Describe WHAT and HOW organisms in each functional feeding group eat.
2. What is the advantage of using functional feeding groups to classify aquatic organisms instead of other types of classification schemes (such as carnivore, predator, etc.)?
3. Why are aquatic macroinvertebrates so useful for evaluating water quality? Why might you use aquatic macroinvertebrates for this as opposed to, for example, chemically testing the water?
4. Make sure you can correctly describe the defining features of the following aquatic macroinvertebrate taxa: Ephemeroptera (Mayflies), Diptera (true flies), Trichoptera (Caddis flies), Plecoptera (Stoneflies), Coleoptera (beetles), *Juga* (snails).
5. Using the sample data set below:
  - a) Calculate the water quality score by using the OWEB water quality tolerance method on page 12-11 – and INTERPRET this score
  - b) Calculate the percentage of organisms that fall into each of the functional feeding group categories (by using the method we discussed in class) – and DISCUSS the overall diversity of this site as evidenced by the functional feeding groups

Taxa	Description	Number
<b>Caddis fly</b>	Stone house	4
<b>Mayfly</b>	2 tails, big bulgy eyes	1
<b>Midge</b>	Red and worm like	14
<b>True fly</b>	Translucent and worm-like	2
<b>Dragonfly</b>	Looks like a hairy beetle	1
<b>Water Mite</b>	Round, red	3
<b>Stonefly</b>	2 tails, about 1 inch long	16
<b>Mayfly</b>	3 tails, long, slender, FAST	11
<b>Caddis fly</b>	Rock house	3
<b>Snail</b>	Hard shell	14
<b>Beetle Larva</b>	Long, thin, snouty with sharp mandibles	3
<b>Beetle Larva</b>	Short and fat with sharp mandibles	4
<b>Stonefly</b>	2 tails, short and fat	5