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