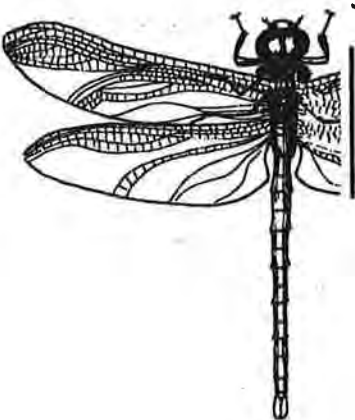


Macroinvertebrates Post-Trip Activity

Now that you've seen some Macroinvertebrates at Agapé, let's see how well you can do at matching the adult with the larvae or nymph. Bonus if you know what Class it's in (I, II, or III).

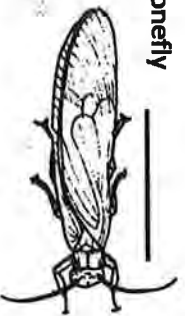
1. Dragonfly



A.



2. Stonefly



B.



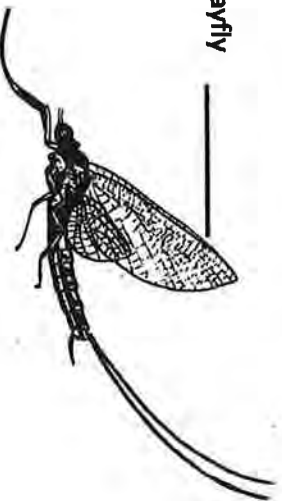
3. Caddisfly



C.



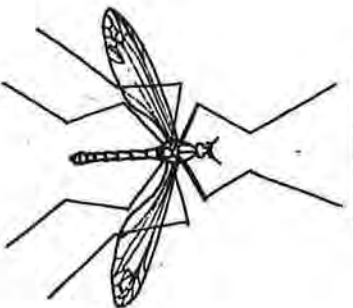
4. Mayfly



D.



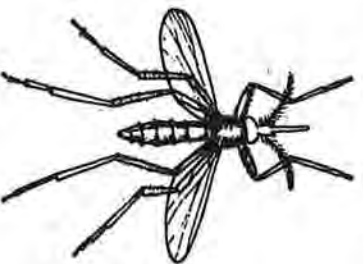
5. Cranefly



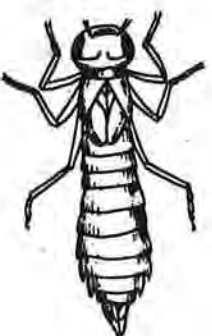
E.



6. Mosquito



F.



You are going to determine the water quality rating for three streams by doing a Macroinvertebrate Study. Remember, knowing what Class the macroinvertebrates are in will determine the water quality rating.

1. The first stream you are investigating runs through a farm town; mainly pig and cattle. Pig farms have lagoons to contain the animal waste. The cattle farms have ponds the cows frequent for water. During your collection you found the following macroinvertebrates: Leech, Snail, and Midge Fly Larvae.
 - a. What is your water quality rating? (circle one) Excellent Good Poor
 - b. Did you expect this?
 - c. Why do you think you got this rating?

2. The second stream you are investigating runs through a big city. The city encounters heavy car commutes and lots of new development construction. During your collection you found the following macroinvertebrates: Damselfly Nymph, Dragonfly Nymph, and Mosquito Larvae.
 - a. What is your water quality rating? (circle one) Excellent Good Poor
 - b. Did you expect this?
 - c. Why do you think you got this rating?

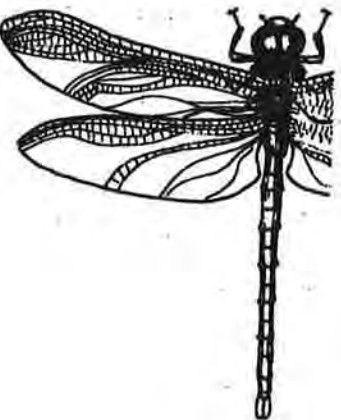
3. The third stream you are investigating runs through a state park. Many people visit this park to go hiking. This area has some nice wildlife viewing areas where no development has occurred. During your collection you found the following macroinvertebrates: Caddisfly Larvae, Mayfly Nymph, Damselfly Nymph, and Aquatic Worms.
 - a. What is your water quality rating? (circle one) Excellent Good Poor
 - b. Did you expect this?
 - c. Why do you think you got this rating?

Teacher Answer Key Macroinvertebrates Post-Trip Activity

Now that you've seen some Macroinvertebrates at Agapé, let's see how well you can do at matching the adult with the larvae or nymph. Bonus if you know what Class it's in (I, II, or III).

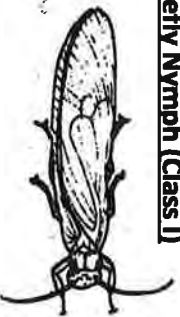
1. Dragonfly F-Dragonfly Nymph (Class II)

A.



2. Stonefly C-Stonefly Nymph (Class I)

B.



3. Caddisfly A-Caddisfly Larvae (Class I)

C.



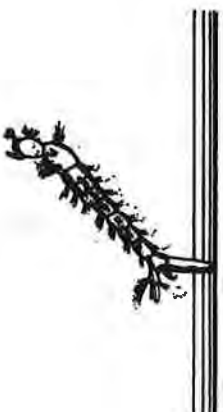
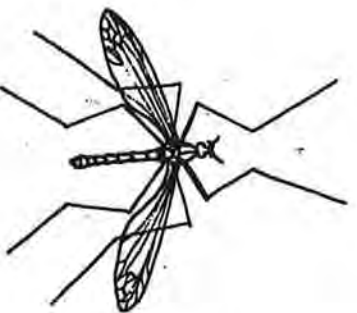
4. Mayfly B-Mayfly Nymph (Class I)

D.



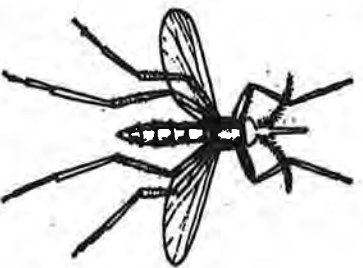
5. Cranefly D-Cranefly Larvae (Class II)

E.



6. Mosquito E-Mosquito Larvae (Class III)

F.



You are going to determine the water quality rating for three streams by doing a Macroinvertebrate Study. Remember, knowing what Class the macroinvertebrates are in will determine the water quality rating.

1. The first stream you are investigating runs through a farm town; mainly pig and cattle. Pig farms have lagoons to contain the animal waste. The cattle farms have ponds the cows frequent for water. During your collection you found the following macroinvertebrates: Leech, Snail, and Midge Fly Larvae.
 - a. What is your water quality rating? (circle one) Excellent Good **Poor**
 - b. Did you expect this?
 - c. Why do you think you got this rating?

If the lagoons or ponds leaked or flooded, nitrates could seep into the stream. High nitrates are a sign of high animal waste, fertilizer, or sewage problems. Also, the majority of the macroinvertebrates found in the stream were Class III which are tolerant to pollution.

2. The second stream you are investigating runs through a big city. The city encounters heavy car commutes and lots of new development construction. During your collection you found the following macroinvertebrates: Damselfly Nymph, Dragonfly Nymph, and Mosquito Larvae.
 - a. What is your water quality rating? (circle one) Excellent **Good** Poor
 - b. Did you expect this?
 - c. Why do you think you got this rating?

All of the development can cause lots of runoff into the stream. Sedimentation is the #1 pollutant for streams. Also, the majority of the macroinvertebrates found in the stream were Class II which are somewhat sensitive to pollution.

3. The third stream you are investigating runs through a state park. Many people visit this park to go hiking. This area has some nice wildlife viewing areas where no development has occurred. During your collection you found the following macroinvertebrates: Caddisfly Larvae, Mayfly Nymph, Damselfly Nymph, and Aquatic Worms.
 - a. What is your water quality rating? (circle one) **Excellent** Good Poor
 - b. Did you expect this?
 - c. Why do you think you got this rating?

There are not many environmental stressors affecting the water quality since it is somewhat protected by the park. Also, the majority of the macroinvertebrates found in the stream were Class I. The students might expect excellent because it is at a park, but there is still some foot traffic through the park. Pristine streams get excellent ratings.

Reference Chart for Classes:

Class I (Sensitive)	Class II (Somewhat Sensitive)	Class III (Tolerant)
Caddisfly Larvae	Dragonfly Nymph	Leech
Mayfly Nymph	Damselfly Nymph	Snail
		Midge Fly Larvae
		Mosquito Larvae
		Aquatic Worms