

Name: \_\_\_\_\_

Date: \_\_\_\_\_

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# Crayfish Dissection Lab

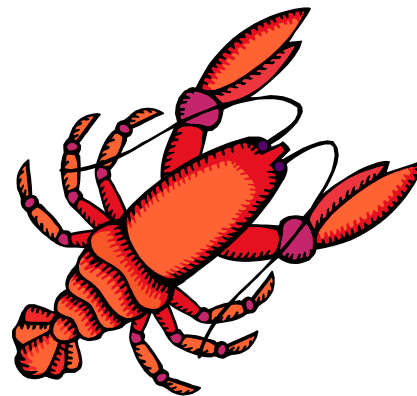
**Directions:** Follow the directions step-by-step, locating each of the structures in the order they appear in the directions. You may want to review terms you don't remember (cephalothorax, thorax, rostrum, telson, carapace, and dorsal) before you start this dissection. You may use your photocopied diagram to help you locate the organs  
\*\* Cross out the number when you have completed that step of the procedure to help you keep your place.

## I. Purpose

The purpose of this lab is to observe the structure and function of internal organs of crayfish through dissection.

## II. Materials

- 1 crayfish
- 1 dissection tray
- 1 pair of dissection scissors
- 1 pair of forceps
- 1 bent probe
- 1 ruler
- 1 piece of paper towel
- 1 pair of gloves
- 1 pair of safety glasses



## III. Procedure

1. Place the specimen in the dissecting tray dorsal side up.
2. Measure (in cm) from the rostrum to the telson, and record
3. Measure (in cm) the length of the abdomen and record
4. Determine the gender of your crayfish by looking at the first pair of swimmerettes and record.
5. Carefully insert the point of the scissors under the top of the carapace (shell) at the back of the cephalothorax and cut up the middle to the rostrum.
6. Cut across the carapace just behind the eyes and remove the two pieces of the carapace.
7. Note the exposed gills (feathery structures just under the carapace you removed).
8. Remove the exposed gills and legs attached to the thorax. Carefully separate the dorsal layer of the muscles in the thorax and not the light colored **heart** just underneath.
9. Remove the heart. The two light yellow masses extending on each side of the body into the head are the **digestive glands**. (The heart is located posterior "behind" these)
10. Between the digestive glands, you may find the small pair of white reproductive organs and cuts in the male animal. If your specimen is female, you may see a large mass of dark colored eggs.

11. To locate the **intestine**, insert the point of the scissors under the dorsal side of the shell of the abdomen and cut back to the telson. Spread the shell and the intestine will be found as a tube on the top side of the muscles of the abdomen.
12. Trace the intestine forward to the point where it joins the large, thin-walled **stomach** in the front part of the cephalothorax.
13. CAREFULLY remove all the organs in the thorax by cutting the short **esophagus** below the stomach and the bands of muscle holding the stomach just behind the eyes. You should be able to lift out most of the internal organs in one piece.
14. Clean out the remaining tissue in the head so that the **green glands** (kidneys) are exposed. \*\* These are pink, not green!
15. In the front part of the head cavity between the eyes, note the small mass of white tissue. This is the **brain**.
16. Trace the nerves that go from the brain to the antennae and eyes.
17. Spread the shell of the abdomen apart and pull out the large muscle. (This is the part of the body that gets eaten, just like shrimp). Note the **ventral nerve cord** that is exposed on the ventral side of the crayfish.
18. The enlargements of the nerve cord in each segment of the abdomen are the **ganglia**.
19. On another sheet of paper, draw the dorsal (top) view of the crayfish. Label each of the 9 bold words above.

#### IV. Data

- A. Diagram – see attached
- B. Observations:  
Measurement of rostrum to the telson: \_\_\_\_\_  
Measurement of the length of the abdomen: \_\_\_\_\_  
Gender of the crayfish: \_\_\_\_\_
- C. Data Table – n/a
- D. Graph – n/a
- E. Analysis Questions (*rewrite the question, then type the answer below in complete sentences*)
  1. What is the job of the green gland?
  2. What is found underneath the rostrum?
  3. What is an interesting thing about the internal structure of your crayfish?
  4. How can you tell if your crayfish is male or female?

#### V. Conclusion (*Use your pink sheet to help you write this – remember to do every prompt except for those that apply to a hypothesis since we didn't have one for this lab*)