

Internal Anatomy of the Crayfish

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 or reference terms you don't remember (It is expected that you know the terms: **cephalothorax, thorax, rostrum, carapace and dorsal “top”** before you start this dissection). You may use your book diagrams to help you locate the organs.

*Check the box next to the number when you have completed that step.

Before you begin Dissecting complete these steps first.

Measure in cm from rostrum to the telson: _____

Measure the length of the abdomen in cm: _____

Is your crayfish Male or Female? _____

1. Place the specimen in the dissecting tray dorsal “top” side up.
2. 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.
3. Cut across the carapace just back behind the eyes and remove the two pieces of the carapace.
4. Note the exposed gills. (Feathery like structures just under the carapace you just removed)
5. Remove the exposed gills and legs attached to the thorax. Carefully separate the dorsal layer of muscles in the thorax and note the light colored **heart** just underneath.
6. Remove the heart. The two light colored masses extending on each side of the body into the head are the **digestive glands**. (The heart is located just posterior “behind” to these.)
7. Between the digestive glands, you will find the small pair of white reproductive organs and cuts in the male animal. If your specimen is female, you will probably see a large mass of dark colored eggs.
8. 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.
9. Trace it forward to the point where the intestine joins the large, thin walled **stomach** in the front part of the cephalothorax.

10. Now, remove all the organs in the thorax by cutting the short **esophagus** below the stomach and the bands of muscle holding the stomach just back of the eyes. You should be able to lift out most of the internal organs in one piece.
11. Clean out the remaining tissue in the head so that the **green glands** (kidneys) are exposed.
12. In the front part of the head cavity, between the eyes, not the small mass of white tissue, the **brain**.
13. Trace the nerves that go from the brain to the antennae and eyes.
14. Cut the hard tissue on the floor of the thorax with your scalpel so that you can follow the **ventral nerve cord** back from the brain to the abdomen.
15. Spread the shell of the abdomen apart and pull out the large muscle. (This is the part of the body eaten in shrimp and lobsters)
16. Note the nerve cord that is now exposed on the floor of the abdomen. The enlargements of the nerve cord in each segment of the abdomen are the **ganglia**.

On another sheet of paper, draw the dorsal “Top” view of the crayfish. Label each of the bold words above.

Conclusion:

- 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.**