

Squid Dissection

Materials:

- preserved squid
- dissection tray
- scalpel, scissors, probe, tweezers
- microscope

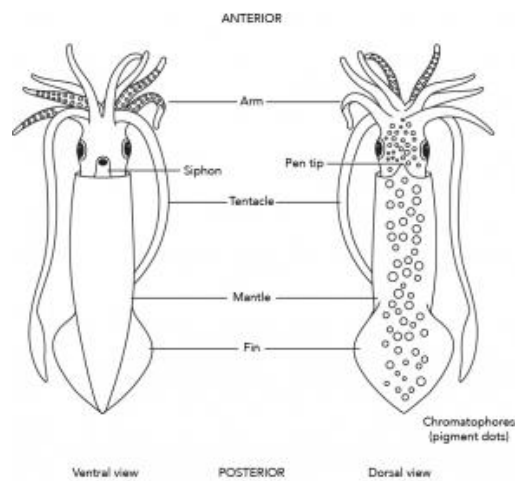


Fig. 3.71.1. Diagram of external squid anatomy

Image by Byron Inouye

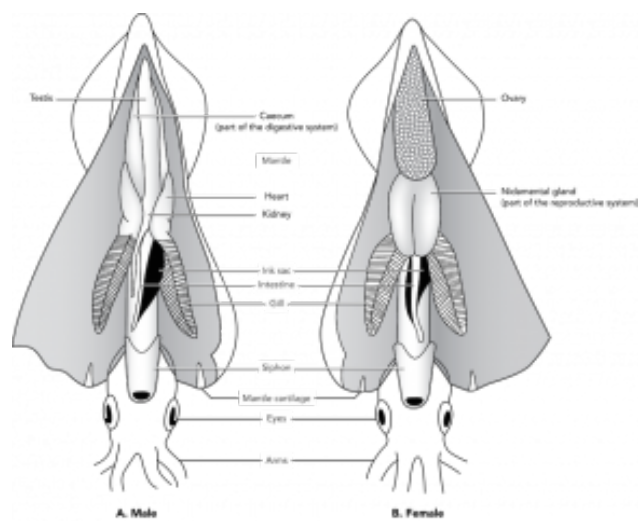


Fig. 3.71.2. Diagram of internal squid anatomy

Image by Byron Inouye

Procedures

*** Use the laminated reference pages to help you identify structures. Your Dissection report must include the requested sketches AND complete answers to the questions at the end of this handout.**

1. Lay the squid dorsal side down on your dissection tray. Lay the squid with its head to the left and its siphon opening upward (Fig. 3.71.1).
2. Reach under the animal and remove the pen from the dorsal side by grasping it firmly with your fingers and pulling it free from the mantle.
3. Using a scalpel or dissecting scissors, cut the mantle from its anterior edge next to the siphon to its posterior tip. Do not cut into the internal organs.
4. Using a blunt probe, find the internal organs listed below (Fig. 3.71.2). Describe their functions. Sketch and label the following organs in your dissection report:
 - Caecum
 - Intestine
 - Pen
 - Ink sac
 - Heart
 - Ovary and testis
 - Gills
 - Chromatophores
 - Kidney
 - Nidamental gland

5. Examine a single sucker from an arm.
 - Cut off a 0.5 centimeter (cm) piece of the arm and place it on a glass slide.
 - View it under the microscope.
 - Draw a single sucker in your dissection report.

6. Observe the chromatophores, small frecklelike spots on the outer layer of the mantle. Cut out or peel off a small piece of the skin that contains the spots. Observe at about 20x under a microscope. Stretch the skin, noting any apparent change of color. Record your observations.

7. Remove the beak.
 - Cut out the arms from the head with a scalpel.
 - Pull out the beak.

8. CLEAN YOUR MATERIALS AND AREA COMPLETELY

Dissection Report Questions

1. Describe how squid are cephalized using the identifying features examined in the dissection.

2. What is the purpose of the squid's pen?

3. What are squid tentacles and suckers used for? Describe how the form of the tentacles relates to the function.

4. Did you observe any color changes in the squid's chromatophores? Explain.