

## Exercise 10

### Cnidaria (Coelenterata)

#### Learning Objectives

After completing this exercise, you should be able to do the following:

1. Describe the evolutionary significance of the phylum Cnidaria and appreciate evolutionary relationships within the phylum.
2. Describe diploblastic, tissue-level organization.
3. Describe cnidarian polymorphism.
4. Define radial symmetry and describe its advantages for sedentary organisms.
5. Describe the cnidarian body plan.
6. Recognize class representatives.
7. Recognize and describe the function of those structures studied in the laboratory.

#### Prelaboratory Quiz

Study this week's laboratory exercise and then complete the following quiz to assess your preparation for the laboratory.

1. Members of the phyla Cnidaria and Ctenophora possess
  - a. radial or biradial symmetry.
  - b. diploblastic, tissue-level organization.
  - c. oral and aboral ends.
  - d. All of the above are correct.
2. The life cycle of many cnidarians involves an alternation between \_\_\_\_\_ and \_\_\_\_\_ stages.
  - a. aquatic and terrestrial
  - b. polyp and medusa
  - c. bilateral and radial
  - d. diploblastic and triploblastic
3. Members of the class Hydrozoa include
  - a. sea anemones.
  - b. true jellyfish.
  - c. corals.
  - d. colonial hydroids and *Hydra*.
4. Members of the class Anthozoa include
  - a. *Hydra*.
  - b. corals and sea anemones.
  - c. true jellyfish.
  - d. freshwater cnidarians.
5. The larval stage of cnidarians is called the
  - a. planula.
  - b. hydranth.
  - c. polyp.
  - d. medusa.
6. True/False The epidermis of cnidarians contains epithelio-muscular cells and cnidocytes.
7. True/False The phylum name Cnidaria is derived from the presence of specialized cells called cnidocytes, which are used in reproduction.