SAVE THE BAY
NARRAGANSETT BAY

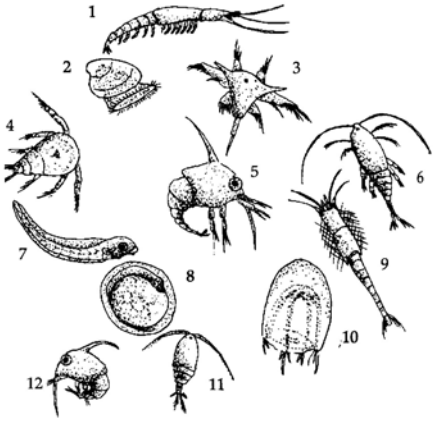
Uncommon Guide to Common Life on Narragansett Bay

A continuing series that describes the common fish, invertibrates, plants, water birds and marine mammals that share our Bay.

This Month

Zooplankton

Common Nicknames:
Microscopic animals, copepods



1. Shrimp larvae
2. Bivalve larvae
3. Barnacle larvae
4. Barnacle larvae
5. Crab larvae
6. Copepod
7. Fish larvae
8. Fish egg
9. Shrimp larvae
10. Comb jelly
11. Copepod
12. Crab larvae

Field Markings: Various colors and shapes, mostly translucent
Size: Range from microscopic to jellyfish that grow upward of 8 feet
Habitat: Throughout the water column in both fresh and marine environments
Seasonal Appearance: Year-round; numbers tend to increase in late spring and early fall

DISTINGUISHING FEATURES AND BEHAVIORS

Zooplankton is the common name given to many small species of animals found in fresh and marine waters throughout the world. The word "zooplankton," derived from Greek, means "wandering animals." Although some species can reach eight feet long, most of these animals are so minute they are visible only with a microscope.

Two general groups of zooplankton exist: holoplankton (those that remain planktonic throughout their entire life) and Meroplankton (those that are larval stages of larger life forms).

Jellyfish are the largest example of holoplankton. They remain in the pelagic zone for life and can grow as large as eight feet, with tentacles up to 120 feet.

Meroplankton are the eggs and larvae of nearly all species of fish and bethnic invertebrates. These creatures are planktonic during their developing stages and will eventually settle out of the planktonic zone as juveniles.

Of the numerous zooplankton species, the most abundant and diverse are copepods. Copepods are crustaceans similar to lobsters, crabs and shrimp. Their tough exoskeleton is composed of calcium carbonate, and their bodies are divided into three sections: head, thorax and abdomen. Two antennae protrude from the head and aid in swimming, while two to four pairs of appendages extend from the thorax.

Zooplankton migrate vertically in the water column each day, feeding on the phytoplankton near the surface of the water. They have adapted various mechanisms to float in the water column and protect themselves from predation. Some, such as larval crustaceans, have spikes that protect them and increase surface area for better floatation. Some species of fish larvae have oil globules that give them added buoyancy.

Zooplankton are a critical element in the Bay food chain, preyed upon by every filter-feeding organism, including shellfish, fish and whales. The great whales feed entirely on one particular zooplankton species called krill. Copepods and other zooplankton feed on phytoplankton and are the first link between the primary producers and larger animals. They are, by far, the most abundant group of animals in the world's oceans.