

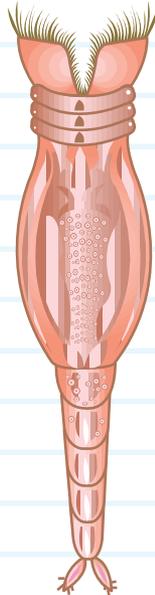
# SMART

## Angler's Notebook

by Carl Richardson

### Zooplankton

**Zooplankton** (zoe-uh-plank'-ton) are consumers that feed on phytoplankton. Most are so small that you need a microscope to see them. Yet, they are important parts of aquatic ecosystems. Young fish fry, or fingerlings, need zooplankton to grow and develop. If there isn't enough phytoplankton, there won't be enough zooplankton to feed the hungry growing fish. The amount of zooplankton in the water is vital to gamefish populations. Zooplankton come from three groups of animals: protozoa, rotifers, and arthropods.



Rotifer-  
(*Philodina roseola*)

#### Rotifers

Rotifers are small animals. They are often mistaken for single-celled animals. They are so named because they have tufts of hair that rotate and move food toward the mouth. Rotifers graze on phytoplankton. Some live free-floating. Others attach themselves to a plant and suck out the juices.



Rotifer-  
(*Monostyla lunaris*)

#### Arthropods

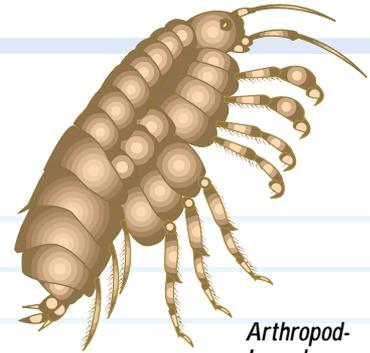
Arthropods are the largest zooplankton animals. They have a shell, many legs, and large antennae. The group of arthropods includes small crustaceans such as shrimp, fleas, copepods, side swimmers, or scuds, and isopods.

There are two main kinds of shrimp: fairy and clam. Shrimp are often less than one inch in length.

**Water fleas** are abundant. They are active. They move by using very large antennae like paddles. The most common water

flea is daphnia. Daphnia are less than .05 inches long!

**Copepods** are also abundant in freshwater habitats. They measure less than 0.1 inches in length. They have very large antennae that are used to paddle the copepod around.



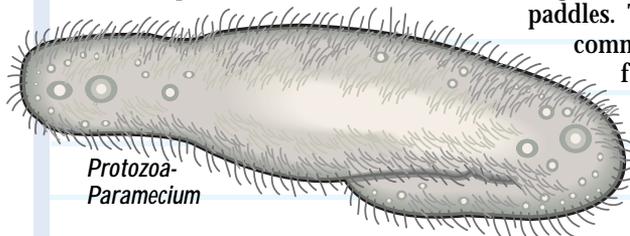
Arthropod-  
Isopod  
Scud  
(*Amphipoda*)

**Isopods** are likely the largest of the animals called zooplankton. Some can reach lengths of 1/2-inch. They are very common in streams, rivers, and lakes with lots of vegetation. Two common kinds are the scud, or side-swimmer, and the sow bug. These critters are often large enough for adult fish to eat!

Knowing more about zooplankton won't help you catch more fish. Still, knowing about these critters can help you figure out why some waters are more productive than others. This information can also help you learn more about food webs. ☐

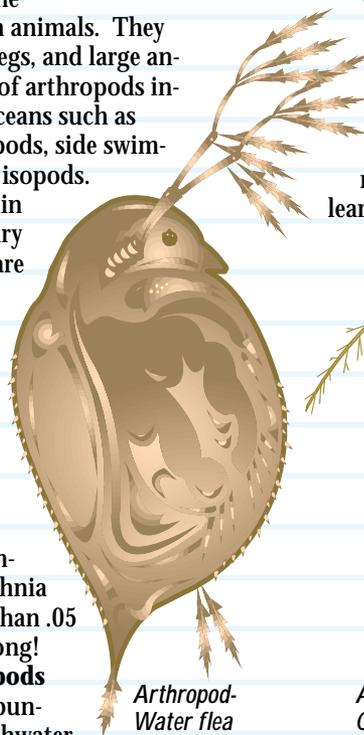
#### Protozoa

Protozoa are single-celled animals. They move tails or hairs to capture phytoplankton and move about. There are more protozoa in a waterway than any other kind of animal. There are more than 30,000 different kinds of protozoa.

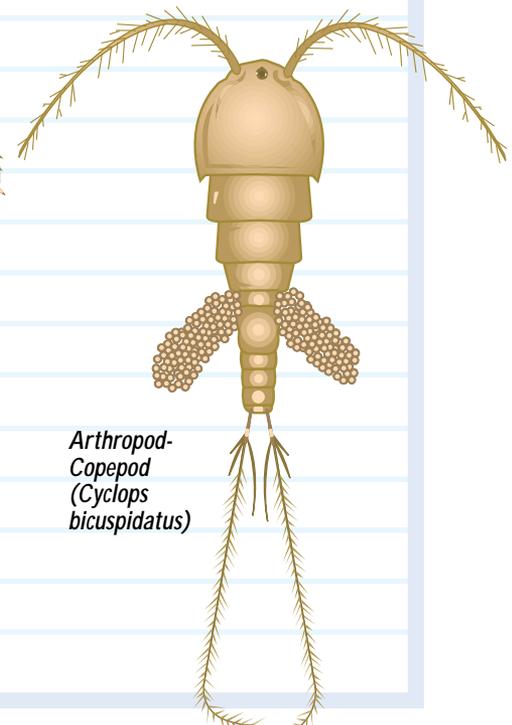


Protozoa-  
Paramecium

Paramecia are the most common kind of protozoa. A paramecium is a shoe-shaped cell with hairs all around. These hairs move it around in the water. Hairs also fan food toward its "mouth."



Arthropod-  
Water flea  
(*Daphnia pulex*)



Arthropod-  
Copepod  
(*Cyclops bicuspidatus*)