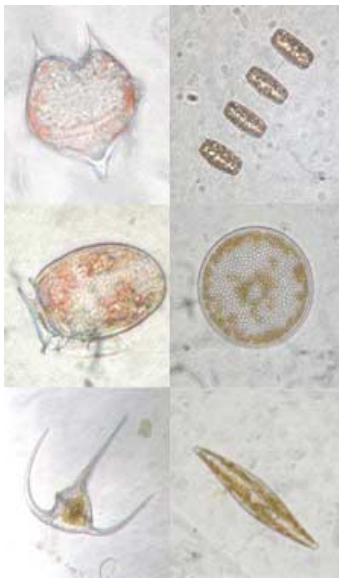
Plankton

By Anna Bunyan

Plankton are the tiny organisms that inhabit both oceans and freshwater. The word 'plankton' comes from the Greek word '*planktos*' meaning "wanderer" or "drifter". They are so called because they are either unable to swim or are very poor swimmers. This makes it impossible to swim against the flow of water and so they just float with the currents.

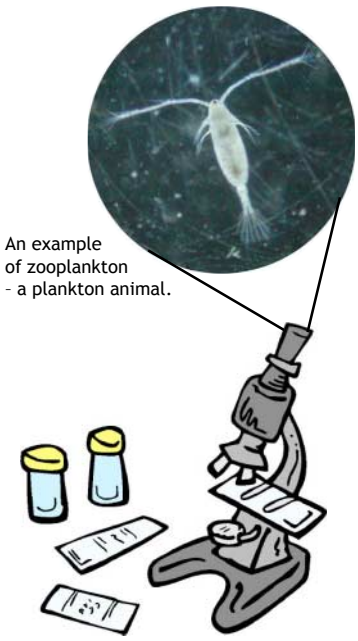
Plankton are microscopic plants and animals and most are invisible to the naked eye. Planktonic plants are known as **phytoplankton**, and planktonic animals are known as **zooplankton**. Most zooplankton are microscopic and many will spend their whole life floating in the water column as plankton. However, some zooplankton are the young (or larvae) of much larger animals, such as fish, crabs and barnacles, and will only spend part of their life as plankton.

Plankton is of primary importance in the aquatic food chain. The smaller plankton feed the larger plankton, which in turn feed larger aquatic organisms like fish and cetaceans (e.g. dolphins).



Courtesy of Sherkin Island Marine Station

Examples of phytoplankton - planktonic plants.



An example of zooplankton - a plankton animal.

Most plankton can only be seen with the help of a microscope.

A Breath of Fresh Air!

Phytoplankton also play a vital role in producing oxygen and absorbing carbon dioxide. Oxygen is produce during photosynthesis* and approximately 40% of photosynthesis on Earth is carried out by planktonic organisms. That means that nearly half of the world's oxygen is generated by phytoplankton! Because the phytoplankton use carbon dioxide from the air to produce food, the ocean forms what is known as a 'carbon sink', helping to absorb some of the carbon dioxide (too much carbon dioxide leads to global warming). In fact, the oceans form the world's largest carbon sink, even larger than all the world's forests put together.

(*Photosynthesis is the process that converts energy in sunlight to chemical forms of energy that can be used by biological organisms.)

Courtesy of NOAA

Plankton 'blooms'

Certain environmental conditions can cause an individual species of plankton to reproduce in large amounts, forming a 'bloom'. Some plankton are toxic and blooms can pose serious health risks for humans and wildlife. The toxic plankton may be eaten by fish and shellfish and may eventually pass along the food chain to humans. Various plankton blooms can cause the water to turn reddish-brown and these are often known as "red tides". However, not all blooms that discolour the water are harmful, so the term "harmful algae bloom" is a more accurate name for a bloom that can pose a threat.