

## AQUATIC ECOLOGY 3 Prof. Dr. Nilsun DEMİR

Ankara

### sunlight

phytoplankton, seaweed

100 C

fish, zooplankton

#### Producers

Consumers

Inorganic Nutrients P<sub>N</sub>N<sub>P</sub>P PN

phosphorus, nitrogen

#### Decomposers

bacteria, Benthic organisms

## Food webs

Food webs are more complex, and consist of a network of linked food chains. Food webs include autotrophs, at the lowest feeding level, to the herbivores (primary consumers) and then to various carnivores (secondary consumers). Food webs show principles of ecological emergence through the nature of trophic relationships

Food webs are composed of subgroups where members in a community are linked by strong interactions, and the weak interactions occur between these subgroups.

# **Trophic level**

An organism's position in the food chain as determined by the number of energytransfer steps required to reach that level (Begon *et al.*1990).

## A fish that has consumed an insect, which itself has just consumed algae, is at a higher trophic level than the insect.