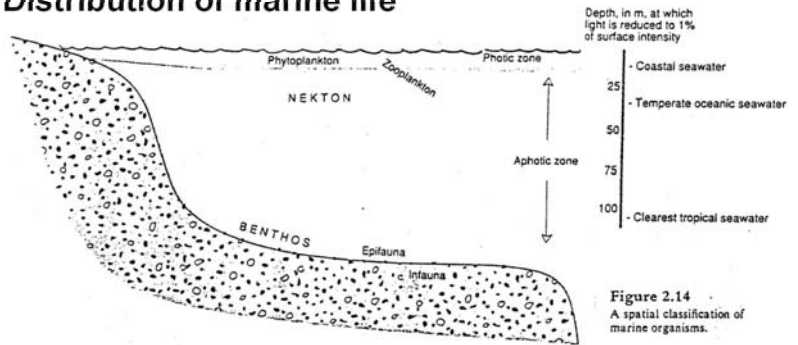
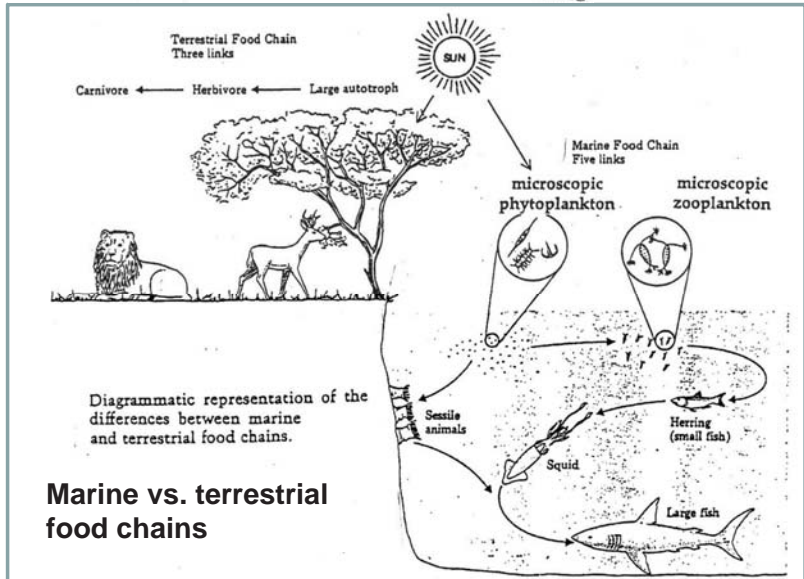
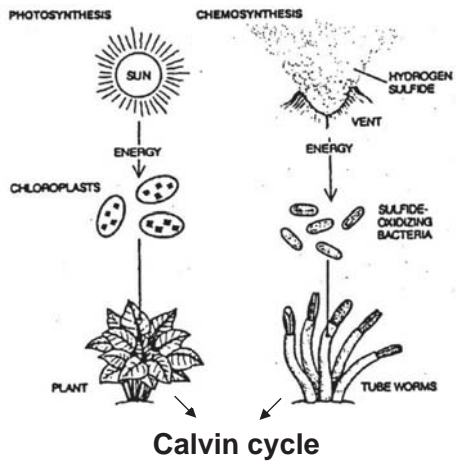


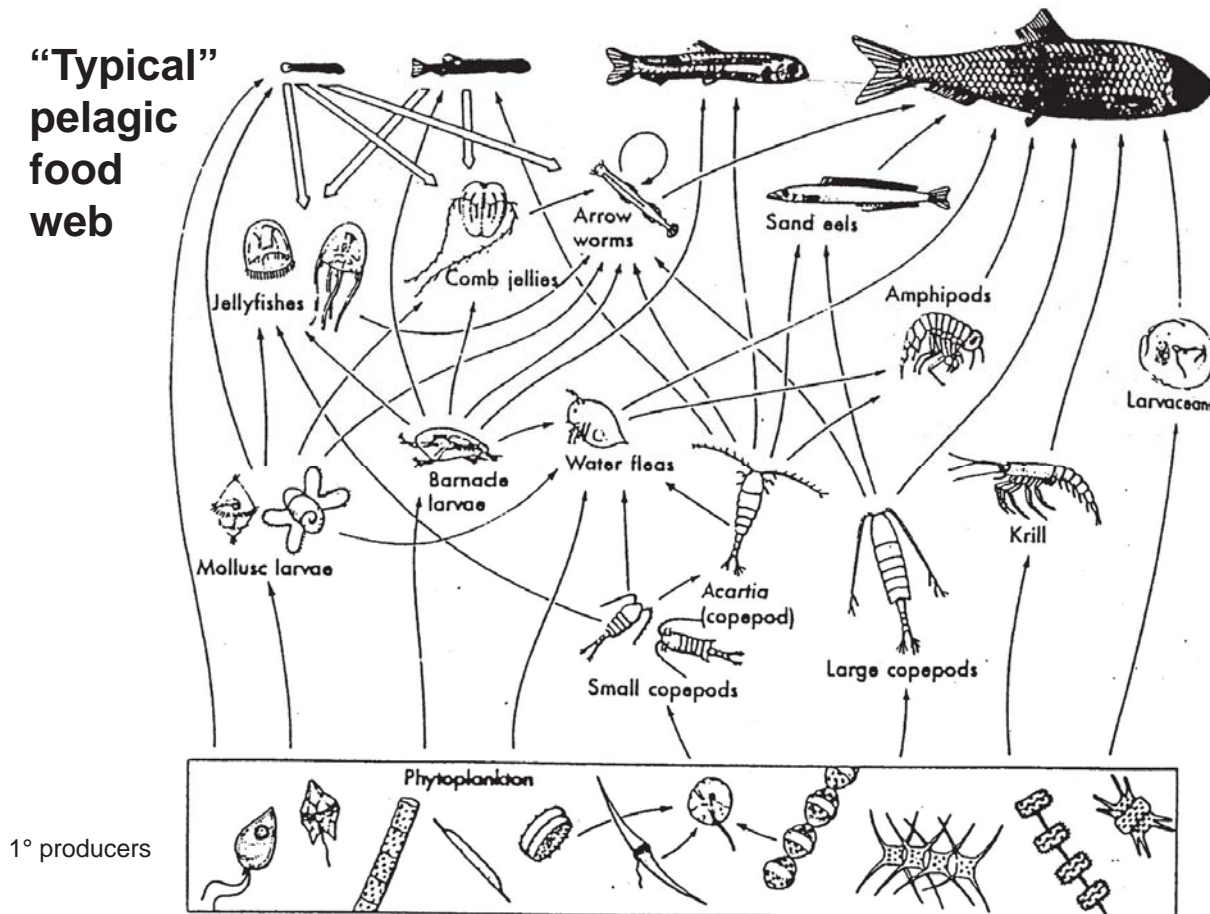
### Distribution of marine life

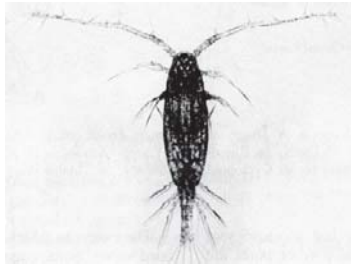


### Sources of nrg input

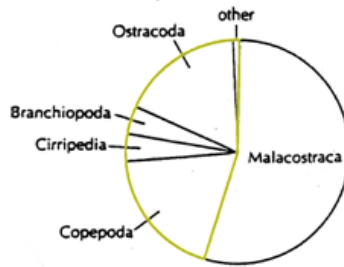


### “Typical” pelagic food web

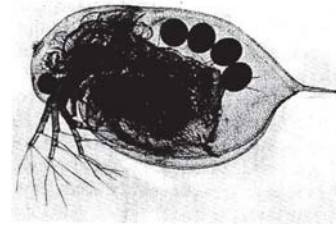
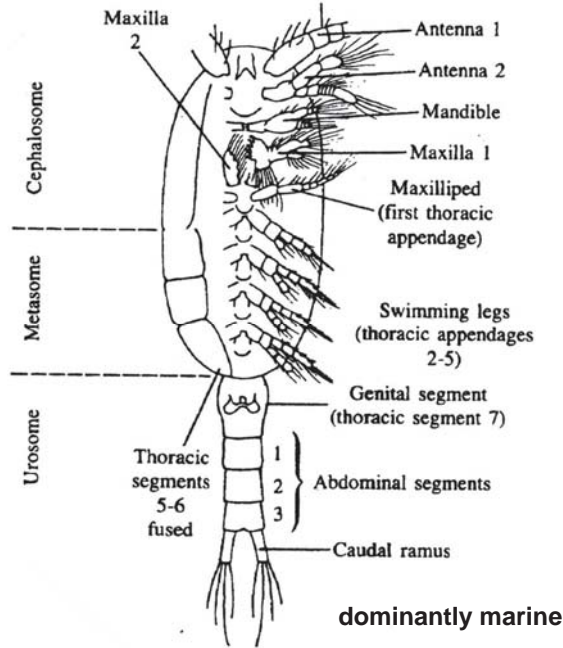




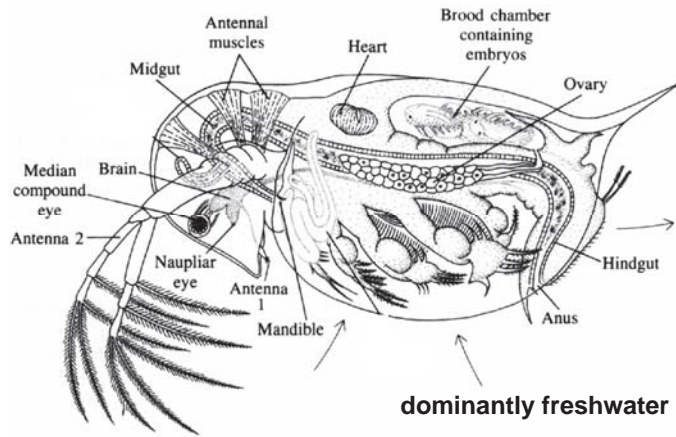
**Subcl. Copepoda**  
e.g. *Calanus*



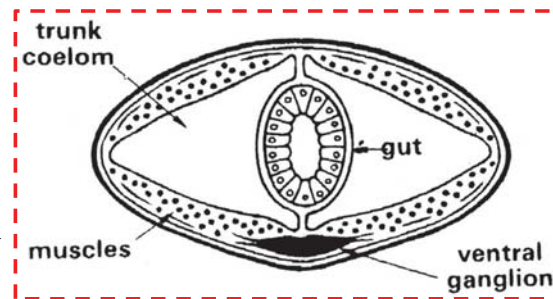
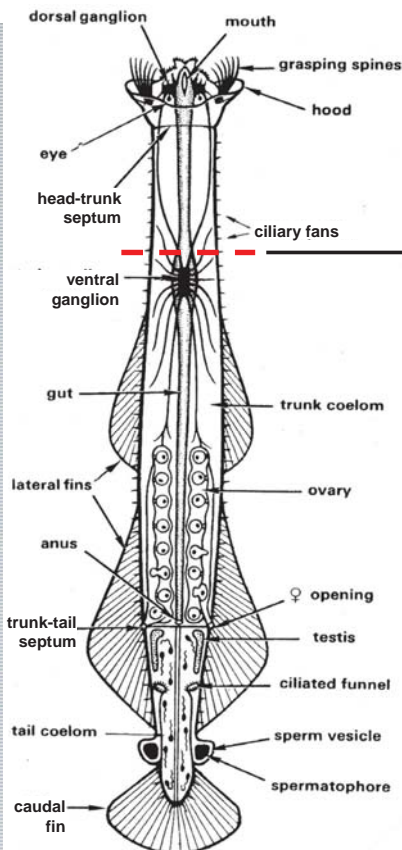
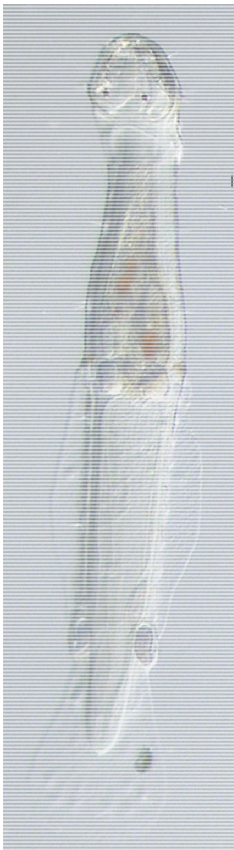
**Ph. Arthropoda**  
**Subph. Crustacea**  
**Cl. Maxillopoda**



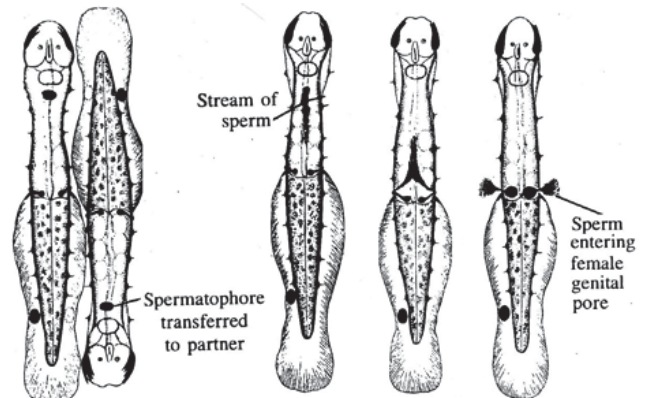
**Subcl. Branchiopoda**  
"water fleas"  
e.g. *Daphnia*



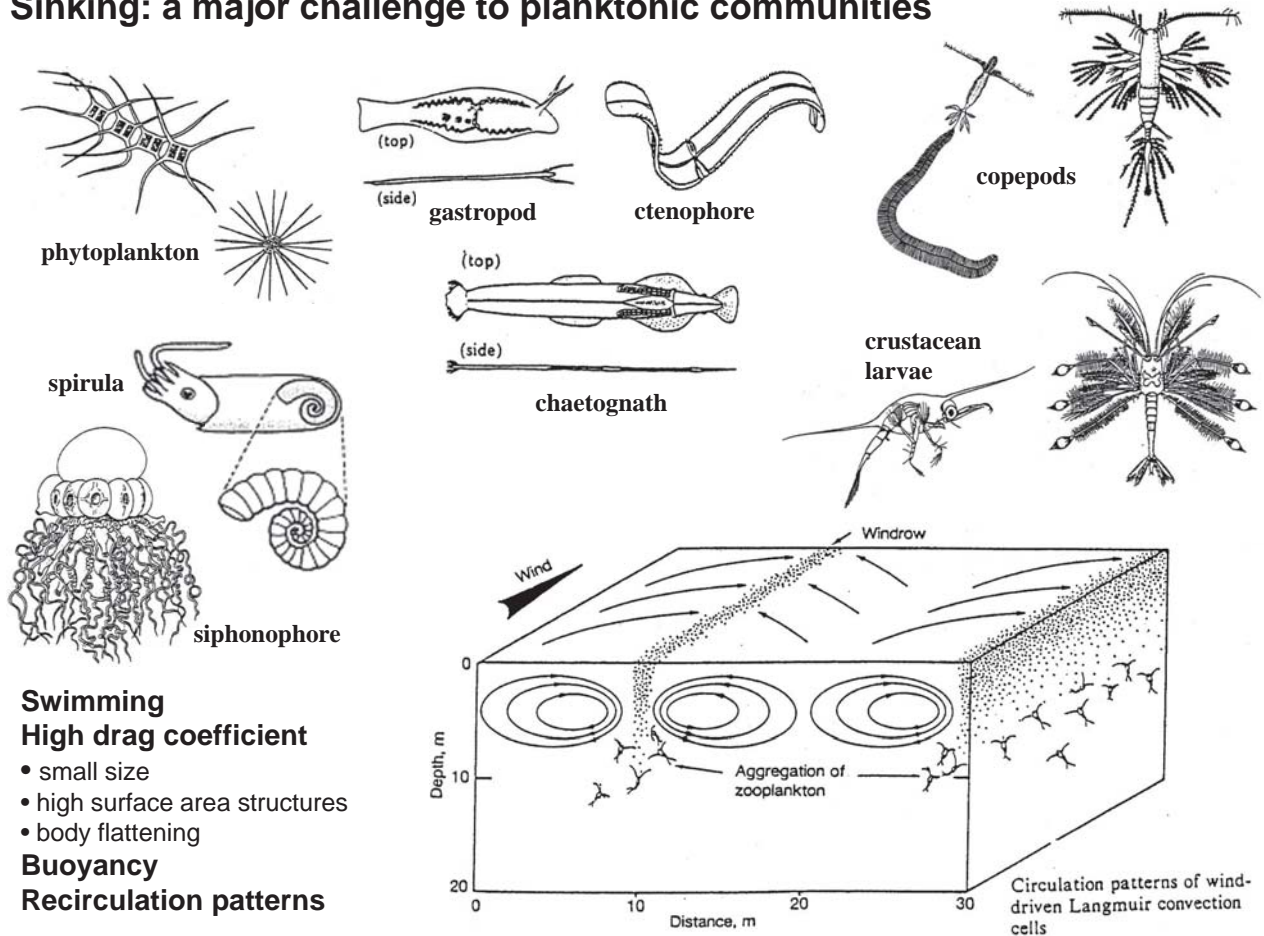
**Ph. Chaetognatha**



**reciprocal sperm transfer in benthic *Spadella***



# Sinking: a major challenge to planktonic communities



## Swimming

### High drag coefficient

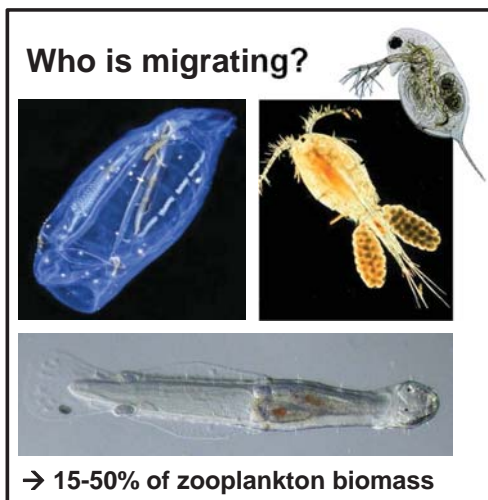
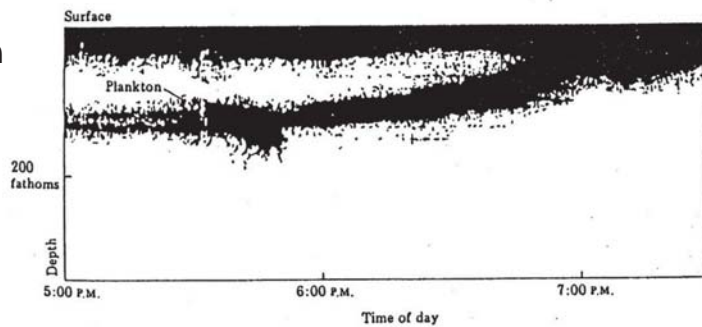
- small size
- high surface area structures
- body flattening

### Buoyancy

### Recirculation patterns

## Patterns of diel vertical migration

Figure 2.26 Sonogram record of movement of vertical migrating plankton.



## Why? Stich & Lampert (1981): costs and benefits of different migration strategies of two copepod species

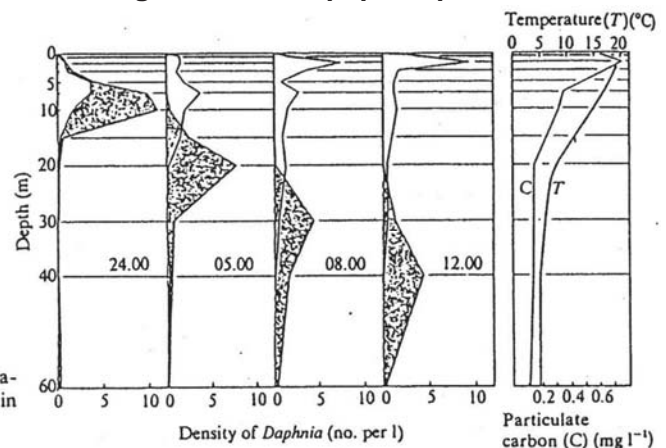


Fig. 1 Typical examples of the different diurnal vertical migrations of *D. galeata* (open area) and *D. hyalina* (shaded area) in Lake Constance, July 1977.