

Biogeography. Lecture 9

Alexey Shipunov

Minot State University

February 3, 2016



Outline

Basics of ecology

Ecosystems and biosphere



Basics of ecology

Ecosystems and biosphere

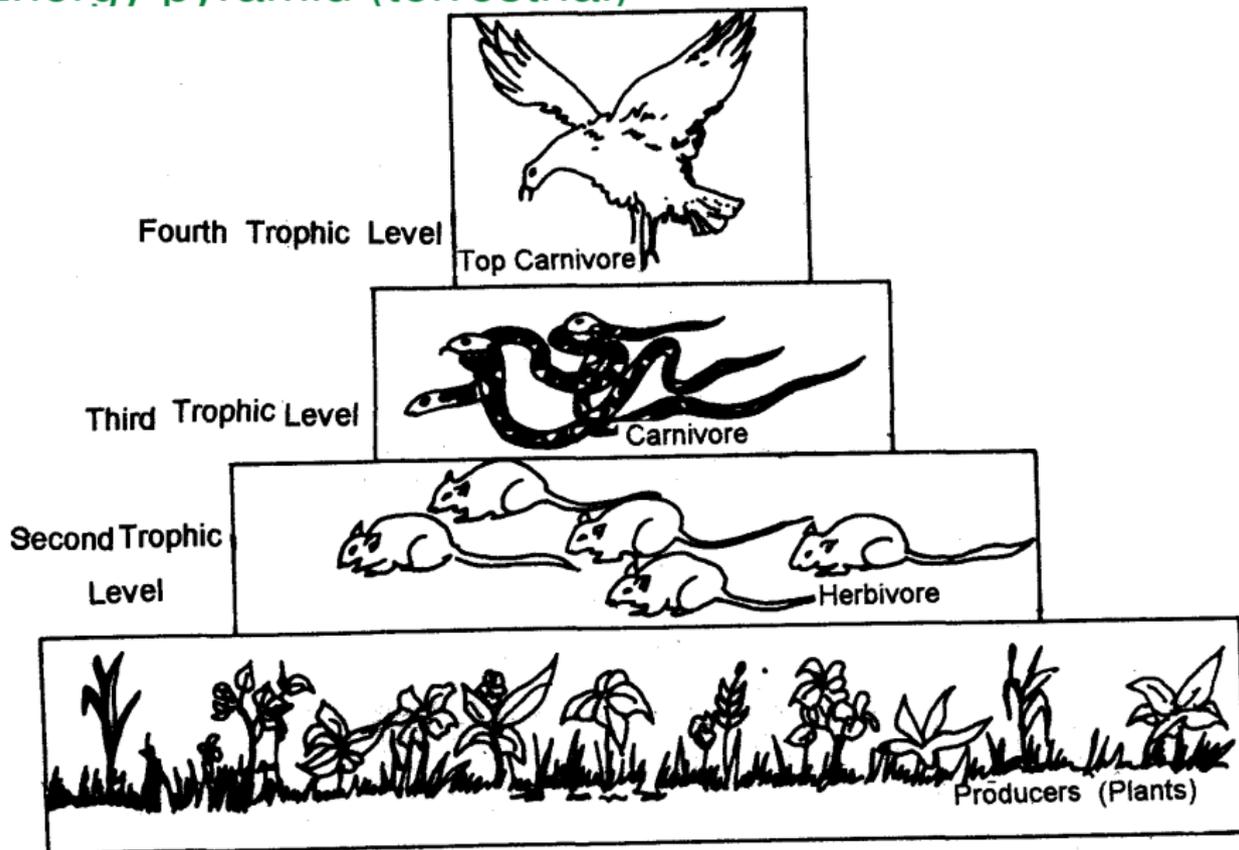


Food webs

- ▶ Plant-based: producer – herbivore (consumer I) – carnivore (consumer II) etc.
- ▶ Detritus-based: decomposer – detritivore – carnivore (consumer II) etc.



Energy pyramid (terrestrial)

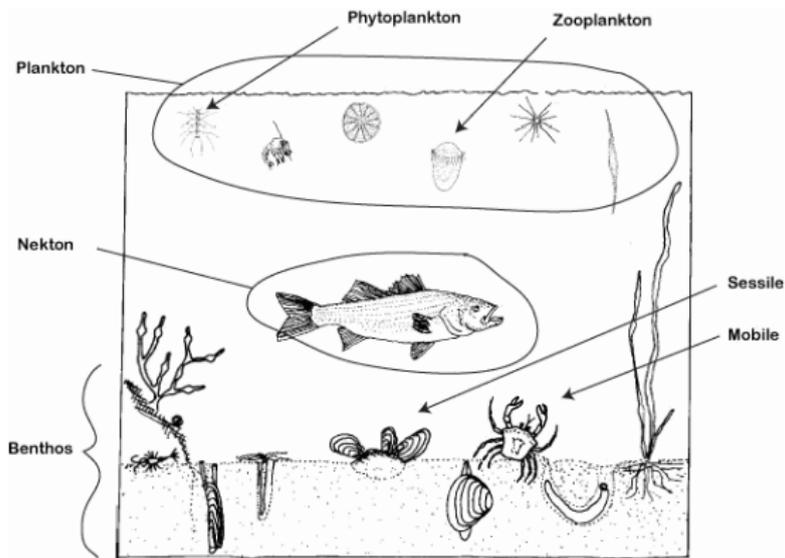


Examples of ecosystems' structures

- ▶ Pond: phytoplankton, zooplankton, nekton, benthos
- ▶ Ocean: pelagic and littoral zones and some additional layers like neuston (first mm of surface)
- ▶ Forest: layers



Plankton, nekton and benthos



Succession

- ▶ Temporal chain of ecosystems
- ▶ Primary or secondary
- ▶ May start on bare minerals, river deposits, water
- ▶ May end with “climax” (F. Clements)



Summary

- ▶ Ecosystems are self-reproduced and self-regulated units



For Further Reading



A. Shipunov.

Biogeography [Electronic resource].

2014—onwards.

Mode of access:

http://ashipunov.info/shipunov/school/biol_330



Ecology.

<http://en.wikipedia.org/wiki/Ecology>

