

Food Web:

Food chains in natural conditions never operate as isolated sequences, but are interconnected with each other forming interlocking pattern, which is referred to as a food web.

Under natural conditions, the linear arrangement of food chains hardly occurs and these remain indeed interconnected with each other through different types of organisms at different trophic levels.

For example,

in grazing food chain of grassland, in the absence of rabbit, grass may also be eaten by mouse. The mouse in turn may be eaten directly by hawk or by snake first which is then eaten by hawk. Thus, in nature there are found alternatives which all together constitute some sort of interlocking pattern and are called the food web.

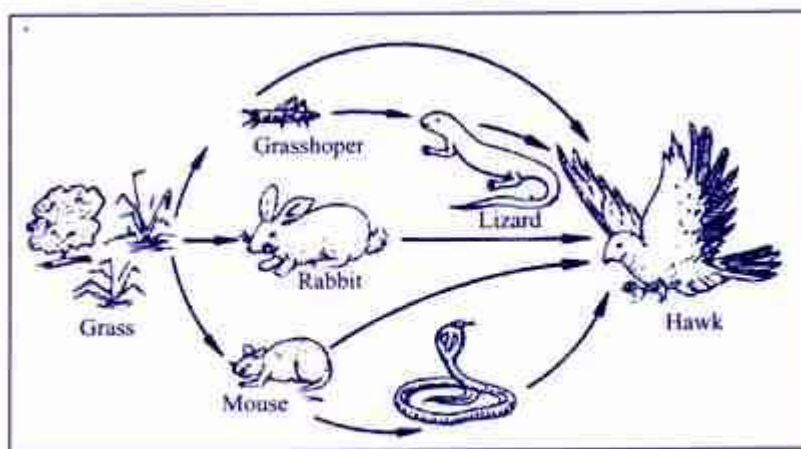


Fig. 1.1 Diagrammatic sketch showing a food web in a grassland ecosystem.

In such a food web in grassland, as shown in fig 1.1, there may be seen five possible food chains interlocked together making the food web, which in sequences are:

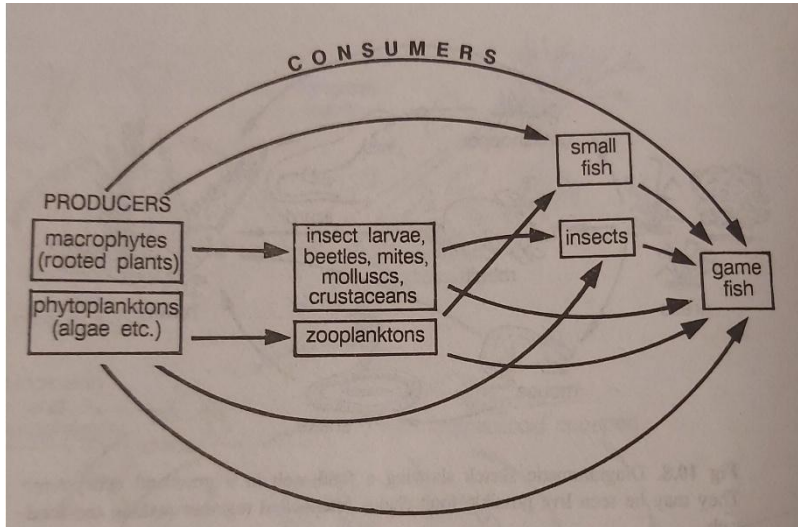
1. Grass-» Grasshopper-» Hawk
2. Grass-» Grasshopper-» Lizard-» Hawk
3. Grass-» Rabbit-» Hawk (or vulture or fox or even man)
4. Grass-» Mouse-» Hawk
5. Grass-» Mouse-» Snake-» Hawk

Besides those shown in Figure 1.1, there may also be present some other consumers as **vultures, fox and man in grasslands**, and if so, the food web may be even more complex.

However, these all five chains are interlinked with each other at different points, forming food web. **Real food webs usually have hundreds of species interlinked by their feeding habits.**

In Pond ecosystem:

A similar food web in a pond, with different interlinked food chains.



A balanced ecosystem is essential for the survival of all living organisms of the system. For instance, had primary consumers (herbivores) not been in nature producers would have perished due to overcrowding and competition. Similarly, the survival of primary consumers is linked with the consumers (carnivores) and so on. Thus, each species of any ecosystem is indeed kept under some sort of a natural check so that the system may remain balanced.

The complexity of any food web depends upon the diversity of organisms in the system.

It would accordingly depend upon two main points:

- (i) Length of the food chain. Diversity in the organisms based upon their food habits would determine the length of food chain. More diverse the organisms in food habits, more longer would be food chain.
- (ii) Alternatives at different points of consumers in the chain. More the alternatives more would be the interlocking pattern. In deep oceans, seas, where we find a variety of organisms, the food webs are much complex.