Food Chains and Food Webs

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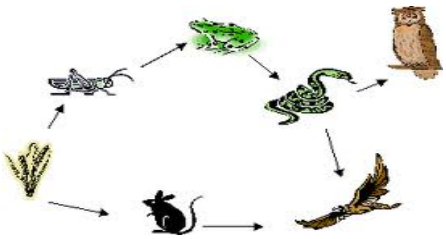
Predator Prey Relationships

Every organism needs energy to live. Plants get energy from the sun, some animals eat plants, and some animals eat other animals.Food chain and food webs are representations of thepredator-prey relationships betweenspecies within anecosystem orhabitat.

A food web is a graphical description of feeding relationships among species in an ecological community, that is, of who eats whom. It is the path of food from a given final consumer back to a producer.

Typical food chain

- The Grass eaten by a Grass hopper
- The Grass Hopper is eaten by a Mouse
- The Frog is eaten by Snake
- The Snake is eaten by Owl
- The Owl is eaten by Hawk



Grass ? **Grasshopper** ?**Mouse** ?**Snake** ?**Owl** ? **Hawk**

Thefood chain above identifies the autotrophs and heterotrophs, and classifies each as an herbivore, carnivore, etc.

Autotrophs or primary producers:

Photosynthetic plants that make their own food from sunlight (Photosynthesis)

Herbivores or primary consumers

Organisms that eat the autotrophs (Grasshopper eats grass)

Secondary consumers

Animals that eat herbivores (Mouse eats grasshopper).

Tertiary consumers

Animals are eaten by larger predators (Snake eats mouse and owl eats snakes)

Quaternary consumers

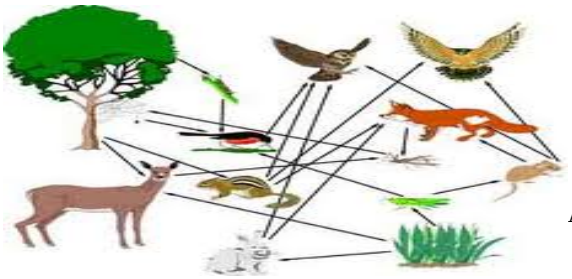
Tertiary consumers are eaten by them (Hawk eats owl)

- Food chain end with a top predator.
- The position holds by an organism in a food chain is the tropic level.
- Exchange of Energy continues even if any animal dies and decomposed bydecomposers (like bacteria etc or eaten by detrivores (like vulture etc).

Equilibrium

The herbivore population will be declined if the number of carnivores in a community increases. Because they start eat more and more of the herbivores. It will then be difficult for the carnivores to find herbivores to eat, and automatically the carnivores' population decreases. The carnivore and Herbivore limits each other's populations. And it is known as Equilibrium. The same equilibrium is maintained between plants and herbivores too.

Food Web



A food web differs from a food chain. A food web aims to depict a more complete picture of the feeding relationships, and can be considered a bundle of many interconnected food chains occurring within the community

Hawks don't limit their diets to snakes, snakes eat things other than mice, mice eat grass as well as grasshoppers, and so on. A more realistic depiction of who eats whom is called afood web.

A food web is a series of related food chains displaying the movement of energy and matter through anecosystem.

Categories of Food web:

1. The grazing web, beginning with autotrophs,
2. The detrital web, beginning with organic debris.

Want to know more about the categories of food web?click here to schedule live homework help from a certified tutor!

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Reference Links:

- http://en.wikipedia.org/wiki/Food_chain
- http://www.vtaide.com/png/foodchains.htm
- http://en.wikipedia.org/wiki/Decomposer
- http://www.youtube.com/watch?v=TE6wqG4nb3M
- http://www.youtube.com/watch?v=3Bn7wdCP2v4

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