Food Webs

The Ecological Network

Food web is an ecological network. They look like a concept map. From such a map we understand the pathways energy flows in an ecological community. Solar energy being used by plants for the production of food by photosynthesis is the initial step of this process. Once the plants grow for a while they accumulate carbohydrates. When herbivorous animals feed on plants, this will pass onto their body. Each and every line of food web explains the relations between organisms in the life of web.

Definition:
Food web is a graphical description of feeding relationships among species in an ecological community, that is, of who eats whom.

Types of Food Web

1. **The Grazing Web** - beginning with autotrophs.
2. **The Detrital Web** - beginning with organic debris.

• Nutrients and energy pass on to herbivores from plants and then to carnivores or omnivores in the grazing web
• Plant and animal matter is broken down by decomposers and then pass on to detritivores and then to carnivores in the detrital web.
• But both grazing web and the detrital web are interrelated. Example: Mushrooms produced by decomposers in the detrital web will be the food source for deer, squirrels, of the grazing web. Earthworms are detritivores consuming decaying leaves

Image not readable or empty
food/web-2 food%20web-2 food/web-3 food%20web-3.jpg
food web-2   food web-3
Freshwater Aquatic and Terrestrial Food-webs

Ecological Dimensions

To create difficult and complicated food webs the ecological dimensions are being mapped. This includes,

• species composition
• richness
• biomass
• productivity
• stability

The species composition is normally illustrated in the food web. We can understand the changes in a single species. The species is directly and indirectly influence many others. Each organism depends on others.

Food webs are generally restricted to a specific habitat so they are limited: for example, the food webs in the cave or a pond. The aquatic food web demonstrates the complexity connecting the aquatic system to the nearby land.

food web-4   food web-5

Image not readable or empty
images/stories/food%20web-5.jpg

Image not readable or empty
images/stories/food%20web-4.jpg

Generalized Food web and Food Chain

Food Chain

To understand the movement of nutrients from the producers to top predators, the food chain is used to measure the number of species involved in the process. It helps to simplify the food web. Every known food chain starts from the autotrophs only.

History of Food Webs

Al-Jahiz demonstrated the food web and gave definition to it. It was the first research on food webs. The earliest graphical representation of a food web was given to us by Lorenzo Camerano in 1880.

Interest in food webs increased later and many scientists involved in the research process of food webs. They came to a conclusion that the complex food webs should be highly unstable.

Food webs serve as a framework to help ecologists organize the complex network of interactions among species observed in nature.

Want to know more about the food webs? Click here to schedule live online session with e Tutor!

About eAge Tutoring:

eAgeTutor.com is the premium online tutoring provider. Using materials developed by highly qualified educators and leading content developers, a team of top-notch software experts, and a group of passionate educators, eAgeTutor works to ensure the success and satisfaction of all of its students.

[Contact us](#) today to learn more about our tutoring programs and discuss how we can help make the dreams of the student in your life come true!

Reference Links:

- http://en.wikipedia.org/wiki/Ecology
- http://en.wikipedia.org/wiki/Food_chain#History_of_food_webs
- http://www.vtaide.com/png/foodchains.htm
- http://www.youtube.com/watch?v=TE6wqG4nb3M
- http://www.youtube.com/watch?v=7v1tyqa4sxQ&feature=related

Category:ROOT