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ECOLOGY – An Introduction

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What is Ecology?

Ecology is the scientific study of the interactions between organisms and their environments. With the surroundings all organisms are intimately tied.

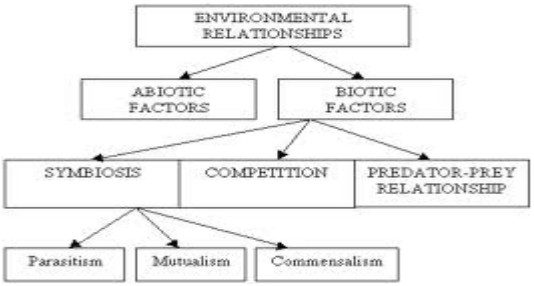


"Study of the House" is the literal meaning of Ecology.

The word "ecology" was coined in 1866 by the German scientistErnst Haeckel (1834–1919).

Ecosystem a specific area of size in which climate, landscape, animals and plants are constantly interacting.

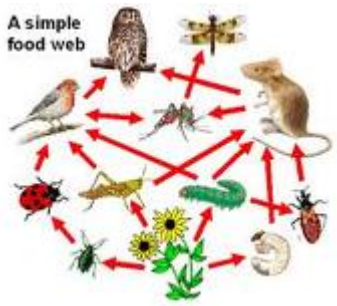
Two parts of Earth's ecosystem



1. The living things-(biotic)
2. The non-living parts -(abiotic)

Ecosystems create abiophysical feedback between living and nonliving components of anenvironment which generates and regulates thebiogeochemical cycles of the planet.

Life depends on both the biotic and abiotic environments for survival.



The key factors:

- Organisms absorb and radiated heat from and to the surrounding environment.
- Organisms compete with other organisms for limited resources (food, water, space).
- Organisms eat and are eaten by other organisms (Food web).
- Modern ecological techniques have proved useful in testing ecological theories, and in arriving at practical decisions concerning the management of natural resources.
- Ecological principles help us to understand the global and regional consequences of competition among human beings and so on.

Category of Environment

(1) Abiotic Environment:

This includes all the nonliving factors and processes in anecosystem. Sunlight, soil, water, andpollution, light from the sun, an abiotic environmental factor, makes life possible in almost all ecosystems.

(2) Biotic Environment:

This includes of all the living organisms in an ecosystem like Humans, Animals, Plants & etc, and includes factors such as disease, predators, prey, and human activity.

Basic Flow of energy

Through photosynthesis, the green plants take solar energy and convert it into chemical energy. As animals eat the plants, the energy moves through the biotic environment and is eventually expended as heat.

This basic flow of energy shows how closely abiotic and biotic components are linked.

This open system cycle relies on the sun.

The subdivisions of ecology

Biogeography	Population ecology
Molecular ecology	Community ecology
Ecological modeling	Ecosystem ecology
Individual-based ecological modeling	Landscape ecology
Chemical ecology	Biosphere ecology
Physiological ecology	Microbial ecology

Organismal Ecology

– evolutionary adaptations enable individual organisms to survive.

Population Ecology

– processes of population growth, density, and how members of a population coexist.

Community Ecology

– interactions between species affect community structure and organization.

Ecosystem Ecology

– broadens to include the interactions of communities with all the abiotic factors taken into consideration.

Want to know more details about Ecological subdivisions?Click here to schedule a live help with an eTutor!

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Reference Links:

- http://en.wikipedia.org/wiki/Ecology
- http://en.wikipedia.org/wiki/Ecosystem
- http://www.barrameda.com.ar/ecology/
- http://www.wisegeek.com/what-is-the-abiotic-environment.htm
- http://www.cameron.edu/~bmcdonal/course_description/lectures/chapter18.doc

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