

ECOLOGY

HISTORY and Relevance to Humankind.

The word ecology is derived from the Greek oikos, meaning "household," and logos meaning "study". Thus study of the environmental house includes all the organisms in it and all the functional processes that make the house habitable. Literally then, ecology is the study of life at home with emphasis on "the totality or pattern of relations between organisms and their environment."

The word ecology is of recent origin, having been proposed by German biologist Ernst Haeckel in 1869. Haeckel defined ecology as the study of natural environment including the relations of organisms to one another and their surroundings.

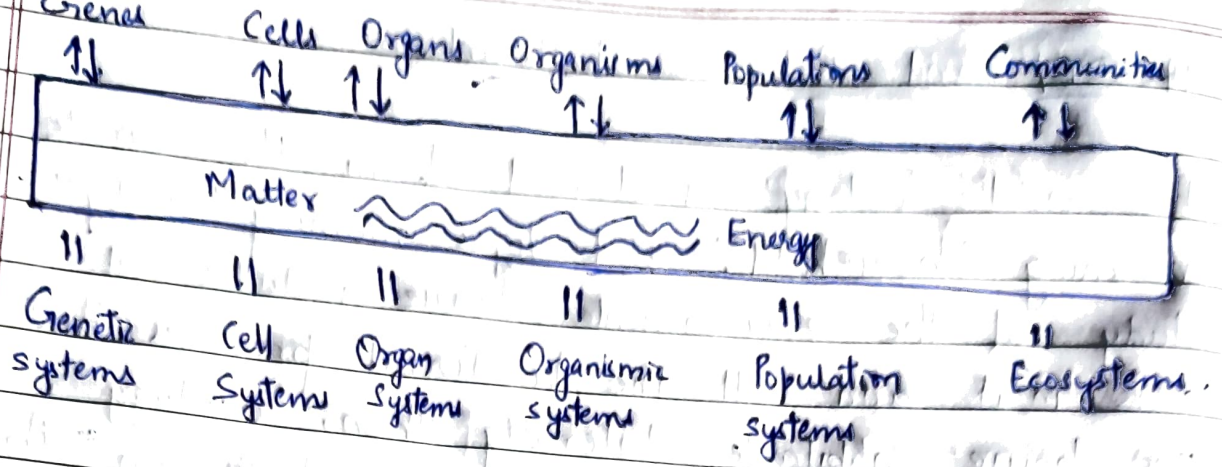
The 1970s were frequently referred to as the decade of the environment, "initiated by the first 'Earth day' on 22 April 1970."

LEVELS OF ORGANIZATION' HIERARCHY:-

Hierarchy means "an arrangement into a graded series".

Interaction with the physical environment (energy and matter) at each level produces characteristic functional systems. A system refers to "regularly interacting and interdependent components forming a unified whole".

Systems containing living and non-living components constitutes biosystems, ranging from genetic systems to ecological systems.



Biotic Components

+

Abiotic Components

||

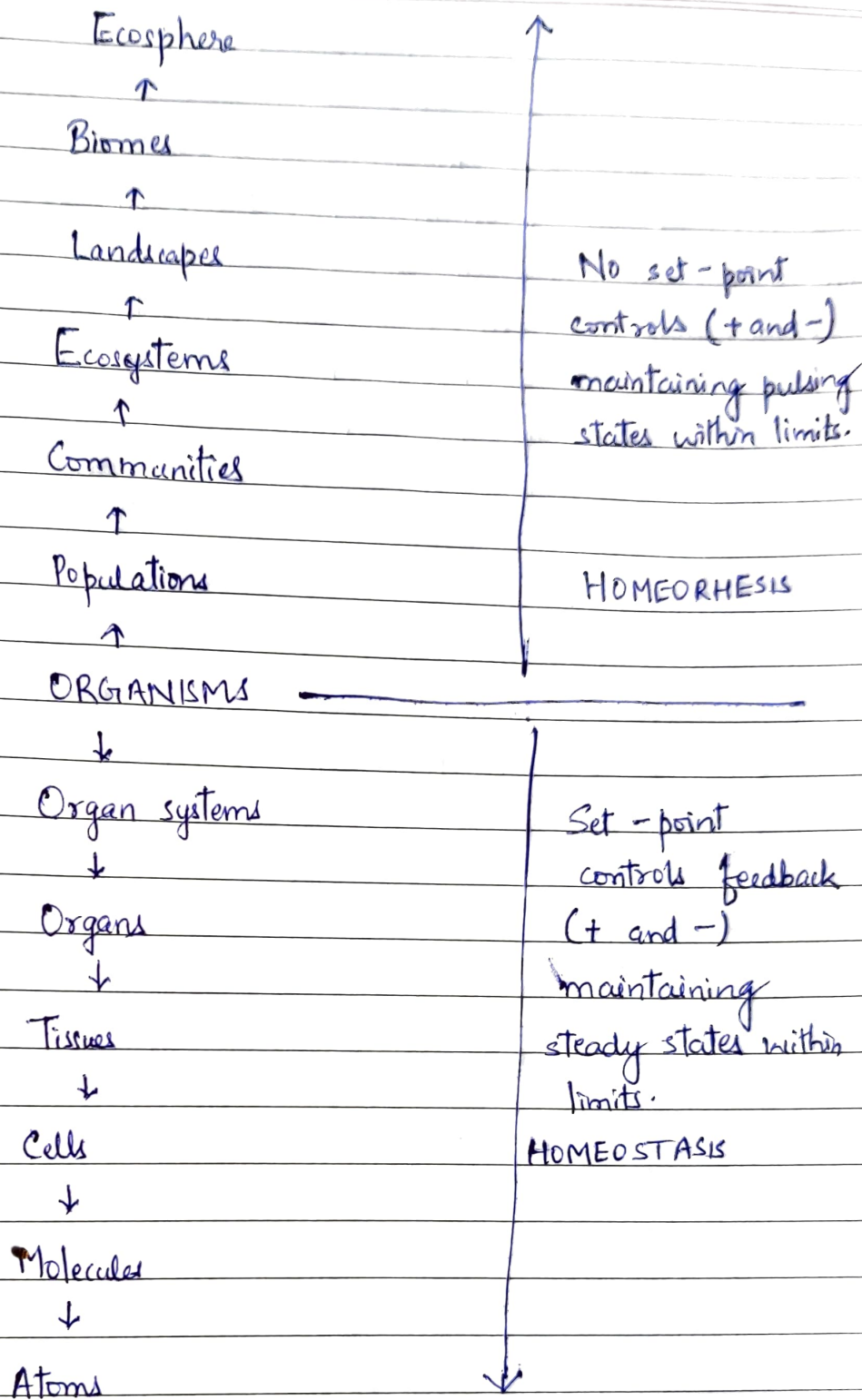
Biosystems

FIG: Ecological levels of organization spectrum emphasizing the interaction of living (biotic) and non-living (abiotic) components.

Ecology is largely concerned with system levels beyond that of the organism. In ecology, the term population denotes a group of people (i.e. to include groups of individuals of any one kind of organism).

Community in the ecological sense includes all the populations occupying a given area.

Ecosystem: The community and the non-living environment function together as an ecological system or ecosystem.



Homeorhesis versus homeostasis.