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PLANT ECOLOGY INTRODUCTION

**BOTANY (MINOR) TOPICS
SEMESTER -3**

A/C to FYUGP



PLANT ECOLOGY INTRODUCTION

Plant ecology is the study of the distribution and abundance of plants and the reasons why those distributions and abundance occur. It is a huge subject, with aspects thought in the full semester and course with plant ecology.

Radically different communities are found in different parts of the earth. The different types are usually summarised by their plant communities organised in biomes.

Plant ecology is a branch of ecology that focuses on the relationship between plants and their environments including both physical factors like sunlight water and soil and other living organisms

DEFINITION OF PLANT ECOLOGY

Ecologist derived from two Greek word:

- **Oikos meaning home/habitat/place/dwelling place**
- **Logos meaning study**

Study of how living organism interact with one another and with the physical environment.

Deals with the study of relationship between biotic and abiotic components.

BRANCH OF ECOLOGY

1. AUTECOLOGY- Study of individual organisms in relation to their environment. Study of Taraxacum officinale in a grassland. It is comparatively simple.
2. SYNECOLOGY- study of community in relation to their environment. Study of entire grassland ecosystem including all the species. It is comparatively complex and synecology is more appropriate to give true pictures of ecosystem.

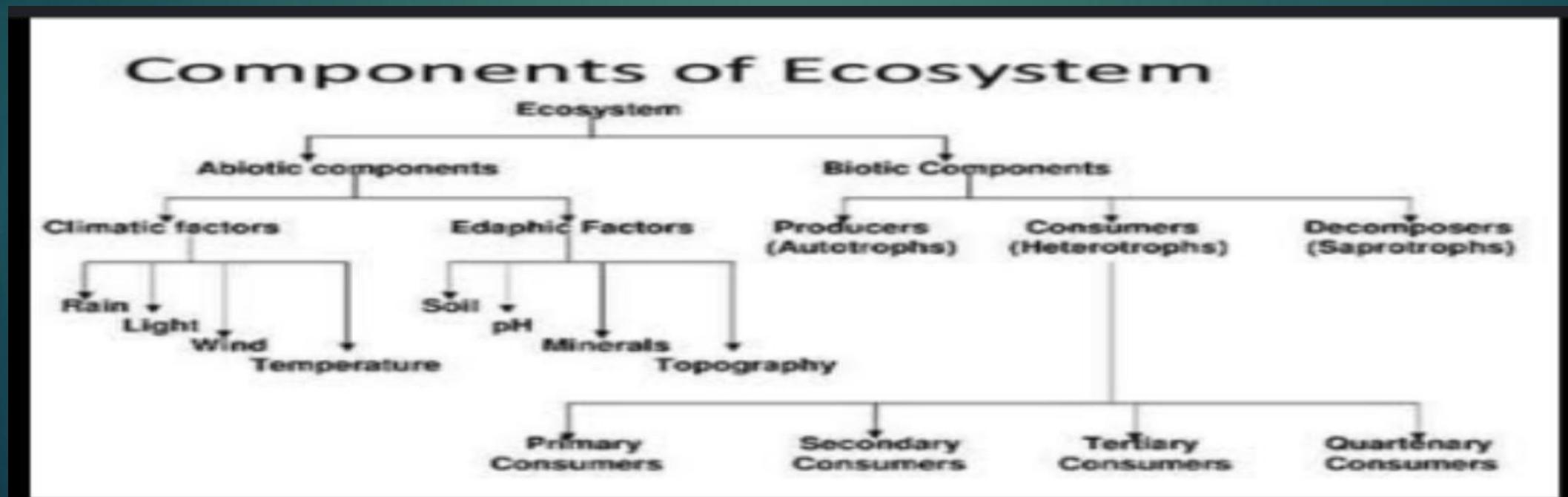
FAMOUS ECOLOGIST

- Term ecology-Ernst Haeckle
- Father of ecology-Alexander Von Humboldt
- Father of modern ecology and father of ecosystem- Eugene Osum
- Father of engine ecology-Ramdeo Mishra
- Term ecosystem-Arthur George Tansley.



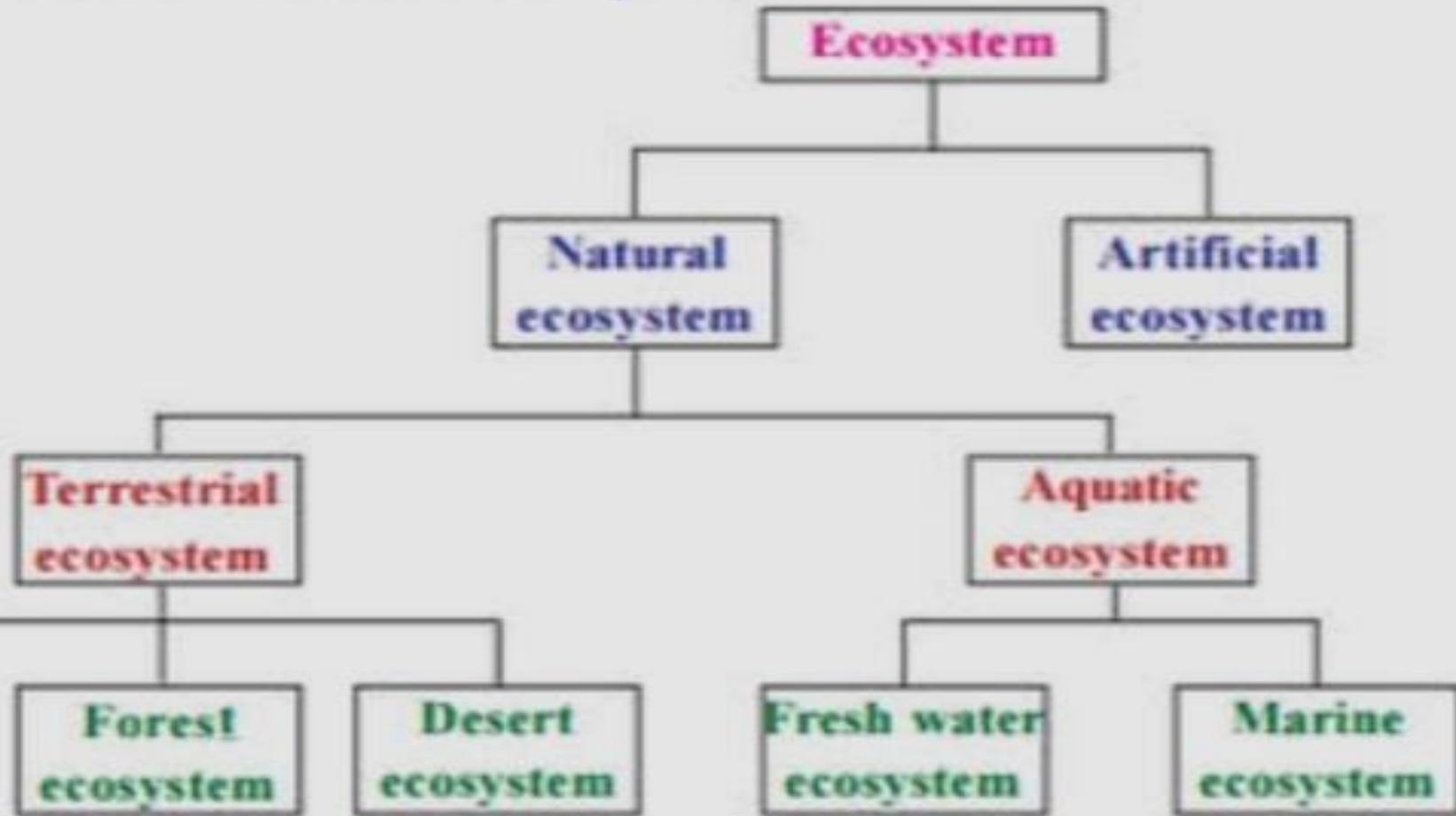
COMPONENTS OF ECOSYSTEM

1. Abiotic components – Light, temperature ,water ,air ,soil.
2. Biotic components – Flora,Fauna, and microorganisms.



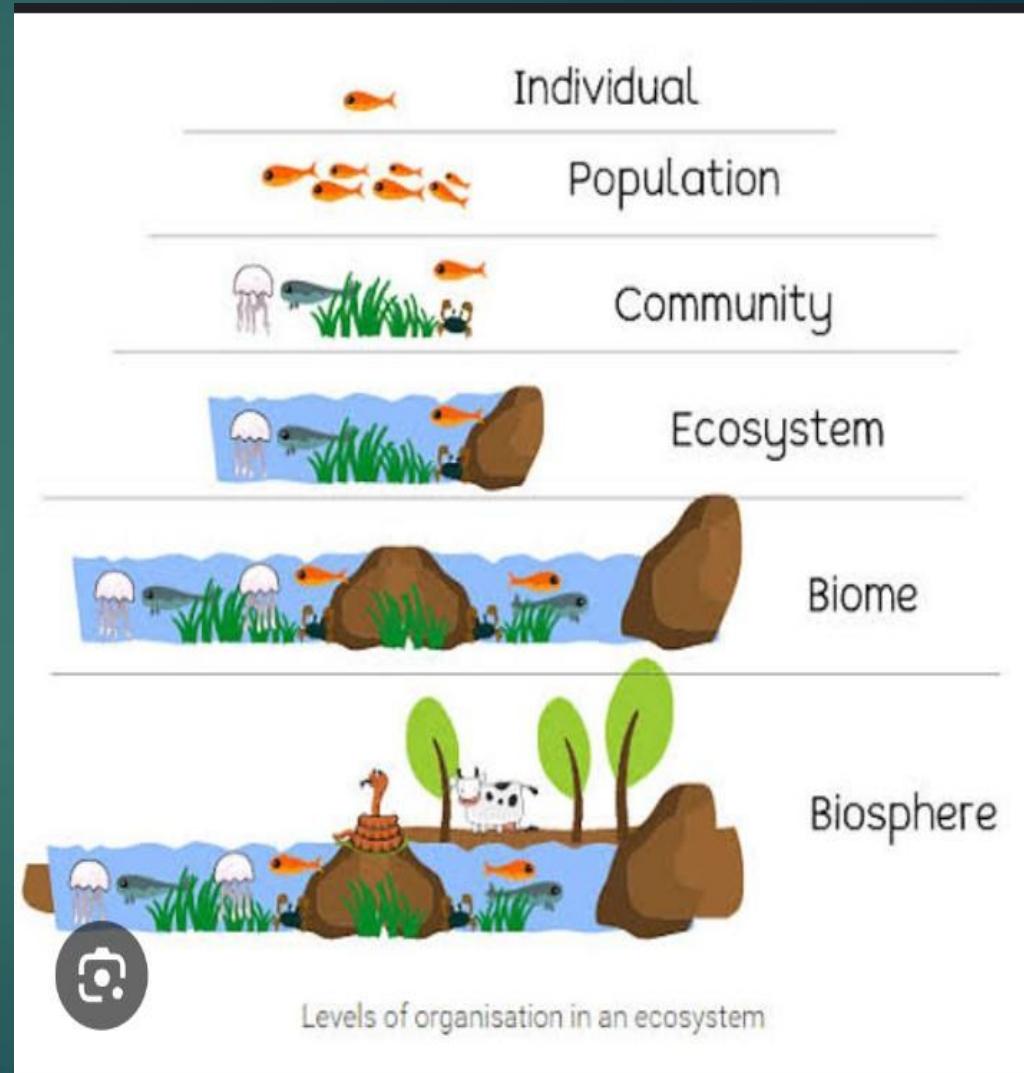
TYPES OF ECOSYSTEM

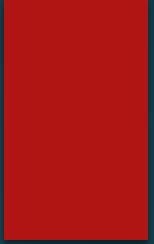
Flow chart of classification of ecosystem



ECOLOGICAL LEVEL OF ORGANISATION

1. INDIVIDUAL- Lowest level of organisation and belonging to a particular species
2. POPULATION- it is the sum of all individuals belongs to one species at a particular time in a given era.
3. COMMUNITY- (Biocoenosis) – Sum of all different population found in a given area
4. ECOSYSTEM –(Geobiocienosis/Biogeocenosis)It is a system resulting from interaction between all living and nonliving components of environment.
5. LANDSCAPE- large region formed by interaction of two or more ecosystem.
6. BIOME- a biome is a large area characterised by its vegetation, soil, climate and wildlife. It is formed in response to the physical environment. Example- tropical rainforest, temperate deciduous forest, deserts.
7. BIOSPHERE- The region a verb and below the Earth surface where life exist.





THANK YOU