



Biodiversity: A General Aspect

MR. RAM SARAN

M.Sc. NET (Guest Lecturer)

S.R.T.C PG College Utraula Balrampur U.P-271604

Abstract:

Biodiversity is defined by the convention on Biological diversity as the variability among living organism from all sources including terrestrial, marine and other aquatic ecosystem and the ecological complexes of which they are part, this include diversity within species, between species and of ecosystem it includes genetic variability also.

Keywords: *Species, Genetic Variability*

1. Introduction

Biodiversity or biological diversity concept leads towards the whole variability from genetic variability among organism and its relationship among each other with physical environment. The relationship carry all the aspect of as organism with necessities for life which is found on earth. Earth is home to a rich and diverse array of living organism. A general acceptance of biodiversity is a richness of species of plants and animals and microorganism in a given community. Biodiversity is the foundation of human life on earth.

2. The composition and levels of biodiversity

It includes in following point.

A – Ecological diversity	B – Organismal diversity	C – Genetic diversity
Bioregions	Domain	Genome
Biomes	Kingdom	Chromosome
Landscape	Phyla	Gene
Ecosystem	Class	Nucleotides
Habitats	Order	Nitrogenous
Population (species diversity)	Families	Base + Pentose suger + ip
	General	
	Species	
	Sub- species	
	Individuals	

Fig. 1: shows composition & levels of biodiversity

A. Ecological diversity

Ecological diversity is the variety of organism that exist in an ecosystem due to diversity of niches, trophic levels and ecological process like nutrient cycling, food web energy flow role of dominant species or biological environment

B. Organismal diversity

The total no of species on earth is estimate about 14 billion; of which 1.75 million have been described species level diversity is the lowest level of diversity.

Whittaker divided the diversity in to three categories

α – **Diversity** – it deals with diversity within habitats or within a community

β – **Diversity** – it is also known as differentiation

γ - **diversity** – entire landscape of all habitat

γ - **diversity** – entire landscape of all habitat .

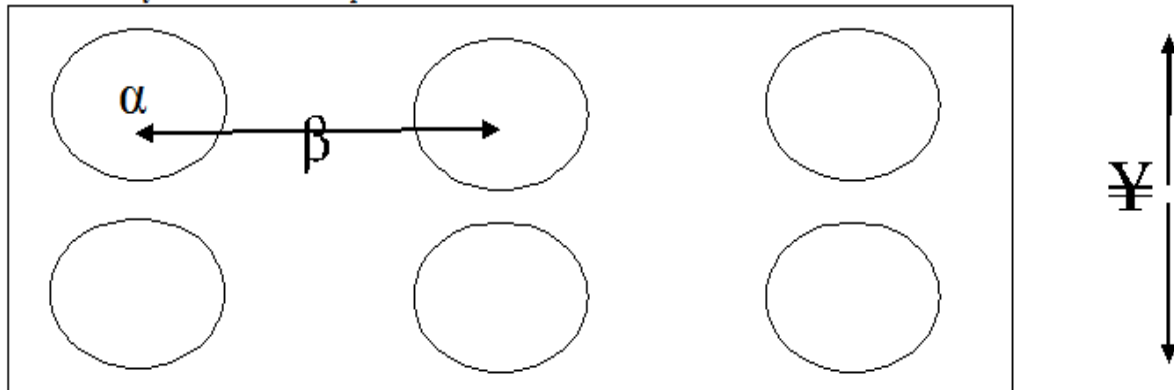


Fig.2. shows α , β and γ diversity of a landscape

C. Genetic diversity

It represent the variation at the gene level by within organism shows all its alleles or differences. There is commonly used term pattern diversity which refers of the diversity to the diversity resulting from the differences due to zonation , periodicity , stratification , food web, patchiness and habitat condition etc. pattern diversity is environmentally – induced diversity .

Biodiversity helps in producing more productive and stable ecosystem or communities which can tolerate various stresses like prolonged drought.

There are some board trends of biodiversity on earth.

1. Diversity per unit area in terrestrial biomass is normally greater than that in the marine ecosystem.
2. Diversity gradually decreases as we proceed from equator to the pole on both the hemispheres.
3. Diversity normally increases down the mountain slope from top to the bottom.
4. Diversity per unit area in continents is higher than the island.
5. Habitats distributed in extreme climatic zones with harsh environmental condition normally have low species diversity.
6. Diversity is higher in warm music environments that in hot xeric and cold hydria environment.
7. In ocean's benthic community, deeper region have higher overall biodiversity compared to shallow regions.

Reverence

1. Campbell , Neil A and Reece , Jane B. (2005) Biology , 7TH ed Pearson , Inc .
2. Enger, david D et at (2005). concept in Biology , 11th ed Tata – Mc Grow _ Hill Publishing Company Limited.
3. Kardong , Kenneth V, et al (2005). An Introduction of Biological Evolution , Is ted Mc Grow Hill Higher Education .
4. Odum , Eugene. P Barrett Gray W (2005). Fundamentals of Ecology , 5th ed Thomson Brooks/Cole , Inc.
5. Smith,Thomas, Robert Leo (2006). Elements , 6TH ed . Pearson Education Inc.