

Significance of Species Diversity

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DESCRIPTION

The variety of unique species present in a community is referred to as species diversity. The effective number of species required to obtain the same mean proportional species abundance as found in the dataset under study is the number of equally abundant species. (where all species may not be equally abundant). Since most of the species in a region are equally numerous, diversity is greatest species. Greater specific variety results from high evenness. Because the ecology supports a wide range of species, tropical areas have increased species diversity. There may be a significant number of different species (high species richness) in a forest, but only a few individuals of each species (low species evenness). There may be few plant species in a forest (low species richness), yet many of each species (high species evenness). Species diversity can be defined as species richness, taxonomic or phylogenetic diversity, and species evenness. The genetic link between distinct groupings of animals is known as taxonomic or phylogenetic diversity.

Species diversity is made up of two elements

Species richness: The quantity of different species in a given ecosystem is referred to as species richness. Because the ecology supports a wide range of species, tropical areas have increased species diversity.

Species evenness: Species evenness refers to the relative quantity of individuals within each species. It is said to have high evenness if the number of individuals within a species is reasonably stable throughout communities, while it is said to have poor evenness if the number of individuals fluctuates from species to species. Greater specific variety results from high evenness.

Biodiversity refers to the heterogeneity found in the world or in an environment, which can range from macromolecules within

cells to biomes. Biodiversity includes:

- Species diversity refers to the number of species and their diversity.
- Genetic variety refers to the genetic variation that exists within a species.
- Ecological diversity is the variety of ecosystems found within a given geographic area.
- Since most of the species in a region are equally numerous, diversity is greatest.

Importance of species diversity

A diversified and balanced number of species exists in a healthy ecosystem to maintain the ecosystem's balance. All species in an ecosystem are either directly or indirectly dependent on one another. It is therefore critical to maintain high species diversity in order to create a more efficient, productive, and sustainable environment.

Ecosystems with more diversity are more productive. For example, an ecosystem with a large number of producer species will produce a big amount of biomass to support a larger number of consumer species.

CONCLUSION

An ecosystem with increased species diversity and production is more sustainable and stable. The more diverse an ecosystem is, the better it can withstand natural stresses like drought or invading species. An ecosystem's diversity of species enables it to respond to any tragedy. Species diversity varies by geographical location, with the tropics having the most and the poles having the least. The majority species are found in tropical rainforests, coral reefs, and the ocean bottom zone. With increasing explored area, species richness increases.

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