Community Ecology

Community

- This term refers to the species that occur at any particular locality.
- Each community characterises by :
- I. Constituent species or
- II. Primary production
- Species interactions (mutualism or predation) lead to govern many ecological (population decrease or increase) and evolutionary processes (natural selection).

Concepts of Community

- 1. Individualistic concept: H. A. Gleason: species aggregation
- 2. Holistic concept: F. E. Clement: Superorganism whose constituents of species have coevolved together. (likes human body)
- Two different predictions can be proposed about the integrity of the community across space and time???????????????

Competition

- Niche:- is the sum of total ways the organisms utilise the resources of its environments.
- -Does the species is capable to occupy their entire niche? Why or what is the limitation for that?
- Interspecific competition: species compete for the sharing niches which is not available in enough to satisfy their requirements.

- Interference competition: Fighting over resources.
- Exploitative competition: consuming shared resources.
- So
- There are two types of niches:
- 1. Fundamental niche: the entire niche that a species is capable of using, based on its physiological and tolerance limits and resources needs.
- 2. Realized niche: the actual niche the species occupies

Gause Principle

- Paramicum aurelia and Paramicum caudatum (overlap in resources)
- Exploitive competition
- Competitive Exclusion: if two species are competing for a limited resources, the species that uses the resources efficiently will eventually eliminate the other locally (when niche is identical for both species and limited).
- Paramicum bursaria: the P. caudatum

and bursaria lived together in the culture tube. What? Oxygen

CONCENTRATION, So when the two species occupy the same unlimited recourses or the have different niches

Resources Partitioning

- Experiment of Warbler Species feed on insects at the tree?
- 1- feeds near the tip of branches
- 2- feed on the dense of leaves
- 3- feed at the base of branches
- 4- feeds on the tree
- 5- feed on the very apex of the tree
- Sympatric species: the same species occupy the same geographical space: they avoid the competition by living in different portions or utilising different food. This kind of partitioning result from the natural selection (different morphological features).
- Allopatric species: the same species with the same morphological features