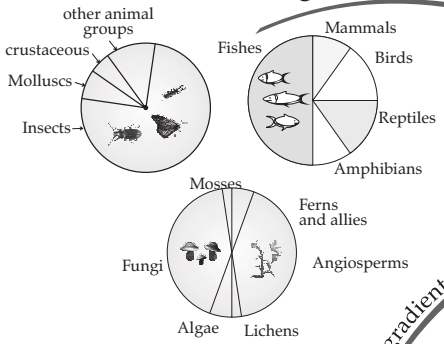
MIND MAP : LEARNING MADE SIMPLE

CHAPTER - 15

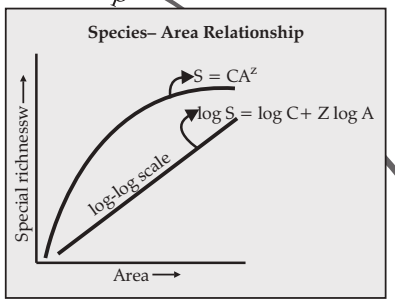
Biodiversity and Conservation

Biodiversity

- Levels of biodiversity
  - Genetic diversity
    - Diversity shown by a single species at genetic level.
  - Species diversity
    - Diversity at the species level.
  - Ecological diversity
    - Diversity at the ecosystem level
- Global Species Diversity



- Patterns of biodiversity
  - Latitudinal gradients
    - Species diversity decreases from the equator towards the poles.
    - Tropics (latitudinal range of 23.5° N to 23.5° S) have more species than temperate or polar areas.
  - Species– Area Relationship



$\log S = \log C + Z \log A$

- Causes of loss of biodiversity
  - Habitat loss and fragmentation
  - Over-exploitation
  - Alien-species invasions
  - Co-extinctions

Conservation of Biodiversity

- Reasons
  - Narrow Utilitarian
    - More than 25% of the drugs are derived from plants.
  - Broadly Utilitarian
    - Provides oxygen
    - Pollination
    - Aesthetic pleasures
  - Ethical Utilitarian
    - Moral duty to take care for biodiversity.
- Methods
  - In-situ Conservation
    - National Park
    - Sanctuary
    - Biosphere Reserves
    - Sacred Forests
    - Hotspots
  - Ex-situ Conservation
    - Zoological Parks
    - Botanical gardens
    - Gene banks
    - Genetic resource centres