## WHAT IS AN ECOSYSTEM ?

## A. Ecology

- 1. Definition
- 2. Ecological levels of organization:
  - a) organism
  - b) population
  - c) community
  - d) ecosystem
  - e) biosphere
    - 1) atmosphere (troposphere, stratosphere and ionosphere)
    - 2) hydrosphere
    - 3) lithosphere

## **B.** Three principles of ecosystems

- 1. All life bound by 1<sup>st</sup> and 2<sup>nd</sup> Laws of Thermodynamics
- 2. Ecosystems are holocoenotic
- 3. Ecosystems governed by Laws of Limiting Factors:
  - a) law of the minimum
  - b) theory of tolerance

## C. Ecosystem organization

- 1. Abiotic components
- 2. Biotic components: autotrophs (1° producers) heterotrophs (consumers – herbivores, carnivores, omnivores) decomposers
- 3. Ecological succession: replacement of one biological community with another
  - a) climax community
  - b) 1° succession
  - c)  $2^{\circ}$  succession