

Organizing biota

- **Individual:** member of a species occupying a niche
- **Population:** members of the same species occupying a niche and interbreeding together
- **Community:** coexisting populations
- **Ecosystem:** community + abiotic factors
- **Biome:** major ecosystems

Ecosystems

- Have two components:
 - **Biotic component** (the community of species occurring together)
 - **Abiotic component** (climate, soil, water, humidity, etc.)

Within ecosystems: Novel organismal traits arise by chance.....

1. The interaction of all of the abiotic factors of the planet determines what biotic factors (organisms) survive
2. The interaction of biotic factors (organisms) among themselves determines what survive

ABIOTIC FACTORS ("Steady")

GLOBAL

Winds

Ocean currents

Rainfall

Sunlight

Temperature

Etc.

LOCAL

Winds

Temperature

Rainfall

Sunlight

Temperature

Soil (geology/hydrology)

etc.

