Communities

Def: **A set of populations of different species that share the same habitat**

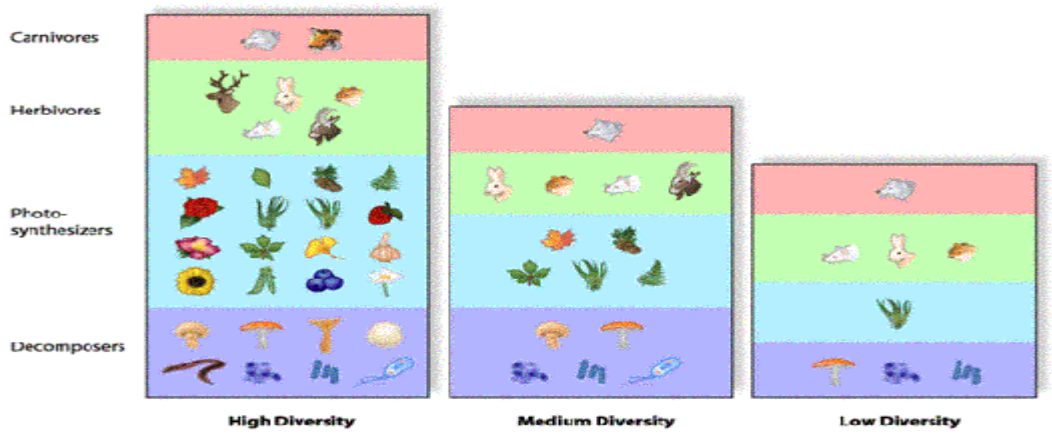
Biodiversity:

def: **variety of species living in a community.**

3 factors affect biodiversity:

1) **# of different species**
2) **relative abundance (# individuals of each species)**
3) **good number of each specie**

To be diverse you must have: **different species, an equal distribution of each species and a good number of each specie.**



Determining if an ecosystem is biodiverse

Things to calculate

- **the number of species**
- **the population of each specie**
- **the relative abundance of each specie**

Calculating relative abundance:

$$\frac{\text{total \# of a specific specie}}{\text{total \# of all species}} \times 100$$

Ex:

Ecosystem A	Ecosystem B
15 chickadees 12 partridges 8 bears 20 raccoons 11 rabbits	15 chickadees 12 partridges 0 bears 3 raccoons 4 rabbits

Using the information above, find the relative abundance of each specie and determine which ecosystem is more diverse.

Ecosystem A	Ecosystem B
Chickens: 15/66 = 22% **Partridges: 12/66 = 18%** **Bears: 8/66 = 12%** **Raccoons: 20/66 = 30%** **Rabbits: 11/66 = 17%**	**Chickens: 15/34 = 44%** **Partridges: 12/34 = 35%** **Bears: 0/34 = 0%** **Raccoons: 3/34 = 9%** **Rabbits: 4/34 = 12%**

Ecosystem A is more biodiverse because it has more types of species, the species are equally distributed and there is a good number of each specie.

Interactions in a community

4 factors which can increase or decrease the population in an ecosystem:

1- Competition **Organisms which seek the same resources in their habitat (ex. food, shelter, mates).**

2- Predation: **2 living organisms, 1 feeds on the other.**

Parasitism: **A type if predation where parasite (predator)lives in or on host (prey). ex: lice or worms in intestines**

3- Mutualism: **both organisms benefit from relationship ex: pollination.**

4- Commensalism: **one organism benefits, the other is unaffected (neither harmed or helped). Ex: taking over an old nest.**