

Ecosystems

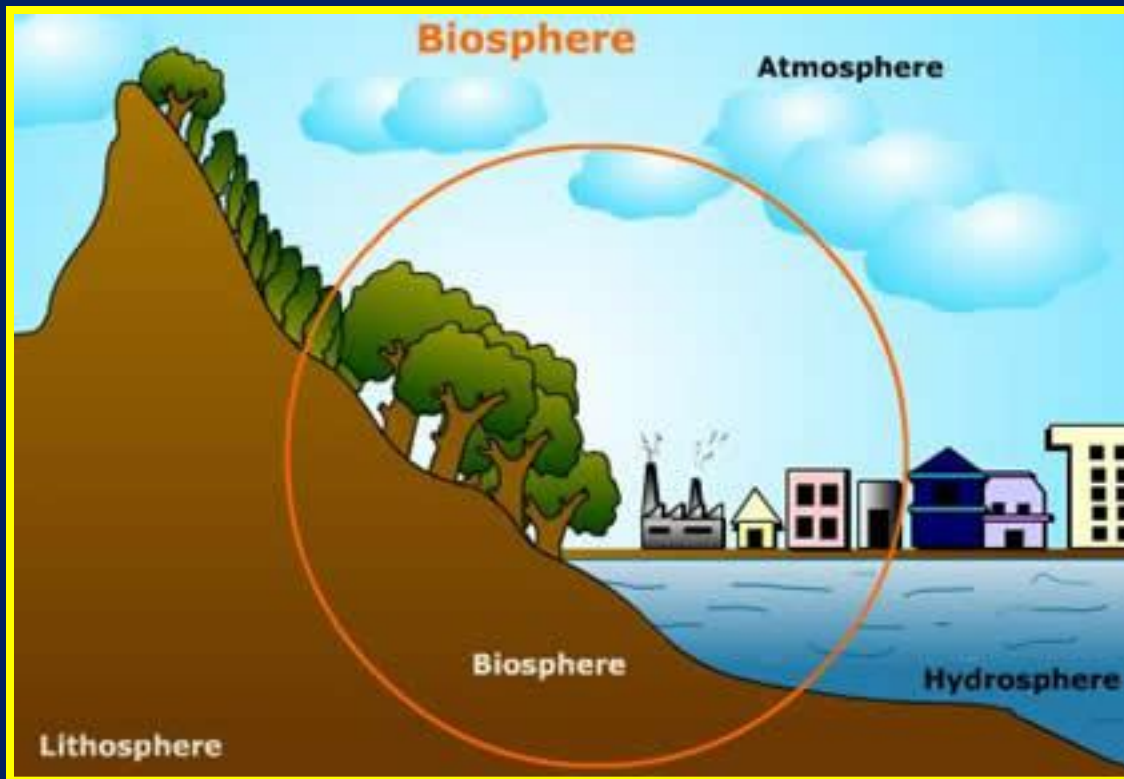


Essential Standard 2.1

Analyze the interdependence of living organisms within their environments.

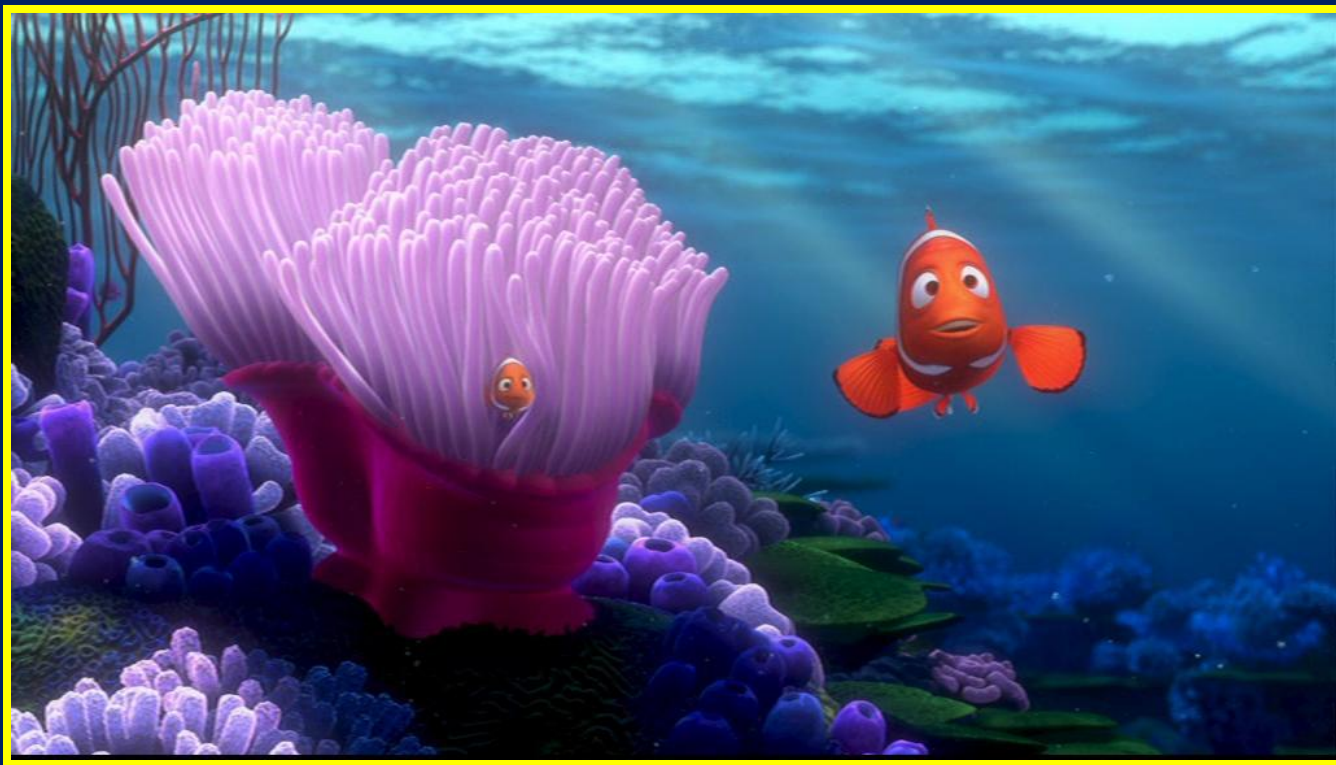
Biosphere

On Earth, all living things live within the Biosphere, which includes parts of the atmosphere, hydrosphere, and lithosphere that are able to support life.



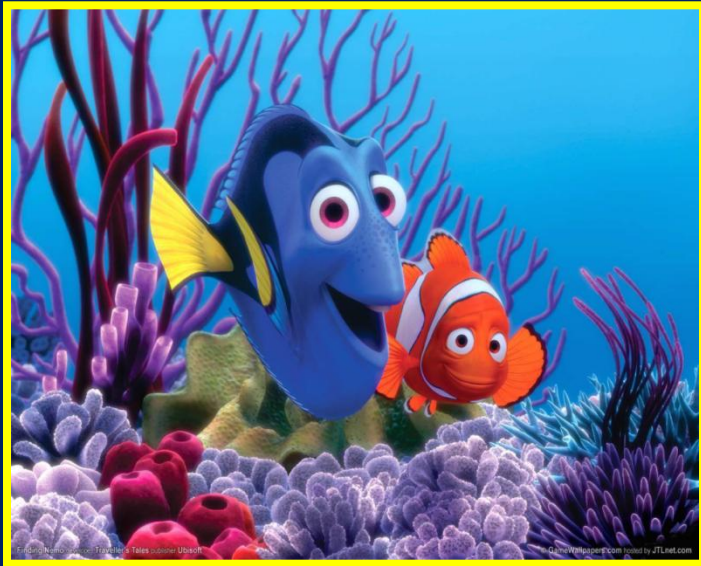
Ecology

Ecology is the study of interactions among living things with the living and non-living parts of their environment.



Abiotic and Biotic Factors

The non-living parts of an organism's environment are called abiotic factors.



The living parts of an organism's environment are called biotic factors.

Abiotic Determines Biotic Factors

Abiotic factors determine what biotic factors, or living things, can survive in a particular environment.



Clear, warm water that allows sunlight to penetrate.

Ecosystem

All biotic and abiotic factors, in any particular environment, make up an ecosystem.



Coral Reef Ecosystem

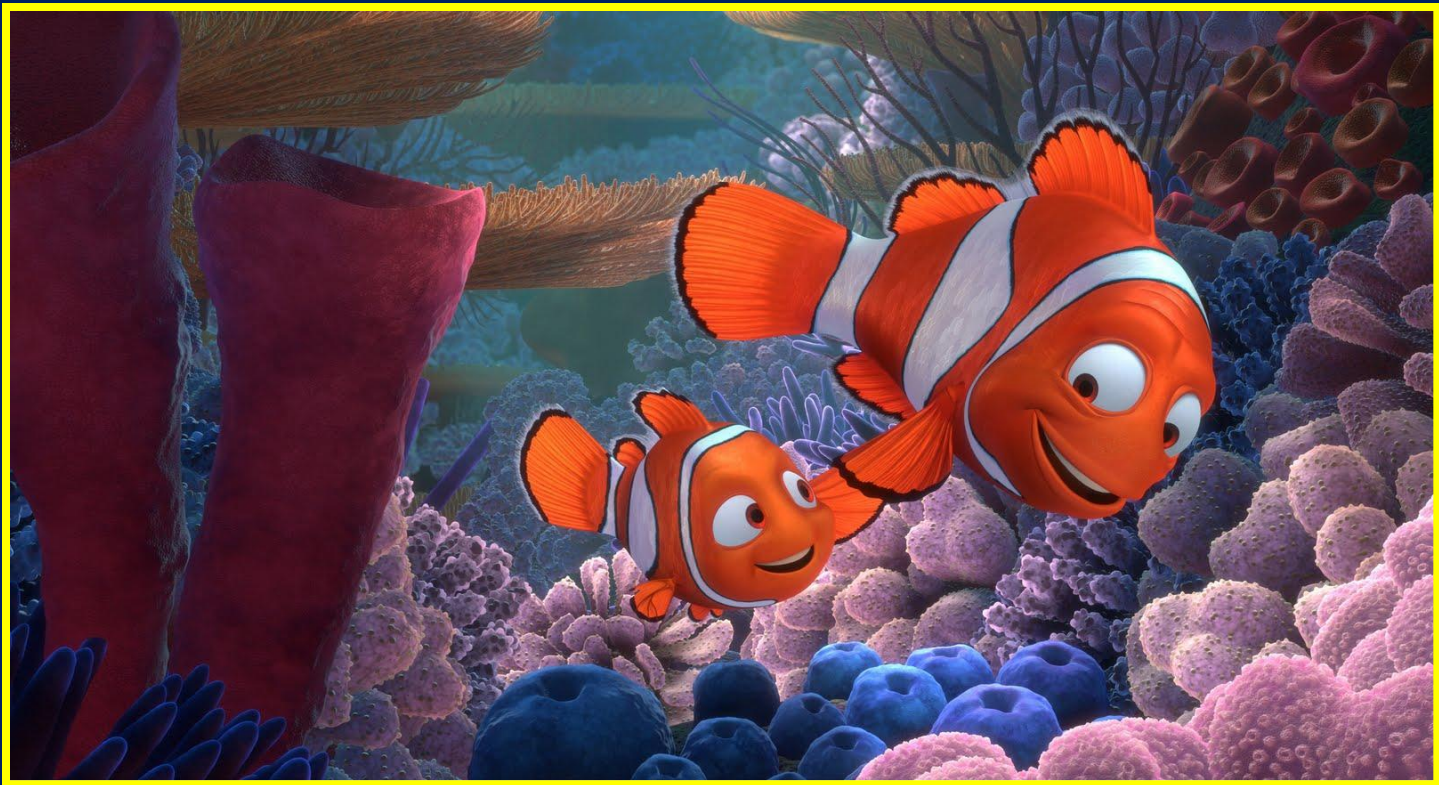
Community

Within an ecosystem, the biotic factors, which would include all of the different species, make up a community.



Population

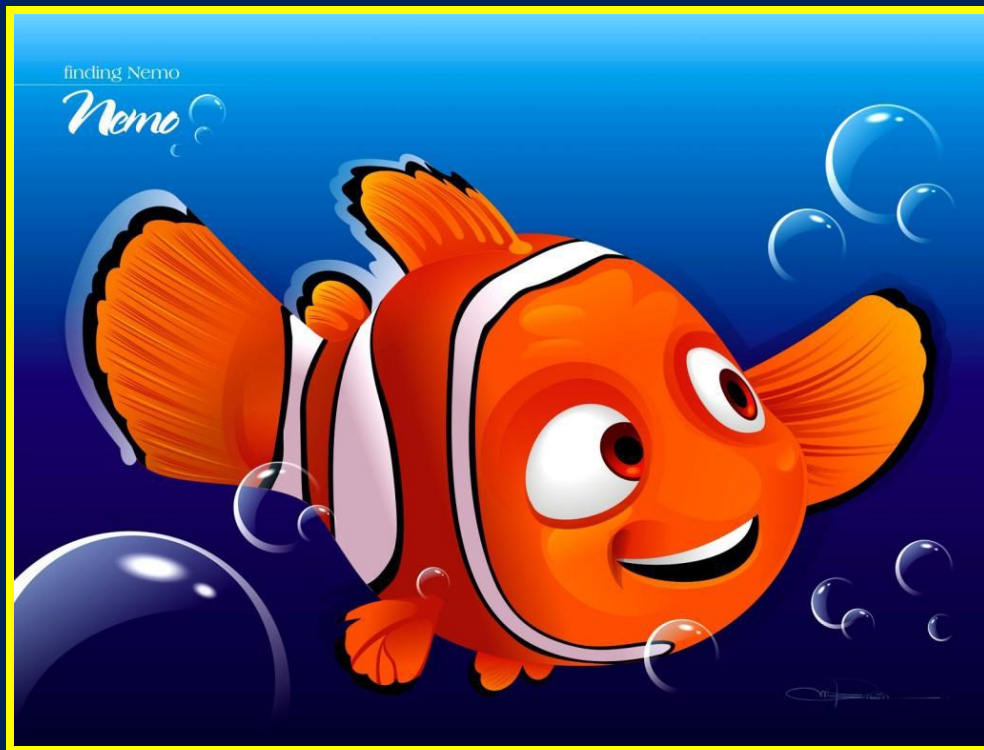
Within the community, one individual species makes up what is called a population.



Clownfish

Organism

Within a population, one individual, that has all the characteristics of life, is called an organism.



Nemo

Levels of Organization

Ecosystem

Living and Non-living factors



Community

Just the Living factors



Population

Just one species



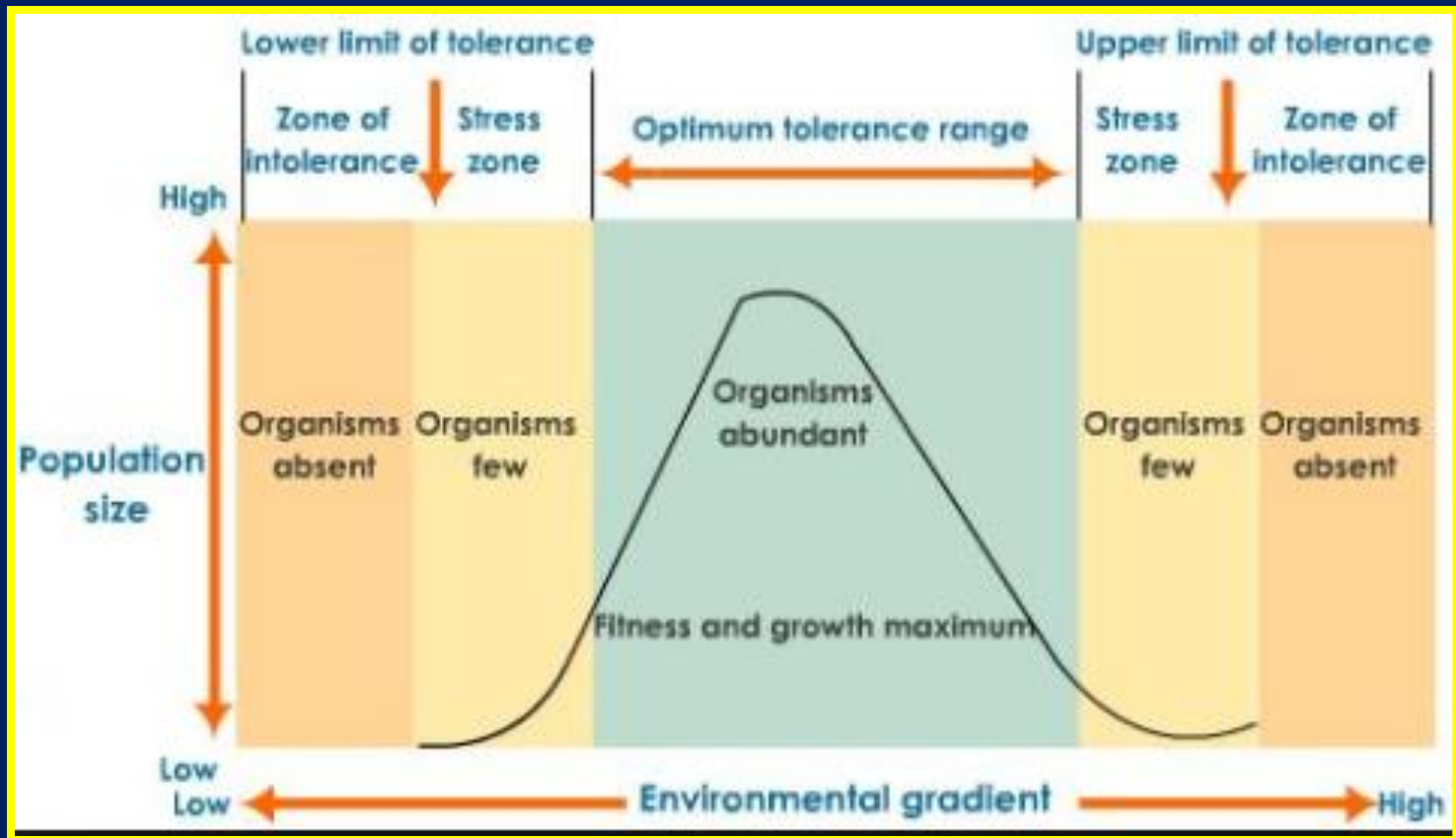
Organism

Just one individual



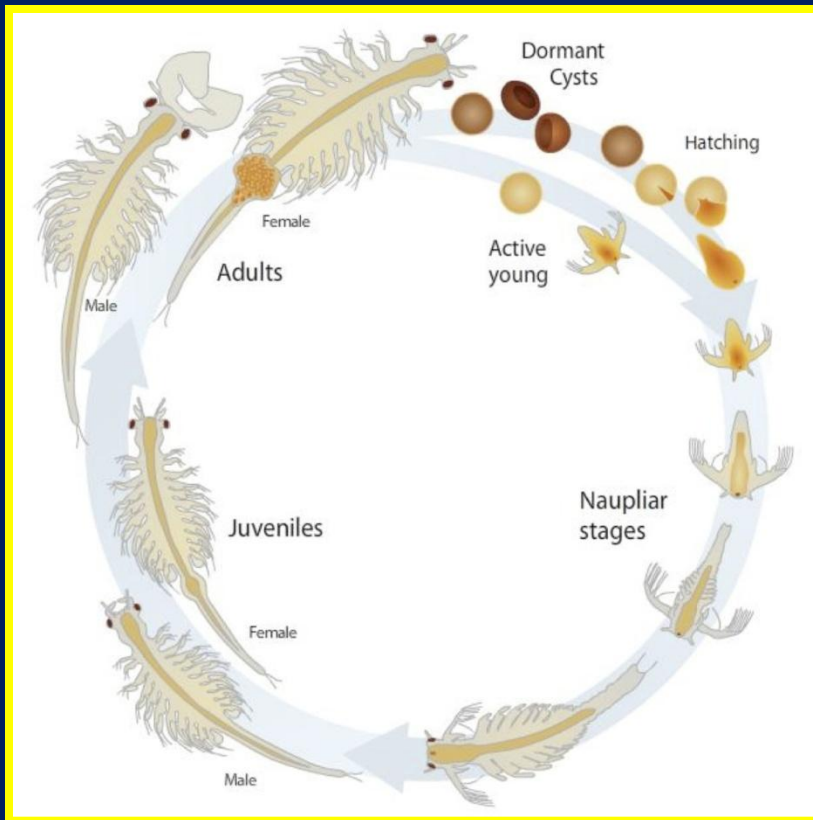
Tolerance

Every species has its own range of tolerance in which it can survive and reproduce

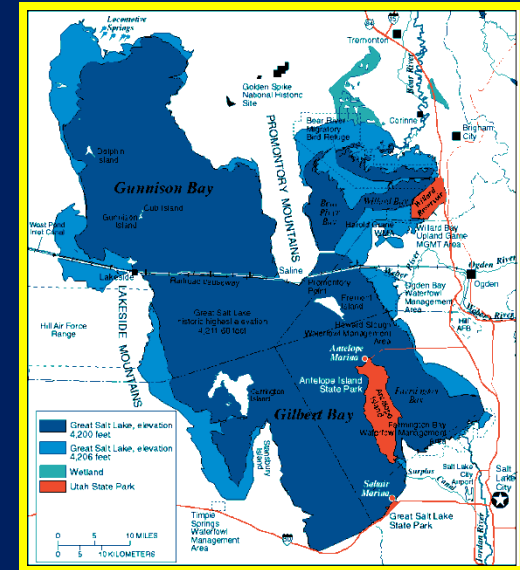
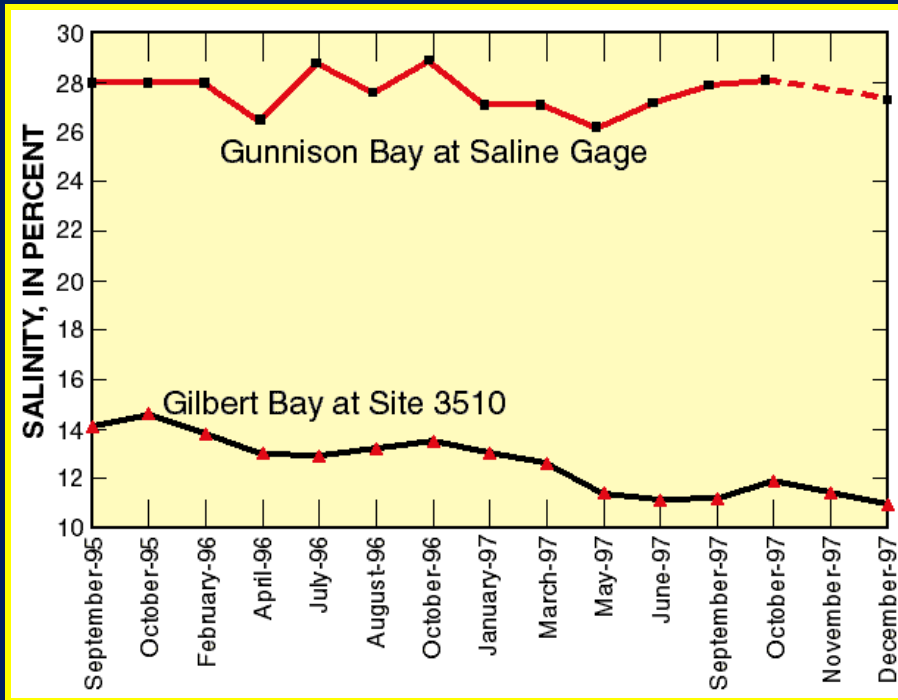


Habitat

A species tolerance levels help determine its habitat or where an organism lives



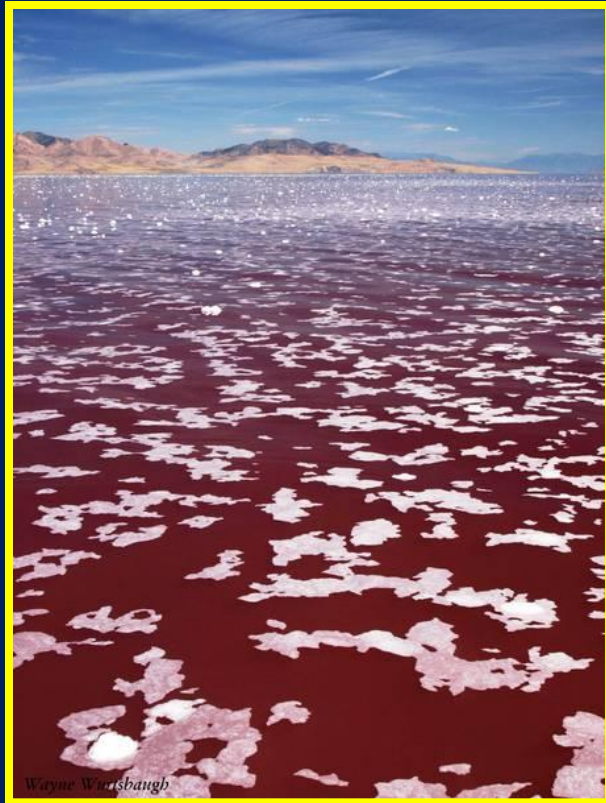
Salinity Range



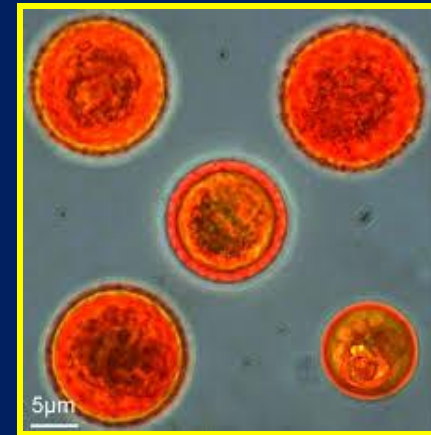
Average Ocean Salinity
3.5%



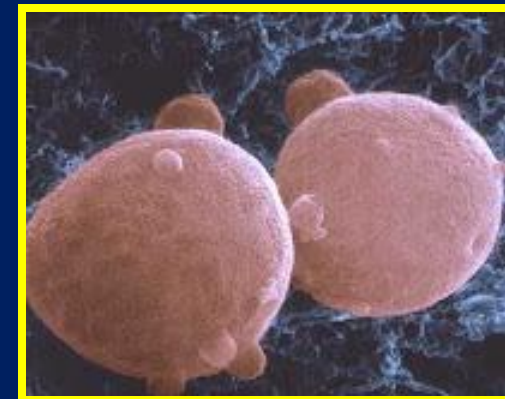
Biotic Factors



Gunnison Bay

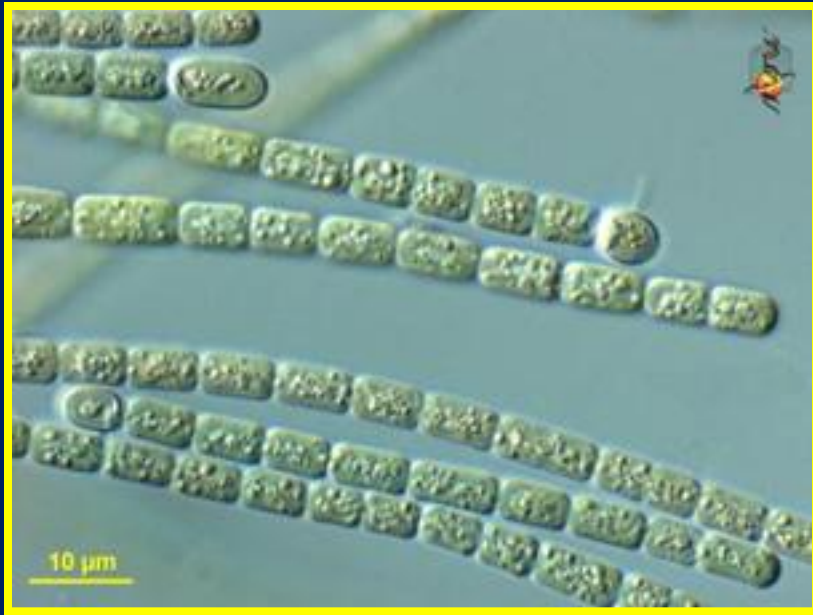


Dunaliella Salina



Halobacterium salinarum

Biotic Factors in Gilbert Bay



Cyanobacteria

Producers



Free-Floating Phytoplankton
Dunaliella veridis

Biotic Factors in Gilbert Bay

Brine Flies

Ephydra cinerea

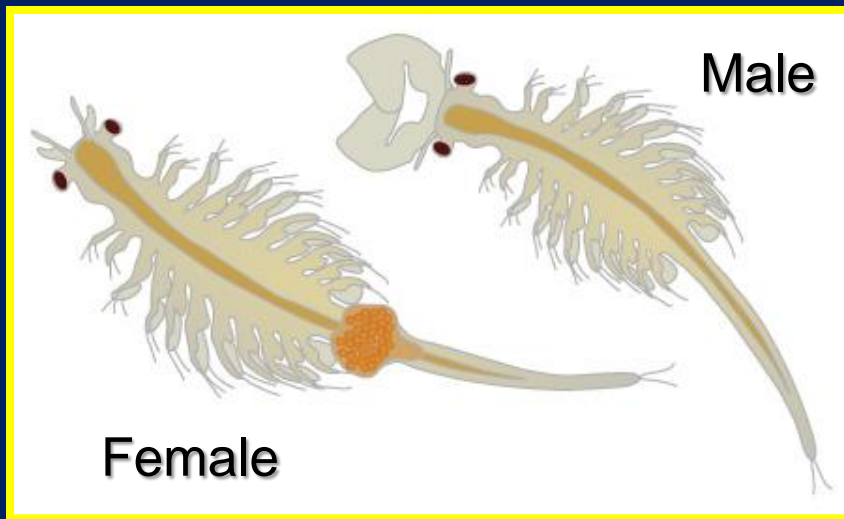
Primary Consumers



Biotic Factors in Gilbert Bay

Brine Shrimp

Artemia franciscana



Primary Consumers

Biotic Factors in Gilbert Bay



Avocet



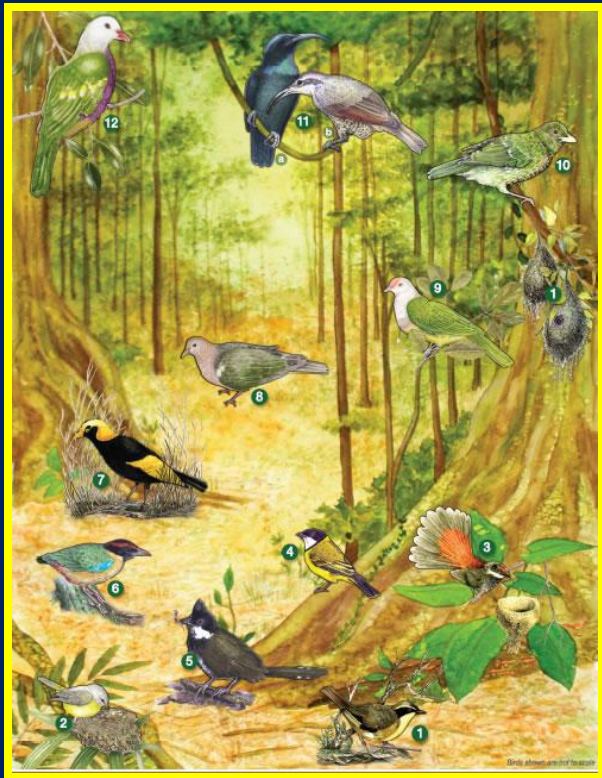
Gull



Secondary
Consumers

Niche

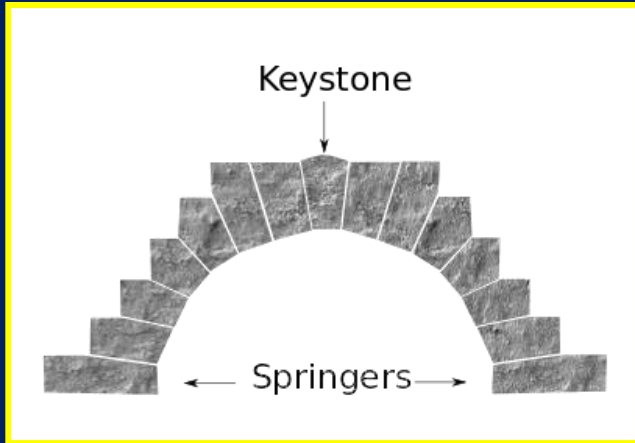
Each species has its own niche, within an ecosystem, or a way to meet its need for food, shelter, survival, and reproduction.



The more unique a species niche is, the less competition it faces within a community.

Keystone Species

Some species, called keystone species, play a critical role in maintaining the health of an ecosystem.



The End

I SHALL CALL HIM SQUISHY
AND HE SHALL BE MINE



AND HE SHALL BE MY SQUISHY