



# Ecology

Interactions of organisms with the Environment

# **The ENVIRONMENT is...**



**THE SURROUNDINGS OF AN ORGANISM AFFECTING ITS  
LIFE AND DEVELOPMENT (LIVING OR NON-LIVING)**



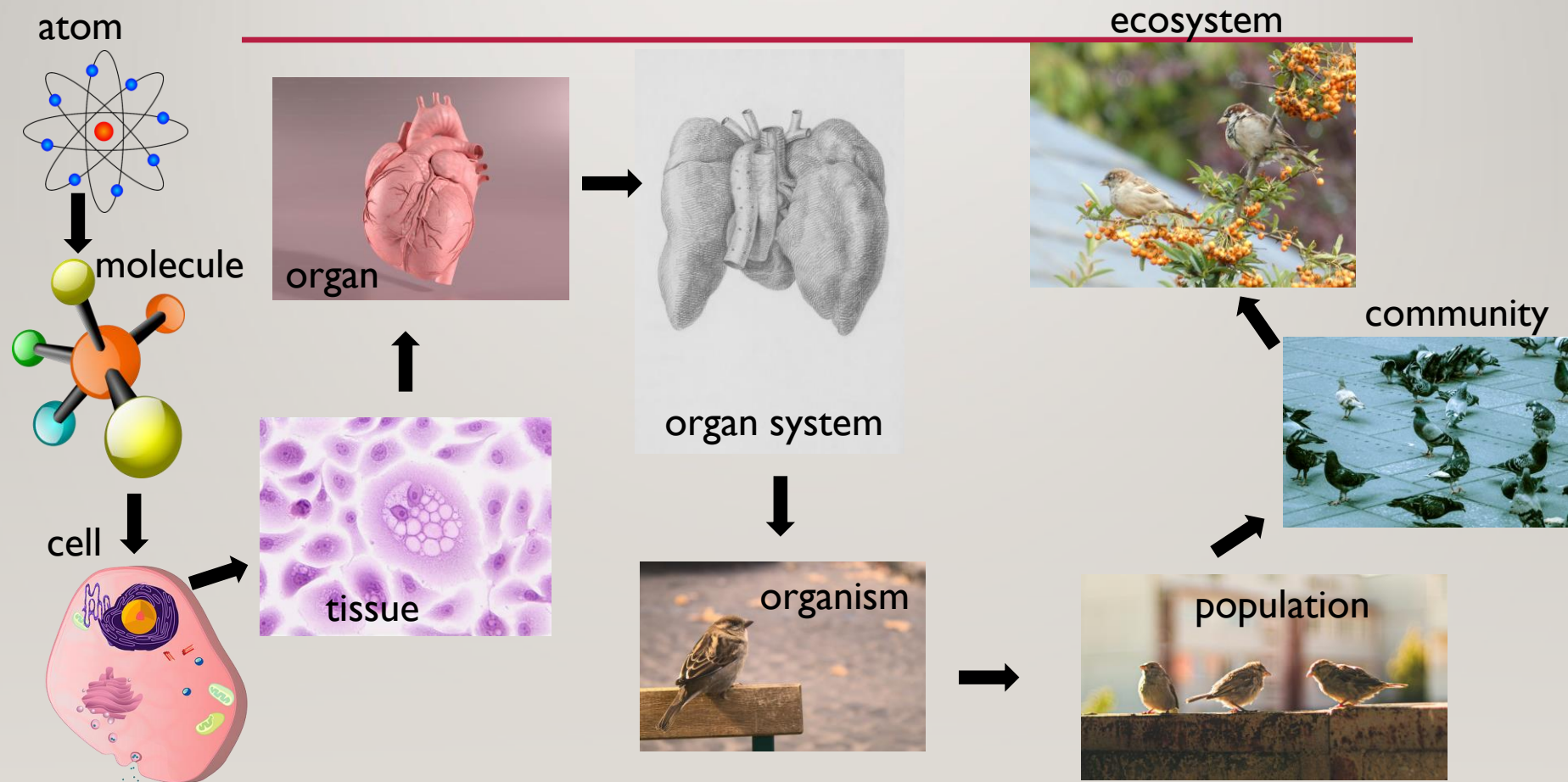
# The environment is characterized by **ABIOTIC** and **BIOTIC** factors

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- **Abiotic** factors are *non-living*.
  - winds, tides, gases in the air, temperature, sunlight...
- **Biotic** factors are *living* and can be categorized within an *ecosystem structure...*

**ECOSYSTEM**: all of the communities that live in an area together with the abiotic factors in the environment

# Levels of Organization in an ecosystem



# SPECIES – POPULATION - COMMUNITY

Species: A group of living organisms that can interbreed and produce fertile offspring.

- Is a mule a species?

Population: Organisms of the same species living in the same area.

Community: Different populations living in the same habitat.

Horse + Donkey

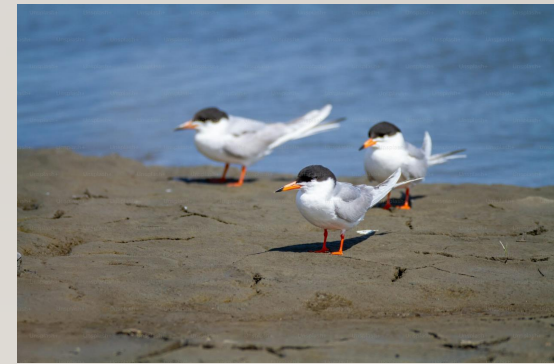


infertile

# AN ORGANISM'S NICHE

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- Habitat: the actual (physical) place an organism lives in.
- Niche: the organism's role in the ecosystem including its activity patterns (nocturnal, diurnal,...).
- If two species share the same niche, they will have various interactions





# AN ORGANISM'S NICHE

- The niche of an organism depends on *where it stands in the ecological structure* of the ecosystem.
  - Producers
  - Consumers
  - Decomposers
  - Scavengers



# PRODUCERS

- Producers are autotrophs (they make their own food).
- Example: plants





# CONSUMERS

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Consumers are heterotrophs, they cannot make their own food. They must eat other organisms.

Herbivores feed on vegetation.

Carnivores feed on herbivores or on other carnivores.

Omnivores feed on both producers and consumers.

Scavengers feed on dead or decaying organisms.

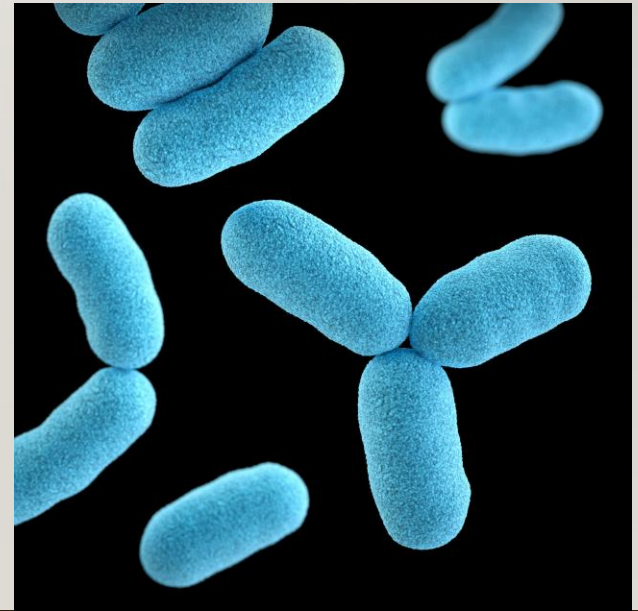
**Scavengers feed on dead or injured animal corpses and dead plants.**

**Scavengers reduce the size of dead organic matter. Decomposers will finish the job!**



**DECOMPOSERS** are heterotrophs that recycle small, often microscopic bits of dead organic matter into inorganic nutrients.

**BACTERIA** and **FUNGI** are decomposers...most worms are plant scavengers!





# What is the niche of Tara iti?

