

Which do you like better?



A



B

Which do you like better?



A



B

What do you think biodiversity means?

Biodiversity

What does "Bio" mean?

Bio = **Life**

Biodiversity

What does "Diversity" mean?

Diversity = Variety

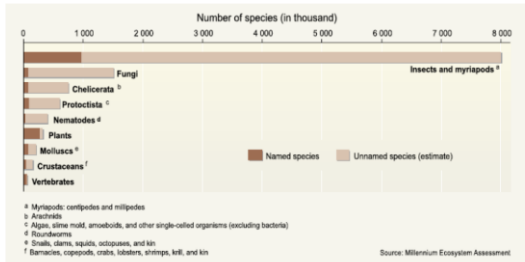
Biodiversity is...

- The variety of life on Earth
- The essential interdependence of all living things

• Scientists have identified more than 2 million species. Tens of millions -- remain unknown

• The tremendous variety of life on Earth is made possible by complex interactions among all living things including microscopic species like algae and mites.

1. How much biodiversity is there on Earth?



3 components of Biodiversity

Diversity of Genes

Chihuahuas, beagles, and rottweilers are all dogs—but they're not the same because their genes are different.



Chihuahua



Beagle



Rottweilers

3 components of biodiversity

Diversity of Species

For example, monkeys, dragonflies, and meadow beauties are all different species.



Saki Monkey



Golden Skimmer



Meadow Beauty

3 components of biodiversity

Variety of Ecosystems

Prairies, Ponds, and tropical rain forests are all ecosystems. Each one is different, with its own set of species living in it.



Paines Prairie



Hoh Rain Forest

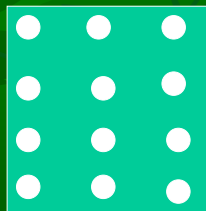


Florida Sand hill Pond

Which is more diverse?

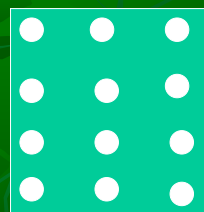


A

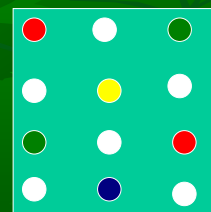


B

Which is more diverse?



A



B

Which is more diverse?

A B

Which is more diverse?

A B

Which has more cultural diversity?

A B

Which has more biodiversity?

A B

Which has more biodiversity?

A B

Biodiversity is Valuable!
 What do we get from biodiversity?

- Oxygen
- Clean Water
- Aesthetics
- Food
- Medicine
- Ideas



Benefits of Biodiversity

- More than 20,000 species have been used for medicinal purposes
- 41% of prescription drugs in the USA have their active ingredients derived from living organisms (25% from plants, 13% from microorganisms, 3% from animals)
- Over 70% of promising anti-cancer drugs come from plants in the rainforest

Diversity of Interaction:

- The success of survival of a particular species may depend entirely on its interaction with another species
- What are humans dependent on other species for?
- What are some other interdependent interactions?

Should we be concerned about biodiversity?

What we know:

The Earth is losing species at an alarming rate

- Some scientists estimate that as many as 3 species per hour are going extinct and 20,000 extinctions occur each year.
- when species of plants and animals go extinct, many other species are affected.

Food Supply

- Heterotroph vs. Autotrophs

H: obtain energy rich nutrients by consuming living/ dead organisms

A: uses sources of energy (water, gases, minerals) to produce nutrients

- Protection
- Transportation
- Reproduction
- Digestion



Threats to biodiversity

Habitat destruction

Pollution

Species

Introductions

Global Climate
Change

Exploitation

