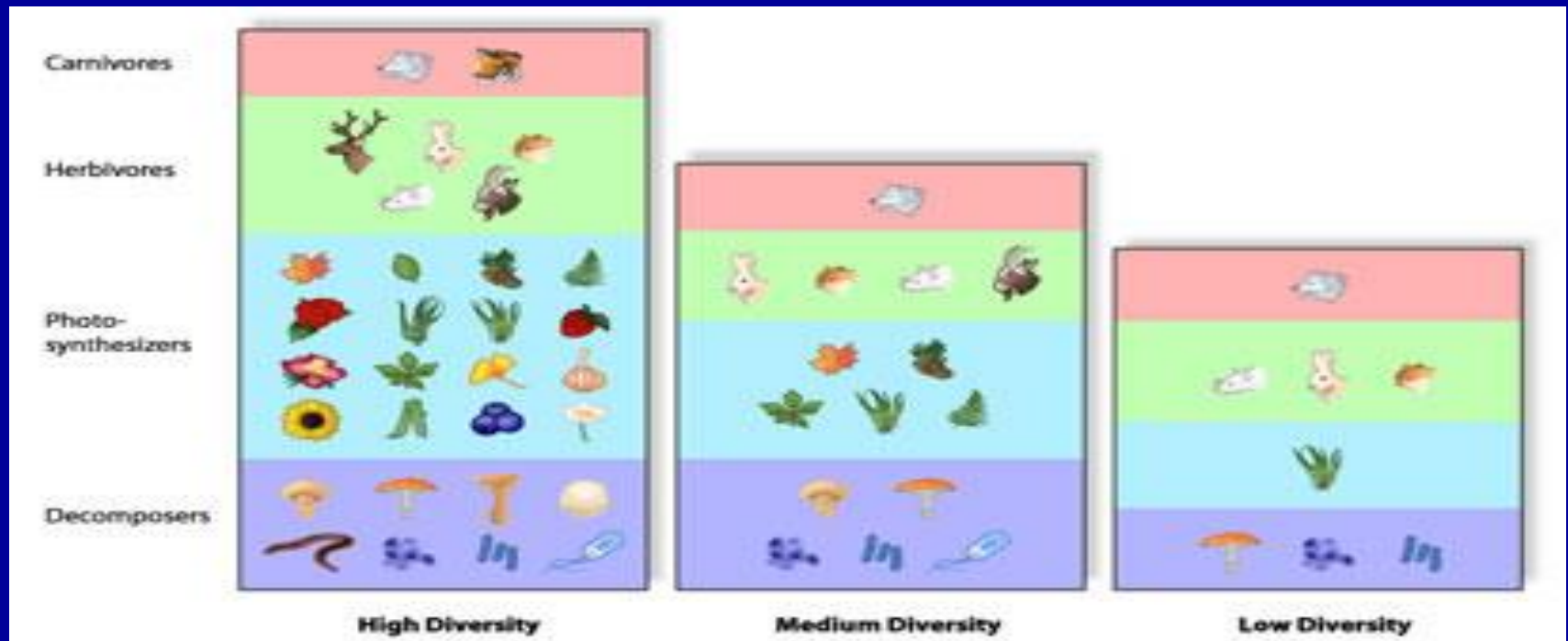


Human Impact on Ecosystems

The Positive

What is a Healthy Ecosystem?

- An ecosystem that contains a wide variety of life.
 - It has many different types of plants and animals.
 - This is known as Biodiversity.



Stresses on Ecosystems

- Due to the wide variety of life in healthy ecosystems, they can withstand many more stresses than ecosystems with a low biodiversity.



Think Back to Food Webs

- If there are a lot of different things to eat, removing one species will not cause many problems, but if there are only a few different things to eat, removing one species may cause the whole food web to collapse.



Resources

- Anything that is needed by humans to live.
- There are 2 types:
 1. Renewable
 2. Non-renewable



Renewable Natural Resources

- Any resource that can be naturally replaced in a reasonable amount of time.
- Examples:
 1. Trees
 2. Wind
 3. Fresh water



Non-renewable Resources

- Any resource that cannot be replaced naturally in a short period of time.
- Examples
 1. Fossil Fuels
 2. Natural Gas
 3. Coal



So How do Humans Help?

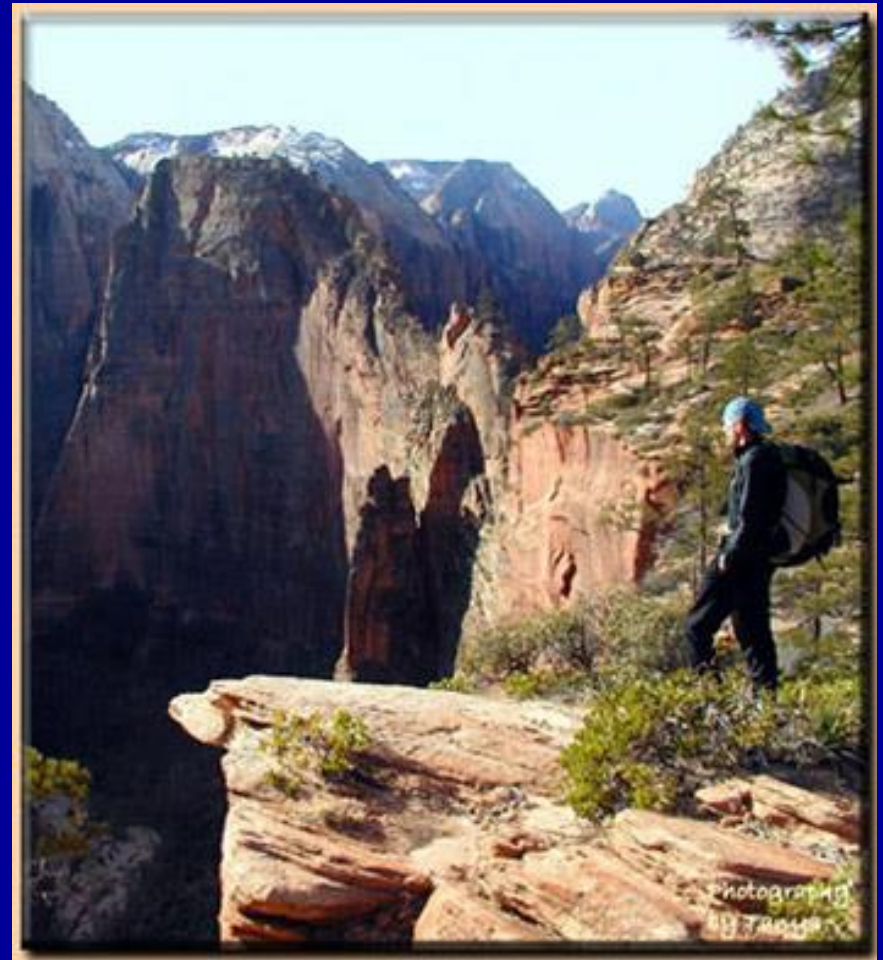
1. Conservation
2. Recycling
3. Organizations



Conservation

1. Humans set aside land so it remains in its natural state.

- Examples
 1. National Parks
 2. State Parks
 3. Nature Preserves



Conservation

- Green Ways
- Humans create green ways through urban areas which allow animals to move freely from one area to another.



Conservation

- Laws have been passed to protect endangered species.



Conservation

- Zoos and Breeding Programs have been established to help species repopulate.
- Examples
 1. California Condor
 2. Giant Panda
 3. African Elephant



Recycling Programs

- Programs have been established to promote reusing and recycling material.
- This reduces the amount of garbage produced each year and helps maintain natural resources.



Organizations

- There are many local and global organizations that try to protect ecosystems and many organisms from harm.
- Examples:
 1. Green Peace
 2. The Sierra Club



- *"Leave it as it is. The ages have been at work on it and man can only mar it."*
- **Theodore Roosevelt**, 1903



"We can never have enough of nature."
- **Henry David Thoreau**, *Walden*, 1854

Human Impact on Ecosystems

The Negative



Negative Effects on the Environment by Humans

- Pollution
- A substance that contaminates the environment.



There are many different types of pollution.

- Air pollution – any pollutant that stays in the air.
- Smog is air pollution that reacts to sunlight.



Air Pollution Causes

Soot, ash, smoke, carbon monoxide and carbon dioxide.



Acid Rain

- Caused from the mixing of vehicle and industrial plant exhaust and rain.



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Acid Rain

- Acid rain washes nutrients out of soil, often leading to deaths of plants.



Water pollution

- Sewage and other contaminants mix with the water causing it to become poisonous to wildlife.



Soil pollution

- Litter and other garbage that mixes with the soil causing it to lose nutrients and not be able to sustain life.



Global warming

- An increase in the greenhouse gases that surround the Earth which trap the heat from the sun causing the Earth's temperature to increase.



Habitat Destruction

- Building in previous range lands.
- Roads across migration paths.



Why Should We Care?

- These types of pollution often harm the organisms that rely on clean water, air and soil to survive.



Human Impact

This leads to shrinking populations, which could cause a breakdown in an ecosystem's food webs. This could ultimately lead to the extinction of a variety of species of plants and animals.



Laughing owl, extinct 1914



Bourbon crested startling, extinct 1850-60



Tasmanian Wolf, extinct 1936. AMNH transparency #5522

What can we do?

- Think globally and act locally!!!

