

Biomes

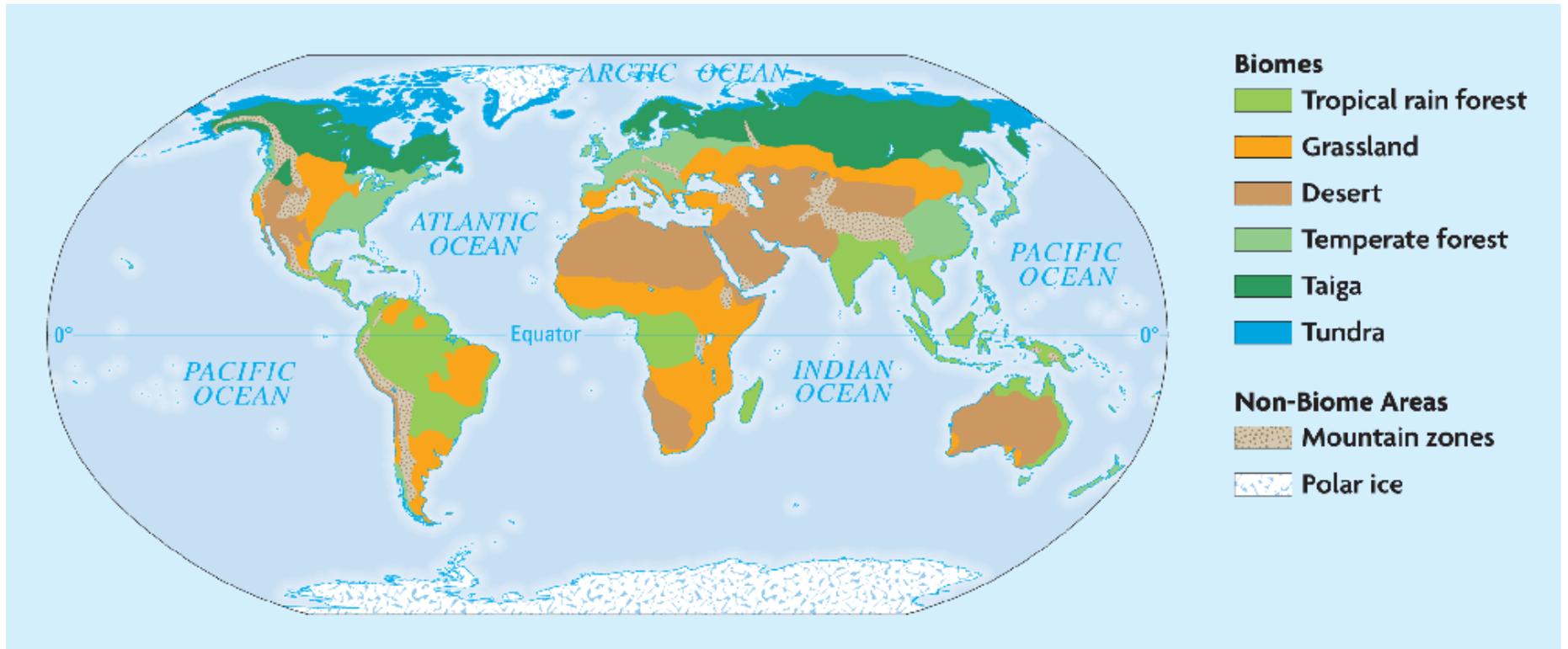


Ch. 21

Biomes

- ❑ Major communities of organisms characterized by the climate and plant life that thrive there
- ❑ Earth has 6 major biomes

Earth has 6 major biomes.



Tropical Rainforest

- ❑ Hot and wet all year. Annual precipitation >200cm.
- ❑ Located in parts of South and Central America, Southeast Asia, parts of Africa, southern India, and Northeastern Australia
- ❑ Soil is thin & poor in nutrients because all the nutrients are tied up in living material.

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- ❑ Limiting factor is sunlight.
 - ❑ Contains more species of organisms than any other biome-
high biodiversity.
 - ❑ There are more species of reptiles, birds, and amphibians than in any other terrestrial biome.

Areas in the forest:

1. **Canopy**- dense covering of the tree tops. Precipitation from the leaves provides water for the forests.
2. **Understory**-Beneath the canopy. Dimly lit. Plants have large leaves to attract as much sunlight as possible.
3. **Forest floor**

Animals of the Rainforest

Sloth



Jaguar





Anteater

**Squirrel
monkey**





Army Ants

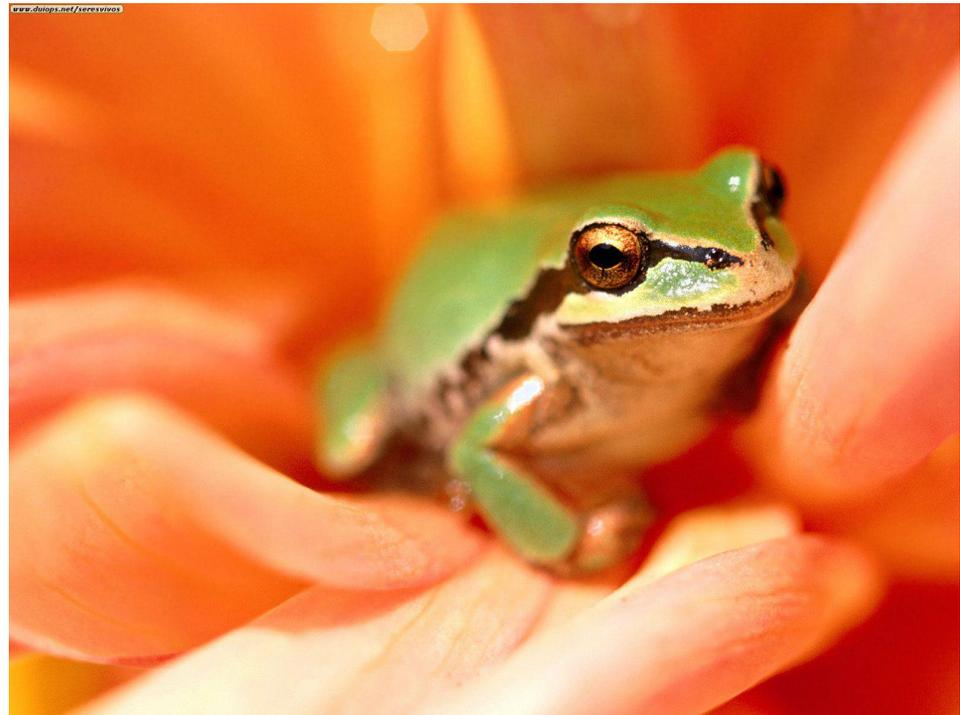
Toucan





**Burmese
python**

Tree frog



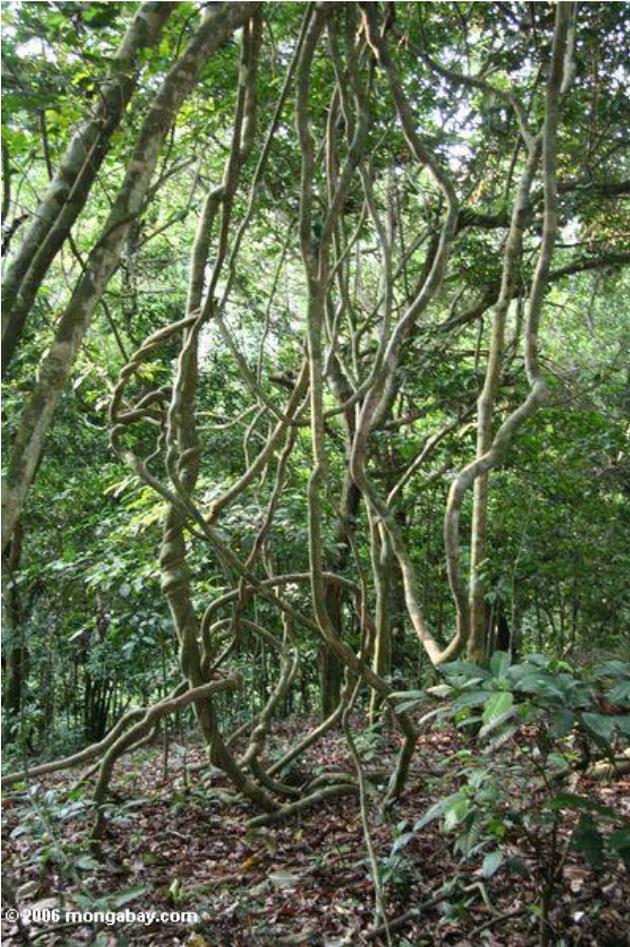
Plants of the Rainforest



Bromeliads



Epiphytes: vines



Grasslands

- Primary plant life is grass
- 2 main types of grasslands:
tropical and temperate

Tropical Grasslands

- Also known as savannas
- Located in eastern Africa, southern Brazil, and northern Australia.
- Rainfall is a limiting factor. For 5 months of the year there may be very little (10 cm a month), but during the rainy season rivers, ponds, etc. may be replenished
- Tall perennial grasses, and isolated trees as well as small groves of trees and shrubs resistant to drought and fire.

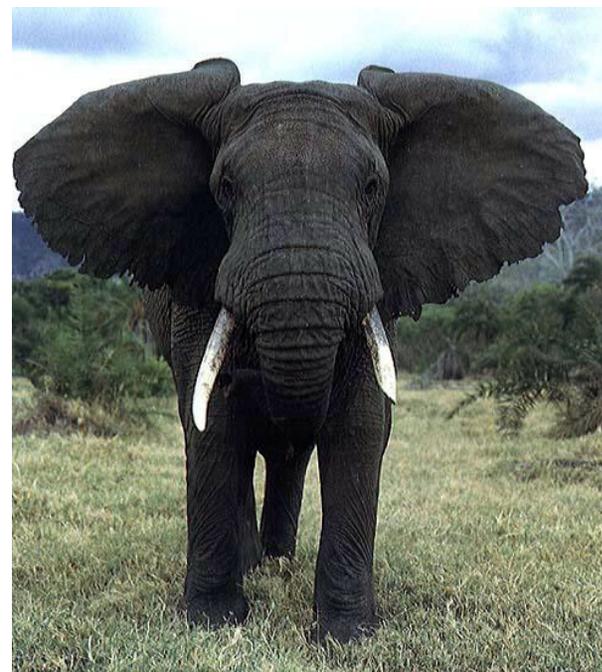
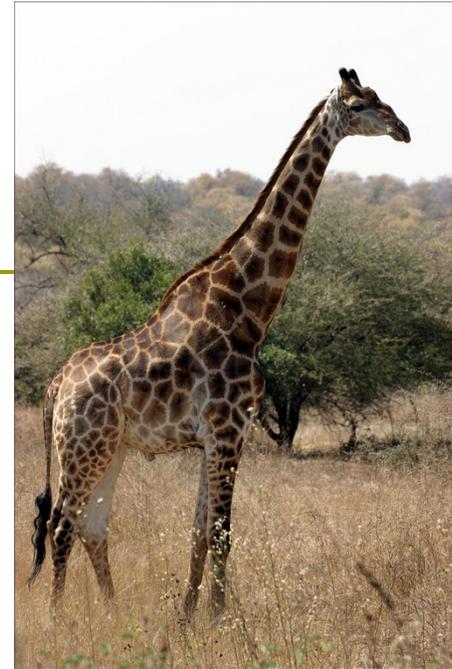
Animals of the Savanna



Lions

Baboons





**Rhinos,
giraffes, zebras,
and elephants**

Temperate Grasslands

- ❑ Temperate grasslands are also known as plains or prairies.
- ❑ Located in central Asia, North America, Australia and central Europe, and plateaus of South America.
- ❑ Warm to hot summers and cold winters.
- ❑ Rainfall is moderate and seasonal (20-35 in per year).
- ❑ Fires are common, but some plants have fire-resistant seeds

Prairie Animals



Prairie dogs, buffalo,
prairie falcon, antelopes,
rabbits, wolves, bears

Desert

- ❑ Annual precipitation <25cm(10 in.)
- ❑ Characterized by a very dry climate
- ❑ Temperatures range from extremely hot days and cold nights.
- ❑ Soils are rich in minerals but poor in organic material (humus).

- ❑ Located in Africa, Asia, the Middle East, United States, Mexico, South America, and Australia.
- ❑ Appearance of desert depends on where it is located. (4 types: hot, semiarid, coastal, & cold)
- ❑ Adaptations of Desert Plants: spines instead of leaves; ability to store water; long roots or short, branching roots; heat-and-drought resistant seeds.



**Saharan Desert:
drier than desert
in US**



Desert Animals



**Roadrunner,
snakes,
kangaroo
rats,
scorpions,
lizards**

Desert Plants

Barrel cacti



Saguaro cactus



Temperate Forest Biomes

□ Have distinguishable seasons

-growing season between
mid-spring to mid-fall

2 types: temperate deciduous forest
and temperate rain forest

Temperate Deciduous Forests

- ❑ Warm to hot summers & cold to moderate winters
- ❑ Rainfall: 30-59 inches per year
- ❑ High humidity
- ❑ 4 distinct seasons
- ❑ Contains trees that lose leaves and go dormant during cold season (deciduous trees)



- Fertile soil containing clay

- Main vegetation: trees such as oaks, beeches, & maples, as well as shrubs, lichens, mosses

- Located in Eastern US, SE Canada, most of Europe, and parts of Japan, China, and Australia

- Contains many ponds and streams

- Much of this biome has been developed and cut down.

Animals of Deciduous Forests



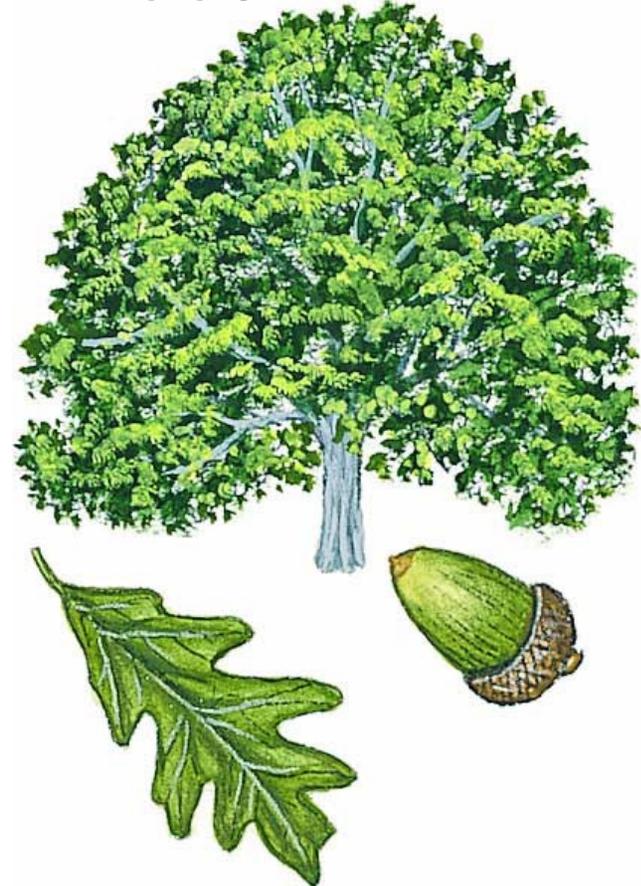
**Deer,
raccoons,
skunks,
black bears,
squirrels**

Plants of Deciduous Forests

Conifers



Deciduous trees



Temperate Rain Forest

- ❑ Sometimes called the northwestern coniferous forest
- ❑ Fall, Winter, Spring: temperature is mild with abundant precipitation (98 inches per year)
- ❑ Summers are cool & dry
- ❑ Soil is rocky & acidic

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- A vertical decorative bar on the left side of the slide, consisting of a dark olive green top section and a lighter olive green bottom section.
- Contains coniferous trees (evergreen conifers) which retain their needles all year
 - Mosses, lichens and ferns are found on forest floor
 - Located along the pacific coast of northwestern US and Canada and from northern California to Alaska

Plants of the Temperate Rainforest

Redwood



Spruce



Animals in Temperate Rainforest

- Bears
- Deer
- Elk
- Beavers
- Owls

Taiga

- ❑ Also known as the boreal forest.
- ❑ Located below the tundra.
- ❑ Winters are long and cold, while summers are short and mild.
- ❑ Humidity is high and precipitation is moderate during summers.
- ❑ Soils are acidic and poor in nutrients.

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- Annual precipitation: 12-33 inches

per year
 - It is the largest terrestrial biome.
 - Covers most of inland Alaska, Canada, Sweden, Finland, Norway and Russia.
 - Characterized by coniferous forests.

Animals of the Taiga



Moose, snowshoe rabbits,
wolves, beavers, lynx

- **Evergreens such as spruce and fir.**



Plants of the Taiga

- **Broadleaf deciduous trees such as birch.**



Tundra

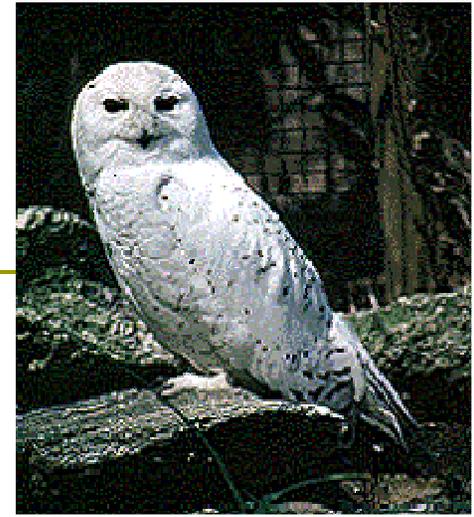
- ❑ First biome south of the north pole.
- ❑ Characterized by low precipitation and strong winds. Annual precipitation is < 5 inches per year.
- ❑ Soils are poor.
- ❑ The subsoil is permanently frozen in a layer called the permafrost.
- ❑ Short summers (6-10 weeks); Long winters (10 months)

Plants of the Tundra

- ❑ Lichens & mosses
- ❑ Grass
- ❑ Scattered shrubs
- ❑ Small low-lying plants



Animals of the Tundra



**snowy owl,
arctic fox,
reindeer,
polar bear**