

April 3, 2015

Ecosystems Part 1

Outline

- Announcements
 - o Grades updated
 - Critical thinking questions 3 and 4
 - volunteer extra credit form last week
 - Participation 10 this week
 - o Quiz 7 due on Sunday April 5, 11:59 pm
 - o Critical Thinking #5 Due Monday April 6, 11:59 pm
 - o Volunteer Extra credit day April 11th
 - Biology field research center
 - 12pm to 2 pm
 - Sign-up on discussion board
- Ecosystems
 - o Flow of Energy
 - o Recycling of Nutrients

Ecosystems

- Biotic **and** abiotic factors in the environment
 - o Biomass= amount of **living** organic matter in an ecosystem
 - becomes important when we look at energy and nutrient flow through a community
 - o Habitat= physical environment/structure

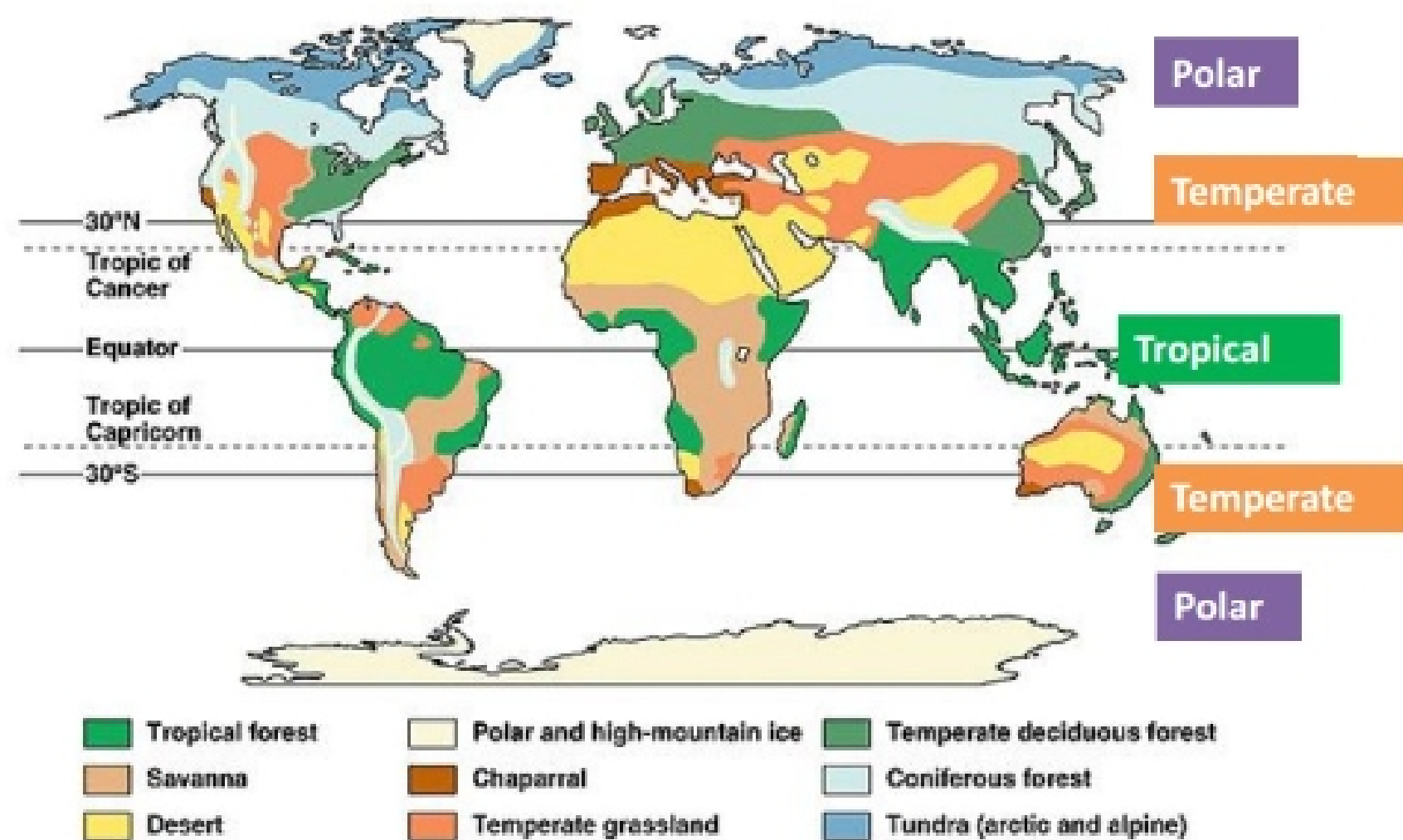
- o Ecological Niche= species role, habitat, and resources used
 - Everything a species needs to survive in a habitat
- Landscapes
 - o Group of ecosystems in specific geographic location

Landscapes: variety of ecosystems

Climate and Ecosystems

- Influential for abiotic conditions
- Climate= **long-term** trends in meteorological variables
 - o Happens over many years
 - o Temperature
 - o Precipitation
 - o Wind
 - o Humidity
- Weather= current conditions and **short-term** trends
 - o Right here right now
- Weather and Climate are not interchangeable

Distributions of Ecosystems



- Climate zones
 - o Tropical zone is warmest area in most cases
 - Highest biodiversity normally
 - Marine sea birds have higher diversity at the poles because there are more fish
 - Angiosperms are the most diverse in this area
 - Conservation is key due to high biodiversity in Tropical zone
 - o Temperate zones tend to have a traditional seasonality
 - Periods of warmth and cold
 - o Polar coldest areas on planet

Climate + Biodiversity

- General Trend: Higher biodiversity in tropical ecosystems than temperate or polar ecosystems