



# Deciduous Forest

Evan Steelhammer 2<sup>nd</sup> period

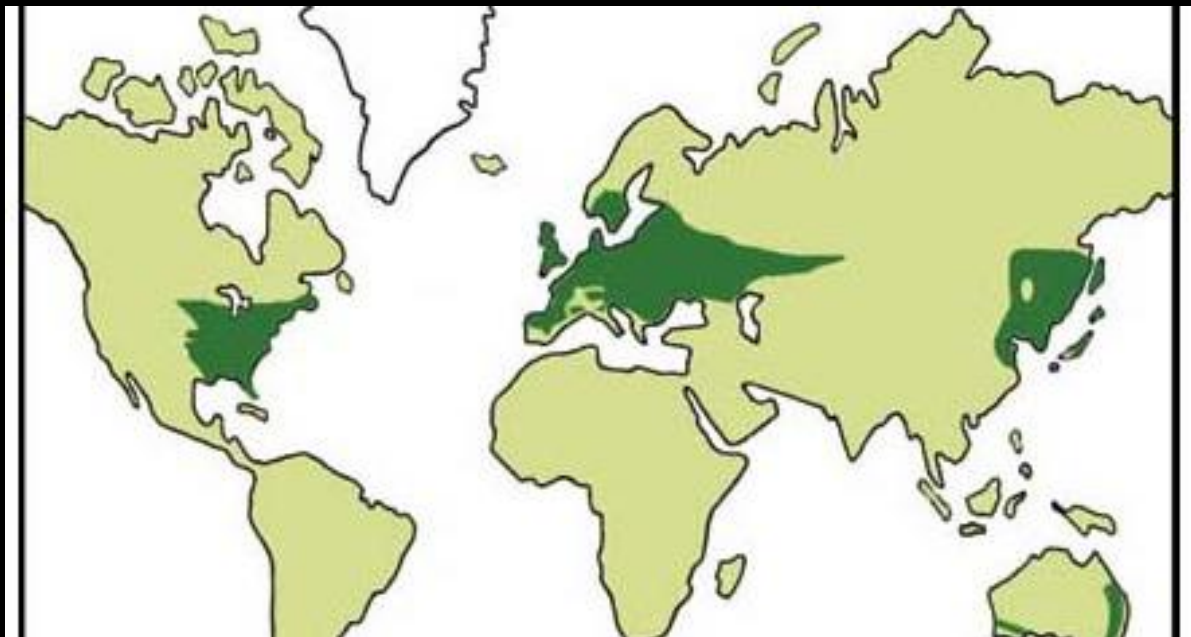


# Info

- **Temp 70F** in the summers  
below freezing in the winters
- **30 to 59** inches of rain annually
- **Fauna** included
  - Black bear, beaver, bison, and deer
- **Flora** consists of
  - Oak, beeches, birches, mountain laurel, and Azaleas









# Deciduous forest are in

- **North America:** Notably in the eastern half, including the Great Smoky Mountains National Park in the United States.
- **Europe:** Parts of central and western Europe, with famous forests like the European Temperate Deciduous Forest.
- **Asia:** Including the Northeast China Plain, parts of Russia, Japan, and China.
- **Southern Hemisphere:** In the southernmost part of South America and New Zealand.



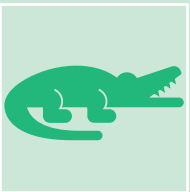
# Producer - Azaleas



***producer:*** an organism that synthesizes its own food from inorganic substances using light or chemical energy.



***Sun Tolerance:*** can handle more sun if they receive sufficient water.



***Water Tolerance:*** Some species, like the swamp Azalea, can be planted in moist to wet areas and tolerate extreme cold well.

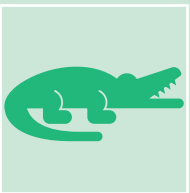
# Primary consumer - Beaver



***primary consumer:*** an organism that feeds on primary producers, such as Azaleas



***Description:*** Beavers are large, semi-aquatic rodents known for their flat, scaly tails and their ability to build dams and lodges



***Adaptation:*** continuously growing, chisel-like teeth, which allow it to gnaw through wood

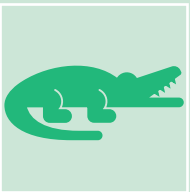
# Tertiary consumer - Great Horned Owl



***Tertiary Consumer:*** An organism that eats secondary consumers



***Description:*** Carnivore and a large bird of prey with distinctive tufts of feathers resembling horns



***Adaptation:*** Exceptional night vision and silent flight making it an apex predator

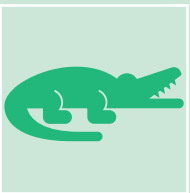
# Decomposer - Fungi



***Decomposer:*** Organisms that break down dead material, returning nutrients to the ecosystem



***Description:*** Fungi include organisms like mushrooms that decompose organic matter



***Adaptation:*** Produce enzymes that break down complex organic compounds into simpler substances



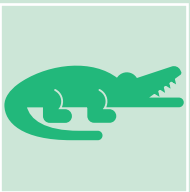
# Detritivore - Earthworm



***Detritivore:*** Organisms that consume decomposing organic material.



***Description:*** Earthworms are long, tubular, segmented creatures that live in soil



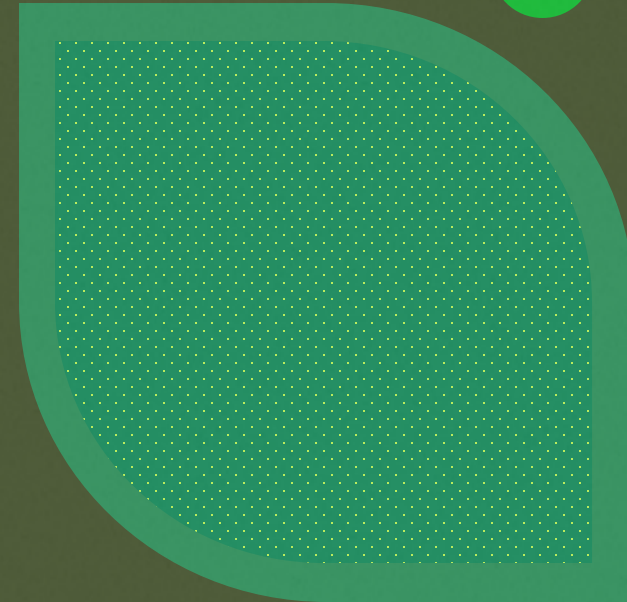
***Adaptation:*** a digestive system specially adapted to break down organic matter in soil

### 3-Level Food Chain:

Producers: Oak trees

Primary Consumers:  
Caterpillars (herbivores)

Secondary Consumers:  
Warblers (insectivorous  
birds)





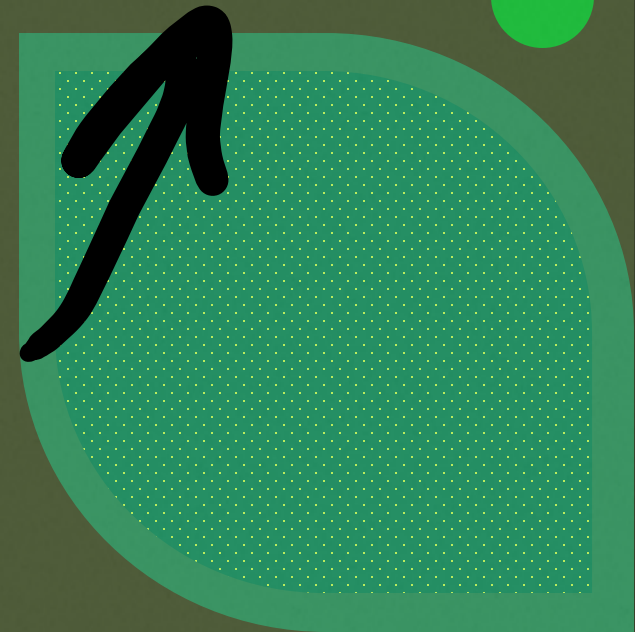
#### 4-Level Food Chain:

Producers: Shrubs

Primary Consumers: Deer (herbivores)

Secondary Consumers: Wolves  
(carnivores)

Tertiary Consumers: Bears (omnivores)





5-Level Food Chain:  
Producers: Grasses

Primary Consumers:  
Rabbits (herbivores)

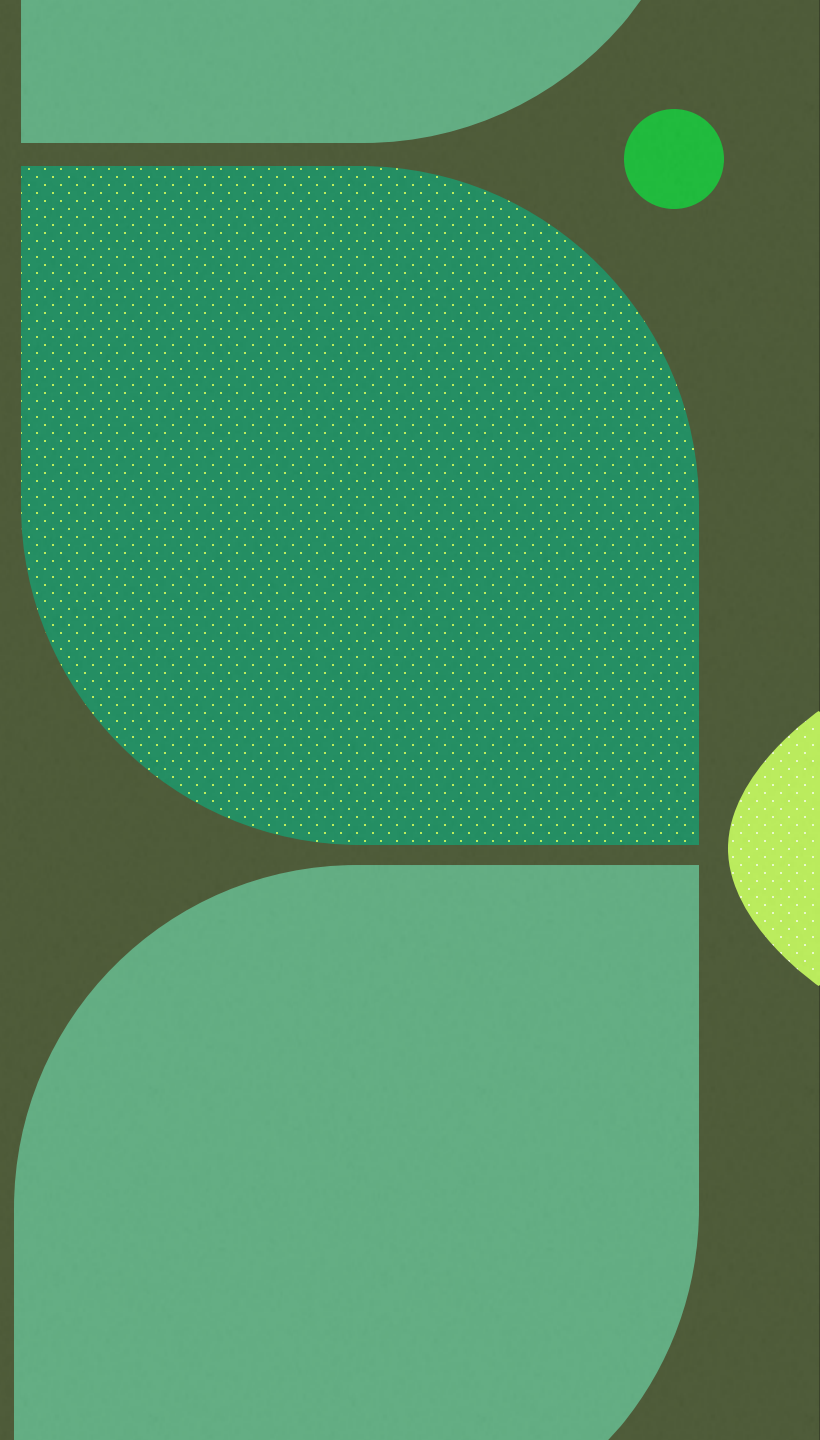
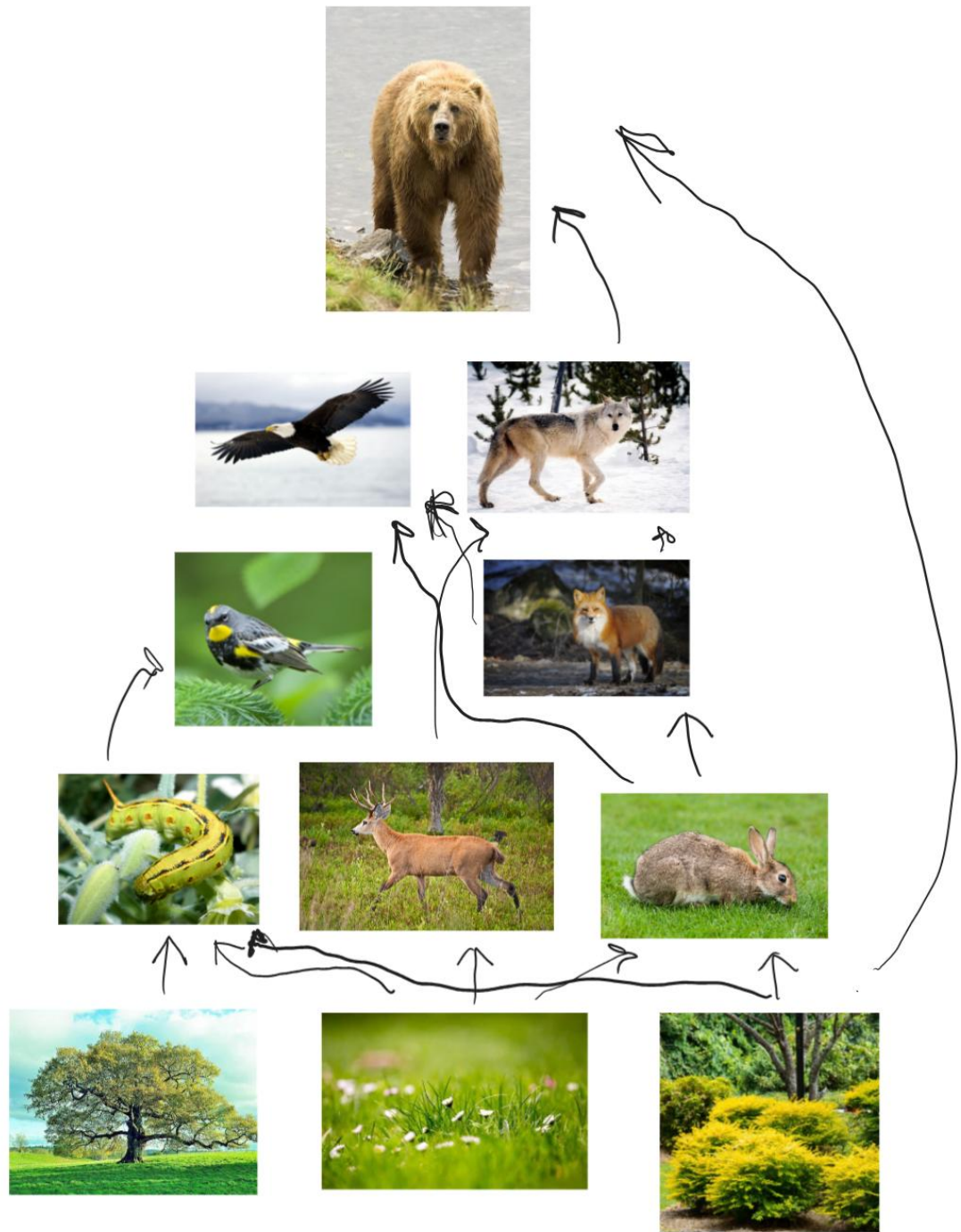
Secondary Consumers:  
Foxes (carnivores)

Tertiary Consumers: Eagles  
(carnivores)

Quaternary Consumers:  
Humans (omnivores)







**Symbiosis:** A close, prolonged association between two or more different biological species

- **Mutualism:**
  - Both species benefit from the interaction
- **Commensalism:**
  - One species benefits while the other is neither helped nor harmed
- **Parasitism:**
  - One species benefits at the expense of the other





# Examples



## Mutualism

- Ants and acacia trees. Ants live in the tree's thorns and protect it from herbivores, while the tree provides nectar for the ants



## Commensalism

- Barnacles on whales. Barnacles attach to the whale, gaining mobility and access to more food, while the whale is not harmed or helped



## Parasitism

- Ticks on mammals. Ticks feed on the mammal's blood, benefiting at the mammal's expense