

## Chapter 6 Notes – Part 3: Terrestrial Biomes

### Section 2: Forest Biomes

- Taiga
  - o *What is taiga?*
    - **taiga** – region of \_\_\_\_\_  
below the arctic and subarctic tundra regions
  - o *Where can they be found?*
    - In a broad band across the \_\_\_\_\_ Hemisphere \_\_\_\_\_
  - o *What controls this biome? Why is it significant to these areas?*
    - \_\_\_\_\_ temperature and \_\_\_\_\_ soil
  - o *What is unique about this biome?*
    - \_\_\_\_\_  
\_\_\_\_\_ and have average temperatures that are below freezing and often fall below 0°F.
  - o *Plants and their Adaptations:*
    - Conifers with needle-like, wax-coated leaves (that \_\_\_\_\_) and seeds that develop in \_\_\_\_\_
    - Conifer's \_\_\_\_\_ helps to \_\_\_\_\_ and breaking its branches
    - As \_\_\_\_\_ drop and begin to decompose, they \_\_\_\_\_ that prevent the growth of other plants.
  - o *Animals and their Adaptations:*
    - \_\_\_\_\_ enjoy the lakes and swamps of the taiga in the summer
    - Due to food scarcity in the winter, year-round animals like \_\_\_\_\_ burrow underground to \_\_\_\_\_.
    - \_\_\_\_\_ shed their brown summer fur for a coat of white in the winter to avoid predators like the \_\_\_\_\_.

- Temperate Deciduous Forests
  - o *What is a temperate deciduous forest?*
    - **temperate deciduous forest** – a forest biome that is characterized by

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  - o *Where can they be found?*
    - Generally located \_\_\_\_\_  
latitudes
  - o *What controls this biome? Why is it significant to these areas?*
    - \_\_\_\_\_ and \_\_\_\_\_
  - o *What is unique about this biome?*
    - The \_\_\_\_\_ in the fall (to red, orange, and yellow).
    - Range of temperatures can be \_\_\_\_\_ and the growing season only lasts \_\_\_\_\_ months.
    - Although there is \_\_\_\_\_ for decomposition, \_\_\_\_\_ during the winter.  
As a result, organic matter decomposes fairly slowly, which leads to more \_\_\_\_\_.
  - o *Plants and their Adaptations:*
    - \_\_\_\_\_, oak, birch, \_\_\_\_\_, herbs, and mosses
    - Herb seeds, bulbs, and \_\_\_\_\_ (underground stems) become \_\_\_\_\_ in the ground during the winter – insulated by snow until spring.
  - o *Animals and their Adaptations:*
    - Chipmunks, squirrels, \_\_\_\_\_, grasshoppers, deer, \_\_\_\_\_ (that nest and feed in the forest in the spring and summer)

- Temperate Rain Forests
  - o *What is a temperate rain forest?*
    - **Temperate rain forest** – a forest biome characterized by \_\_\_\_\_, \_\_\_\_\_, where tree branches are draped with \_\_\_\_\_, tree trunks are covered with \_\_\_\_\_, and the forest floor is covered with \_\_\_\_\_
  - o *Where can they be found?*
    - \_\_\_\_\_ region of the US (N. California, Oregon, and Washington), Australia, and \_\_\_\_\_
  - o *What controls this biome? Why is it significant to these areas?*
    - Large amounts of \_\_\_\_\_
  - o *What is unique about this biome?*
    - Even though some temperate rain forests are located at high latitudes, they still maintain moderate temperatures year-round because nearby \_\_\_\_\_ . This is known as a **maritime climate**.
  - o *Plants and their Adaptations:*
    - \_\_\_\_\_, like the \_\_\_\_\_ and \_\_\_\_\_, can grow up to 90m (~300 feet tall)
    - \_\_\_\_\_
- Tropical Rain Forests
  - o *What is a tropical rain forest?*
    - **Tropical rain forest** – a forest or jungle biome \_\_\_\_\_ that is characterized by \_\_\_\_\_ (200 to 450 cm per year which is approximately 6.5 to 14.7 feet per year) and \_\_\_\_\_
  - o *Where can they be found?*
    - Located in a \_\_\_\_\_

- *What controls this biome? Why is it significant to these areas?*
  - Located where \_\_\_\_\_ in plentiful
- *What is unique about this biome?*
  - Greatest known \_\_\_\_\_ on Earth
  - This biome helps \_\_\_\_\_ and circulation of nitrogen, oxygen, and carbon.
  - High biodiversity ≠ \_\_\_\_\_
    - Organic matter \_\_\_\_\_, but plants quickly \_\_\_\_\_.
- *Plants and their Adaptations:*
  - While 1 hectare ( $10,000\text{m}^2$ ) of temperate forest contains \_\_\_\_\_ tree species on average, the same area of tropical rain forest may contain more than \_\_\_\_\_ species of trees.
  - Many of the trees form above-ground roots called \_\_\_\_\_ that grow sideways from the trees and \_\_\_\_\_ in the thin soil.
  - Layers of the Rainforest
    - **emergent layer** – \_\_\_\_\_ layer
    - **canopy** – \_\_\_\_\_ layers; upper and lower canopies
      - Plants called **epiphytes**, like some \_\_\_\_\_ species, \_\_\_\_\_ instead of on the ground.
    - **understory** – \_\_\_\_\_ layer
      - \_\_\_\_\_ reaches this layer
      - Trees, shrubs, and other plants that are adapted to \_\_\_\_\_ grow here. Most do not grow over 3.5m tall.
      - \_\_\_\_\_ with large, flat leaves grow on the forest floor
      - Most of our \_\_\_\_\_ are native to tropical rain forest floors. Because they are adapted to low levels of light, they are \_\_\_\_\_.

o *Animals and their Adaptations:*

- Most rain forest animals live in the \_\_\_\_\_ because they depend on the abundant \_\_\_\_\_ that grow there.
- Many rainforest animals are \_\_\_\_\_ that use specific resources in particular ways:
  - \_\_\_\_\_ uses its long tongue to reach insects where other animals cannot reach
  - \_\_\_\_\_ uses its strong, curved beak to crack open nutshells
  - Costa Rican \_\_\_\_\_ is shaped like leaves and twigs – \_\_\_\_\_ it from its predators

o *Threats to this biome?*

- \_\_\_\_\_ and \_\_\_\_\_
  - Every 60 seconds, nearly \_\_\_\_\_ acres of tropical rain forest are cleared for logging operations, agriculture, cattle ranching, or oil exploration.
  - Once covered about \_\_\_\_\_ of Earth's land area, but today covers less than \_\_\_\_\_.
  - Leads to \_\_\_\_\_ of species
- Climate change - \_\_\_\_\_ temperatures and changing levels of precipitation affect this biome.
- \_\_\_\_\_ and \_\_\_\_\_  
\_\_\_\_\_