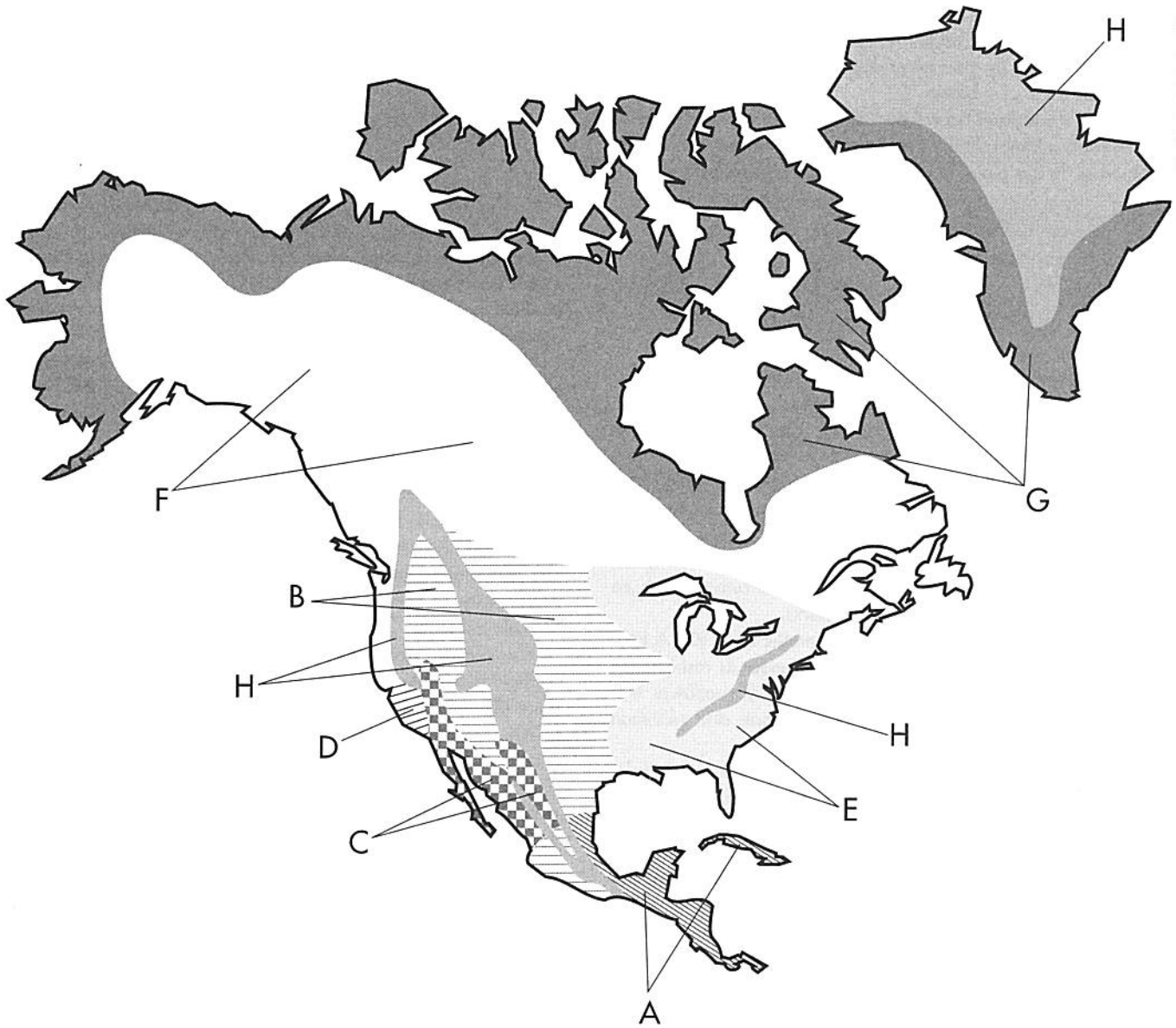


Terrestrial Biomes



Terrestrial Biomes

- | | | |
|---|---|---|
| <input type="radio"/> Tropical Forest.....A | <input type="radio"/> Chaparral.....D | <input type="radio"/> TundraG |
| <input type="radio"/> Grassland.....B | <input type="radio"/> Temperate ForestE | <input type="radio"/> Mountain/IceH |
| <input type="radio"/> DesertC | <input type="radio"/> Taiga.....F | |

Chapter 11-4: Terrestrial Biomes

The biosphere is composed of all the ecosystems on Earth. Within the biosphere are a number of large and somewhat distinct geographical regions known as biomes. The biosphere contains two major types of biomes: terrestrial, or land-based biomes; and aquatic, or water-based biomes. This plate discusses terrestrial biomes. Types of terrestrial biomes are distinguished by their appearance and climate and are similar, wherever they occur in the biosphere.

This plate shows an ecological map of North America and its surrounding regions. Within this region, there are eight biomes. Strictly speaking, a biome does not refer to a particular geographic area; it refers to a number of regions that have similar climates, soil conditions, and communities. Thus, a biome in North America may have a counterpart in Europe or Asia.

The first terrestrial biome we identify is the **tropical forest (A)**. Located in Central America and the Caribbean islands, the tropical rain forest is the biome that is richest in number of species. Because it is near the equator, it experiences warm, humid conditions, and there is abundant rainfall and sunlight that supports a diversity of animals. In general, its trees are tall and form a dense canopy that shades the forest floor.

The second terrestrial biome identified in the map is the **grassland (B)**. Grasslands extend from the base of the Rocky Mountains to the forests of the Mississippi Valley. The prairies and the Great Plains, both of which are grasslands, dominate North America. Rainfall in these areas tends to be scarce, and the large animals that inhabit these regions, such as bison, are grazers. Grasslands are the most important biome for the production of food for humans.

A third biome of North America is the **desert (C)**. Large areas of southwestern United States and Mexico are covered by desert. Rainfall in these areas is very scarce and temperatures are alternately very hot and cold. Desert plants include cacti, yuccas, and fan palms, all of which have small leaves and thick waxy coverings to prevent the loss of water through evaporation.

We have begun our discussion of terrestrial biomes by considering three different biomes of North America; we will continue our study with five others.

At the coast of southern California is a distinctive biome called the **chaparral (D)**. The chaparral is characterized by long, hot, dry summers and mild, rainy winters. Only small trees and shrubs are able to grow there because of the harsh conditions. Chaparrals are also found near the Mediterranean Sea and parts of Chile, as well as along the coast of Australia.

Most of the eastern United States is within a **temperate forest (E)**. The trees in this biome are deciduous, meaning that they shed their leaves in the winter. Shrubs and herbs are numerous at ground level in this biome, and the forest floor is rich in plant life. The temperate forest climate is stable; rainfall is abundant and evenly distributed, temperatures are moderate, and there are distinct summer and winter seasons. Animal life is also varied and abundant.

North of the Great Lakes and extending far into Canada is the biome known as the **taiga (F)**. Most trees in this biome are coniferous, including pine, spruce, and fir. These trees do not shed their leaves in winter and continue to photosynthesize. Their dense foliage shades the ground, so few shrubs and herbs are present. Taigas can also be found across parts of Asia, and are characterized by dry, cold conditions.

North of the coniferous forests of Canada and into the Arctic area is the **tundra (G)**. The tundra is an extensive, treeless plain in which the topsoil remains frozen almost year round. Small shrubs, lichens, and grasses are found here. Plant and animal life is limited since this climate is extremely inhospitable.

The last biome we will discuss is the **mountain/ice (H)**. This biome exists in the Rocky and Appalachian Mountains, and in Greenland. The extremely cold climate of the mountain/ice biome limits vegetation substantially, and little life is found at these high elevations.

11.4 Terrestrial Biomes

1. What is a biome?
2. List the two major types of biomes:
3. By what two ways are terrestrial biomes distinguished?
4. What climatic factors allow the tropical forest to be so rich in number of species?
5. Why are the grasslands so important to humans?
6. Describe the rainfall & temperature of the desert.
7. What two things characterize the chaparral?
8. Only what type of vegetation are able to grow in the chaparral?
9. Trees that shed their leaves in the winter are said to be:
10. What type of trees are found in the taiga?
11. Characterize the conditions of the taiga.
12. The _____ is an extensive, treeless plain in which topsoil remains _____ almost year round.