

Course- WL- 707 Terrestrial Wildlife
Management
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Management

2nd Lecture

Mountain, Rangeland, Foothill, Desert, Agro ecosystem

Mountain is a large landform that rises above the surrounding land in a limited area, usually in the form of a peak. A mountain is generally steeper than a hill. Mountains are formed through tectonic forces or volcanism. These forces can locally raise the surface of the earth. High elevations on mountains produce colder climates than at sea level. These colder climates strongly affect the ecosystems of mountains: different elevations have different plants and animals. There are three main types of mountains: volcanic, fold, and block. All three types are formed from plate tectonics: when portions of the Earth's crust move, crumple, and dive.

- **Volcanoes**

Volcanoes are formed when a plate is pushed below another plate, or at a mid-ocean ridge or hotspot. At a depth of around 100 km, melting occurs in rock above the slab (due to the addition of water), and forms magma that reaches the surface. When the magma reaches the surface, it often builds a volcanic mountain, such as a shield volcano or a stratovolcano.

- **Fold mountains**

Fold Mountains occur when two plates collide: shortening occurs along thrust faults and the crust is over thickened. Since the less dense continental crust "floats" on the denser mantle rocks beneath, the weight of any crustal material forced upward to form hills, plateaus or mountains must be balanced by the buoyancy force of a much greater volume forced downward into the mantle.

- **Block Mountains**

Block Mountains are caused by faults in the crust: a plane where rocks have moved past each other. When rocks on one side of a fault rise relative to the other, it can form a mountain. The uplifted blocks are Block Mountains or horsts. The intervening dropped blocks are termed graben: these can be small or form extensive rift valley systems

Rangeland:

Rangelands are the principal source of forage for livestock, and they also provide habitat for a great variety of native plants and animals. Rangelands are also used by people for recreational purposes. Some plant species of rangelands are used in landscaping, and as sources of industrial chemicals, pharmaceuticals, and charcoal.

IMPORTANCE OF RANGELANDS

Rangelands, primarily covered by natural vegetation, provide grazing and forage for livestock and wildlife. The fertile soil that characterizes many grasslands make the areas well suited to cultivating crops.

- Land for farming
- Grazing and forage for livestock and native animals
- Watersheds for rural and urban uses
- Habitat for plants, insects, and animals
- Water for sustainable landscapes
- Areas for recreational activities
- Potential renewable energy and mineral resource

Desert:

It's a barren area of landscape where little precipitation occurs and, consequently, living conditions are hostile for plant and animal life. The lack of vegetation exposes the unprotected surface of the ground to the processes of denudation. About one-third of the land surface of the world is arid or semi-arid.

Deserts generally receive less than 250 mm (10 in) of precipitation each year. The potential evapotranspiration may be large but (in the absence of available water) the actual

evapotranspiration may be close to zero. Semi-deserts are regions which receive between 250 and 500 mm (10 and 20 in) and when clad in grass, these are known as steppes.

Cold winter deserts:

Also called semiarid deserts, are characterized by moderately long, dry summers and winters that include brief intervals of rain.

Coastal deserts:

Are found in regions that are generally cool to moderately warm. Portions of the aforementioned Atacama Desert in Chile represent the coastal desert biome.

Polar deserts:

Cold deserts are curiosities, like almost everything about the Earth's poles. Compared to other desert biomes, they receive a veritable flood of precipitation, especially in the winter months.

Foothills:

The piedmont are geographically defined as gradual increases in elevation at the base of a mountain range, higher hill range or an upland area. They are a transition zone between plains and low relief hills and the adjacent topographically higher mountains, hills, and uplands. Foothills primarily border mountains, especially those which are reached through low ridges that increase in size closer and closer to the mountain, but can also border uplands and higher hills.

The Alpine foothills around the European Alps

The foothills' of the Blue Mountains in Sydney, Australia.

Agro ecosystem:

It is the basic unit of study in agro ecology, and is somewhat arbitrarily defined as a spatially and functionally coherent unit of agricultural activity, and includes the living and nonliving components. A typical example of artificial ecosystem is a cultivated field or agro-ecosystem.

Examples of relatively diverse traditional agro ecosystems include shifting cultivation, traditional rain fed rice systems, home gardens, and traditional shade coffee and cacao systems.

One common traditional agricultural system is shifting cultivation (also known as swidden or slash-and-burn agriculture).