**EQUATORIAL REGIONS**

**Distribution of Equatorial Climate:**

The equatorial, hot, wet climate is found between 5° and 10° north and south of the equator. Its greatest extent is found in the lowlands of the Amazon, the Congo, Malaysia and the East Indies. Further away from the equator, the influence of the on-shore Trade Winds, gives rise to a modified type of equato­rial climate with monsoonal influences.

Within the tropics, the equatorial highlands have a distinc­tively cooler climate, modified by altitude, such as the Cameron Highlands in Malaysia, the Northern Andes, and the Kenyan Highlands in East Africa. Fig. 121 shows the regions of the world which expe­rience the hot, wet equatorial climate.

**Features of Equatorial Climate:**

**i. Temperature:**

The most outstanding feature of the equatorial climate is its great uniformity of temperature throughout the year. The mean monthly temperatures are always around 80°F. with very little variation. There is no winter. Cloudiness and heavy precipitation help to moderate the daily temperature, so that even at the equator itself, the climate is not unbearable.

In addition, regular land and sea breezes assist in maintaining truly equable climate. The diurnal range of temperature is small, and so is the annual range.



The annual range is not more than 2°F. The mean monthly temperatures for Bogota are comparatively low because of its altitudinal differences.

It is located in the Andes, 8.73 feet above sea level. Its annual range is equally small, also 2°F. (59°E-57°F.). The dotted in the temperature graph shows its temperature reduced to sea level. Statistics taken from various equatorial stations indicate that the annual range of temperature is small: Singapore, 2.3°F Djakarta 1-8°F., Quito 0-7°F, Colombo 3-2°F.

Over the oceans, the range is even smaller, Jaluit in the Marshall Islands in the Pacific Ocean records a range in temperature of only 0-8°F.

**ii. Precipitation:**

Precipitation is heavy, between 60 inches and 100 inches, and well distributed throughout the year. There is no month without rain, and a distinct dry season like those of the Savanna or the Tropical Monsoon Climates, is absent.

Instead, there are two periods of maximum rainfall, in April and October as shown in Fig. 122 (a) and 122 (b), which occur shortly after the equinoxes. Least rain falls at the June and December solstices.

The double rainfall peaks coinciding with the equinoxes are a characteristic feature of equatorial climates not found in any other type of climate. But this simple pattern may be upset by local conditions, e.g. Kota Bharu, Kelantan receives most of its rainfall from the North-East Monsoon at the end of the year and Rangoon, Burma, from the South-West Monsoon between June and September.

As one goes further north and south of the equator, parti­cularly in coastal districts open to the influences of the trades, the tendency is towards a monsoonal pattern with the heaviest rainfall coming in the summer months, i.e. June, July and August in the northern hemisphere and December, January and February in the southern hemisphere.

Due to the great heat in the equatorial belt, mornings are bright and sunny. There is much evaporation and convectional air currents are set up, followed by heavy downpours of convectional rain in the afternoons from the towering cumulo­nimbus clouds.

Thunder and lightning often accompany the torrential showers and the amount of rainfall recorded in one single afternoon may be as much as the deserts receive for the entire year! Besides the convectional rainfall, mountainous regions also experience much orogra­phic or relief rain.

In addition, there are some intermittent showers from cyclonic atmospheric dis­turbances caused by the convergence of air currents in the Doldrums.

Forested slopes of Mt. Kinabalu. The lower slopes have been cleared in places for cultivation. The vegetation on the higher slopes gradually changes in response to lower temperatures Paul Popper.

The relative humidity is constantly high (over 80 per cent) making one fee) ‘sticky’ and uncomfortable. The monotonous climate, oppressive and enervating, taxes one’s mental alertness and physical capability, though along the coasts refreshing sea breezes do bring some relief.

As a result, most of the white settlers, whose bodies are attuned to cooler and more varied conditions take to the cooler highlands whenever they can.

#### Equatorial Vegetation in Equatorial Climate:

High temperature and abundant rainfall in the equatorial regions support a luxuriant type of vegetation-the tropical rain forest. In the Amazon lowlands, the forest is so dense and so complete in its vegetational extravagance that a special term ‘selvas’ is used.

Unlike the temperate regions, the growing season here is all the year round-seeding, flowering, fruiting and decaying do not take place in a seasonal pattern, so some trees may be in flower while others only a few yards away may be bearing fruit. There is neither drought nor cold to check growth in any part of the year.

**The characteristic features of the equatorial vegetation may be summarized as follows:**

**i. A Great Variety of Vegetation:**

The equatorial vegetation comprises a multitude of evergreen trees that yield tropical hardwood, e.g. mahogany, ebony, greenheart, cabinet woods and dyewoods. There are smaller palm trees, climbing plants like the lianas or rattan which may be hundreds of feet long and epiphytic and parasitic plants that live on other plants. Under the trees grow a wide variety of ferns, orchids and lalang.

**ii. A Distinct Layer Arrangement:**

From the air, the tropical rain forest appears like a thick canopy of foliage, broken only where it is crossed by large rivers or cleared for cultivation. All plants struggle up­wards for sunlight resulting in a peculiar layer arrangement. The tallest trees attain a height of over 150 feet (Fig. 123).

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Their slender trunks pierce skywards with wide-spread branches at the top. The smaller trees beneath form the next layer, and the ground is rooted with ferns and herbaceous plants which can tolerate shade. Because the trees cut out most of the sunlight the undergrowth is not dense.

**iii. Multiple Species:**

Unlike the temperate forests, where only a few species occur in a particular area, the trees of the tropical rain forests are not found in pure stands of a single species. It has been esti­mated that in the Malaysian jungle as many as 200 species of trees may be found in an acre of forest.

This has made commercial exploitation of tropical timber a most difficult task. Many of the tropical hardwoods do not float readily on water and this makes haulage an expensive matter. It is therefore not surprising that many tropical countries are net timber importers!

**iv. Forest Clearings:**

Many parts of the virgin tropical rain forests have been cleared either for lumbering or shifting cultivation. When these clear­ings are abandoned, less luxuriant secondary forests, called belukar in Malaysia, spring up. These are characterized by short trees and very dense under­growth. In the coastal areas and brackish swamps, mangrove forests thrive.

**Human life**

Various tribes of people live in the tropical rainforests, such as: the Pygmies in central Africa, the Lumad peoples in the southern Philippines and the Amazonia Indians of South America. Whilst some are keen to **trade high value forest products** such as: animal hides, feathers, and honey with agricultural people living outside the forest, others prefer to**remain elusive** - it is believed that there are 67 different uncontacted tribes in Brazil and 44 on the island of New Guinea

**Some are nomads**, which means that they move from place to place. They chop down trees to make small clearings and then spread the ashes to make the soil fertile for a while before moving on to a new patch, in a way of farming called **slash and burn**.