Global pattern

Most of the world's deserts are found in a linear pattern which is mostly between 25° - 30° latitude North and South of the Equator [1]. North of the Equator has the most areas of desert with a major concentration including the Sahara Desert in Africa and the Arabian Desert in Saudi Arabia. The linear pattern spreads east from the Sahara, through the Arabian Peninsula deserts and over to the Thar Desert in India. This line closely follows the Tropic of Cancer. This line or strip can include deserts in China like the Taklamakan and Gobi but this part of the line has gaps so is not so clear [2]. Across the Pacific Ocean the line of deserts continues with the Mojave and Great Basin Deserts.

To the south of the equator, there is linear pattern through Southern Africa, Australia, Chile and Argentina…

The linear pattern also shows more desert areas on the western coasts of continents like down the western side of North and South America, but this is not a continuous line [3]…

An annotated map supported the description.

Factors and/or processes

Climate is the main factor that has caused the linear pattern of deserts.

The linear pattern follows the Tropics of Capricorn and Cancer and this clearly shows a link to climate patterns [4]. At the Tropics there are belts of high pressure air cells and these do not cause rain. Air is descending in the high pressure cells which are mainly a time of evaporation not precipitation. This process in the high pressure cell would quickly remove any moisture that was in the area like coastal fog which is common in the Atacama and Namib deserts, and this makes these areas even drier [5]. The Sahara in northern Africa and the central Australian desert areas have almost permanent high pressure systems over them…
The coastal deserts are formed because of cold ocean currents which …This is the case on the west coast of Africa. The Namib Desert is caused by the Benguela Current from the South Atlantic and in South America … This factor causes many deserts to occur on the western coasts of continents and why line can be seen stretching down the west coast of North and South America… [6]

Significance to people’s lives

Most of the desert areas are unsuitable for people to live in permanently. Some tribes have adapted to a subsistence/nomadic way of life, but most desert areas have very low population densities.

Indigenous tribes have adapted to living in the desert and have done so for generations. In the Sahara desert the Tuareg have adopted certain strategies to survive. They live as a tribe in groups of 30-100 people and they are constantly searching for water and food. They graze camels and goats… Traditionally they follow the trade routes of the Sahara with their camel caravans to the markets trading in goods and animals. These trade routes have declined and many now live in fertile areas near to oases and raise cereal crops, like maize, and use camel dung as fuel for cooking and heating instead of being nomadic. [7]. However, they still use camels as transport to travel huge distances across the desert…

In America, people use modern technology to create a tourist and resort area in the desert. Las Vegas has a booming community… The development of air conditioning has made it possible for people to live in the desert…. often people migrate to the warm, dry desert for the winter and return to the east coast in the spring [7].

The Arabian Desert is significant for people’s lives as it has over 80% of the world’s oil reserves and includes the countries of Saudi Arabia… All of these countries have oil refineries and have benefited from the extraction of oil from the desert [8].