THE STRANGE NAMIB DESERT

While winter is quickly approaching in the United States, the Namib Desert of southern Africa is almost ready for summer. Climatically, the Namib Desert is strange. Though it receives on average less than 0.4 inches (10 mm) of rain a year, the air is often at or near its saturation point and fog is common. The Namib is often called one of the world’s “foggy” deserts.

The Namib (nah-MEEB) Desert is located along the Atlantic coast of Africa from Luanda, Angola, through the entire length of Namibia to the mouth of the Orange River in the Cape Province of South Africa. It stretches 1,200 miles (1,900 km), but its width is very narrow, rarely exceeding 100 miles (161 km) and averaging only about 70 miles (113 km). The Namib covers approximately 19,300 square miles (50,000 sq km) and gradually merges in the south with the Kalahari Desert of Africa’s interior.

Deserts cover about one-fifth of our planet and are created by low rainfall, but there are many reasons for the lack of precipitation and they differ considerably in their temperatures and seasonality. Some desert environments are tropical dry, existing between 20 and 30 degrees latitude. Others are middle latitude deserts situated in the interiors of large continents and have cold winters. Although the Namib Desert is located in the tropics, geographers and climatologists label it a coastal desert, whose year-round temperatures are anything but tropical.

Research shows that arid or semi-arid conditions have existed in the region of the Namib Desert for more than 80 million years, making it the oldest continuous desert on earth. Located along the coast, its odd climate is created by the Atlantic Ocean’s cold Benguela current, which flows northward along the coast. Cool, moist air from over the Benguela current pushes onto the coast producing a cool coastal fog. As the air pushes inland, however, the fog evaporates and relative humidity drops rapidly. Hardly any precipitation falls.

Average daily temperatures in the Namib range between about 64 F (18 C) in the warm season (December) and 50 F (10 C) in the cool season (July). Coolest nighttime temperatures may drop into the low 40s F, while highest daytime temperatures can reach into the 80s F (approx. 7 to 30 C), making the climate very temperate for a tropical location.

Strangely enough, humidity on the coast stays at 100 percent on an average of 19 hours a day during summer days and 11 hours a day during the winter. Further inland, more continental conditions prevail and temperatures vary more between seasons. Other foggy coastal deserts include the Atacama and the Moroccan deserts, both of which have cold ocean currents along their tropical coasts.

The Namib Desert’s most famous landforms are its sand dunes, which are some of the oldest in the world. Scientists estimate that they are approximately 30 million years old and they cover about 12,500 square miles (32,400 sq km). Coastal winds in the Namib create the tallest sand dunes in the world, with some reaching heights of 980 feet (300 m). Many of the dunes are bright orange. The color is created by iron oxidizing in the sand over time. Therefore, the oldest dunes are brighter in color than the younger ones. Near the coast, the sand dunes tend to taper off leaving lagoons, wetlands and mudflats which are homes to hundreds of thousands of birds and other animals.

For the most part, however, the Namib Desert is relatively barren. Large areas, especially the gravel flats, the bedrock platform and the dunes, are nearly devoid of any vegetation. In the zone of heaviest fog near the coast, especially in the south, however, low succulent bushes can be found growing sporadically. Along the eastern border of the desert, a thin to moderate cover of annual grasses appears in most years. These grasses can support a variety of ostrich, zebra, antelopes and their predators for a short time during the year.

Though very few settlements exist in the Namib, the area is important for the mining of diamonds, tungsten, zinc, tin and salt. A few ports, including Walvis Bay and Luderitz are Namibia’s principal entry ports, while settlements exist in the interior desert solely for the extraction of mineral resources. Although some cattle and goats are grazed on the scarce grasses, cultivated agriculture is limited to a few irrigated areas.

In general though, the beautiful and remarkably hardiest Namibians and desert animals. As one of the world’s driest deserts, the Namib stands out for its temperate climate and the moist fog that shrouds its shores.

And that is Geography in the News™, January 5, 2007. #866.

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