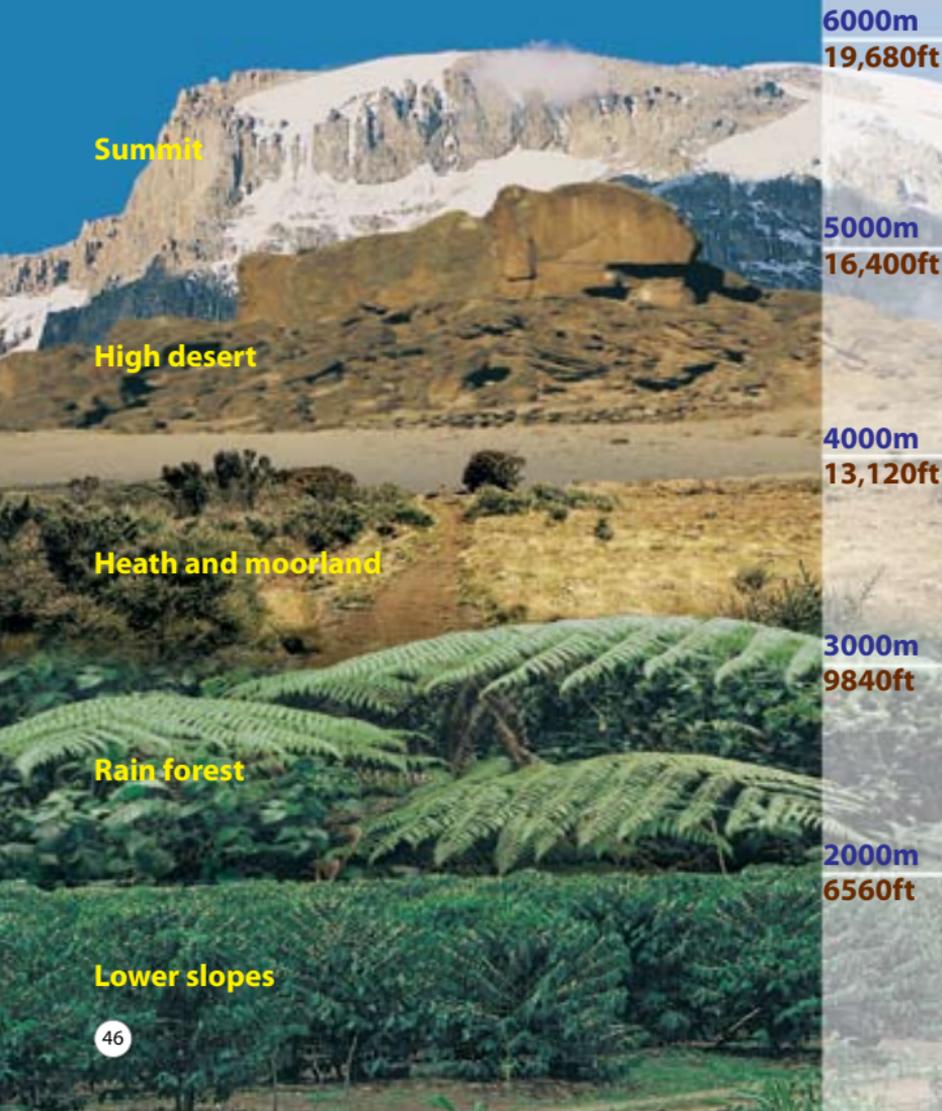


2 Background information

2.4 Habitats and wildlife

Five habitat zones encircle the mountain, each for about 1000m of altitude and each with its own climate, plant life and animals. The higher you go, the colder it gets and the lower the rainfall, limiting the number of species. These conditions demand remarkable adaptations for survival.



The lower slopes

Between about 800 and 1800m, the Chagga people cultivate the rich volcanic soil for crops such as maize, coffee and bananas. The south and west sides of the mountain are wetter and more fertile, with rainfall varying from 500-1800mm per year.

There are brilliant wild flowers all around. Interesting vegetation supports a wide range of bird life, including the common bulbul (brown with a black crest), the tropical boubou (a black and white shrike), brown speckled mousebirds and nectar-feeding sunbirds (long curved bills and iridescent feathers).

You may see monkeys on the lower slopes, though they are commoner higher up, in the forest: 'blue monkeys' and colobus: see p87.



Banana palm in flower

Blue monkey



2 2.4 Habitats and wildlife

Rain forest

The rain forest occurs between about 1800-2800m, with rainfall of about 200cm (79in) per annum on the southern slopes. To the west and north is much drier, and on the Rongai route the rain forest is a narrow band. A band of clouds often forms, causing mist and high humidity.



*Impatiens
kilimanjarii*

Mosses and ferns flourish in these conditions, and grow to giant size. Trees are decked with streamers of bearded lichen: see p74. Wild flowers include violets, gladiolus, orchids and some *endemic* species – found nowhere else in the world. One of the most delicate is *impatiens kilimanjarii* – related to the 'bush Lizzie'.

Common trees include teak, camphorwood and the huge yellow-woods or *Podocarpus*: see p62. An oddity is the lack of bamboo, which occurs in the upper belt of rain forest elsewhere in East Africa.

Fruit trees attract many birds: if you hear a bird braying like a donkey, it is probably a silver-cheeked hornbill. If you are lucky enough to see a large bird flashing crimson at its wings, it could be a turaco. Most animals are all too easily hidden in the thick vegetation. You will likely see or hear more monkeys, which also feast on fruit.

Protea kilimandscharica



Heath and moorland

Between 2800m and 4000m are overlapping zones of heath and moorland, with annual rainfall about 130cm (51 in) lower down, reducing to 50cm higher up. Frost forms at night, and intense sunshine makes for high daytime temperatures.



Kniphofia thomsonii

Heather and allied shrubs are well adapted to these conditions. Tree heathers (*Erica arborea*) have tiny leaves and thick trunks, and grow 3m high, even taller in the forest below. *Protea kilimandscharica* is common here, but unique to the mountain: see p48. You may recognise red-hot poker (*Kniphofia thomsonii*) standing as if in a garden at sea level.

The moorland has many giant groundsels, especially near water courses. The most striking is *Senecio kilimanjari*, which grows up to 6m tall: see p82. The smaller *Lobelia deckenii* (up to 3m) has a hollow stem and spiralling 'leaves' that close over at night. Look inside and you will see blue flowers sheltering.

Animal sightings are scarce. Tiny four-striped grass mice flourish around Horombo huts and you'll see birds around most camps: the shy alpine chat (small, dusky brown) and white-necked raven (large scavengers, see p79). On the Shira Plateau you'll see signs and spoor of larger animals: footprints of buffalo, and perhaps eland or jackal. Your guide may even have seen lion.

Lobelia deckenii



2 2.4 Habitats and wildlife

High desert

The montane (high) desert zone stretches from 4000-5000m and has low precipitation, less than 25cm (10in) a year. Here mid-day temperatures burn at 35-40 °C, but deep wintry chill falls at night. Soil is scanty, and is affected by *solifluction*: when the ground freezes, it expands and flows, disturbing plant roots. Only the hardiest can survive.



Helichrysum

Lichens are a very old life form that fares well in these conditions. They don't need soil, but grow directly on rock. Lichens are not plants but small ecosystems, involving close partnership (*symbiosis*) between a fungus and algae (and sometimes bacteria, too). Fungi have no chlorophyll, so they rely on the algae for photosynthesis to provide it with nutrients. The fungus' role is to protect and supply moisture to the algae. Lichens are amazingly good at absorbing moisture from dew or fog – up to 35 times its body weight.

The desert is also relieved by *Helichrysum* – clumps of hardy, daisy-like flowers, also known as everlastings. They have a big altitude range, and you may have noticed them lower down. They tend to be more colourful at lower altitudes, especially when in bud: see p75. Higher up, they are usually either white or yellow.

Lichens store moisture from dew



The summit zone

Higher up, it's colder and drier still, and any precipitation (under 10cm a year) falls mainly as snow. This often condenses from clouds sucked up from below when air pressure drops because of the warming effect of the sun. There is no surface water: it disappears into porous rock or is locked in as ice and snow.

Living things must endure blazing equatorial sun by day and arctic conditions by night. Here altitude defies latitude. With deep frosts, fierce winds, scarce moisture and less than 50% of the oxygen available at sea level, the environment is deeply hostile to life of any kind.

Nevertheless, you may spot a few lichens, which grow very slowly at this height. Treasure any that you see: they may be among the oldest living things on earth. The highest flowering plant ever recorded was a small *Helichrysum* growing in the crater at 5670m.

Animal sightings are very unlikely, although wild dogs have been reported occasionally. In 1926 Donald Latham found and photographed the carcass of a leopard on the crater rim, 300m north of Gillman's Point, at a spot now known as Leopard Point. Hemingway immortalised this animal in his 1938 short story *The Snows of Kilimanjaro*, remarking that 'No one has explained what the leopard was seeking at that altitude'.

The Kersten glacier, seen from the crater rim

