

2-4 Habitats and wildlife



Summit

High desert

Heath and moorland

Rain forest

Lower slopes

Five zones encircle the mountain for about 1000 metres of altitude, 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 800-1800 m, 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 500-1800 mm (20-70 in) per year. There are brilliant wild flowers and interesting vegetation supporting a wide range of bird life, including the common bulbul (brown with a black crest), the tropical boubou (a black and white shrike), lots of brown speckled mousebirds and nectar-feeding sunbirds (long curved bills and iridescent feathers).

Rain forest

The rain forest occurs between about 1800-2800 m, with rainfall of about 2000 mm (80 in) per year on the southern slopes. The west and north are much drier, and on the Rongai route the rain forest is sparser and less luxuriant. The forest often has a band of clouds, with mist and high humidity. Fine tall trees are decked with streamers of bearded lichen. Mosses and giant ferns flourish in these conditions, and wild flowers include violets, the occasional orchid and the unique red-and-yellow *Impatiens kilimanjari*, found nowhere else in the world.



Blue monkey

Common huge trees include *Podocarpus milanjianus* (with narrow curling leaves, see page 42) and camphorwoods. An oddity is the lack of bamboo, which occurs in the upper belt of rain forest elsewhere in East Africa. In the upper forest, you start to see giant heather trees with yellow-flowered *hypericum* (St John's Wort) growing among them. *Protea kilimandscharica* is common around Maundi Crater and above Mandara, and, as its name implies, is unique to the mountain.

Protea kilimandscharica





Colobus monkey

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 shy and easily hidden in the thick vegetation. You will probably see monkeys in the forest: blue monkeys (actually a dark bluish-grey) and colobus (black with a flowing white mane of hair and thick white tail).

Heath and moorland

Between 2800-4000 m are overlapping zones of heath and moorland, with rainfall ranging from 1300 mm (50 in) per year on the lower slopes to 500 mm (20 in) higher up. Frost forms at night, and intense sunshine makes for high daytime temperatures.

Heather and allied shrubs are well adapted to these conditions, the giant heathers (*Erica arborea*) having tiny leaves and thick trunks and grow to 3 metres high. In the upper forest, they grow even taller. You will also see red-hot pokers (*Kniphofia thomsonii*) standing to attention, and colourful *Helichrysums* – clumps of everlasting daisy-like flowers: see page 37.



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

Senecio kilimanjari (giant groundsel)



Kniphofia thomsonii



Lobelia deckenii

The animal you are most likely to see is the tiny, semi-tame four-striped grass mouse (*Rhabdomys pumilio*), which has found its niche around the Horombo huts. Also, if you sit quietly while eating a picnic lunch, you may be approached by the alpine chat (dusky brown with white sides to its tail). From just above the forest upward, you will often see and hear the harsh croak of the white-necked raven, which scavenges successfully from the huts: see the photograph on page 35.

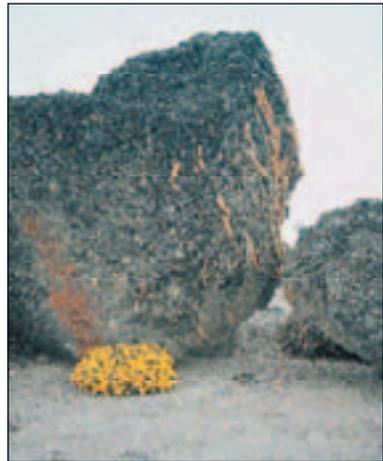
High desert

The montane (high or alpine) desert zone stretches from 4000-5000 m and has low precipitation, less than 250 mm (10 in) a year. Here summer burns every day with mid-day temperatures of 35-40 °C, whilst at night the winter chill bites deeply. Soil is scanty, and what little there is can be affected by *solifluction*: when the ground freezes, it expands and flows, disturbing plant roots. Only the hardiest can survive, such as the long-lived lichens. They flourish without soil, growing directly on the lava rocks. Lichens are a perfect example of *symbiosis*: a close partnership between fungi and algae in which they both live in a place where neither could survive alone. The fungus provides the medium whilst the algae photosynthesise the food for both.

The photograph shows two kinds of lichen: the red is growing flat on the rock surface whereas the grey-green dangles from it. At the foot of the rock, a yellow clump of helichrysum shelters in the lee of the rock. The few plants that survive are slow-growing. Any you see are very old indeed, so take care not to damage them.

The summit zone

Higher up, it is colder and drier still, and the slight precipitation (under 100 mm or 4 in per 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 liquid water on the surface: it disappears into porous rock or is locked in as ice and snow.



Hardy lichens grow directly on the rock

Living things must not only endure the blazing equatorial sun by day, but also 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.

The highest flowering plant ever recorded was a small helichrysum in the crater at 5670 m. Animals are very rare, although in 1926 the Lutheran missionary Richard Reusch found and photographed a leopard frozen in the snow. Hemingway immortalised it 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

