HOW DID THE LAST ICE AGE AFFECT SOUTHERN AFRICA?

**SOUTHERN AFRICA DURING THE LAST ICE AGE**

During the last Ice Age about 120,000 years ago, sea level was about 130 m lower than today, resulting in a very different coastline.

The last Ice Age began about 120,000 years ago with a period of rapid global cooling (see page 58). Brief intervals of rapid temperature increases followed, interspersed with further periods of cooling that culminated in a global deep freeze about 18,000 years ago. At this time, much of North America, northern Europe and Siberia was buried beneath a sheet of ice several kilometres thick. This massive ice sheet locked up a huge amount of water, lowering sea level by about 130 m relative to today. The effects of the lower sea level around the southern African coast would have been quite dramatic: what is now Durban harbour would then have been 15 km from the sea, while the coastline would have lain about 45 km southeast of present-day Port Elizabeth (see page 62).

Although temperatures in southern Africa were several degrees colder than at present, there were no major ice sheets covering the land. The high mountains of Lesotho would have been subject to permafrost, and small glaciers may have developed in some of the south-facing mountain valleys. The seas were generally colder and the cold Benguela current extended much further north than today. The amount of moisture reaching the interior was therefore lower and the climate was much more arid, especially in the Kalahari region and in northern Botswana, eastern Angola and western Zambia, where rainfall may have been as low as 150 mm per annum. Because dunes of this type only form where rainfall is less than about 150 mm per annum, it is likely that arid to semi-arid conditions extended well into what are now the Free State and Gauteng. The Kalahari sand sea in the interior extended to a latitude north of the Equator, forming what is today the most extensive sand body on Earth. Warming began abruptly about 15,000 years ago, as the Ice Age ended, with a short-lived return to cold conditions between 12,000 and 11,000 years ago. Temperatures then rose again, and today’s relatively warm conditions were attained about 10,000 years ago, along with an increase in rainfall over southern Africa and a rise in sea level to its present position. Since then temperatures have been relatively stable, although both they and rainfall have shown some fluctuation. A maximum temperature, in the region of 1–2°C warmer than today, was reached about 7,000 years ago. At this time, rainfall over the Kalahari was probably about 20% higher than it is at present. Gradually, however, conditions changed, and southern Africa became drier. A low point was reached in the Little Ice Age, which lasted from the early 1300s to the mid 1800s, and since then the temperature has apparently been rising.