GEOLOGY AND GEOMORPHOLOGY

The Pinnacle Point caves are situated in the Table Mountain Group that forms part of the Cape Supergroup. The Table Mountain Group is a thick succession of creamy white to ash gray quartz sandstone, metamorphosed to a quartzite and in places it is crushed to breccia. The parent material Table Mountain sandstone is easily erodable. The limestone and calcrete rocks that are exposed on site are part of the Bredasdorp formation. The cliffs at Pinnacle Point show evidence of breccia talus fans deposited on steep hill slopes, pebble and cobble beaches, and sandy estuarine channels that formed along what was the brand-new South African coastline of the very earliest time of the Gondwana break-up. A thin layer of sour, sandy soils cover the highland. Younger sediments rest on quartzite of Table Mountain sandstone. The groundwater quality is brackish to very salty. Rivers flow only after heavy rains.

CLIMATE

Temperature

Pinnacle Point falls under the Southern Cape and is a region that is known for its mild temperatures at the coast. The mean annual temperatures stretching over a period of at least twenty years for Mossel Bay are 17 degrees Celsius.

Rainfall

Pinnacle Point is situated between the winter and summer rainfall regimes. Because of its location on the coast Pinnacle Point is exposed to the warm moisture laden air mass from the Indian Ocean in the summer as well as the cooler air masses from the Atlantic Ocean in the winter. Rainfall occurs year round with summer rainfall marginal higher than winter rainfall. Pinnacle Point with its flat hinterland receives an annual average of 250mm and has an average of 54 rainy days and 10 thunderstorm days per year.

Wind

South-easterly and South-westerly winds are the dominant winds in the summer and North-westerly winds occur in the winter months. Onshore and offshore winds occur as a result of the location on the coast. Berg wind conditions, mostly in January and February, occur from the Northwest and have a marked impact on the temperatures and create the danger of veldfires. The effect of a berg wind on temperatures is dramatic and can result in a 10 degree Celsius increase in half an hour.