near Adelaide, is 2330 feet. Volcanic cones, as Gambier and Schanck, are south-east, near Victoria. In general the country is level, where not slightly undulating. It is far from being well watered, especially to the west­ward and in the interior. The Murray, passing through Lake Victoria, had previously received most of the drain­age of the three eastern colonies. The Torrens flows by Adelaide. Few streams reach the ocean. Cooper’s Creek drains part of Western Queensland. The Indian seas receive the Alligator, Liverpool, Roper, Macarthur, Daly and Victoria rivers. Albert and the Coorong are lakes at the Murray mouth. The depressed area northward con­tains Lakes Torrens, Eyre, Gairdner, Blanche, Hope, and Amadeus. The overland telegraph to Port Darwin passes mostly through an ill-watered country, with oases around springs. The population, 330,000, is principally within 100 miles of Adelaide, the capital, in lat. 35° S. The leading places north of Adelaide are Gawler, 25 miles, Barossa 38, Kapunda 49, Angaston 51, Port Wakefield 60, Clare 90, Kooringa of Burra Burra 100, Moonta 100 north-west, Kadina 96 north-west, Blyth 100, Morgan or North-West Bend 105, Broughton 150, St Petersburg 154, Port Pirie 155 north-west, Port Augusta 240 north­west, Colton 320, Blinman 350. To the east are Barker 21, Echunga 23, Nairne 25, Kingston or Port Caroline 170 south-east, Narracoorte 220, Penola 250, Gambier 290, Macdonnell 304. Lincoln is 210 west. Adelaide Port is 7, Glenelg 7, Brighton 10, Willunga 30 south; Goolwa, the Murray port, is 60 south. Palmerston of Port Darwin is the chief town of Northern Territory; Southport is 25 miles south of it. Other settlements are inland mining townships. There are 36 counties, 4 pas­toral districts, 23 municipalities, and 112 district councils in South Australia proper.

*Climate.—*Excepting Western Australia, this is the driest portion of the island continent. The rain clouds from the Pacific or the Indian Ocean have little store left on reach­ing the South Australian districts. The north-west summer monsoons favour the northern coast-lands, though the rains penetrate but few miles inland. The trade-winds bring only dry blasts from the Queensland side. A large propor­tion of the south-western shore has a very partial deposi­tion, and even the southern Yorke Peninsula, laved by two great gulfs, seldom shows any surface water. The conflict between the polar and equatorial currents occasionally throws down rain in the interior, though many a thunder­storm fails to let fall more than a few drops. But the south-eastern coast catches a fair amount of rain from the western breezes off the Southern Ocean. The settled districts have winter rains, when Adelaide plains are transformed from parched sterility to luxuriant vegetation. The average annual rainfall there is but 20 inches, with an evaporation of three times that amount. In 1885 (a dry year) Adelaide had only 16 inches. In some years only 5 inches have fallen, even on parts of the sea-shore. The interior, however, has been known to have extensive floods after sudden storms. The northern coast, as at Port Darwin, has from 50 to 70 inches, though for several months without a shower. The heat is considerable during the dry summer time, though cold is felt severely on winter mornings and nights, even in the tropics, when a dozen degrees of frost may be followed in a few hours by a tem­perature of 80° or 90°.

The health conditions of the colony are but little inferior, except in Adelaide and Port Darwin, to those ruling in Tasmania and New Zealand, which are so much cooler and wetter. Dry heat is never so prejudicial as a moist heat. A raging hot wind from the north and north-west, to which Adelaide is so unpleasantly exposed, is trying to young children, though it never brings noxious

gases. On the contrary, when passing over eucalyptus forests it brings down health-giving airs, in spite of 160° in the sun, or even 120° in the shade. Diarrhoea may trouble in summer, and catarrh in winter ; but, with a birth-rate of 39 in the thousand and a death-rate of from 12 to 17, South Australia stands more favourably than England in relation to health. Recently, several town­ships had for the year but seven deaths in the thousand, exhibiting a freedom from mortality three times greater than London. The death-rate of the colony during 1885 was only 12·48 to the thousand, while the birth-rate· was 37·70. One-third of the deaths were in Adelaide. Reports from the tropical Northern Territory speak of fever and ague, especially among imprudent gold-miners.

*Geology.—*The few mountain ranges scattered throughout the colony were once, in all probability, but islands rising in a mediterranean sea that connected the Indian Ocean and Java Sea with the Southern Ocean. Over at least the southern half of South Australian territory the water flowed in Tertiary times. The climatic effect of such an archipelago of islands must have been very different from what now is realized in that region. The rise of the country displayed that vast extent of arenaceous limestone forming the southern coast floor, and extending westward hundreds of miles in Western Australia, and far eastward in Victoria. The south coast is still rising. The Murray cuts its channel through this vast coralline formation. According to the Rev. J. Tenison Woods, the newer Pliocene is near Adelaide, while the older is at Mount Gambier. The Murray cliffs are Upper Miocene, and the Murray flats are Lower Miocene. He finds little or none of Eocene. Flint bands occur in this lime­stone, particularly at Gambier. The Biscuit country, south-east, has flat limestone concretionary cakes on the surface, more or less rounded. Beds of sand cover large areas of the recent rock. Caves abound in the Gambier district, provided with stalactites and stalagmites. Subterranean rivers flow through some of the caverns, and are occasionally reached by natural sloping wells. Gambier exhibits much Bryozoan limestone. Its 40 species and 16 genera of *Polyzoa* are in Lower Crag. The coral limestone there has extensive flint bands. *Foraminifera* are of many kinds; some of the Rhizopods are still existing in Australian waters. Sharks’ teeth and large nautili are frequently met with. Most fossils are in casts, except *Pecten, Bryozoa, Echini,* &c. The Murray cliffs mark the remains of an extensive formation, since largely denuded. The Gambier deposits prove the presence of an ancient deep sea, when little of Australia, as we now perceive it, had any existence. The South Australian ranges are generally of Primary order, the Silurian formation being often pierced or flooded by igneous rocks, which have transmuted the strata. While granites and granitoids are in great masses, the basalts and greenstones of a later age are not wanting in the ranges. The Primary rocks are observed, also, in Eyria Peninsula, Port Lincoln, the central continental districts, aud very prominently in the Northern Territory. Flat-topped sandstone hills prevail north­ward. Westward and south-eastward the Tertiary rests on a granite floor. Eastward there is the same Primary presence, with crystalline mountains developing silver mines just over the border. Metamorphic rocks, rising amidst Tertiary beds, are strong in Yorke Peninsula, producing much copper. The tablelands are of horizontal sandstone, often on spiriferous limestone. Desert sand­stone may be Miocene. Near the Victorian boundary, in the south-east corner of South Australia, recent volcanic action is apparent. Several of the lakes there were once craters. The deep Blue Lake, or Devil’s Inkstand, occupies the centre of Mount Gambier. The banks are nearly 300 feet high, and are formed of lavas and volcanic ashes. Cinder walls are detected, and other varieties of volcanic products. Several smaller cones surround the great mount. The country itself is of the usual Tertiary lime­stone, more or less covered with ashes. Mount Schanck, between Gambier and the sea, is known as the Devil’s Punchbowl. This cone of lava has an empty crater 200 feet deep. Gambier and Schanck are landmarks to passing mariners. Among the fossil forms in Tertiary Pliocene strata are those of the huge *Diprotodon,* a marsupial vegetable feeder 16 feet in height, with gigantic kangaroos, emus, wombats, &c.

*Minerals.—*South Australia, though without coal, was the first Australian colony to have a metallic mine, and the first to possess a gold mine. In 1841 the wheel of a dray, going over a hill near Adelaide, disclosed to view silver-lead ore. In the midst of the bad times in 1843 the Kapunda copper mine was found. In 1845 the wonderful Burra Burra copper was first wrought. The land, 10,000 acres, cost £10,000; and for several years the dividends to shareholders were 800 per cent. per annum. The first colonial mineral export was 30 tons of lead ore, value £128, in