



Australian Government

AUSTRALIA'S

National Heritage



Witjira-Dalhousie Springs

Australia is home to the largest artesian system in the world. The Great Artesian Basin, which covers more than 20 per cent of the Australian continent, has around 600 artesian spring complexes in twelve major groups.

Artesian springs are the natural outlets of the extensive aquifer from which the groundwater of the basin flows to the surface. Springs can range in size from only a few metres across to large clusters of freshwater pools known as 'supergroups'. Witjira-Dalhousie Springs is a supergroup that contains around 60 springs, extending over an area of more than 50,000 hectares.



'Mound' Springs

Situated about 250 kilometres southeast of Alice Springs, Witjira-Dalhousie is the most northerly group of springs in South Australia. It is a complex of 'mound' springs, which means the groundwater flow deposits calcium and other salts from the mineral-rich waters. These deposits, combined with wind-blown sand, mud and accumulated plant debris, settle around the spring outflow forming mounds that resemble small volcanos.

Great Artesian Basin groundwater movement rates are slow, between one to five metres per year. As a result some water in the centre of the basin is more than one million years old. Dating techniques that measure groundwater flow reveal that the Witjira-Dalhousie Springs appears to be recharged by thousands of years old water that has percolated down through the beds of Finke River, and adjacent arid zone rivers, where they overlie outcrops of the Great Artesian Basin aquifer. As a geological feature the Witjira-Dalhousie Springs complex is unique in Australia. It illustrates on a huge scale an artesian spring's system, with faults, impermeable confining beds, aquifer outcrops, mound spring deposits, and the large pools and rivulets of artesian water.

Image credit: Department for Environment and Heritage - South Australian Government (SADEH)

Evolution on display

Great Artesian Basin springs have been significant in providing reliable water and habitat as the Australian continent progressively dried out over the last 1.8 million years. As the only permanent source of water for 150 kilometres, Witjira-Dalhousie provides a significant refuge for a number of plants and animals. Due to the springs' isolation many of these plants and animals have evolved into distinct species not found anywhere else in the world.

Witjira-Dalhousie Springs is an integral part of Aboriginal tradition and life in northern South Australia. It is a place that is associated with many traditional stories and songs. Evidence of the spring's significance to Aboriginal people can be seen in the large camp sites found at the springs, some are thousands of square metres in size, and the vast number of stone artefacts found scattered around the area.

National Heritage List

Due to its extraordinary natural qualities and Indigenous significance, Witjira-Dalhousie is considered to have outstanding heritage value to the nation and has been included in the Australian National Heritage List. The National Heritage List recognises and protects our most valued natural, Indigenous and historic heritage sites. Places listed in the National Heritage List are protected under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. For more information visit www.heritage.gov.au