Nullarbor Plain

The Nullarbor Plain (/ˈnʌləbɔːr/; Latin: nullus, "no", and arbor, "tree") is part of the area of flat, almost treeless, arid or semi-arid country of southern Australia, located on the Great Australian Bight coast with the Great Victoria Desert to its north. It is the world's largest single piece of limestone, and occupies an area of about 200,000 square kilometres (77,000 sq mi). At its widest point, it stretches about 1,100 kilometres (684 mi) from east to west between South Australia and Western Australia.

History

Historically, the Nullarbor, considered by Europeans to be almost uninhabitable, was used by the semi-nomadic Aborigines, the Spinifex and Wangai peoples. It was used for thousands of years before that by prehistoric Aborigines.

Despite the hardships created by the nature of the Nullarbor, European settlers were determined to cross the plain. Although Edward John Eyre described the Plain as "a hideous anomaly, a blot on the face of Nature, the sort of place one gets into in bad dreams", he became the first European to successfully make the crossing in 1841. Eyre departed Fowlers Bay, South Australia on 17 November 1840 with John Baxter and a party of three Aboriginal men. When three of his horses died of dehydration, he returned to Fowler's Bay. He departed with a second expedition on 25 February 1841. By 29 April, the party had reached Caiguna. Lack of supplies and water led to a mutiny. Two of the Aborigines killed Baxter and took the party's supplies. Eyre and the third Aborigine, Wylie, continued on their journey, surviving through bushcraft and some fortuitous circumstances, such as receiving some supplies from a French whaling vessel anchored at Rossiter Bay. They completed their crossing in June 1841.

In August 1865, while travelling across the Nullarbor, E.A. Delisser in his journal named both Nullarbor and Eucla for the first time.[1]

On 25 December 1896, after an arduous journey of thirty-one days, Arthur Charles Jeston Richardson became the first cyclist to cross the Nullarbor Plain, pedaling his bicycle from Coolgardie to Adelaide.[2] Carrying only a small kit and a water-bag, he followed the telegraph line as he crossed the Nullarbor. He later described the heat as "1,000 degrees in the shade".[3] During their three-year cycling trip around Australia between 1946-1949, Wendy Law Suart and Shirley Duncan became the first women to cycle across the Plain.

A proposed new state of Auralia (meaning "land of gold") would have comprised the Goldfields, the western portion of the Nullarbor Plain and the port town of Esperance. Its capital would have been Kalgoorlie.

During the British nuclear tests at Maralinga in the 1950s, the government forced the Wangai to abandon their homeland. Since then they have been awarded compensation, and many have returned to the general area. Others never left. Due to their isolation, the government was not able to reach all of the people to warn about evacuating before the testing.

Some agricultural interests are on the fringe of the plain including the 2.5 million acre Rawlinna Station, the largest sheep station in the world, on the Western Australian side of the plain. The property was established in 1962 by
Hugh G. MacLachlan, of the South Australian pastoral family, the station has a comparatively short history compared to other properties of its type around Australia. An older property is Madura Station, situated closer to the coast, it has a size of 1.7 million acres and is also stocked with sheep. Madura was established prior to 1927, the extent of the property at that time was reported as two million acres.

Cultural significance

"Crossing the Nullarbor", for many Australians, is a quintessential experience of the "Australian Outback". Stickers bought from roadhouses on the highway show "I have crossed the Nullarbor", and can be seen on vehicles of varying quality or capacity for long distance travel. The process of "beating the crowds" on overbooked air services at the time of special sporting events can also see significant numbers of vehicles on the road.

Crossings in the 1950s and earlier were significant, as most of the route then was a dirt track. Round-Australia car trials (the Redex Trials) used the Nullarbor crossing for good photo shoots of cars negotiating poor track.

Geography

The Nullarbor Plain is a former shallow seabed, as indicated by the presence of bryozoans, foraminifera, echinoids and red algae calcareous skeletal that make up the limestone. The region is also the location of "Nullarbor limestone" and it has a reputation as a significant karst region with Oligocene and Miocene cave formations.\[4\]

The sequence within the limestone includes five formations:

- the upper formation is the Nullarbor Limestone which is early middle Miocene in age;
- the Mullamullang member of this formation is a paraconforming member, being separated by 5 million years;
- the third member is the Abrakurrie Limestone that was formed in a central depression of the earlier formation; this is late Oligocene to Early Miocene in age and does not reach the edge of the plain;
- the last two formations are conforming formations; the late Eocene Toolinna Limestone lies on the Wilsons Bluff Limestone which is mid to late Eocene in age; and
- the Toolinna Limestone does not cover the whole Nullarbor and is extant only in the extreme east beside the Abrakurrie formation which lies in a depression.
One theory is that the whole area was uplifted by crustal movements in the Miocene, and since then, erosion by wind and rain has reduced its thickness. The plain has most likely never had any major defining topographic features, resulting in the extremely flat terrain across the plain today.

In areas, the southern ocean blows through many subterranean caves, resulting in blowholes up to several hundred metres from the coast. The Murrawijinie Caves in South Australia are open to the public, but most of the Nullarbor Caves on the Western Australian side can only be visited and viewed with a permit from the Department of Environment and Conservation.

The Nullarbor is known for extensive meteorite deposits, which are extremely well preserved in the arid climate. In particular, many meteorites have been discovered around Mundrabilla, some up to several tonnes in weight.\[5\] According to the United States Department of Agriculture, the Nullarbor's soils are considered to be mainly aridisols.

The prevailing climate across the Nullarbor is typical of a desert, characterised by arid to semi-arid conditions, with maximum daytime temperatures of up to 48.7 °C (119.7 °F), while in winter nights can drop below freezing. The mean annual rainfall at Cook is 184.1 millimetres (7.25 in), with most rain falling between May and August.

### Transport

The need for a communications link across the continent was the spur for the development of an east–west crossing. Once Eyre had proved that a link between South Australia and Western Australia was possible, efforts to connect them via telegraph began. In 1877, after two years of labour, the first messages were sent on the new telegraph line, boosted by eight repeater stations along the way. The line operated for about 50 years before being superseded, and remnants of it remain visible.

The Trans-Australian Railway railway line crosses the Nullarbor Plain from Kalgoorlie to Port Augusta. Construction of the line began in 1917, when two teams set out from Kalgoorlie in Western Australia and Port Augusta in South Australia, meeting in the centre of the Plain at Ooldea, an uninhabited area noted for a water supply. This original line suffered severe problems with track flexing and settling in the desert sands, and journeys across the Plain were slow and arduous. The line was entirely rebuilt in 1969, as part of a project to standardise the previously disparate rail gauges in the various states, and the first crossing of the Nullarbor on the new line reached Perth on 27 February 1970. The Indian Pacific is a regular passenger train crossing the Nullarbor from Perth to Sydney via Adelaide.
The Nullarbor Plain viewed from the Indian Pacific. The featureless terrain made navigation difficult for early explorers.

The Eyre Highway, which connects Norseman in Western Australia to Port Augusta, was carved across the continent in 1941. At first it was little more than a rough track, but was gradually sealed over the next thirty years. The last unsealed section of the Eyre Highway was finally sealed in 1976. Unlike the railway, though, it crosses the plain at its southernmost edge rather than through the centre.

The railway line has the longest straight section of railway in the world (478 km, 297 mi), while the road contains the longest straight section of tarred road in Australia (146.6 km, 91.1 mi).

Most of the inhabited areas of the Nullarbor Plain can be found in a series of small settlements located along the railway, and in small settlements along the Eyre Highway that provide services to travellers, mostly spaced between one and two hundred kilometres apart. The town of Cook, in South Australia, was formerly a moderately thriving settlement of about 40 people, with a school and a golf course. The reduction of railway operations at the town resulted in its virtual desertion, and it now has a permanent population of four. The Tea and Sugar Train operated until 1996 supplying provisions to the town along the railway line.

Biogeography

Nullarbor is a biogeographic region under the Interim Biogeographic Regionalisation for Australia (IBRA) and the Nullarbor Plains Xeric Shrubland ecoregion of the World Wildlife Fund.

Vegetation in the area is primarily low saltbush and bluebush scrub. A large part of the Nullarbor Plain is now a National Park.

The fauna of the Nullarbor includes communities of crustaceans, spiders, and beetles adapted to the darkness of the Nullarbor Caves and the underground rivers and lakes that run through them. Mammals of the desert include the southern hairy-nosed wombat which shelters from the hot sun by burrowing into the sands, as well as typical desert animals such as red kangaroos and dingoes. An elusive subspecies of the Australian masked owl unique to the Nullarbor is known to roost in the many caves on the plain. The grasslands of the Nullarbor are suitable for some sheep grazing and are also damaged by rabbits.

Limits

Frequently The Nullarbor is expanded in tourist literature and web-based material to loosely refer to all the land between Adelaide, South Australia and Perth, Western Australia.

References

[1] Journal of the Great Australian Bight Expedition, May–October 1865, recording the exploration and naming of the Nullarbor Plain. Written in pencil and ink, the journal covers the dates 1 May to 5 October. Both volumes include mounted and identified botanical specimens, with some since lost or deteriorated. Book II includes a sketch plan entitled "Bight Country -The two catacombs near Kuelna [Colona?] July 16 Sunday -1865". This volume appears to contain the first written use of the name Nullarbor Plain under the date Friday 18 August 1865. - see http://trove.nla.gov.au/work/34692051
Further reading


External links

- Across The Nullarbor (http://www.travography.com/nullarbor/) Travel story by Roderick Eime
- Eyre Bird Observatory (http://www.eyrebirds.org/observatories/eyre.htm)
- Mundrabilla meteorite information (http://spaceresearch.nasa.gov/research_projects/meteorite.html)
- Photo Essay on Driving Australia's Nullarbor Plain (http://www.nicholsonprints.com/Essays/NullarborIntro.htm)
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