

## **SUMMARY OF STATE HERITAGE PLACE**

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### **REGISTER ENTRY**

**Entry in the South Australian Heritage Register in accordance with the  
*Heritage Places Act 1993***

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**NAME:** Corra Lynn Cave **PLACE NO.:** 22798

**ADDRESS:** Curramulka, Yorke Peninsula  
CT 5678/905, Section 34, Hundred of Curramulka

### **DESIGNATED PLACE OF PALAEOLOGICAL AND SPELEOLOGICAL SIGNIFICANCE**

#### **STATEMENT OF HERITAGE SIGNIFICANCE**

Corra Lynn Cave contains extensive fossil deposits including the only known cave deposits of Late Miocene and Pliocene age (6 – 2 Million years ago) in South Australia. Ancestors of modern marsupials including kangaroos, bandicoots, koalas and possums have been discovered and several species are new to science and not yet described. The cave's fossil deposits provide an opportunity to investigate and understand the evolution of South Australia's fauna. In addition, it is the best example of a maze cave in South Australia.

#### **STATEMENTS OF DESIGNATION**

##### **Designated Place of Palaeontological Significance**

The Corra Lynn Cave has considerable palaeontological significance, with fossil deposits covering a period that has not been found in any other South Australian caves. These deposits include fossils from the late Miocene and Pliocene epochs, a period rare in the context of South Australian fossil finds.

In addition to this, the cave also has fossils of a comparable age with other sites. This allows geographic as well as temporal comparisons with other sites building a more complete picture of faunal evolution in South Australia.

##### **Designated Place of Speleological Significance**

The Corra Lynn cave system is one of the longest in the State. South Australia has a number of areas of karst where there has been significant cave development. The

south east of South Australia and the Nullarbor Plains caves have developed in Tertiary aged limestone and generally follow a single plane of development. The Flinders Ranges contains many caves in Pre Cambrian and Cambrian limestone of a similar age as Corra Lynn, but most of these are small and none exhibit the strong maze style of development that Corra Lynn Cave does.

As at 2011, Corra Lynn is the second longest cave in terms of cave passage in South Australia and in the top ten in Australia. In terms of maze-type cave development, it has no rival in South Australia.

### **RELEVANT CRITERIA (under section 16 of the *Heritage Places Act 1993*)**

#### ***(b) It has rare, uncommon or endangered qualities that are of cultural significance.***

Corra Lynn Cave's fossil deposits include animal fossils dating to the late Miocene and Pliocene eras (6 - 2 Million years ago). These deposits cover a period of time not revealed in any other fossil sites in South Australia and provide the only known window into faunal evolution during this period. Several species new to science have been described and a number of others await description. Finds from this cave have furnished collections in significant institutions including the South Australian Museum and have increased our understanding of Earth's history.

#### ***(c) it may yield information that will contribute to an understanding of the State's history, including its natural history***

Corra Lynn Cave is one of South Australia's longest caves and contains significant fossil deposits. The significance of Corra Lynn Cave lies in the age of the fossil deposits and the contribution these make to our understanding of the state's natural history. Some fossils removed from the cave have been studied by a number of authors, however, the majority of the material remains in situ providing a large resource awaiting further investigation.

Some Corra Lynn Cave deposits are considered to be late Miocene to Pliocene in age, a period not covered in other cave or surface deposits in South Australia, and rare elsewhere in Australia. In addition, Corra Lynn is a maze cave, a type of cave that develops following fractures within the host rock, in this cave limestone. When first discovered, less than two kilometres of cave was accessible. Through the determination of cavers, tunnels blocked by sediment have been opened and the known passage exceeds 14 km. Given the predictable pattern of this cave's development the likelihood for further passage discoveries is highly probable.

# SITE PLAN

Corra Lynn Cave  
Currumulka, Yorke Peninsula

PLACE NO: 22798



Site plan showing extent of listing (orange boundary) and entrance to cave

## COMMENTARY ON THE LISTING

### Description and notes with respect to a place entered in the South Australian Heritage Register in accordance with the *Heritage Places Act 1993*

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#### Physical Description

Corra Lynn Cave is an extensive cave of over 14 km of horizontal passages and shafts developed in the Cambrian Parara Limestone of the Yorke Peninsula. It is a maze cave, formed along fractures within the limestone. These fractures have led to cave development that includes many loops and parallel passages, resulting in Corra Lynn Cave having 14 km of known passages contained within an area about 400m x 300m and a depth of 46m. There are a number of smaller caves nearby that have mostly formed in the underlying older Kulperra Limestone.

Although first explored in 1850, its true significance was only revealed through active exploration and the discovery of major extensions to the cave in 1984. Recreational caving and ongoing active exploration could lead to more discoveries and a further enhancement of this already impressive fossil record.

The extent of listing is the Corra Lynn Cave, Curramulka, Yorke Peninsula, CT 5678/905, Section 34, Hundred of Curramulka as generally indicated on the attached site plan.

The components identified as being intrinsic to the heritage significance of the Corra Lynn Caves **include**:

- *The full extent of the underground cave system contained within CT 5678/905, Section 34, Hundred of Curramulka (as indicated by the Site Plan)*
- *Fossil deposits within the cave*

#### History of the Place

The first recorded entry into Corra Lynn Cave is 1850 when a party of people visited the cave including Edward Snell (contained in his diary) (Griffiths 1988). The cave was later reported in "The Adelaide Observer" newspaper in 1880 resulting in a greater awareness of the cave and increased visitation by local people and groups from Adelaide. In the 1950's the cave was used by the local boy scouts for exploration and training in preparation for expeditions to the Nullarbor Plain. This use of Corra Lynn to introduce young people to caving still occurs today.

The Cave Exploration Group of South Australia (CEGSA) was established in 1955. CEGSA was formed to carry out exploration, to document and to foster conservation of caves. This work was carried out across South Australia and included many thousands of hours work in Corra Lynn Cave. Fossils were retrieved on some of these early visits but most were of a young age and not significant compared to discoveries elsewhere in South Australia. Extensions to the cave were discovered on virtually every visit.

Cavers began to excavate clay-filled passages and many significant discoveries have been made in this way. In 1964 an extension now named Skeleton Crevasse and Skeleton Maze were found. Further excavation in this area in 1973 opened up

the western section of the cave including "Hawaiian Tub Hill", extending the known cave by over one kilometre.

In 1977, CEGSA was determined to break the southeast "barrier" that presented itself as a line of passage terminations along a southwest-northeast line. After three years of probing and excavating, a way past this barrier was located. However, it was left alone for 5 years while all known cave areas were mapped. In 1984, the way past the barrier was finally tackled. It took a year and the excavation of many small tunnels to locate the entrance to Dreamland by climbing a 12m high tight fissure. Dreamland has about 7km of known passages, and contains the Miocene and Pliocene fossil deposits.

### ***Palaeontological Context***

Cave fossil deposits are found in a number of regions in South Australia. Naracoorte Caves and many other caves in the south east of South Australia contain fossils dating from around 500,000 years ago to the present and the significance of these deposits was recognised with World Heritage listing in 1994. Victoria Fossil Cave is also on the South Australian Heritage Register recognising these fossil values. Kelly Hill Caves and the Emu Bay caves on Kangaroo Island contain fossil material, which is mostly considered to be less than 100,000 years old. Recent discoveries of cave fossil deposits on the Nullarbor Plain may be as old as one million years.

Some Corra Lynn Cave deposits are considered to be late Miocene to Pliocene in age, a period not covered in other cave or surface deposits in South Australia, and rare elsewhere in Australia. Pledge (1992) described a number of new species including a koala, a sthenurine kangaroo and a giant ringtail possum. He also noted a number of specimens that could not be ascribed to known species and some of these remain undescribed in the South Australian Museum collections. Pledge noted that the absence of rodents in the fossil material retrieved from the cave is significant as it is considered rodents reached Australia around 4 million years ago (Tedford 1994), giving a possible minimum age for some deposits. Tyler (1994) reported a frog from these deposits that is indistinguishable from a modern species, indicating little change in frogs over this period of time. Prideaux (2004) described a new species of sthenurine kangaroo from well preserved fossils from the cave.

A number of sites of younger fossil material have been identified and some significant collections made. E. Hamilton-Smith deposited material with the South Australian Museum in 1954, collected from the "Bushwalkers" section of the cave, including a juvenile Thylacine (Tasmanian Tiger), and bettongs. This material is considered to be Holocene (less than 10,000 years old) (J McNamara pers. comm.)

N. Duncan made large collections from the "Crystal Chamber" section of the cave in 1964-65 considered by B Daily (SA Museum) to be less than 1000 years old. G Pilkington conducted excavations in the "Giant's Staircase" area with retrieved material considered to be Pleistocene in age (J McNamara). This included bandicoots, potoroos, bettongs, pygmy possums, kangaroos, rodents, birds and reptiles.

There is a significant amount of fossil material from Corra Lynn Cave and a small amount from the nearby Town Well Cave (2.5km northeast) and the Curramulka Quarry (2km northeast) of Corra Lynn in the South Australian Museum collection. Most authors group this material together as the Curramulka Local Fauna. This groups together fauna that may in fact be of quite different ages.

## References

The principal source for this Summary of State Heritage Place was the following:

- Bourne, Steven, *Assessment report: Assessment of Heritage Value for Corra Lynn Cave, Curramulka, Yorke Peninsula*, Report for DEWNR, June 2011.

Additional references include the following:

- Archer, M., Black, K. & Nettle, K. (1997) Giant Ringtail Possums (Marsupialia, Pseudocheiridae) and Giant Koalas (Phascolarctidae) from the late Cainozoic of Australia, *Proceedings of the Linnean Society of New South Wales* 117: pp 3-16.
- Cave Exploration Group of South Australia. (1955 -2011) Newsletters.
- Drexel, J.F., Preiss and Perker, A.J. (1993) *The Geology of South Australia Volume 1: The Precambrian*, StatePrint, South Australia.
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- Griffiths, T. (ed) (1988) *The Life and Adventures of Edward Snell: The illustrated diary of an artist, engineers and adventurer in the Australian colonies 1849 to 1859*, Angus and Robertson, Sydney, pp140-142.
- Jones, A. (1979) *Curramulka 1876-1975*, Adelaide, pp249-255.
- Long, J., Archer, M., Flannery, T. & Hand, S. (2002) *Prehistoric Mammals of Australia and New Guinea*, UNSW Press, Sydney, Australia.
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- Pledge, N.S. (1992) The Curramulka local fauna: A new late Tertiary fossil assemblage from Yorke Peninsula, South Australia. *The Beagle: Records of the Northern Territory Museum of Arts and Sciences* 9: 115-142.
- Price, G.J., Zhao, J., Feng, Y. & Hocknull, S.A. (2009). New records of Plio-Pleistocene koalas from Australia: Palaeoecological and Taxonomic Implications. *Records of the Australian Museum* Vol. 61:39-48.
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- Scanlon, J.D. (2005). Cranial morphology of the Plio-Pleistocene giant madtsoiid snake *Wonambi naracoortensis*. *Acta Palaeontologica Polonica* 50 (1): 139-180.
- Tedford, R.H. (1994). Succession of Pliocene through Medial Pleistocene mammal faunas of Southeastern Australia. *Records of the South Australian Museum*. 27(2):79-93
- Tyler, M.J. (1988). *Neobatrachus pictus* (Anura:Leptodactylidae) from the Miocene/Pliocene boundary of South Australia. *Transactions of the Royal Society of South Australia*. 112: 91.
- Vickers-Rich, P., Monaghan, J.M., Baird, R.F. & Rich, T.H. (1991) *Vertebrate paleontology of Australasia*, Pioneer design studio, Lilydale, Victoria.

## SITE RECORD

Corra Lynn Cave  
Curramulka, Yorke Peninsula

PLACE NO: 22798

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<b>FORMER NAME:</b>	Also known as Correll's Cave, Curramulka Cave	
<b>DESCRIPTION OF PLACE:</b>	Limestone cave network containing extensive fossil deposits	
<b>DATE OF COMPLETION:</b>	N/A	
<b>SA HERITAGE REGISTER STATUS:</b>	<b>Description:</b>	Provisionally entered
	<b>Date:</b>	22 February 2012
	<b>Description:</b>	Confirmed
	<b>Date:</b>	25 October 2013
<b>LOCAL HERITAGE STATUS</b>	N/A	
<b>CURRENT USE:</b>	<b>Description:</b>	Cave
	<b>Dates:</b>	
<b>PREVIOUS USE(S):</b>	<b>Description:</b>	N/A
	<b>Dates:</b>	N/A
<b>ARCHITECT:</b>	<b>Name:</b>	N/A
	<b>Dates:</b>	
<b>BUILDER:</b>	<b>Name:</b>	N/A
	<b>Dates:</b>	
<b>LOCAL GOVERNMENT AREA:</b>	<b>Description:</b>	District Council of Yorke Peninsula
<b>LOCATION:</b>	<b>Unit No.:</b>	-
	<b>Street No.:</b>	-
	<b>Street Name:</b>	-
	<b>Town/Suburb:</b>	-
	<b>Post Code:</b>	-
<b>LAND DESCRIPTION:</b>	<b>Title Type:</b>	CT
	<b>Volume:</b>	5678
	<b>Folio:</b>	905
	<b>Lot No.:</b>	-
	<b>Section:</b>	34
	<b>Hundred:</b>	Curramulka

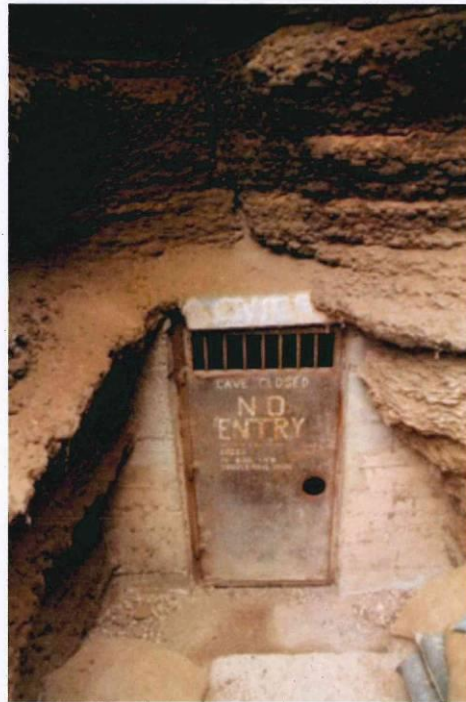
## PHOTOS

Corra Lynn Cave  
Curramulka, Yorke Peninsula

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Corra Lynn Cave, Curramulka, Yorke Peninsula



Corra Lynn Cave entrance: note erosion and stabilising work undertaken by cavers and landowner



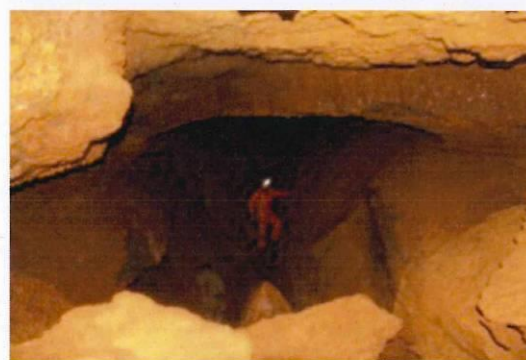
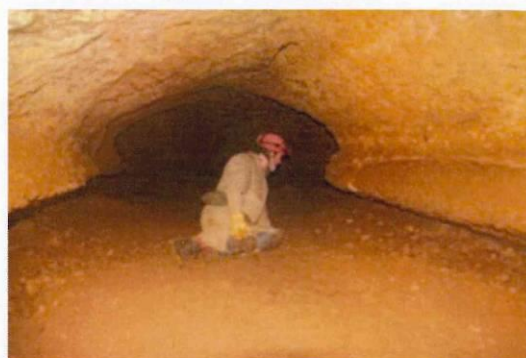
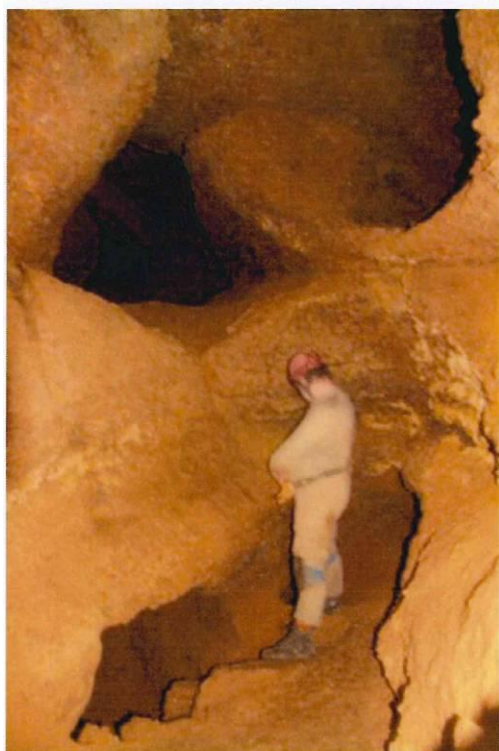


## PHOTOS

Corra Lynn Cave  
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Above: Cave passages: The numerous loops and parallel passages, the three dimensional nature of the cave and its robustness make it suitable for recreational caving activities.

Below: Although mostly devoid of calcite speleothem, Corra Lynn has many fine examples of gypsum crystals. These areas are carefully managed to avoid incidental damage.



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Corra Lynn Cave  
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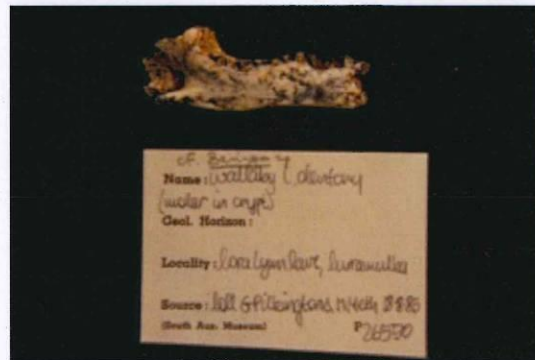
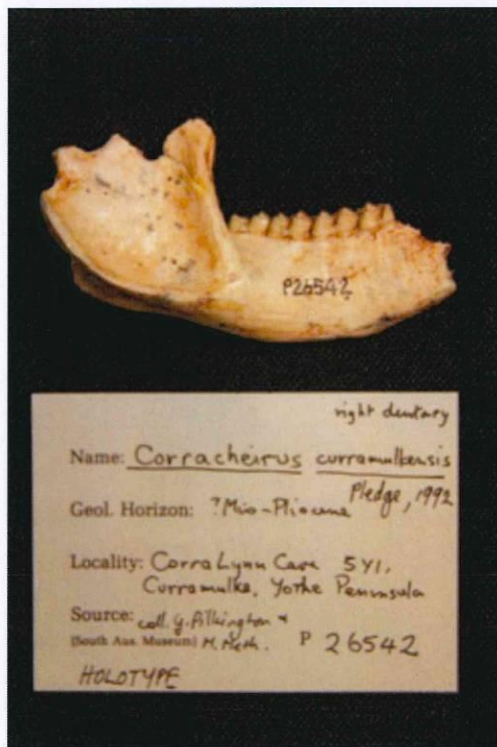
The Bench/ Palorchestes site : Red sediment of chamber is fossil bearing (above), fossils excavated but left in the cave (below). Non diagnostic material has been left in the cave at some sites



## PHOTOS

Corra Lynn Cave  
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Corra Lynn fossils in the South Australian Museum: Above left - a new species of koala, Above right (top) - a new species of sthenurine kangaroo, Above right (bottom) - an undescribed species of wallaby, Below - a series of bettong skulls from the younger deposits within the cave.

