

CANBERRA KARST REGION

There are numerous limestone lenses in the Canberra Karst Region, but most are small and do not contain caves. We have selected two that do contain small caves as representatives of the region. The areas are London Bridge and Paddys River.

Most limestone lenses in the immediate vicinity of Canberra are of Silurian age. The limestone is usually found in lenses a few metres thick and less than a kilometre long. Frequently, the limestone (or marble) is interbedded with, and may laterally grade into, shale or volcanic rocks (e.g. London Bridge Area). Some of the lenses have been strongly metamorphosed and the limestone recrystallized to form marble (e.g. Paddys River Area).

As a function of the small size of the limestone lenses and the generally low relief adjacent to the exposures, caves formed in this region are generally short. Cotter Cave (Paddys River) is only 65 m long and no single cave at London Bridge is in excess of 45 m in length. Despite their short length, the caves are of reasonable complexity.

PADDYS RIVER CAVE AREA

The Paddys River Cave Area is the best known and only presently accessible limestone cave area in the ACT. Located adjacent to Paddys River, upstream from its junction with the Cotter River (fig. 2), the area is 20 km W of Canberra and is reached by driving along the Cotter Road to the Cotter Recreation Reserve. Park in the reserve and walk to the area by crossing the Cotter River near its junction with Paddys River and follow the latter about 400 m upstream. The limestone is on a hill on the western side of the River and the main cave is found by following the obvious track up the hill.

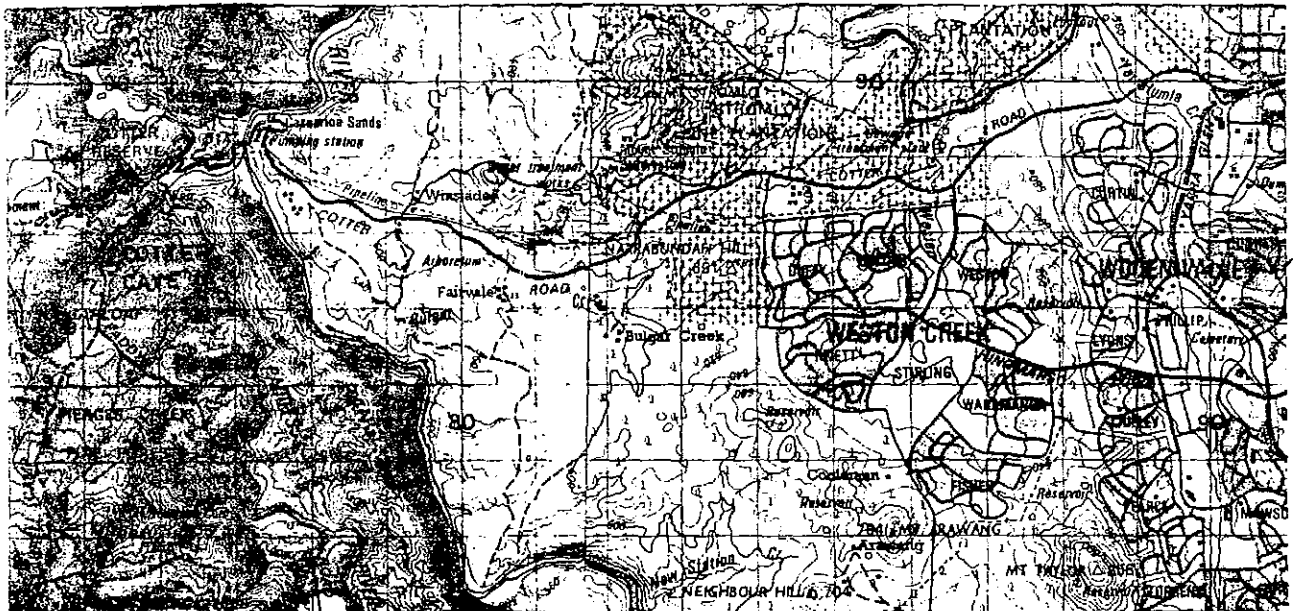


Fig. 2, Location map of the Paddys River Cave Area. Brindabella and Canberra 1:100,000 topographic maps.

Glossary

- KARST: limestone area, often with scarcity of vegetation due to ground being too porous.
- SILURIAN Geological period 435 - 395 MY ago.
- SHARN thermally metamorphosed limestone or dolomite.

The cave is developed in a recrystallized limestone (marble) lens that has nearly vertical bedding and lies within the Silurian Paddys River Volcanics. To the west, there is a sharp transition from the limestone into a skarn rock that is mostly magnetite. A small exploratory mine, 200 m long, was driven into the magnetite body in the 1920's and several million tons of reserves are present.

There are three caves in the Area (Nicoll & Brush, 1975a). Cotter Cave is the largest with about 65 metres of passage, while Powder Store and Blasted Caves are each only a few metres long. Entry to the caves is regulated by the City Parks Administration of the Department of Capital Territory, and the entrances have locked gates.

Cotter Cave (PR1)

Time - 45 min.

Walking time - 20 min each way.

Photography - generally poor, interesting flat roof levels.

Equipment - none

References - Nicoll & Brush, 1975, TYL 7 (4), 3-8.

Entry - Cave is gated and locked (access controlled by City Parks Admin., Canberra).

Cotter Cave may be regarded as semi-developed for tourists because wooden entry stairs and some stone steps have been erected in the cave. However there is no known commercial attempt to develop it as a show cave. The entrance stairs drop 6 m to a small platform and then a further descent of 9 m over rubble brings one to the main floor level of the cave (fig. 3). The large passage is about 10 m wide and 12 m high at that point. The main passage leads back into the hill for another 50 m where the passage is terminated by clay and gravel fill at floor level and by bedrock above. About 4 m above the floor a very tight crawl leads on to a small chamber. The aven near the end of the cave has been climbed but does not lead to additional passage.

There are few speleothems remaining in Cotter Cave. It was never over-endowed with speleothems (as far as one can tell) but abuse by visitors over the years has largely removed those that were there. There is no evidence of an active stream flowing in the present cave but the sediment in the cave was deposited by stream action. Also of note are the two levels of flat roof development that are related to periods of stability in the ground-water level during the history of development of the cave.

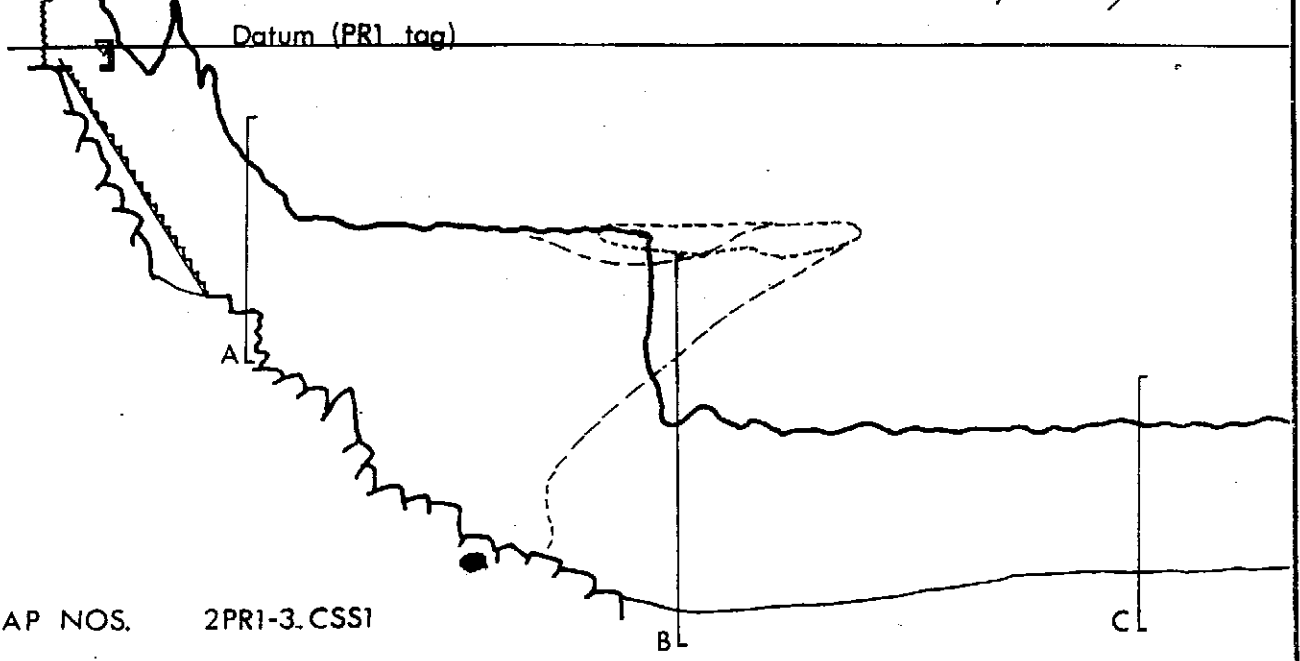
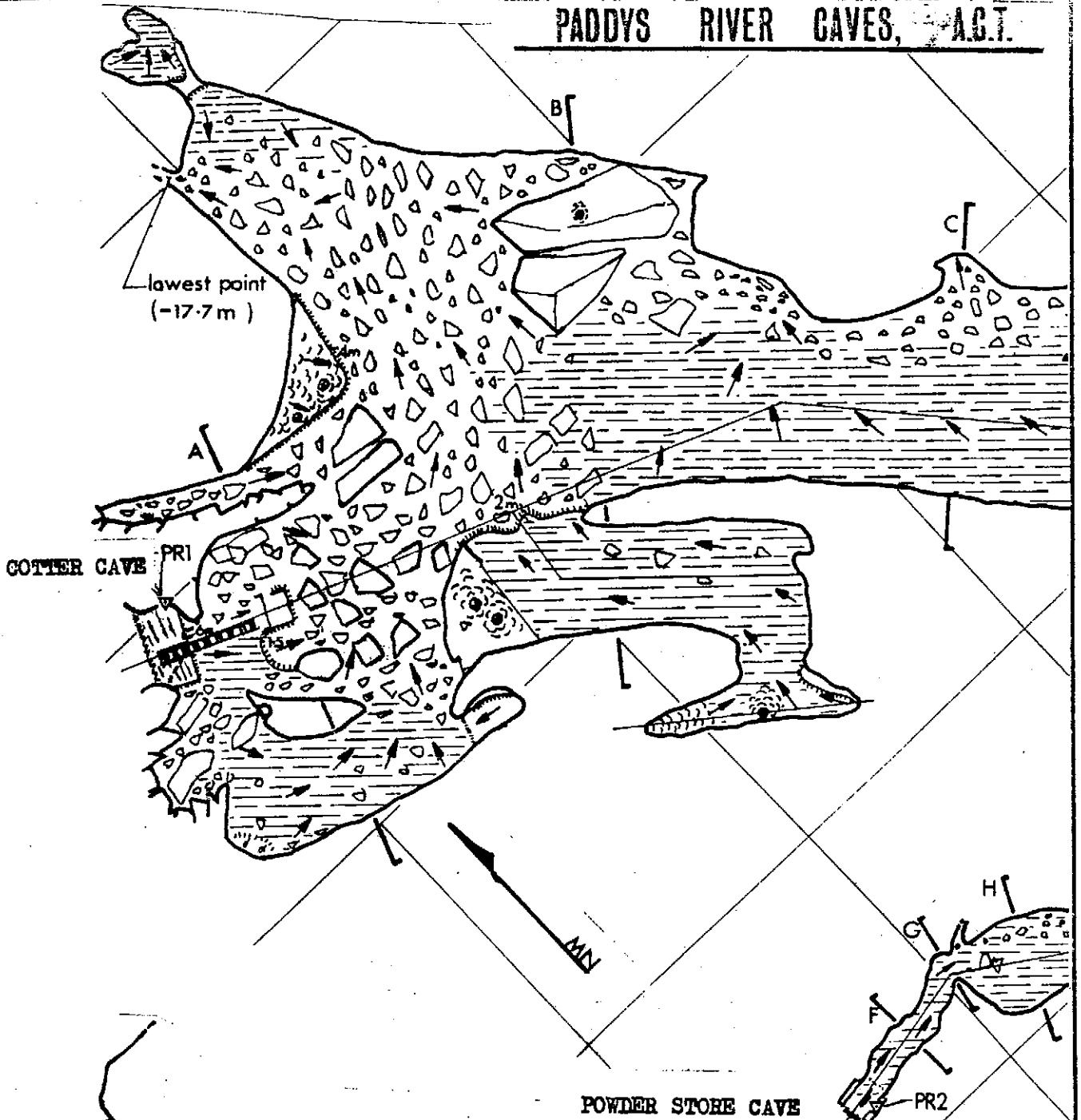
Powder Store Cave (PR2) & Blasted Cave (PR3)

These two small caves are probably abandoned upper levels of Cotter Cave (fig. 3). Both are gated and locked. Neither is more than 15 m long and they lack any significant features. We recommend their examination only to those people who want to say that they have been into all of the caveable caves in the A.C.T.

LONDON BRIDGE CAVE AREA

The London Bridge Cave Area is located on Burra Creek, 1.5 km upstream from its junction with the Queanbeyan River and 18 km S of Queanbeyan (fig. 4). The London Bridge Area has 8 tagged entrances that lead to 5 distinct but closely related caves. All of the caves, including London Bridge itself, are developed in a small limestone lens which is part of the Cappanana Formation. Similar small limestone lenses south of London Bridge contain a few small caves but none that compare with the main area.

PADDYS RIVER CAVES, A.C.T.



SURVEYED : J.Brush, M.Coggan, R.Nicoll, G.Mayo.
15 March 1975.

INSTRUMENTS : Miners dial, fibron tape.

DRAWN : J Brush June 1975.

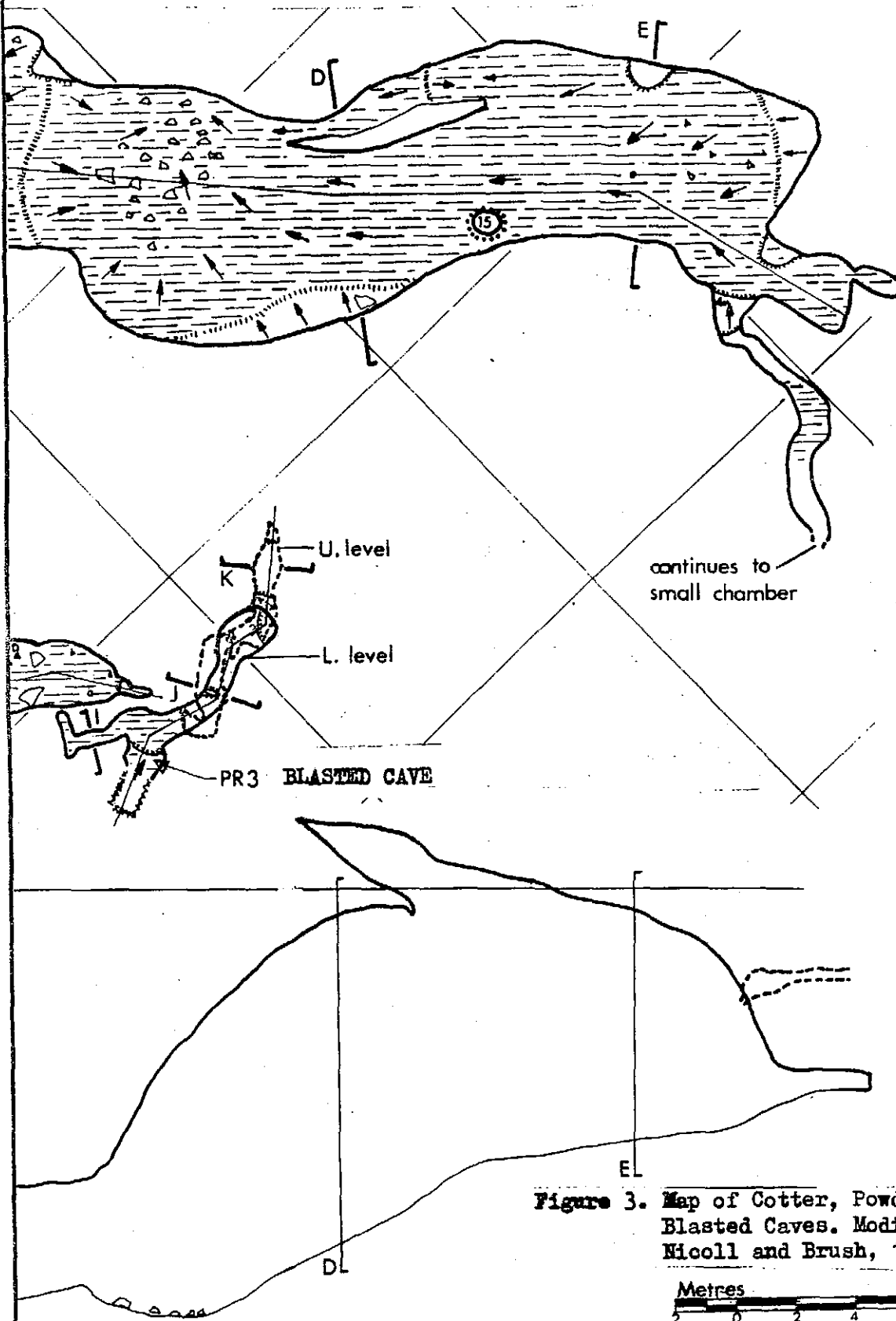


Figure 3. Map of Cotter, Powder Store and Blasted Caves. Modified from Nicoll and Brush, 1975.

Metres 1:200
0 2 4 6 8 10