

General Presentations

Pilchers Mountain Caves

Garry K Smith

LOCATION

The caves are located approximately six kilometres north of Wallarobba. This small settlement is centred around a railway station and road crossing approximately midway between Paterson and Dungog. The caves are currently within a Crown Reserve, which is surrounded by private property.



ACCESS

Access is through several private properties and permission is required from the land owners before entering the Crown Reserve. For further details on access conditions etc, contact the Newcastle and Hunter Valley Speleological Society.

DESCRIPTION

The Pilchers Mountain Crown Reserve was established to protect the caves and unique geomorphology of the surrounding area, comprising several sub-parallel offset chasms that host a picturesque pocket of dense subtropical rainforest, typical of many occupying small hillside gullies with a southerly aspect in this region. The protected area lies in stark contrast to the surrounding grassy hills cleared of their original dry sclerophyll forest cover for grazing.



GRESFORD, 1:250000 Topographic Map CMA 9233-3-S

There are 5 disjointed main chasms, and a number of smaller ones running generally East West for approximately one kilometre, over a width of half a kilometre. The base and sides of the wider chasms are mostly strewn with massive angular sandstone blocks. The large depressions created a micro climate which aided growth of the present pocket of subtropical rainforest.

The chasms formed as a result of massive sandstone block separation along sub-parallel joint planes, aided by the dip of the sandstone layers towards the floor of the valley, and the presence of underlying shale bands which acted as slip planes when lubricated by groundwater (England, 1982). Many speculate that this event occurred gradually over millions of years, however Hunter (1991) suggests that the development process may well have been accelerated by the numerous earthquakes which occurred in the district over hundreds or even thousands of years.

The open chasms reach a depth of 90 metres and typically have vertical walls, with the gaps ranging from a metre or less to over 50 metres. In places where the walls are narrow, large blocks wedged between the two walls have created several large caves. (eg. Bat Cave and Rebel Cave). Smaller caves are located in piles of large angular boulders which have fallen into the wider chasms as the sandstone masses moved down-slope (Figure 1.).

The caves contain a wide variety of fauna. The Bat Cave (also known as Wallaringa, Pilchers or Main Cave) is the roosting site for a large colony of Common Bent-wing Bats (*Miniopterus schreibersii blepotis*) and a smaller population of Eastern Horseshoe Bats (*Rhinolophus megaphyllus*). There are also gecko lizards, frogs, weta, millipedes and various insect life in the caves.

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The most northern gorge contains the Bat Cave, and Rebel Cave. Another contains the Lambton, Valentine, Diamond Mine and other caves. In all there are about 14 known caves. The largest chamber is found in Bat Cave, while the deepest known cave is Rebel Cave with a vertical depth of 46m. It contains a 6m pitch and another 27.5m free hang. The Bat and Rebel Caves generally follow the line of the northern gorge, while the others are more irregular as they occur in large rockpiles.

There are no reported cases of “foul air” being encountered at Pilchers Mountain caves. However, at some times of the year, the smell of decomposing bat guano in Bat Cave is overpowering to the uninitiated caver. The Rebel and Bat Cave tend to stay damp and humid even through the worst droughts. However the rockpile caves such as Valentine and Lambton Caves, tend to be dusty during extended periods without rain.

HISTORY

The gorge area and rainforest would have certainly been known by the aboriginals of the Worimi tribe (Tinbale, 1974), who inhabited the area prior to European occupation. However there is no evidence to suggest that they entered the caves or even knew of them.

Pilchers Mountain was named after Henry Incedon Pilcher who arrived in NSW during 1830 and was admitted to practice as an attorney and solicitor of the Supreme Court. He was granted a large estate called Wallaringa, near the mountain. Pilcher lived in Maitland where he practiced as a solicitor, while the estate was managed by an overseer who utilised a convict workforce (Hunter, 1991).

Around 1840, a group of notorious bushrangers called the ‘The Jewboy Gang’ terrorised the district, robbing travellers and homesteads of money, guns, ammunition, silverware, jewellery etc. This group of seven escaped convicts carried out robberies in many parts of the Hunter Valley and even up into the New England district. One of the convicts had escaped from the nearby Wallarobba Estate (within 5km of Pilchers Mountain). This estate, owned by Matthew Chapman, was thoroughly robbed as were many others in the area. It was believed by some that the overseer and convicts of the Wallaringa estate collaborated with the outlaws. One of the gangs’ hiding places was known to be in the Wallarobba mountains and Hunter (1991) speculates that the Gang may have stowed their ill-gotten wealth in the boulderous caves at Pilchers Mountain. The gang’s reign of terror came to an end on the 23rd December when they were captured at Doughboy Hollow over the range from Murrurrundi. The seven were taken to Sydney, tried, convicted and hanged in March of 1841 (Smith, 1994).

Certainly the gorges of Pilchers Mountain were known by the early 1880’s, as a description dated 1886 refers to a fissure varying in depth from 100 to 300 feet (30 to 90 metres). The account also mentions large boulders, lush vegetation similar to a jungle with a tall tree canopy (Hunter, 1991).

During early European settlement and the clearing of land for grazing, it was inevitable that the early pioneers stumbled upon the gorges and lush rainforest, possibly even discovering the Bat Cave entrance, but no records have yet surfaced to indicate the exact time of its discovery.



***Northern most chasm at Pilchers Mountain
Below this open chasm is Bat Cave***

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Obviously the significance of these unique gorges, rainforest and caves was realised soon after their discovery, hence an area covering about 65 acres (26.3 hectares) was gazetted a Crown Reserve number 8894 on 18th April 1889 by the governor of the day (Government Gazette, 1889).

The earliest known map to indicate the existence of caves on the reserve is the NSW Crown Land Administrative Map from County DURHAM, Parish of DUNGOG, Edition 4, 1st January 1914.

The Dungog Shire Council (formerly Wallarobba Shire Council) was appointed as Trustee of the reserve on 18th February 1916. However this appeared to be just formalising the situation because under the local government act, Council had care and control of the reserve since its gazettal in 1889.

In the late 60's and early 70's the first caving groups began exploring the area. The cave now called "Bat Cave" was referred to as Wallaringa Cave (WC1) in the 'CAVE' official newsletter of the Newcastle University Speleological Society, May 1970. In this publication the editor states "Wallaringa Cave was run through with compass and tape early last year, but nothing further has arisen from this. The Cave is in sandstone, and has been formed by the collapse of a rock mass. It is the only reported cave of its type in Australia, so mapping it will be worthwhile, as would be a full scale study." It is interesting to note that the trip report in this magazine talks about five cavers entering (WC1) and exploring the main level but not the lower level. They then moved on to another previously unexplored hole at the top of the gorge (Jordan, 1970). From the description one could assume that they descended the small pitch into the first chamber of Rebel Cave. The name Wallaringa was taken from the name of the property at the junction of Spring Creek and Coxs Creek as shown on the early 1 inch to the mile maps of 1942. However on more recent maps the Coxs Creek was renamed Wallarobba Creek. The Wallaringa property is approximately 1.5km south of the caves.

In January 1988, the National Parks and Wildlife Service (NPWS) proposed to acquire Pilchers Mountain as a Nature Reserve. This led to a meeting on the 5th June 1992, where agreement was made between NPWS, Dungog Council and 'Department of Conservation and Land Management' (CALM) to dedicate the reserve for Environmental Protection and Recreation following land assessment action." NPWS agreed to withdraw from a Nature Reserve acquisition proposal on completion of a Plan of Management for the site (Wiseman, 1994).

In November 1995, the NSW Department of Land and Water Conservation, released for public inspection a 'Draft Assessment of Crown Land at Pilchers Mountain' as a requirement under the Crown Land act 1989, to seek public comment prior to changes in Reserve classification (George, 1995).

The reserve 8894 (Lot 338 DP No. 1009839) covering 30.07 hectares, was dedicated as an Environmental Protection Reserve on 15th December 2000, and the earlier classification of Crown Reserve for Public Recreation was revoked. (Government Gazette, 2000). The Dungog Shire Council was appointed to manage the affairs of the reserve trust (Aquilina, 2000).



Peter Jackson ascends the 27.5m pitch in Rebel Caver

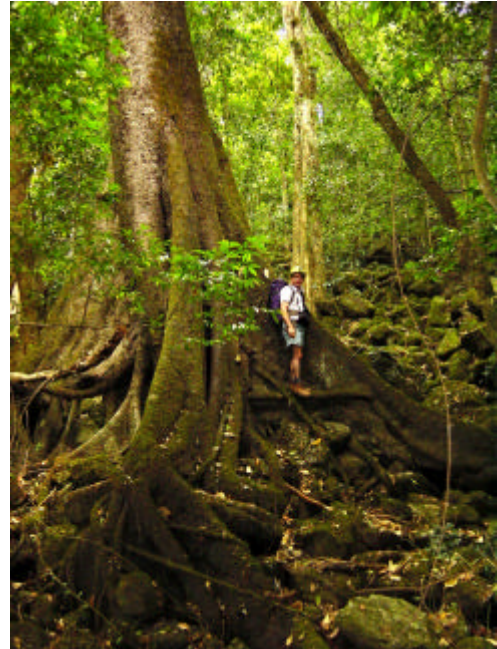
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In a letter to the Dungog Council, the Manager of Resource Access and Compliance for the Department of Land and Water Conservation, said the change in the reserve's status was "in recognition of the significance of the site." (Garboll, 2001).

Recently the Dungog Council applied for a Government grant to fund the preparation of a "Plan of Management" for the Pilchers Mountain reserve.



Bird's Nest Fern in rain forest among the boulders of the open gorges



Morton Bay Fig with a buttress in excess of 6m across

CAVING AT PILCHERS MOUNTAIN - PERSONAL EXPERIENCES

The first time I visited the gorge and Bat Cave was in 1969, as a young Senior Scout on a Unit outing. With a few Scouting friends, I revisited the area in early 1970 to once again explore the Bat Cave. After exiting, I searched a nearby pile of rocks and found a small opening beneath a jumble of logs. Wayne Jessup and I entered this 'new' cave (now known as Rebel Cave) while Tony Harris and Robert Patrick remained outside as a safety backup. In the floor of the first chamber, opposite the entrance pitch, there was a hole leading down into a small chamber which could fit several people. We scrambled down, and after finding no leads, began exiting this small rock pile chamber. When almost back into the spacious entrance chamber, a large boulder next to the squeeze began sliding on the soft sloping earth toward the hole. It took me a lot of effort to restrain the boulder until Wayne exited the dusty hole. When the boulder was let go, it quickly slid downward, resulting in a loud thud and cloud of dust, to completely block the hole which we had just exited. Wayne and I were noticeably shaken by this life threatening experience and left the cave without further exploration. The entrance was re-covered with logs and we vowed never to return to the cave. Several years later the Scout Association began running introductory abseiling and caving courses in the main gorge. Members of Kotara Venturer Scouts Unit rediscovered the cave and gave it the name Rebel Cave after the nickname of their Unit. They went on to discover a small passage off the entrance chamber, which led into a deeper section of cave containing the 27.5m pitch. After 1975, I did return to the cave and have been to the bottom on a number of occasions. Even today, visitors to this cave should be very wary of loose rocks as this cave can be very dangerous even to the experienced caver.

The caves most visited these days are the Bat (Main) Cave, Valentine Cave, Lambton Cave and Crawler Cave. Visitors should not enter the Bat Cave in winter when bats are hibernating. A complete listing of known caves is given in Table 1.



Sonia Taylor in the Northern Gorge



View to the North from the top of Pilchers Mountain
Note: rolling hills and grazing land is dramatic contrast to subtropical rainforest in gorge, just 50 metres to the south of this spot

GEOLOGY

Pilchers Mountain consists of thickly bedded sandstone with lenses of conglomerate, part of the Carboniferous Age Wallaringa Formation. They are generally yellow-brown, grading to reddish at the top of the formation (beneath a bed of Volcanics). The beds are mostly massive and resistant to weathering and therefore are excellent cliff formers (England, unpublished).

Localized dissolution of minor calcite cement in the sediments has resulted in the formation of isolated poor quality calcite speleothems in parts of the Bat Cave.

Also of interest is the narrow seam of coal and shale exposed in Bat Cave. The coal seam reaches a maximum thickness of around 100mm and tapers down to just a few millimetres in other places.



Abseiling into the northern gorge



Sonia Taylor in the entrance passage of Bat Cave

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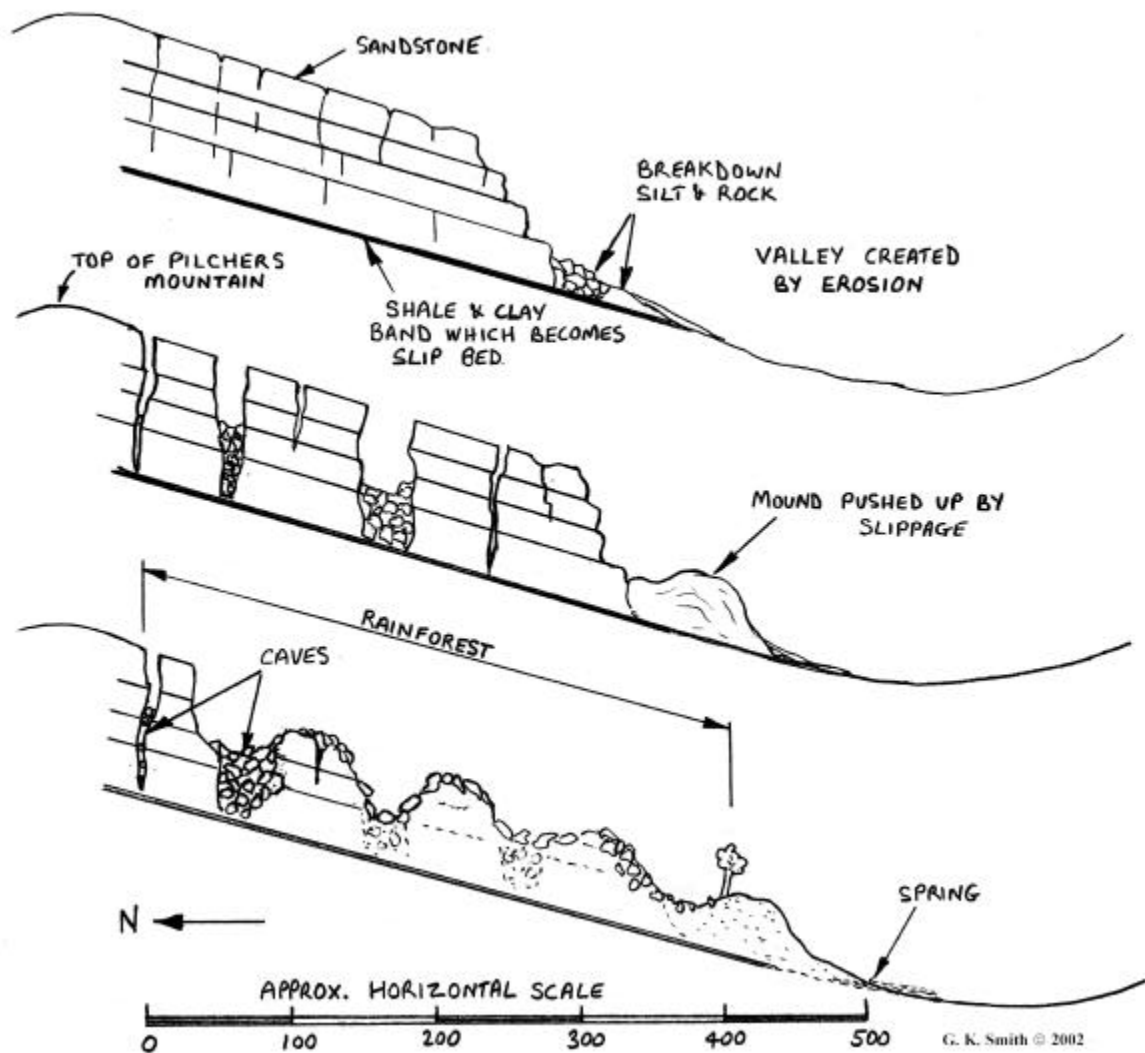


Figure 1 - Representative sketch of possible events which led to the development of chasms and caves at Pilchers mountain
North / South section through the Bat Cave

FLORA

The gorges within the reserve contain dense subtropical rainforest with an upper canopy in many places exceeding 50 metres. There are a number of varieties of tall trees, among them giant Morton Bay Fig, (*Ficus macrophylla*) with buttresses exceeding 6 metres. Some of the finest examples in Australia, of the Giant Stinging Tree (*Dendrocnide excelsa*), can be found in this rainforest. There are many good specimens of the Strangler Fig (*Ficus watkinsiana*), which have taken on the shape of their former host tree, before it died and rotted away from within the grasp of the fig. Other examples of the Strangler Figs' determination to survive are where they have actually grown over and around large boulders the size of small houses.

In the rainforest there are other tall trees, include the Flame Tree (*Brachychiton acerifolium*), Red Cedar (*Toona australis*), and Brown Beech (*Pennantia cunninghamii*).

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The high canopy trees are hosts to huge vines, ferns, orchids and mosses. Among them are Elkhorn (*Platynerium bifurcatum*), Staghorn (*Platynerium superbum*), Bird's Nest Fern (*Asplenium australasicum*), Pink rock orchid (*Dendrobium kingianum*), King orchid (*Dendrobium speciosum*), and Maidenhair Fern (*Adiantum aethiopicum*). The vine Smooth Tender Grape (*Cayratia clematidea*) reaches its known southern limit here.

At the extremities of the rainforest and on parts of the surrounding land now used for grazing, one can see the occasional Grass Trees (*Xanthorrhoea*), numerous varieties of Eucalyptus as well as Turpentine (*Syncarpia procera*) and Wattles belonging to the *Acacia* family.



Morton Bay fig growing on boulder



Strangler fig in gorge



Fig tree roots over boulders near Valentine Cave

FAUNA

The subtropical rainforest within the gorges supports a diverse range of wildlife including; possums, quolls, Brush-tailed Phascogale, koalas, bandicoots, wallabies, up to 50 species of birds and includes the nesting site of the rare Peregrine Falcon.

Fruit eating birds such as Top-knot, Wonga, White-head and Brown Pigeons have all been recorded in the area. Other birds include the Regent Bower Bird, Boobook Owl, and Wompoo Fruit Pigeon.

WATERSHED

There are two permanent springs which drain from the water table of the gorge area. The eastern spring drains into Spring Gully Creek and the other spring runs into an unnamed creek toward the western end of the gorges. Both these creeks merge and flow into Wallarobba Creek. Gresford, 1:25,000 Topographic Map CMA 9233-3-S.

ELEVATION RANGE

360 to 240 metres

ACKNOWLEDGEMENTS

I would like to especially thank Brian England for his critical review of this paper and the NSW Department of Land and Water Conservation for sourcing information on the gazetting of the reserve.

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Contact details

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New Tag No.	Old Tag No.	Cave Name	Discovery	Mapped
		Main Chasm (Gorge)	Before 1889	Mapped 5-9-75
I6B15	PH-1	Bat Cave (Main Cave)	Before January 1970	Mapped by J. Smith, K. Rugg, G. McHugh & W. Brown, 29-8-75.
I6B16	PH-2	Cleft Cave	Before January 1976	Mapped by Steven Smith, 2-4-77, Grade 4 map
I6B17	PH-3	Diamond Mine	Before June 1975	Mapped by Peter Payne, David Carey & Wayne Smith, June-1975, Grade 4 map
I6B4 & 5	PH-4,5	Rebel Cave	Around 1970	Sketch map 22-2-86 by D. Armitage et.al.
I6B6	PH-6	Spider Hole	Before January 1976	No Map
I6B7	PH-7	Arch Cave	Before January 1976	No Map
I6B8	PH-8	Stalactite Cave	Before January 1976	No Map
I6B9	PH-9	Cathedral Cave	Before January 1976	No Map
I6B10	PH-10	Crawler Cave	Before January 1976	No Map
I6B11	PH-11	Valentine Cave	Discovered by members of Valentine Venturer Scout Unit prior to Jan. 1976	No Map
I6B12	PH-12	Pioneer Cave	Discovered prior to Jan. 1976 – links up to Valentine Cave I6B11	No Map
16B13	PH-13	Lambton Cave	Discovered by Garry K. Smith some time prior to January 1976, and named after Lambton Venturer Scout Unit	Mapped 27-2-93 by Garry K. Smith, Michael Smith, Pat Hyde & Katie Mottram
16B14	PH-14	Kotara Cave	Discovered by members of Kotara Venturer Scout Unit in 1992	No Map

Compiled from the following information by (Powell, 1976) (Smith, 1995).

Table 1 - Known Caves At Pilchers Mountain

Walkway Technology

Neil Taylor

ABSTRACT

This session will be informative and hands on. There will be a technical sheet handed out on the specific materials used in the walkway. The session is about the provision of a walkway into a cave with minimal impact on the cave. There will be a 3m section of walkway in kit form on site; participants can watch/assist as the kit is put together (and disassembled). The real value will be to see the materials used and be able to ask questions during the session. Participants wishing to see it put into Calgardup Cave will be able to do so if time permits. The materials used are 316 stainless steel and recycled plastic and the system could be adapted to accommodate varying path widths.

Contact details

Department of Conservation and Land Management, Busselton.