

The 1830 Cave Diaries of Thomas Livingstone Mitchell

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Abstract

In 1830 the Surveyor-General of NSW, Thomas (later Sir) Mitchell gathered bones at Wellington and other cave sites in the NSW Central West, initiating almost two centuries of palaeontological research. This paper transcribes his previously unpublished diaries for the key 16 days of this essentially 'private' expedition to Molong, Borenore, Wellington and beyond, during which he spent 13 days in cave exploration and several more drawing cave maps and sketches. Mitchell's background, motivation and outcomes are discussed along with the contributions of some minor players.

Key words: Sir Thomas Mitchell; Wellington Caves; Molong; Borenore; expeditions

Introduction

The four official expeditions led by Thomas Mitchell into the interior of eastern Australia took place between 1831 and 1846. In recognition of the first three expeditions, his meticulous trigonometrical survey and 1834 map of the colony, he was knighted by Queen Victoria in 1839 (Figure 1).

Over nearly two centuries, numerous publications, including some biographies, have reported the results of Mitchell's investigations at Wellington Caves in 1830 (Foster 1936, Lane & Richards 1963, Augee 1986, Osborne 1991, Branagan 1992). This is ground well-ploughed over and under, but much less has been conveyed about the conduct of the actual 1830 'expedition' itself, mounted less than three years after his appointment as Surveyor-General of NSW. Overshadowed both by the four major exploratory expeditions and by the saga of the bones, Mitchell's own journals for that period have remained unpublished. This paper transcribes the complete unpublished diaries of his remarkable 1830 speleological excursion from Bathurst to Wellington and return, and discusses the context in which it was conducted.

Mitchell's motivation, means and movements

Possibly inspired by Buckland's 1824 book attributing animal bones in caves to the Great Flood, Mitchell made the acquaintance in London of both Buckland and his colleague W.H. Fitton, and on their proposal he joined the Geological Society in April 1827, seeking instruction, mentoring and advice from them and other experts. Arriving in Sydney on 23 September 1827 he soon established an interest in searching for bones in Australian caves, exploring Grill Cave at Bungonia in December 1829, but found no bones. Then on 25 May 1830 the *Sydney Gazette and New South Wales Advertiser* alerted its readers to the large, recently-discovered cave (i.e. Grill Cave) in County Argyle that



Figure 1. Portrait of Sir Thomas Mitchell, c. 1830s (State Library of New South Wales ML 24)

could contain "*some sort of fossil curiosities*" (Figure 2). The same issue published a letter signed 'L' (attributed to J.D. Lang, 1830) reporting discovery of large fossil bones in caves in the Wellington Valley, which "*will doubtless excite much interest among the geologists of Great Britain ... in regard to the geological history of this vast island*".

Within three days of this announcement Major Mitchell left Sydney, his ostensible aim being to examine and direct progress on construction of the Great West Road to Bathurst in his role as Surveyor-General. This he did en-route, liaising with and instructing his assistant surveyors and military colleagues in charge of convict gangs. His remit did not however extend further. Nevertheless, of the 65 days until he returned to Sydney, travelling through little-known and almost

INTERESTING DISCOVERY OF FOSSIL BONES.—A most interesting letter will be found in our next page, communicating the particulars of a discovery recently made by Mr. RANKIN, in the vicinity of Wellington Valley. After penetrating, with much courage and perseverance, a series of caverns amongst the lime-stone ridges, he found, in the furthest and deepest of the chambers, a considerable number of fossil bones, evidently from their size belonging to a species of animal much larger than any now known to exist in the island. Our correspondent draws some entertaining inferences from this singular discovery, and anticipates the most important results from the scientific inspection to which the fossils are about to be submitted.

Caverns of a similar kind to those at Wellington Valley exist in various parts of the Colony. It may be remembered that a few months ago we described an immense one in Argyle, which Mr. WILLIAM SHELLEY penetrated to a considerable distance, but without being able to reach the extremity. It is very likely that if thoroughly examined, it also would be found to contain some sort of fossil curiosities; and it would be worth the while of a lover of natural history to search it as thoroughly as Mr. RANKIN did that to the westward.

Figure 2.
Extract from the
Sydney Gazette
and *New South Wales*
Advertiser,
25 May 1830
(Trove, National
Library of
Australia)

unsettled country beyond Bathurst, he was engaged in speleological activity on 20 days – discovering, exploring, surveying, sketching and drawing up maps.

Wellington was at the very frontier of white settlement, the first settlement having occurred only seven years earlier, ten years after the first crossing of the Blue Mountains by colonials. No land grants or selections were authorised beyond. On his remarkable private excursion Mitchell explored, diarised and sketched caves at Wellington, Molong and Boree (Borenore), and visited sites nearby – probably at Burran Burran and Geurie. In 1836 the outcome of the investigations at Wellington Caves appeared as one chapter in his well-known account in *Three Expeditions into Eastern Australia* (Mitchell 1838). Numerous subsequent accounts have appeared, the most accessible of primarily speleological interest being Lane and Richards (1963). However most biographies omit mention of the extensive diaries of this remarkable exploit, although in his historical summary Foster (1936) did reproduce one key date's explorations. Dunkley (2009) focused on the significance of the back-stage, somewhat asymmetrical rivalry in 1830 between Mitchell and John Henderson (1832). Osborne's (1991) history of the red earth and bones acknowledged Henderson and highlighted the significance of Mitchell's observations of the sediments, while Oldroyd (2007) assessed Mitchell's geological contributions more comprehensively.

The journal and the journey

Mitchell's 65-day journey can be divided into four phases: 26 days to Bathurst, 16 more to Wellington and return via Molong and Boree, then 14 days camped at Bathurst (during eight of which he was engaged in drawing up the cave maps) and 8-10 days to return to the Weatherboard Inn (Wentworth Falls) and Sydney (Mitchell 1830a). This paper focuses on phases 2 and 3.

In the present transcription for the Bathurst–Wellington return phase of the expedition (see Appendix) original diary dates are retained along with variations in the way they are recorded. He left his property, "Craigend" in Darlinghurst, Sydney at 1 pm on Friday 29 May, 1830 (Figure 3). However this journal date is clearly incorrect as elucidated by Dunkley (2009): Friday was the 28th. He seems to have thus left on a Friday, certainly met the Governor on the following Sunday, filled the diary for every day until his return to Sydney, but appears not to have corrected the error in dates until he arrived back in Bathurst 43 days later, when he made two entries, for both Friday 10 July, and Saturday 10 July (Figure 4). Consequently the dates in his diary up to that day, including all the cave visit dates, should be retarded by one day. For someone so meticulous in his surveying it is curious that he wasn't corrected by anyone on his travels! At a time when Sundays were sacrosanct, actual dates of the month probably pressed somewhat less on the daily routine of remote settlements.

Mitchell paid a courtesy call on Ralph Darling at Government House Parramatta, paused for two nights at the Weatherboard Inn at Wentworth Falls (long enough for a side-trip to the falls themselves), then crossed the mountains to Hartley Vale. On the forward journey most time was spent in mobile camps: planning, marking out, surveying and issuing instructions for a new route (now Victoria Pass) from Mt Victoria to Hartley, then across the Lett and Cocks Rivers, past the future site of Lithgow, and on to Bathurst.

Spanning 16 days, the second phase chronicles 13 days of whirlwind speleological activity at least partly in caves, 11 of them successive. After a day and a half riding from Bathurst on George Ranken's gig, he stopped overnight in a soldier's hut at Molong and briefly explored his first cave in the district. Nine days were based at Wellington, of which six were spent extracting earth-coated bones from the Large or Big (i.e. Cathedral), Breccia (Mitchell) and Bone Caves – exploring, digging, surveying and sketching. Setting out early, a long first day (26 June) was spent in the caves, returning "very tired". Next day he followed up a report about a more distant cave, finally locating it at 2 pm the following day: "this day we rode at least 45 miles without great advantage". Unsurprisingly, on the third day "we were all rather tired this morning" but in the afternoon they went caving again. Returning yet again on the following

Bathurst Road—
 Fr 29th May 1830— Set off at 10 o'clock from Craigend—a gig
 of Mr Jones accompanying me— The horse started
 at the driver having struck one side of the gate
 near the miller's— and threw the driver out— setting
 off at full speed: he was caught beyond the new fall
 one of the shafts being broken. Left Goodwin to
 get the thing repaired— and rode on myself to Para-
 matta which I reached at 5. o'clock— Put up at

Figure 3. Mitchell's diary entry with incorrect departure date, Friday 29 May, 1830.
 (Mitchell Library, State Library of NSW C42)

Thursday 9th July— moved onwards— got to Lammam Hill
 about 2 o'clock— ascended a hill North of the station and took
 some angles on the Conobolas and Mt Lachlan &c— The dray
 in crossing a rivulet in a swamp just beyond this station
 sunk a wheel— and wetted both the boxes containing specimens,
 Got the length of Charley Booths (Dr Richardson's land)— dist^{ce}
 travelled 22 miles— This night the therm[°] was 26°
 Friday 10th July— Detained a little in the morning unpacking
 & repacking the large specimen from Wellington— then we
 started— and reached after dark Mr Rankin's paddock— called
 at Mr Rankin's— met a Mr Lambert there— & his daughter
 who is very pretty— Mr Rankin sent to Bathurst for my letters, and
 for medicine for me.
 Saturday— 10th July— Took salts— and finished my plan of Well-
 Valley— Mr Brown 5th called, and delivered me a packet of
 English letters he had received from Mr M.— whom he had seen
 the week before at Sydney, all well— at Mr Rankin's in the evening

Figure 4. The two entries for 10th July, 1830 on his return to Bathurst, when he reverted to correct dates.
 (Mitchell Library, State Library of NSW C42)

day (Monday 29th) he surveyed the large (i.e. Cathedral) cave, sketched its gallery and The Altar, and later surveyed (probably on the surface) a line connecting the entrances of what we now call Cathedral Cave and the Bone Cave. More caving and horse-riding followed: overall three days were spent taking theodolite angles, possibly to justify his 16 days absence from official duties, but he still managed to enter caves on almost every day.

Returning to Molong he diverted to Boree in Ranken's gig for a day's caving; this clearly stretched to a second day as a Mr Oliver, the overseer at Boree Government Station six miles to the west, was sent back to obtain

some provisions and a kangaroo cloak, under which Mitchell spent a "tolerable night". Returning to Molong next day he made another visit to the cave entered briefly on 24 June, 500 yards west of his campsite by the river. Finally reaching Bathurst, eight of the 14 days of phase 3 were spent drawing up cave maps and sketches. The return journey east across the mountains took the final 8-10 days.

Surveying and sketching equipment

Travelling mainly on horseback and accompanied by a small servant retinue including a dray carrying equipment, tent and home comforts, Mitchell himself

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often marked out the westward route on trees, relying on overseers and convict labourers to then clear ground for the new road. A Gunter chain (one 'chain' or 66 feet long – about 20 m) divided into 100 links of thick iron wire was laid out by convict chain-men and usually supervised by an assistant surveyor. A circumferentor was carried to more rugged high points. Used with a chain when traversing, this instrument provided a relatively quick method of measuring horizontal directions in surveying, but lacked the accuracy of a theodolite, and would have been used for the survey of the Bone, Cathedral and Breccia Caves. A prismatic or azimuth compass (possibly similar to that invented by Kater in 1811) may have aided his observations due to its portability. Similar cave surveying instruments – metal tape, forestry and prismatic compass – were largely unchanged until barely 20 years ago.

It seems likely that the sketches made at Wellington and completed afterwards in Bathurst were aided by a camera lucida, an instrument similar to the older camera obscura but lighter, more portable and less demanding of special lighting conditions. Early designs produced an image both inverted and right-left reversed, but a version patented in 1807 used a prism with four optical faces to produce two successive reflections, thus producing an image that is not inverted or reversed. During his return to Sydney, Mitchell mentioned (1 August) using a camera lucida to sketch the rock (still half-demolished) at Victoria Pass. Similar instruments are still used by modern artists, and computer photo-editing software now provides functionality. His camera lucida (Figure 5) is lodged with the Royal Geographical Society of Queensland which also possesses the paintbox with which the sketches were enhanced.

The difficulties of survey work in the Australian bush in the early nineteenth century can hardly be overestimated. Mitchell's surveyors usually ventured into

almost unexplored country for a month or more, worked to a frazzle with a team of convicts, drays carrying tents, survey equipment and provisions, and with draft maps typically returned to a dressing-down from Mitchell and a litany of complaints about a parsimonious Survey Department.

Mitchell's Megafauna Mates

Several offstage players informed, influenced and assisted the conduct of Mitchell's expedition to Wellington, giving us insight into the energy, determination and curiosity of some early settlers. Local Aborigines are mentioned favourably in places and certainly guided him to some locations. Buckland, Fitton and the Geological Society members each provided intelligence and training on matters geological, palaeontological and perhaps theological, considering Buckland's belief in the Universal Deluge or Great Flood.

John Dunmore Lang first published reports of cave bones in NSW using the nom-de-plume 'L', probably following information from George Ranken ('L' 1830). The first Presbyterian minister in the colony and a close colleague of Mitchell with independent means, he apparently accompanied the bones in 1830 on one of his several return voyages to Britain. Lang also carried Mitchell's manuscript to the home country, communicating the news to the *Edinburgh New Philosophical Journal* which erroneously attributed Mitchell's actual report to Lang, correcting it in the following issue (Lang 1831a, 1831b). As a Calvinist churchman Lang supported belief in a Universal Deluge which was at the time being queried, and probably did not wish to be involved in debate about Divine Creation, evolution or the antiquity of bones. Outspoken, censorious and wowsy, he evolved as a writer, newspaper proprietor, politician and strong advocate for immigration, education and a republic.

George Ranken (correct spelling, not Rankin as in the diaries and perpetuated in the named street in Bathurst) first disclosed the cave discoveries. Although these had been known a few years earlier by local settlers and, for example, explorer Charles Sturt in 1828, he brought some bones to Sydney and possibly apprised Lang. A wealthy property owner, he was also a bank director in Bathurst and a magistrate whose territory extended to Wellington. He owned a coach which probably conveyed Mitchell during his time in Bathurst (Figure 6). Ranken appears on-stage as an energetic fixit man and continuing later correspondent (see below). In a later letter to Ranken on 24 July 1833 Mitchell stated that "*Buckland's nose is put completely out of joint by the bones from Australia*" and that this had provoked much learned speculation in England.

John Henderson was an accomplished, well-educated surgeon and somewhat ascetic traveller who founded



Figure 5. Mitchell's camera lucida. (courtesy Royal Geographical Society of Queensland)

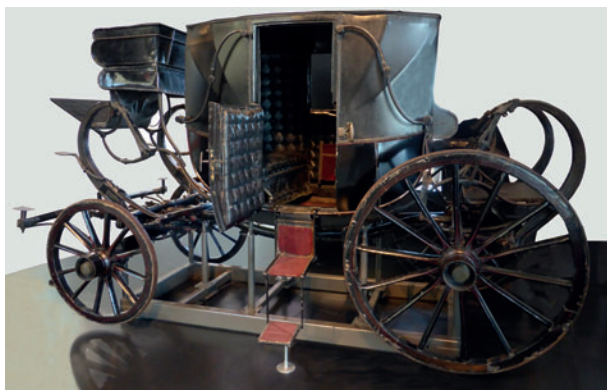


Figure 6. Now housed at the National Museum of Australia in Canberra, George Ranken's coach probably occasionally conveyed Mitchell during his time in Bathurst; he also rode more widely in Ranken's gig. (Author, 2016)

Australia's first scientific society in Hobart (Hoare 1968). He and Mitchell both grasped the significance of the *Sydney Gazette's* account of megafaunal cave fossils, both had access to Governor Darling, both swiftly set out for Wellington and were whirlwinds of activity. They must surely have met earlier, or at least known beforehand of the existence of each other. However the only firm evidence of their ever meeting is Mitchell's disparaging diary entry at Molong, Monday 6 July, after which Henderson continued with James Walker towards Wellington, where on his own account he did collect some bones and report back to Darling. What happened to those bones is unknown. He and Mitchell thus visited the caves just a few days apart. Trenchantly critical of the Surveyor-General's administration, Henderson's 1832 book is his legacy, but neither he nor Mitchell ever acknowledged each other in their respective publications. His report is misleadingly dated 1 July, by which date he had not even reached Wellington; his role in the saga is discussed more fully in Dunkley (2009).

Ralph Darling, as Governor of NSW, was also critical of Mitchell's tardiness (even neglect due to his other passions) on aspects of the surveying work. Aware of Henderson's background and using him as a foil against the Surveyor-General, he probably conveyed that sentiment when Henderson sought support. Mitchell's diary records a courtesy visit to the Governor *en route* to Bathurst, but only inferentially of an intention to continue to Wellington which was essentially a private excursion. However Darling undoubtedly knew, and probably gave more than tacit encouragement to Henderson's excursion. Darling and Mitchell never got along and within a year the Governor was recalled to London.

James Kinghorn (sometimes with an 'e' as in the diaries) was Superintendent of Emu Plains Convict Farm 1826-1829 (preceded by his father Alexander), then appointed Superintendent of the Wellington Valley Settlement until it was closed a year or so later. Sometimes in the company of George Ranken, he discovered and explored several caves before Mitchell's

arrival. He conducted Mitchell into Wellington on 25 June, accommodated him at the settlement, provided the boxes to carry the more than 1,000 bones, and accompanied him on cave exploration. The government closed the Wellington Valley settlement shortly afterward and Kinghorn received land grants (apparently in the Murrumbidgee Pastoral District). Presumed descendants owned a shop in Wellington (Kinghorn & Co.) until about 1900, but were not listed in the 1909 telephone directory.

James Walker owned property in Parramatta, Hartley and Bathurst and was well known to Ranken and Kinghorn as a fellow magistrate. He assisted with the exploration at Boree, extracted some bones from a crevice or cave there, accompanied Henderson to Wellington, then later again met Mitchell during the return to Sydney, assisting with minor surveying in early August. Mt Walker, 6 km west of Lithgow, commemorates his name.

Kenneth Snodgrass played no direct part in the saga but exchanged 11 letters with Mitchell during the 65 days. He later became Acting Governor between Bourke and Gipps. The links between Snodgrass, Mitchell and Darling have origins in their military service in the Peninsula War in Spain.

Surveyor John Rogers appears in the diary entry for the day Mitchell left Bathurst for Sydney, having been summoned there because at the time he rated very highly with Mitchell, who classed him as '*one of the serviceable surveyors of the Department*'. This was high praise from an extremely demanding, overbearing superior in disciplining his assistant surveyors, who suffered losing bullock teams while the drays laden with tents, survey equipment and provisions kept breaking down in rugged, often unexplored country. Rogers was assiduous in implementing instructions to locate and survey limestone and caves (Dunkley 2009).

After the Expedition

By 14 October 1830 Mitchell had written a lengthy report on his discoveries and forwarded it "*by the 'Gilmore', Captain Gearey, three large boxes of bones and a report (36 pages) with ten plans and drawings to the Geological Society...*" (letter, Mitchell to Ranken, December 1830, cited in Ranken 1916). The report was read at the Society's meeting in London on 13 April, 1831. The paper was formally submitted but for unknown reasons publication was refused and it appeared as an abstract only. This likely centred on the simmering learned debate about the implications of cave bones for the prevailing belief in a Universal Great Flood, it being barely seven years since publication of Buckland's book (Mitchell 1831, 1834a). Rebuffed, he incorporated it as a final chapter in his *Three Expeditions into Eastern Australia*, even though none of it related to the routes of those expeditions (Mitchell 1838).

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The original of his sketch of the “Large Cavern at Wellington Valley” (i.e. Cathedral Cave, Figure 10) is apparently housed with the National Museum of Natural History in Paris. Befitting a cave surveyor, the maps were highly professional, and probably only the second produced in Australia. On the other hand Henderson had published his hasty amateurish sketches of both Wellington and Boree Caves some six years earlier, thereby providing Australia’s earliest depictions of karst features.

On 24 July, the day he left Bathurst, Mitchell recalled Surveyor John Rogers from the Hunter River area and despatched him to Bathurst, Molong and Wellington with instructions, *inter alia*:

“You will also note particularly where limestone occurs in all your Survey and this you will tint on your Map by a grey made by mixing blue and red together shewing something like the extent of limestone rock” (Mitchell 1830b).

In September Rogers reported back:

“Having understood that you wish to know the native name of the caves, I have ascertained those near Boree to be called Mulwang, those near Wellington seem to be sounded Welbang, and others there above the junction of the Cudgegong called Werran-dang.

The natural troughs which I understand were empty when you visited the caves are now full of Water proceeding apparently from the concreted mass above” (Rogers 1830b).

In his own notebook Rogers (1930a) had related (9 September):

“Plotting – Sent two men to dig for Bones at the Caves near Wellington Valley NB informed that there are other and more extensive caves in the vicinity of Canobolas not yet visited by person collecting therefrom”.

These more extensive caves on ‘Boreenore Creek’ had in fact already been cursorily examined by Mitchell on 5 and 6 July without great success. Although not part of Mitchell’s new instructions, Rogers visited Boree again on 28 September, 30 November and 25 and 26 December 1830, while Mitchell himself returned for a more thorough search on 18 March 1836, on his great expedition to Australia Felix.

Based on Rogers’ investigations, Ranken continued correspondence with Mitchell, conveying news of more cave discoveries at Boree, Mitchell replying on 17 January, 1831 to the effect that:

“I at first determined to be at Bathurst ... to explore them. On more mature consideration, however, I find that I cannot indulge myself so much at present ... thus I may find it necessary to go very soon as far as Bathurst, and then I should explore the caves at leisure.”

Mitchell wrote again on 21 August, 1831:

“... Although I have been so lately near Bathurst, it is probable that I may very soon call on you there, with a view to visiting the caves again, and explore the new ones ... I know that everything depends on accurate descriptions of the caves, and the particular position in which specimens are found, I am much inclined to go myself ... pray let me know by return of post, and also whether you can send me some good specimens, as I have none left”.

... and then again on 30 October:

“I much wish I could visit the bone caves again ... but I have many things to put in order before the new Governor’s arrival. You will, I have no doubt, have heard from Dr Lang that I have now the Edinburgh Philosophical Journal where I see honourable mention made of you, and a good deal about the bones . . . I am most anxious to explore now, and have some hopes of being sent. I have some thoughts of resigning, if I am not allowed, as I came out with a clear understanding that I should be so employed.”

But within a month of that date Mitchell’s priorities changed dramatically. Authority for his first great expedition into new country had arrived, Wellington was in his past, and a new era of land exploration in Australia had opened. Fame and a knighthood awaited.

Much longer after the Expedition

Wellington Caves and, to a much lesser extent, Boreenore have been well studied and documented. Speleologists have recorded 148 karst features at Wellington and at least 28 at Boreenore (Boree), and sound management plans are in place.

Nearly two centuries after Mitchell, the other three areas, mostly on private tenements, are seldom visited. An inventory of the region’s karst resources (Dunkley & Dykes 2000; Dykes 2001) recorded 81 features at Molong, 13 at Geurie and 5 at Burran Burran. Nearly all are little more than dolines and large grikes in agricultural land, and several appear to have been filled in. A number have suffered deterioration or even disappeared.

Burran Burran Cave has apparently been filled in, and it isn’t certain just which one of the several limestone outcrops in the Geurie district was that visited by Mitchell on 27 June 1830. His diary places it as

“... a large cave to the Northward of the Macquarie . . . it turned out to be mainly a sinking of the earth . . . and of 30 ft descent, at the bottom of which was about 40 feet from the surface . . . but I was dissappointed [sic] to find no subterraneous passage to go further”.

There is a low limestone hill very close to the target area, right beside the Wellington–Dunedoo Road,



Figure 7. Two modern light industrial buildings at the corner of Watson and Molong Streets, Molong, now seal the cave visited by Mitchell on 24 June and 8 July 1830. Molong residents and others report that the cave had at least two entrances. (Author, 2016)

however information from local landowners in 2016 suggested once again that the cave or depressions had been filled in years earlier.

At Molong four or five small caves are known and numerous karst features documented by Orange Speleological Society (Bruce Howlett pers. comm. 2016). The cave visited by Mitchell on the night of 24 June 1830 is most likely that now recorded as MO-1, located at the foot of a hill on the corner of Watson and Molong Streets, and now covered by cement floors on two light industrial sites (Figure 7). Arriving after dark, he wouldn't have had time for more than cursory inspection, but returning on 8 July he wrote that *"These small holes both communicate with the surface above"*. Molong residents and others report that the cave had at least two entrances and that on one occasion a fire at one entrance (a former service station clearly visible on Google StreetView) had emitted smoke from the other. Several other caves in the township suffered similar fates of destruction or filling. Intermittent cave exploration was reported at Molong in 1899, 1920, 1929, 1936, 1938 and 1948, along with occasional proposals for opening one to the public. One writer in 1936 suggested that a few plugs of dynamite would open the entrances to see if there is anything worth developing; another in 1938 expected that *"within a couple of weeks it (another cave) will be blown to pieces by a charge of dynamite and trucked to Sydney to make beer bottles"*.

Mitchell's legacy

Mitchell personally explored caves at Wellington, Molong, Borenore, Oakey Creek, Bungonia, Cheitmore, Big Hole, Glenelg River (Victoria) and probably Burran Burran and Geurie. With a passion bordering on obsession and mirrored by many enthusiasts of matters subterranean, his unspoken strategic plan is familiar to many speleological and research expeditioners, or just

to those pursuing a complex caving project. A mixture of scientific training, clear objectives, skills honed by military experience fuelled his internalising of the 8 Ps – proper prior planning and preparation prevents piss-poor performance.

He explicitly instructed the assistant surveyors to search for limestone and caves and record them on survey maps e.g. Rogers 1830a, 1830b, Mitchell 1830b). Rogers himself located and assiduously mapped limestone at Molong, Cumnock, Bakers Swamp, Nubrigyn Creek, Burran Burran, Dripstone, Boduldura, possibly Stuart Town and Finchs Cave, and sites along the Macquarie and Cudgegong Rivers, some of the last in particular now being submerged beneath Burrendong Dam. Other assistant surveyors documented Taemas, Narrangullen, Wee Jasper, Coolemon, Goodradigbee, Lobs Hole, and Mudgee.

So, was Mitchell Australia's first speleologist or simply using caves as a means to an end? Later generations may legitimately debate whether in his ambition, vanity and prospects of glory, he was merely exploiting caves for their contents (Dunkley 2003). Nevertheless, it was pioneering work in a new colony claimed only 42 years earlier by white settlers, it spawned two centuries of research and was a remarkable achievement. At the time fewer than 40,000 white settlers and convicts lived in the entire continent – the first census was only two years earlier – with barely a thousand or two west of the Blue Mountains.

Mitchell, Henderson and lesser players deserve their place in the history of cave science in Australia. The travails and dedication of Mitchell's assistant surveyors such as Rogers, along with workmen and convicts were equally extraordinary; it was they who traversed unexplored country and first recorded so many new cave and limestone areas, and they whose perseverance contributed to Australia's most astounding early cartography (Mitchell 1834b). Their contribution, mostly previously unpublished, is ably celebrated in several recent specialist books by the late surveyor Alan E.J. Andrews (e.g. Andrews 1992). Spanning a period of little more than twelve months, there have arguably been few, if any, such intense, productive periods of cave documentation by one or two individuals, enabling Major Mitchell's inspirational legacy to dub him Australia's first speleologist.

Acknowledgments

Ever-willing staff of the State Library of NSW assisted greatly in preparation; their patience with temperamental old microfiche readers and printers (since superseded) was particularly appreciated. The Archives Office of NSW located and provided microfiche records of the notebooks of John Rogers and other assistant surveyors. The invaluable Trove facility of the National Library of Australia was its usual

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mine of information. Bruce Howlett (data coordinator for Orange Speleological Society) assisted with field inspections at Molong, while Peter Dykes advised about the modern documentation system. Dr Michael Augée provided advice, accommodation and local contacts at Wellington, where Peter Sheridan also guided us to some sites. Bruce Welch produced scans of material, helped to source other illustrations, and was his usual fount of technical knowledge. Jeanette Dunkley was as patient as ever in proofreading. Friendly members of the Molong Historical Society contributed more local knowledge than could be fully encompassed in this paper.

APPENDIX: The Diaries

In the present transcription the original diary dates are retained along with variations in the way they are recorded. The handwriting is sometimes difficult to read and question marks (?) indicate doubtful rendition. Abbreviations, spelling and punctuation including variations evident in the original are also retained, but some diarised abbreviations in the form of superscripts have been transcribed to ordinary lower case. The old-fashioned double 's' letter appears frequently, along with the ampersand (&) which was widely treated at the time as a 27th letter of the English alphabet, sometimes appearing in the diaries lying partly sideways, sharing with "etc." the meaning "and so on" but written approximately as "&c". Further, it is difficult to distinguish between marks for a dash (–) and those for a comma, affecting the flow of sentences. Original spelling has been retained, for example the word 'diluvium' appears correctly in one place, in another as 'dilluvium'. Deletions are shown as in the original. Background comments and elucidation by the present editor are in italics.

Figures 8, 9, 10 and 11 are included with the Appendix for illustrative purposes.

Sydney to Bathurst

29 May to 22 June

Mitchell left his home, "Craigend" at Darlinghurst at 1 pm on the last Friday of May 1830 (see note above). After visiting the Governor in Parramatta on the Sunday and a two-night stay at the Weatherboard Inn at Wentworth Falls he encamped below Mt York to direct scouting, surveying, clearing and construction of a new road from Mt York to Bathurst, including a new route off Mt York (now Victoria Pass), exploring routes across the Lett & Cocks Rivers and establishing several camps between Hartley, Lithgow and Bathurst. After three days making arrangements in Bathurst, he and Rankin left for Summer Hill (near present-day Orange), Molong and Wellington.

Bathurst to Wellington and Return

Tuesday 23 June

Wrote Mr Everton enclosing plan of allotments & requesting him to give publicity to an arrangement of mine that the solutions should be *[words deleted in the original: related as they come in the Govrs]* communicated by letter to me on or before Tuesday the 5th inst't. At length about 2 o'clock Mr Rankin & I set out in a gig for Wellington Valley, and reached that night, Charley Booth's, a hovel on Dr Richardson's farm dist't 24 miles. The dray following us on this tour and one pack-horse, the whole dray of luggage being left at Mr Rankin's, as well as the remaining packhorses, & Worthington – who being ill with boils, I directed to remain at Mr Rankin's & look after the horses. Raining.

Wednesday 24 June

A rainy morning. We started however and after a few hours reached Summer Hill station. We rested our horses a little. A very tidy Soldier's wife seemed to keep her hut very neat. The husband and comrade came in soon from Kangaroo hunting. We continued and in the evening reached Molong, a Gov't stock station 28 miles from Summer Hill, or 38 from Charley Booths. A Corp'l and private of the 39th were also stationed here and we passed the night in their hut. The Soldier Oliver – or Quin *[?]* having been once in the Buffs, and being now desirous of settling when his 20 years are out, was very obsequious to me. At Summer Hill this morning, one of the "specials" as they are termed, was pointed out to me, he had been a L't in the navy. I saw him in the rain with a Parramatta Jacket on & his cuffs turned up, feeding some pigs, there was another good looking young man. In the evening we explored a cave - (recent being).

Thursday 25th June

The morning rather rainy – it cleared up however very soon – we had a pleasant ride and were met, some miles from the Settlement by Mr Kinghorne who conducted us to Wellington Valley where a nice blazing fire in a rather handsome bowficated *[bifurcated?]* room was awaiting us, and we soon had a very comfortable dinner.

Friday 26th June

We set out altogether, rather early to examine the Caves. First Mr Rankin descended into one lately discovered by Mr Kinghorne but after some time he returned breathless and really knocked up; having been occupied the whole time with ascending and descending the narrow crevice just

Just *[word is repeated in original]* wide enough to admit his body. We then went to the great cave, the descent into which is easy, and I was astonished and

gratified at the grand and simple proportions of every part of this cave; first we enter after winding along a broad & lofty passage – the great gallery around the chapel where there is also the altar-steps, font, & - wholly the work of the encrustation of stalactite – the height of the roof is full sixty feet – the length 80 feet breadth 50 feet – the floor consists of a soft red earth – like impalpable dust – it was extremely interesting to contemplate amid the silence which had reigned [sic] here for several thousand years (for the natives have a superstitious dread of caves & never enter them). The splendid work of nature, and with the inexplicable circumstance of the bones found on my mind, it was impossible to behold this altar without a new sensation of awful reverence for the mysterious works of the deity. [Figure 10] No bones occur in this cave, while a few yards distant is the cave full of them! Passing by the back of the altar we descend rapidly, and enter a smaller gallery which terminates on the brink of a dark precipice called “the well” where there is water the surface of which is 30 feet below. The depth has not been ascertained. On the left hand side of this smaller gallery we ascend by some very gigantic footsteps apparently in stalagmite covering fallen earth – to one still smaller, where some beautifully crystallized carbonate of lime were found. The floor was covered with stalagmite but on cutting we reached the solid rock. On breaking the greater stalactite opposite the well a small hole was found by which another chamber was entered by crawling on hands and knees or sliding; in this the stalagmites of the floor was pretty even, and as it sounded hollow I directed the (man?) to cut and at nine inches sinking below we found brown earth, but entirely free from bones! We dug to the rock which we reached at about 3 feet below the stalagmite. One of the most remarkable phenomena

of this cave is a very peculiar white ashes looking sort of dust which covers part of the floor and into which at one part (behind the altar) Mr Rankin sank to his middle. It looks like the ashes of burnt bones, and it may be observed that a very peculiar smell pervaded this cave to its very mouth, and somewhat resembles that of burnt bones. I also dug in the red dust at the outer end of the Chapel, but found a few bones only very much broken. Mr Brown 39th Reg’t has informed me that when he first entered this caves, few had preceded him, and that at that time, this substance now white was a dark colour and very light, that it ignited, by the drops from the flambeaus and that smoke was seen at the mouth of the cavern for some time after. I am not quite satisfied on this point however, as I saw some of that black earth remaining.

I next descended the cave where bones are found which appear to be entirely different in character from the others: these are caves mainly in solid limestone and the entrance is usually easy, but there is mainly a hole as if formed by the earth or rocks falling in. The bones are found in a red ochreous cement which appears like the matrix of the limestone blocks which hang in horrible airiness over our heads, as we descend. The mouth of the cave consists chiefly of the bone breccia which seems to be the same as that of Gibraltar – it is also in abundance below with large rocks of limestone intermixed in a very irregular manner; wedged in some places together and supported so as to overhang in others, adhering to the breccia which alone retains them overhead. This breccia is of a hardness between that of stone and that of earth, in general its outward texture is peculiarly rough like a swallow’s nest or rough mortar – the bones in many places project or are slightly attached to its

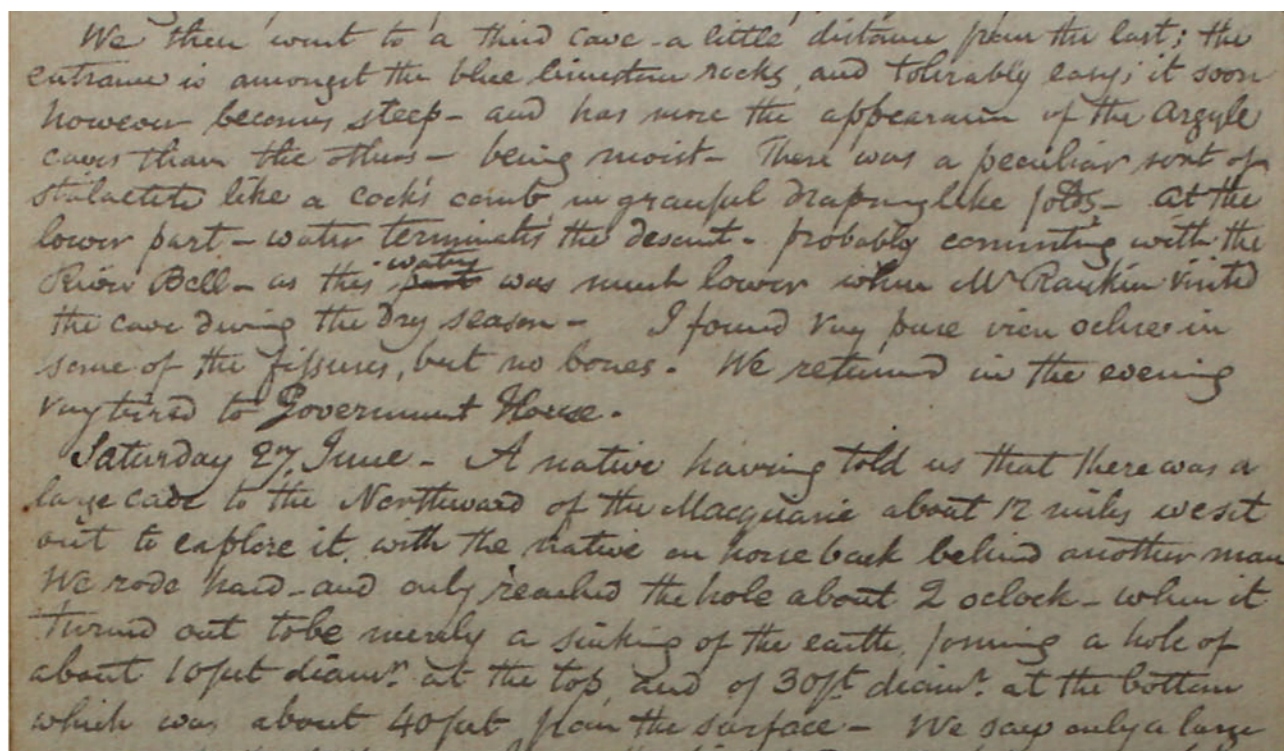


Figure 8. Part of diary entries for 26 and 27 June 1830. (Mitchell Library, State Library of NSW C42)



Figure 9. Section and Groundplot of two Caverns at Wellington Valley. (Mitchell 1838 opp. p. 361)

outward surface, and it would therefore seem clear that this cement was mixed in a very liquid state – the largest bones are generally found outside – and the smaller ones & little fragments dispersed equally throughout the mass. The lower part of the Cave terminates in two little chambers with separate entrances, both of which have a floor of what appears to be diluvial soil. I dug into both but found only few bones, these being apparently of the same sort as those found in the brecchia. The chambers are terminated or rather choked up by this diluvium. In the smallest and upper one, the bones occur in the face of the rock, encrusted in a thick stalagmite crust or stratum of limestone. I took specimens of this, and also a drawing showing the position of the bones, and the face filled up with diluvium.

We then went to a third cave, a little distance from the last; the entrance is amongst the blue limestone rocks, and tolerably easy; it soon however becomes steep, and has more the appearance of the Argyle caves than the other, being moist. There was a peculiar sort of stalactite like a cock's comb in graceful draping like folds. At the lower part, water terminates the descent, probably connecting with the River Bell as this *part [word crossed out in original & "water" written over it]* water was much lower when Mr Rankin visited the cave during the dry season. I found very pure iron colour in some of the fissures, but no bones. We returned in the evening very tired to Government House.

Saturday 27 June

A native having told us that there was a large cave to the Northward of the Macquarie about 12 miles went out to explore it, with the native on horseback behind another man. We rode hard, and only reached the hole about 2 o'clock – when it turned out to be mainly a sinking of the earth, forming a hole of about 10 feet diam'r at the top, and of 30ft descen't, at the bottom of which was about 40 feet from the surface. We saw only a large goanna at the bottom. I was the first to descend by a rope, but I was dissatisfied to find no subterranean passage to go further. The rock consisted of blue clay slate, the country was rather flat, and as I found some thin nodules of magnesian limestone near this, I concluded that this aperture was occasioned by some chasm in some limestone below. This day we rode at least 45 miles without much advantage. We saw a cleartop *[sic]* hill to the N. East, which being conspicuous also and isolated, is a good point for the survey, the native name is Wingewarra.

Sunday 28th June

We were all rather tired this morning. I wrote letters to Mrs. M. and to Col'l Snodgrass. We drove out to the Caves at 1 o'clock and looked at them a little.

Monday 29th June

We set out for the caves early determined to have a good day's work, I surveyed first the large cave with the compass and a line of 20 feet – then I commenced a view of the large gallery with the great altar & then I measured to the bone cave (80feet), and surveyed it, commencing also a view of the little chamber already mentioned. I this day set men to dig where the brecchia seemed to come to the surface at some distance from the bone cave, and there also they soon found bones – the brecchia being very hard, seemed only a species of limestone rock.

Tuesday 30th June

Went with Mr Kinghorne and a man on horseback carrying the theodolite, across the River Macquarie to a high hill named Bingalyjan, about 5 miles E of the station at Wellington. On our way we touched at a cave in a low situation in the Limestone rock, and in the earthy sides at the mouth I found the same red earth or cement and containing bones. The cave has also like the bone cave at Wellington the appearance of the earth having sank or slidden down the lower part being nearly perpendicular of the footing near its edge of loose earth. I could not descend for want of a rope and a light. I was much struck however with the analogy in character between this & the bone cave at Wellington both seeming like holes formed by a sliding in or sinking of the earth, and neither being at all like the other limestone caves. There was another cave into which the bats when scared from the other cave descend. From Bingalyjan I took angles on the Canobolas and on various hills at Wellington. We also saw some very remarkable peaks at a great distance Northward, these I concluded were on the great range extending from the interior to Cape Hawke *[Howe?]*. The country to the Westward of Wellington seems gradually softening into a level & unbroken country although I saw some hills to the Westward which were rather conspicuous. A vast plain of good land is stated to be at a place named Bogan, to which the natives are very desirous that we about extend the colony. They are a civil & obliging race of blacks.

Wednesday 1st July

Sent my things to the tents near the caves, and proceeded, accompanied by Mr Kinghorne to the heights Westward of Wellington and took angles from two stations across the country on both banks of the Bell. I then proceeded to a little trap hill E. of the Bell and also took angles there, returning in the evening to my tent. I afterwards went down into the Big Cave and completed my view of the beautiful Stalactites round "the Altar". Returned home at ½ p. 12.

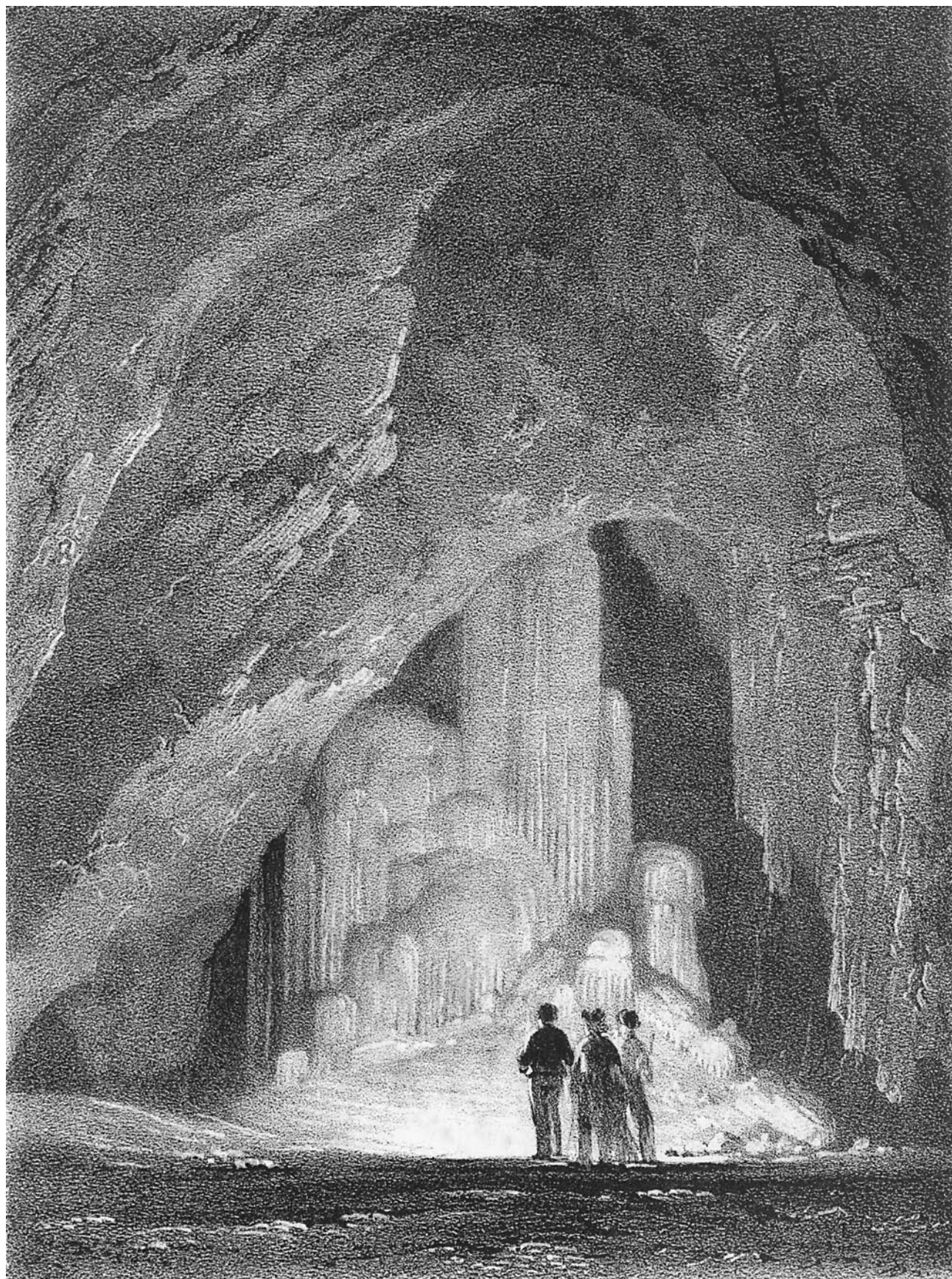


Figure 10. Large cavern at Wellington Valley (Cathedral Cave showing The Altar). (Mitchell 1838, opp. p. 360)

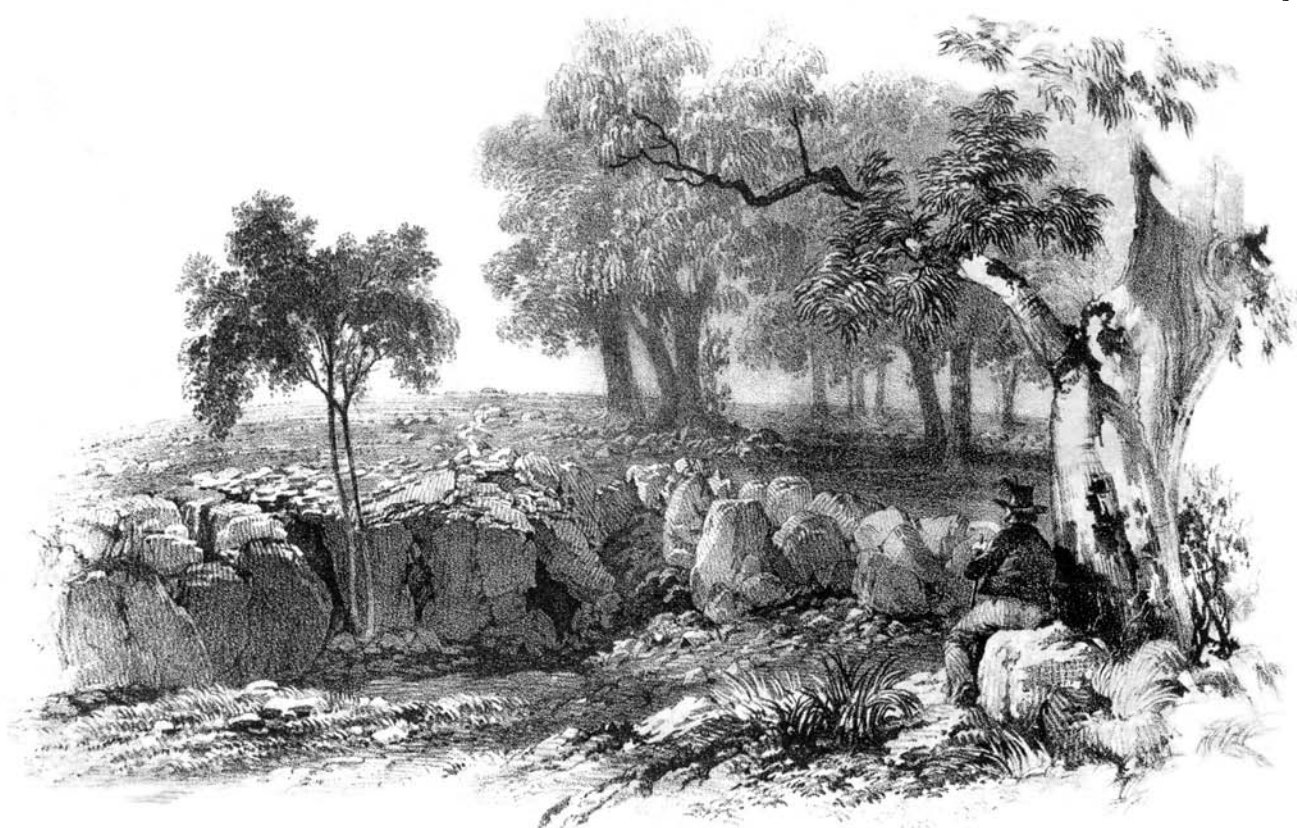


Figure 11. Entrance to the largest cavern, Wellington Valley. (Mitchell 1838, opp. p. 353)

Thursday 2d July

Commenced early with the theodolite at a tree on the bare ground near the Caves (V), and proceeded across the Bell to the higher ground on the West, and traced the summit of the ridges, as far as my station of yesterday. In the evening went into the bone cave.

Friday 3d July

Surveyed the River Bell from above the Caves to its junction with the River Macquarie about 2 miles. This morning I was examining the top of the swell in which the caves are, and tracing the outcrop of the boney red earth, when I came upon a portion exposed to the weather on which were embedded several bones, forming a beautiful and rare specimen. These bones appeared to be the shattered remains of a human being but so scattered and disjointed that only enough remains to identify the order of being to which they belonged.

Like the last remains of a shipwreck, they lay a melancholy vestige of a tremendous storm; and I could not behold these vestiges of a being once animated like myself, after but which had existed long prior to the earliest Egyptian mummy without *[some illegible words crossed out here]* the most elevated and interesting reflecting. Could this being be but reanimated, what light could it not throw on this most puzzling question. How and when comes the red earth always containing bones? This might have been a body from Asia, and was at least as ancient as Noah!

As I was anxious to complete my survey of the river while the weather continued good, I could not remain to examine the hill further as I wished to do. I sent Mr Rankin and Mr Kinghorne who went to the hill & pulled the stones about but found nothing more.

On returning from the Macquarie dined with Mr Kinghorne and in the evening saw a fine Corrobory behind his house. The natives now take in these dances various animals – as the native dog and the manner in which they kill the Kangaroo: the Kangaroo and the natives hunting him, also birds as the crow for instance, and the Emu also, and even they imitate the wind, which was the finale in a very good by taking each boughs of trees and crossing hands rapidly as wind blows branches according to the music, to which they also keep time by a kind of breathing sigh which suited well with a representation of trees waving with wind. This beautiful idea of nature's own children was a greater treat to me than any ballet I ever saw on the stage. I mounted my horse again at nine o'clock and rode to the camp (3½ miles). I then descended the bone cave in order to detach some specimens of the encrustation of bones in one of the chambers, but on descending I found some bones which seemed human, projecting from between two limestone rocks, and I attempted in vain, till it was twelve o'clock, to detach these bones so firmly were they wedged in and I was obliged to leave them there at last, with the exception of some fragments which I brought away. I at length got to the spot below where I wanted the specimens, but I found the aperture filled with a mass of fallen rock, which had come down from the yawning sides since I

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had been there before however we got the specimens I wanted. On returning I could not help stepping to the right and taking a sketch of the overhanging rocks mixed with the red-bone earth which looked tremendous, as if every moment they were coming down, finished this at ½ p. 1 and left the cave.

Saturday 4th July

Got up early to pack my specimens, Mr Kinghorne having kindly furnished me with boxes, wood & and I was engaged in this from daylight till 12 o'clock then I breakfasted, Mr Rankin having been waiting for me from 10 o'clock. Then I took a sketch of the mouth of the big *[this last word is repeated on next page]* & Mr Maxwell exchanged my poor bullocks for an excellent team. *[this last line on the page was added separately, then squeezed into a small space after the previous line, then underlined]*

[new page in original]

big cave, while Rankin waited very patiently as we were to have set out on our return at 10 oc'k. While I was drawing Rankin read a poem he had written in which he noticed most flatteringly my survey, drawings & at Wellington I remarked that it was most encouraging to me to finish the drawing with some pains, & not mind time, as I could not otherwise deserve the credit he had given me in the poems. Finished at 1 o'ck, and we proceeded in Mr R's gig towards Molong. On the way we met Mr Walker who returned with us and we all slept at the soldiers Hut at Molong – havg arrd abt 9 oc.

Thursday *[sic–Sunday]* 5th July

Very rainy morning. We proceeded nevertheless to Buree, a Govt' station about 12 miles off. There we saw Hunt – Huntell's – friend. Mr Rankin begged him to sing, but he excused himself saying he was hoarse. He held my horse for me, and put my foot in the stirrup (Prodigious!!!). Olivir the overseer conducted us to the limestone bridge about six miles East of the Gov't station and I found this the most romantic spot I ever saw in my life, although that day was very rainy, we soon got into fair weather under the bridge where there is a spacious esplanade with the most romantic scenery. The bridge is 125 feet span of solid limestone, the height about 60 feet. The breadth of fine dry space is very considerable under "the bridge", rocks (looking Westward) topple up in the style of Salvation, to the left is a covered terrace and this extends into spacious caves or chambers, lighted in the most romantic manner by small openings to the daylight. There are however, on the other hand, dark shapes, and badgers *[sic – wombats?]* seem very numerous, living in holes made under ground. In one dark cell we found fresh remains of a fire and the mark of a foot with a native *[?]* shoe, very fresh, as the badgers had not marked it with their feet. We were rather alarmed at this, as it was well-known that bushrangers are about this part of the country. We however discovered nothing of this kind. Olivir

went back to the station for some provisions as we had resolved to remain there for the night. We therefore did so and I passed it tolerably well with a Kangaroo cloak brought by Oliver who returned to us after dark

Monday 6 July

Made a sketch of the interior view of the bridge, completed it by ten o'clock and we then mounted and descended the stream about a mile to the other cave. This is also adjoining the rivulet and a tributary coming through the cave joins at the entrance. This subterraneous part is still, narrow and deep. The Cave is of a different character from those we had seen (which indeed all differ from each other), the stalactites formed columns much like Gothic work, and the appearance from the interior is very picturesque – apertures above, but a dim religious light to it, which entering among the smoke from a fire we lighted gave a fine effect. Under a remarkable mass of stalagmitic crust under which were various stones (not lime) cemented we found lumps of salt petre embedded, and I have no doubt that it might be washed here. No cave of importance appeared with the exception of the narrow fissures in which the stream has its course. Up this Mr Rankin & Mr Walker proceeded, I remained to draw), and were absent a long time, at length they made their appearance having ascended by an inlet to the opposite side of the hill. They found the passage long and dangerous, the stream is so deep that they could find no bottom, and across this they had to stride in moving up, having taken off their shoes to preserve a footing in the rock on each side. To these gentlemen's perseverance I am indebted for the discovery of the "red ochreous cement" all containing bones in this cave also. Just as they were about to ascend by a rough & very steep ascent in a crevice, their light being mostly done, Mr Walker noticed a bone in the side of the opening, and soon they broke out some & brought them to me. The hole by which they ascended to day-light was precisely one of the falling-in kind, loose stones & red earth with bones, from the lowest depth to the surface. The hole at the surface, with a perpendicular opening, resembled exactly the bone caves at Wellington and beyond the Macquarie, and on ascending to the first footing place, 10 feet from the surface, I soon found bones in the earth at the sides. From one little spot I found a great number wedged in tightly and then in another place, others, especially one which seemed like a humerus and ulna of the human skeleton. It may be observed that in this and the former cave we found small bones coated with lime, and in this the same kind of bones lay without any orientation thick on the surface, so as to crack & stick upon our feet like shells on a sea beach.

In the last cave we also found recent marks of an inhabitant's embers, and a tied bunch of reeds as for a bed in the interior of the cave. We now mounted and returned home to Molong. I gave Oliver two dollars for his trouble. I was much incommoded by the boils in riding

back. On our arrival at Molong we found a Dr Henderson waiting for us – by the bye we found it difficult to cross the river, which is I believe the Bell or a branch of it – the other at Buree with the bridge &c, empties into the Lachlan. Dr Henderson seemed a very odd personage – he walked with a black boy – he said there was no granite, nor any primitive rock in the country, that he was making a section of the strata etc. He said he was going to Wellington, and wished to have gone 70 miles further, he rode on drays to carry him over the rivers – he read a book of his to Rankin on financial arrangements and said he was come from Van Diemens Land where he had done much good, to set us right too, for we were all wrong &c &c.

Tuesday 7th July

Mr Rankin set off to get home that night to Bathurst 56 miles, Mr Walker with Dr Henderson went towards Wellington Valley. I required a little rest & quiet but I should nevertheless have gone on but that they had arranged to let the bullocks go astray. I therefore continued in the tent completing the plan of Wellington Valley. By Rankin I wrote to Col'l Snodgrass and Mrs M. The day was rather hot.

Wednesday 8th July

Took a walk in the morning the same limestone rock about 500 yards west of my camp near the side of the river. There was a small crevice or oven-like hole in the rock, and I found it half-filled with the red-ochreous cement, and in detaching a portion from the roof, a small bone appeared adhering to the roof – in fact I found again here the same breccia [*spelling as in original*] of bones. On looking into another crevice that too was half-filled. The surface of this substance having the rough appearance as at other places where I had seen it, resembling a swallow's nest something. There was a crust something like that at Wellington, and I think the boney mass was all above it. I took specimens of both. This was therefore the fourth place which I had found this singular earth – or limestone – always containing bones. These small holes both communicate with the surface above. Moved forward with the dray following, towards Bathurst and camped on the station on a good large rivulet ab't 12 miles from Summer Hill.

Thursday 9th July

Moved onwards, got to Summer Hill about 2 oc'k, ascended a hill North of the station, and took some angles on the Canobolas, and met Mr Lachlan etc. The dray in crossing a rivulet in a swamp just beyond this station lost a wheel, and wetted both the boxes containing specimens. Got the length of Charley Booths (Dr Richardson's land), dist'ce travelled 22 miles. This night the therm'r was 26°

Friday 10th July

Detained a little in the morning in packing & repacking the large specimen from Wellington, then we started and reached after dark Mr Rankin's paddock – called at Mr Rankin's – but a Mr Lambert there & his daughter who is very pretty – Mr Rankin sent to Bathurst for my letters, and for medicine for me.

At Bathurst

Saturday 10th July

Took salts, and finished my plan of Well'n. Valley, Mr Brown 57th called, and I delivered him a packet of English letters he had received from Mrs M. whom he had seen the week before at Sydney, all well, at Mr Rankins in the evening.

Sunday 11th July

Commenced an outline of the sketch of the bone cave, Capt Piper invited me to dine, I sent an excuse, being ill & taking physic, Major McPherson called.

Monday 12th July

Took salts. Continued the drawing of the bone cave very cold & snowy.

Tuesday 13th

Wrote various letters – Mr Rankin called.

Wednesday 14th July

Drew till 1 o'clock – then received my letters, one from Snodgrass, announcing the defalcation of Gregson, has £150 of my money! Wrote answers.

Thursday 15th July

Wrote till 12 o'cl'k then sent off my letters. They were just in time, having been interrupted in the morning by Capt. Steel with Capt Piper who came to visit me. The former of course about his land. Mr Hawkins also called ab't land.

Friday 16th July

Commenced a drawing of the little cave of incrustation of bones. Mr Gosling called on land and detained me a long time. Two men & a pack-horse came into me in the evening in search of Mr Rogers who had sent them on from Sydney.

Saturday 17th July

Completed the drawing of the bone Cave.

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Sunday 18th July

Commenced an outline of the view of the entrance to the great Cave. In the evening scrolled the heads of a letter on the Act proposed for the regulation of Towns.

Monday 19th July

Drawing the entrance the Cave – rather rainy.

Tuesday 20th July

Completed the entrance to the Cave.

Wednesday 21st July [NOTE: original has “20th” with a “1” written over “0”]

Received letter from Col^l Snodgrass, Laidley and Perry, the first enclosing me my 2d bill for £10, with the letter of advice Laidley leaving caught the fellow on his arrival. I was as much pleased with this bill as if it had been a gift. Wrote a letter to the Sec’y ab’t the Department generally etc. One about Elliot. Mr Rogers arrived, bringing his plotting & letters.

Thursday 22nd July

Got upon my horse, a man following with the theodolite, and called on Cap’t Piper, then went to the hills below Bathurst and took angles, then went into the Settlement and called on Maj’r McPherson, Mr Everton, & Mr Howard the Commiss’r.

Friday 23rd July

A beautiful morning, protracting my angles when Brown called, he rode with me to the hill near Bathurst which I reached after one o’c’k. We met Maj’r McPherson who went with Mr Moore 39th to look at my specimens at my tent. Mr Moore pronounced the bones to be human he having been bred a Surgeon. On the hills till Sunset. On reaching home heard Mr Rankin had returned. Wrote Mr Rogers instructions - he had been this day employed tracing the houses of the present settlement. Went up to Mr Rankin’s in the evening.

Saturday 24 July

Packed up all the specimens carefully, breakfasted with Mr Rankin. The dray moved on to Sydney Bathurst where a months rations were procured – it then went forwards on the road to Sydney. Obtained from Mr Everton, the loan of a team, to draw Mr Richards Rogers rations to Molong, he being instructed to proceed with the pack horse and 20 days rations on surveying trips leaving his stores at Molong with one man near the Mills [?] station. I had a busy day surveying the hills Westward of Bathurst which I fortunately completed about 4 o’cl’k. Then called on Maj’r McPherson, Mr Everton (with whom I left the sketch having inserted

the names of Selectors. Dined with Brown meeting Mr Rankin. The night was very dark (ab’t 9 o’c’k). When I set forward for my camp on the road to Sydney, Brown sent a dragoon with me, otherwise I cl’d not have found the road - reached my tent at ab’t 12 miles from Bathurst. The soldiers staid all night. Found my tent most uncomfortably pitched - door right towards a very high wind blowing - and being also exactly where some overhanging rotten trees, at midnight the wind roared & it rained incessantly till the next morning.

Bathurst to Sydney

25 July – 3 August 1830

After leaving Bathurst Mitchell resumed oversight of the roadwork for several days, then continued towards Sydney.

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