

**Symposium on Australian Intraplate Volcanism:  
From Source to Surface and Beyond**

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**Volcanism in Indigenous History:  
Evidence & Interpretation**

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## 1.1 Ethnographic Evidence of Volcanism

**Kulin, Maar, and Bungandidj creation narratives**

- Craitbul – Mt Gambier, Mt Schank, Mt Muirhead
- Duelling mountains – Mt Elephant and Mt Buninyong
- Murukpang – Mt Shadwell
- Budj Bim and Tappoc (Mt Napier)
- Bridgewater Complex?

**Toponyms and vocabulary**

- kulurr, kolorer, kulurr, kuulor; 'lava', 'very hot', widespread use across western Victoria where volcanic landscape features exist (e.g. Mt Rouse / Kolorer; Kolora near Mt Noorat); 'Walpa kuulor' – 'burning lava'
- Tintaeeen – Djabwurrung word for lava / Tennateona – name of evil spirit from Bungandidj Gambier/Schank/Muirhead creation story



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Briefly, what we mean by ethnographic evidence is written archival material recorded by Europeans about the culture and society of Kulin, Maar, and Bungandidj nations.<sup>1</sup>

There are creation narratives, and my colleagues and I have identified and evaluated a good number of these, especially around western Victoria. These are in addition to the well-known Craitbul story from Mount Gambier and Schanck and the story of Budj Bim.

As well as creation narratives we have placenames, as well as broader vocabulary for volcanic landscape features.

Of particular interest is the word 'kulurr' and its variants, which is found across the NVP and typically refers to lava itself – Mount Rouse, or Kolorer carries the name, for example, as does the landscape north of Mt Noorat.

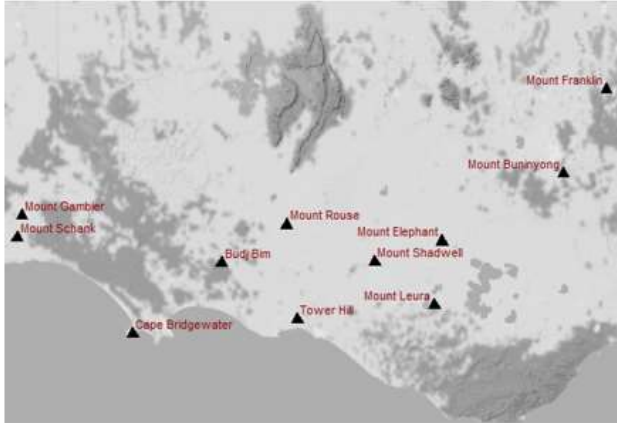
<sup>1</sup> These groups cover, east to west, the Newer Volcanics Province. Macrolanguages are commonly also known as 'nations', and contain many language groups and dialects.

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## 1.2 Ethnographic Evidence of Volcanism

**Other materials**

- “when some of the volcanic bombs found among the scoria at the foot of Mount Leura were shown to an intelligent Colac native, he said they were like stones which the forefathers told them had been **thrown out of the hill by the action of fire.**” – James Dawson, 1881
- “once big fellow Buninyowang [sic] get sulky and **throw up big stones and dirt**” – newspaper report, 1897
- “When Mount Gambier begins to burn, and the earth to shake, the **tidal wave** will come again” – newspaper report, 1870
- “aborigines remember **the eruption of Tower Hill**, Western Victoria, they tell us” – Edmund Gill, 1938
- “Aborigines told the first white residents tales of the time when **the quiet volcano belched forth fire, clouds of ashes and streams of molten stone**” – The Vagabond, 1893



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We also have other anecdotes that are not necessarily creation narratives. Many sources not directly concerned with Aboriginal knowledge of volcanism nevertheless refer to it.

Broadly speaking we have material spanning the width and breadth of the Newer Volcanics Province.<sup>2</sup>

<sup>2</sup> This material is presented in B Wilkie, F Cahir and I Clark (2020) ‘Volcanism in Aboriginal Australian oral traditions: Ethnographic evidence from the Newer Volcanics Province’, *Journal of Volcanology and Geothermal Research*.

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## 2.1 Evidence: Issues & Debates

Sources include:

- G. A. Robinson, *Journals* (1839-40), Thomas H. Braim – *A History of New South Wales* (1846), Daniel Bunce – *Language of the Aborigines* (1859), James Dawson – *Australian Aborigines* (1881), Alfred Howitt – *The Native Tribes of South East Australia* (1904), R. H. Mathews – *Ethnographic Notes* (1904), R. B. Smyth – *The Aborigines of Victoria* (1878), personal papers, diaries, letters, newspapers, etc.

How do we approach these materials?

- Point-in-time records of oral traditions; not oral traditions themselves
- Not all traditions were shared with Europeans, not all traditions were recorded or recorded accurately
- Later 19<sup>th</sup> century informants often displaced and disconnected from Country and traditions, including language



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Western Victoria is particularly well served by these writings because of the timing of colonisation. How are we to approach these materials?

First, we must remember that they are European and colonial textual records of Aboriginal oral traditions; they are not the oral traditions themselves. They are a snapshot of a tradition as it existed then, as it was interpreted then through European eyes.

Further to this, not all knowledge was or could be shared with Europeans.

Finally, traditions recorded in the late-19<sup>th</sup> century and beyond were increasingly taken from informants who were a generation or more removed from their Country and culture before the influence of European colonisation.

So, evidence has to be treated carefully. The question now is: How are we to interpret the evidence?

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## 2.2 Interpretation: Issues & Debates



**Creation narratives**

- Best understood as responses to environment but they do carry practical knowledge about the physical world
- Evolving, *not* static; redundant environmental information removed, new information added
- Stories told today incorporate today's information
  - E.g.: Contemporary Budj Bim story (per Wettenhall 2010) adds description of 'lava that spat out' to 19<sup>th</sup> century accounts that did not include that reference
- A story written down has probably existed in *that specific form* for 3-4 generations

**Placenames and language**

- Languages in NVP traced to hypothetical common ancestor (Proto-Pama-Nyungan); mid-Holocene (~5 ka) from northern Australia
- New and 'nonce' formations: Single-use words/lexemes, 'invented' on the spot in response to questioning

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Importantly, creation narratives are best understood as responses to the environment and an attempt to account for its formation.

These stories are in a state of constant evolution; old information about the environment is removed, new information is added, and the narrative is renewed over generations.<sup>3</sup> A good example for us is Budj Bim: The recorded nineteenth century account doesn't literally mention volcanic activity in the way some contemporary versions do; it has changed over time.<sup>4</sup>

To generalise, a story written down has probably in most cases only existed in *that specific form* for three or four generations.

When it comes to placenames and words, we should note that the languages we are dealing with only developed about 5000 years ago – but that doesn't mean ideas and concepts weren't carried over.

We also must be aware of the phenomenon of words invented to assist cross-cultural communications: 'What is the word for a burning hill?', for example, might produce a literal translation of the verb and noun.

<sup>3</sup> See Cahir, F., Clark, I., & Clarke, P. (2018). *Aboriginal biocultural knowledge in south-eastern Australia: perspectives of early colonists*. CSIRO Publishing.

<sup>4</sup> See, for example G. Wettenhall (2010) *The People of Budj Bim: Engineers of Aquaculture, Builders of Stone House Settlements and Warriors Defending Country*: "At the dawn of time, it was the Ancestral Beings – part human, part beast – who brought what was previously barren land to life. At the end of the Dreaming journeys, the Ancestral Being left aspects of themselves behind transformed into part of the landscape. To the Gunditjmara people, Budj Bim's domed hill represents the forehead of one such Being, with the lava that spat out as the head burst through the earth forming his teeth. In the Dhauwurd wurrung language, budj bim means "high head," and tung att means "teeth belonging to it", referring to the scattered red scoria."



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## 2.4 Interpretation: Contemporaneity

**Table 1**  
Eruption ages of elected eruption centres of the Newer Volcanics Province.

Eruption centre	Age (ka)	Error (2σ)	Age type	Subprovince	Description
Mount Schank	4930	1080	Eruption	Mount Gambier	Maar and spatter cone
Mount Gambier	5450	260	Minimum	Mount Gambier	Maar and spatter cone
Tower Hill	36,800	3800	Eruption	Western Plains	Maar and scoria cone
Budj Bim	36,900	3100	Eruption	Western Plains	Scoria cone and spatter cone
Mount Napier	46,700	5000	Eruption	Western Plains	Scoria cone
Mount Franklin	110,000	14,000	Maximum	Central Highlands	Scoria cone
Lake Bullenmerri	116,000	19,000	Maximum	Western Plains	Maar
Mount Leura	163,300	1500	Eruption	Western Plains	Scoria cone
Mount Leura	155,000	2900	Eruption	Western Plains	Scoria cone
Mount Elephant	184,000	38,000	Eruption	Western Plains	Scoria cone
Mount Buninyong	210,000	10,000	Eruption	Central Highlands	Scoria cone
Mount Rouse	284,000	1400	Eruption	Western Plains	Scoria cone
Mount Shadwell	359,000	2000	Eruption	Western Plains	Scoria cone
Mount Noorat	576,000	7000	Maximum	Western Plains	Scoria cone and maar

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So, where does this leave us with Aboriginal oral traditions of volcanic activity in the Newer Volcanics Province?

First these oral traditions do record details that can only have come from an eyewitness: my suggestion is that the eruptions of Budj Bim, Tower Hill, perhaps Mount Napier, and almost definitely the Mount Gambier Complex had eyewitnesses, and that one or more of these were the original source of knowledge that was then applied to the broader geology and environment of the Province.

These eruption centres have been recently Argon-Argon dated and produce ages that align with the timelines for human occupation in these regions of south-east Australia supported by the extant archaeological evidence.<sup>5</sup>

<sup>5</sup> The currently accepted evidence shows that Aboriginal people migrated from southeast Asia to Australia >60 ka. A now remote cave on an island that was once connected to the north-west of the Australian mainland was used as a hunting shelter 50 ka, for example, while at Deaf Adder Gorge in the Northern Territory there is evidence of the arrival of humans >60 ka (Veth et al., 2017). From Madjedbebe, a rock shelter also in northern Australia, artefacts have been dated to 65 ka (Clarkson et al., 2017). At the dry Lake Mungo north of the Murray River, buried remains of early Australians revealed that humans had reached south-eastern Australia by 40 ka (Bowler et al., 2003). Rock shelter artefacts from the Grampians (Gariwerd) mountains in western Victoria are dated at approximately 22 ka, further south, archaeological evidence predating a volcanic eruption on the south-west coast of Victoria establishes the date of occupation of that region to around 34 ka (Matchan et al., 2020).



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## 2.3 Interpretation: A Rich Heritage Resource



- “as part of a living culture they [myths] are constantly being augmented and altered in line with their changing situations ... **the ability and creativity of Indigenous people in explaining phenomena in their environment must be acknowledged** without assuming that it was a perspective that could only have been handed down through the millenia” (Phillip Clarke, anthropologist, 2019)
- “We never really put any focus on when an event occurred. What’s important is that it did occur ... it’s not a past tense that we use to refer to these events. They are events that happened that are just part of the story of the landscape.” (John Clarke, Eastern Maar Aboriginal Corporation, 2020)

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This fits with the view of anthropologists such as Phillip Clarke who remind us that the ability and creativity in explaining and accounting for the environment is a remarkable feature of Aboriginal cultures. It need not be an eyewitness account; there are other ways in which knowledge is gathered and developed.

As John Clarke said earlier this year, “... it's not a past tense that we use to refer to these events. They are events that happened that are just part of the story of the landscape.”

So, to end, while the dialogue with earth science should continue, we know for certain that there exists body of material that adds a rich layer of cultural history to the heritage of the Newer Volcanics Province.

### Further Reading

- B Wilkie, F Cahir and I Clark (2020) ‘Volcanism in Aboriginal Australian oral traditions: Ethnographic evidence from the Newer Volcanics Province’, *Journal of Volcanology and Geothermal Research*
- B Wilkie (2020), ‘Volcanism in Aboriginal Oral Traditions’, *Geology Today* [forthcoming]