

Two large earthquakes in southeast Queensland in the 1860s - Fact or Fiction?

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Abstract

Reports of two large earthquakes being felt in southeast Queensland in the 1860s have been referred to in several scientific papers. The accounts of the earthquakes are attributed to an explorer, John Green (c.1816-1889), who apparently travelled throughout southeast Queensland on a number of occasions between 1851 and 1884. The notes and diaries of John Green were transcribed and self-published in the 1990s by his great-grand-son, Brett Green.

This paper examines the earthquake reports as well as other extracts from the diaries and compares them with other contemporary accounts. The numerous anachronisms and inconsistencies in the diaries lead us to the conclusion that they are an unreliable source of historical information. This, combined with the complete lack of any corroborating evidence for the earthquakes, leads us to conclude that the earthquakes are fictional.

Introduction

The Geoscience Australia (GA) hazards report for southeast Queensland (Granger and Hayne, 2001) reproduced an extraordinary account of two earthquakes that were observed near Lake Cootharaba, just north of Brisbane, in 1861 and 1862. The authors of the GA report did stress that these observations had not been authenticated or corroborated. This paper aims to show that the reported earthquakes could not possibly have happened.

The John Green Diaries

The accounts of the earthquakes are attributed to John Green (c.1816-1889), who migrated to New South Wales in 1844, farmed in the Illawarra district of New South Wales, and apparently travelled, with his son James, throughout southeast Queensland on a number of occasions between 1851 and 1884. The notes and diaries of John Green were transcribed and self-published in the 1990s by his great-grand-son, Brett Green, in a series of six books under the title *Tales of a Warrior* (Green, 1995a, 1995b, 1996a, 1996b, 1997, 1999).

Account of 1861 earthquake at Lake Weyba

In the third book of the *Tales of a Warrior* series (Green 1996a, pp. 60-61), John Green was at 'the lake called Weiba' late on the afternoon of Tuesday, 25 June 1861, when

... the ground shook violently from a quake force deep within the soil. Trees swayed and the sea waters were in array swishing back and forth in quick succession over the sands exposed by the low waters. It was a frightening experience for I had never taken part in such an occurrence.

Account of 1862 earthquake at Lake Cootharaba

The description of the event of 3 September 1862 (Green 1996b, p. 41) is most extraordinary. The Green party had set up camp on the shores of Lake Cootharaba.

There was an eerie quietness over the land. The birds had fled. There was no movement of the leaves – not a ripple on the water. David I noted was ill at ease. He said the earth spirits were angry. A great roar sounded beneath our feet and the lands shook violently. Trees heaved upwards and downwards – falling in many directions. I fell upon the ground and could not move so violent was the ground shaking and sliding – one way, then the next. I could not stand no matter my effort. The horses cried out in fear as they fell upon each other trying to get upright and free all at the same time. It seemed like an eternity before it ceased. There was a hush as we quietened the horses and secured them further so that they could not escape in their fear. I was fortunate having placed the camp on high ground for the lake waters had risen considerably to a new shoreline of many feet and gained much depth of waters. New lakes had been formed as the waters rushed in taking all before them. The great shaking came again and we were thrown to the ground as jolt after jolt came forth under the ground. Great waves rolled across the waters and crashed upon the new shores filling the waters with trash and debris [sic]. More shaking occurred soon after and again and again, until it was no more than rumbles in

the ground. I take notice that the lands have been changed – resembling nothing like it was when we first came.

Search for corroborating felt reports

The account of 1862 describes Modified Mercalli intensities well in excess of 7. The surface deformation required to produce the water level changes described indicate that the explorers would have been close to the epicentre. This implies a magnitude well in excess of 6.

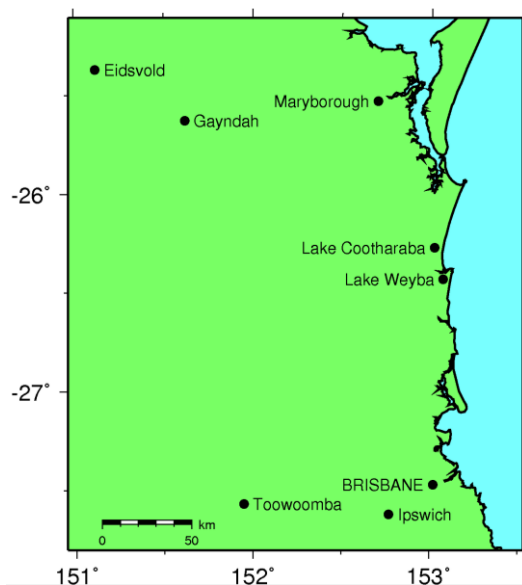


Figure 1: Map of southeast Queensland showing location of earthquakes and place names.

An earthquake of this magnitude (6+) would be expected to be felt with a reasonably high intensity for quite some distance from the epicentre (Greenhalgh *et al*, 1989). For instance the magnitude (ML) 6.0 Bundaberg earthquake of 1918 was felt with MMI IV up to 600 km away into northern NSW.

At the time of the earthquake, Queensland had only just (in 1859) been made a self-governing colony of Britain, separate from New South Wales. Brisbane, just 130 km to the south of the presumed epicentre, had a fledgling population of about 6,000. It had a daily paper, the *Courier*, that frequently contained ‘news from our correspondents’ in regional centres such as Ipswich, Warwick and Gayndah. Other population centres that would have been within the felt area were at Maryborough, Eidsvold, Toowoomba and Rockhampton.

Given the expected felt area, it would be reasonable to expect some reference to this earthquake in the local media. Copies of the *Courier* (from Trove website, National Library of Australia) for a period of several weeks after the September 1862 date were studied, with no mention being found of anyone reporting the shaking from an earthquake. The *Courier* also has no record of the lesser 1861 event.

Authenticity of the Green diaries

The authenticity of the Green diaries has been challenged by local historians, Aboriginal historians (Gympie Times, 1998b) and Green family historians (Gympie Times, 1998a). Brett Green claims that the original diaries were lost in a fire at his

home, so it is now not possible to check the many inconsistencies, anachronisms and factual errors detectable in the published texts.

Many of John Green's descendants contributed to *The Green Book* (1999), a family history published by Grayeme and Lynne Bone (Bone and Bone, 1999). Green family historians assert that their ancestor could not have written the long, wordy accounts attributed to him because he was illiterate. They point to differences in the signature on John Green's will and a signature published by Brett Green. They also claim that John Green never visited Queensland (Gympie Times, 1998a).

John Green's presence in Queensland has not been verified. If he was in the Moreton Bay colony between 1851 and 1859, for example, his name should appear in the comprehensive *Pre-Separation Index* (1990), but the only John Green listed there is a convict. If the John Green of *Tales of a Warrior* does not appear in such a wide range of records, it is probable that he was not in Queensland before 1859. On his visits in the 1860s, he also seems to have dodged detection, as his name and activities do not appear in any records so far examined.

Reports of ancient structures

The accounts of the two earthquakes both refer to a 'stone structure of columns and an archway' with 'symbols ... imprinted on their ancient stones'. These were observed and recorded by John Green in 1861, but they 'collapsed, shattered upon the ground, only to be covered by the new levels of the lake waters' as a result of the earthquake of 1862 (Green, 1996a, p. 46 and 1996b, p. 41), so their existence cannot be verified today .

The theme of finding ancient structures recurred in another Brett Green book, *The Gympie Pyramid Story* (Green, 2000). In 2007, the Department of Main Roads employed a team of archaeologists to investigate the supposed Gympie Pyramid site, but they were unable to confirm the existence of such a structure (ARCHAEO Cultural Heritage Services, 2008).

Contemporary explorers and squatters

At the time of Queensland's separation from New South Wales in 1859, the Noosa River (which flows through Lake Cootharaba) was known to exist, but had not been officially explored or mapped (Graham, 1836; Heath, 1861).

In 1860, Lt John O'Connell Bligh of the Native Mounted Police approached the river from the west with his Aboriginal troopers. His report on its chain of lakes, good timber and promising agricultural land was published in the *Wide Bay and Burnett Times* and then the *Moreton Bay Courier* (1860). In 1860, Bligh applied to the Commissioner for Crown Lands in Maryborough for a cattle run named *Caroora*, which took in much of the Upper Noosa River (Register of Runs, p. 110). Two months earlier, Walter Hay, a noted speculator, had applied for a cattle run named *Coutharaba*, on the western side of Lake Cootharaba (Tenders for Runs, p. 145). Both runs were granted in September 1860.

These two applications suggest that the western side of Lake Cootharaba was visited and subject to some pioneering activity just before the events described by Green in 1861 and 1862. Neither Bligh nor Hay mentioned seeing stone ruins on the western shore of the lake.

In September 1863, the Brisbane sawmiller and surveyor William Pettigrew visited the Noosa River in his steamship, looking for timber. After exploring the lakes, he published his observations in the *Queensland Daily Guardian* (Pettigrew, 1863). Although he spoke with Aborigines, neither his report nor his diary mentions earthquakes or any disturbances that might be attributed to the events described by John Green in 1861 or 1862. In June-July 1865, Pettigrew returned and mapped the Noosa River as far north as the entrances of Kin Kin Creek and the Upper Noosa River into Lake Cootharaba (Pettigrew, 1865).

Anachronisms and inconsistencies with other contemporary accounts

It is a characteristic of John Green, throughout the *Tales of a Warrior* series, to write Aboriginal words to show a variety of pronunciations – a remarkable effort for an illiterate man. He also offers place names, many of which appear to be derived retrospectively from available Aboriginal vocabularies, such as F.J. Watson's *Vocabularies of Four Representative Tribes* (Watson, 1943-44). One place name that is clearly fabricated is 'Pbomerra or Pbomeronga', which Brett Green equates with the town of Pomona (Green 1996a, p. 49). Pomona was in fact named by Henry Armitage, a local settler, in 1900. The authorities had rejected an earlier suggestion, Cooroora, because of possible confusion with the towns of Cooroy to the south and Cooran to the north (Gillespie, 2000).

Unusual wording, which is also characteristic of John Green's writings, is a clue to the unreality of the *Tales of a Warrior* series. For example, John Green used the collective term 'clan', while contemporary writers, such as George Harris (c1923) and Ebenezer Thorne (1876), used 'blacks' or 'tribes'.

Another questionable term frequently used by Green is 'dugout'. It is curious that his 1861 passage refers to 'dugout canoes', while his 1862 passage refers to both 'dugout' and 'bark' canoes. In the waterways of coastal southeast Queensland, Aboriginal canoes were made of bark (Petrie, 1975).

It is also curious that, according to John Green, one clan made pottery and a neighbouring clan made possum-skin drums (Green, 1996a, p. 54 and pp. 59-60). There is no evidence that the Aborigines of coastal southeast Queensland made such pottery or such drums.

The journalist Ebenezer Thorne, who lived 'on the Newsa waters' from 1865 to 1867, presented a lively account of the daily life, customs, ceremonies and beliefs of the two 'tribes', 'some hundreds in number', who then lived in the area. His accounts of the place and its people (Thorne, 1876) are very different from those of John Green.

Summary

The extraordinary description of an earthquake on the shores of Lake Cootharaba in 1862 does not fit with other evidence. The lack of any corroborating felt reports for the period, in Brisbane particularly, indicates that the account was either exaggerated or fictitious.

The discrepancies and anachronisms in much of the remaining sections of the publications would indicate the second possibility is more likely.

Sintubin et al. (2008) describe how an earthquake is sometime 'manufactured' to

explain some unusual observations. They state that

... the danger is that such 'rogue' earthquakes, supposedly proven by archaeologists, will be used by seismologists as real events in a seismic-hazard analysis ...

We hope that this article will lay to rest the myth of the earthquakes that were reported felt at Lake Cootharaba and Lake Weyba in 1861 and 1862.

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