

BOOK REVIEW

Title: "The Earth was Raised Up in Waves Like the Sea ..."

Subtitle: "Earthquake Tremors felt in the Hunter Valley since White Settlement".

Author: Cynthia Hunter

Publisher: Hunter House Publications, Newcastle, NSW, Australia, 1991.

Price: A\$18.50 plus A\$3.00 for packaging and postage

ISBN: 0 646 01716 0

In his forward to the book, Dr K. McCue of the Australian Seismological Centre, writes: "*Earthquakes are not particularly associated with Australia. Students of geology are still taught that Australia is the quiet country, slowly drifting north astride the Australian plate at the speed of a slowly growing finger nail.*" In spite of a catalogue of some 200 - 300 Australian earthquakes recorded in the period 1788-1878, it is New Zealand that many Australians (and others) have come to regard as "the shaky isles".

Cynthia Hunter writes in her preface to the book that before the Newcastle earthquake of 1989, popular knowledge of earthquakes in the region was almost non-existent. However, as a student of regional history, she remembered reading descriptions of early 19th century earthquakes among her research material. Encouraged to go back through old scientific journals, books and newspapers to locate as complete a record as possible of past tremors she was led to a retrospective study of earthquake activity in the area and to this book which is a narrative of past Hunter Valley earth tremors.

As it has turned out, the resulting book is no dull chronicle of earthquakes alone, but also a brief description of the events and their effect on the people who experienced them. As the author herself says: "*Earthquakes are not merely geological events of time and place, but are episodes of human experience; written accounts of them reflect the nature of the society which they disturb so alarmingly.*" And disturb them they have done, as the quotations from the newspapers of the times record.

Even at the very beginning of European settlement in Sydney, Governor Phillips and the first settlers had not only the problems of isolation, inadequate shelter, unruly convicts, and shortages of food and clothing to frustrate them, but then an earthquake occurred five months after their landing in Sydney Cove in 1788. The earthquake was also responsible for an escaped convict giving himself up to the authorities - only to be tried and executed the next day!

Since the first newspaper was not established until 1803, accounts of the 1788 and 1801 earthquakes have come from

letters and journals, but the earthquake of 1804 and all subsequent ones have been widely reported in the papers of the day. The use of extracts from newspaper reports interspersed throughout the text makes very interesting reading about not only the detailed effects of the various earthquakes, but also the accounts from correspondents describing such items as the atmospheric conditions at the time and whether meteor trails had been seen in the sky. By the second half of this century it was to be the financial cost of an earthquake that would make the headlines.

Several of the early chroniclers of seismic events were clergymen, such as Clarke and Wilton, who developed an interest in geology since they were able to collect and record details of landforms and rocks as they travelled the long distances through the countryside to visit their parishoners. Their widespread travelling also gave them an opportunity to collect accounts of the earthquakes that affected the region. Clarke was one of the first people to discover gold in Australia and nearly became the first Professor of Geology at Sydney University. He read a paper "On the Causes and Phenomena of Earthquakes, especially in relation to shocks felt in New South Wales and other provinces of Australia" to the Royal Society of New South Wales in 1868; this was later published in full in the Sydney Morning Herald! When Clarke, "The Father of Australian Geology", died in 1878 he had apparently compiled a catalogue of "200 - 300 Australian earthquakes" from official records and oral accounts. Unfortunately these were never published but were possibly among his geological collections and papers purchased by the government and destroyed not long after by a fire in the building used for storing government records. In the first half of this century, it was two Dublin-born priests in succession who were the seismologists at Riverview College Observatory, Sydney.

Throughout the book, the story of the various earth tremors is filled out with details about the progress of settlement in the Sydney and Hunter River area, the advent of newspapers, the introduction of the telegraph, shipping, railways etc. There are many interesting snippets about local events, such as bushrangers (the Jew Boy gang) who possibly hid their booty on Pilcher Mountain only to have all trace obliterated by a subsequent earthquake. There are many illustrations and photographs to show the development of settlement in the Hunter Valley region and especially in Newcastle, together with maps to show the location of the various earthquakes and the areas affected by them.

The details of the 1925 earthquake that occurred a week before Christmas are set in their context by the reproduction of a few theatre advertisements from the Newcastle paper, along with one for toys for Christmas at "special earthquake prices"!

While the book is an excellent and very well written historical account of earthquake tremors felt in the Hunter Valley since white settlement, it also brings out in very human terms just how it affected the local people. Yet it also draws attention to events in other parts of the world,

particularly with regard to developments in seismology and the work of people like Robert Mallet and John Milne. It was interesting to see a list of questions used in the "Earthquake Memorandum Form Used in New Zealand" in the early 1890s, along with the "1891 Rossi-Forrel Scale of Earthquake Intensity" and the 1931 modified Mercalli Scale.

Besides the references, there are three appendices, covering Earthquake, Coal Mining and Mine Subsidence; Earthquakes in Mythology; and suggestions for further reading.

This book can be recommended not just for its historical record but also for its human interest and will be of interest to the wider public as well as engineers and seismologists. As documented in the book the 1989 earthquake in Newcastle was but the latest occasion in the Hunter Valley when people were reminded that this particular force of nature has not yet been overcome. In New Zealand, Maori tradition has accounts of many past earthquakes and one wonders what accounts the Aborigine might have about these events. Meanwhile, I would suggest you read this book.

(Note: The publishers address is
Hunter House Publications
PO Box 536
Raymond Terrace
NSW 2324
Australia)