Nautical Astronomy in New Zealand: The Voyages of James Cook

by Wayne Orchiston


Wayne Orchiston is Executive Director of the Carter Observatory at Wellington, the National Observatory of New Zealand. This monograph, Carter Observatory Occasional Papers No. 1, in a limited edition of 750, is a slim, well produced and illustrated A4-sized publication. It describes the astronomical and navigational work carried out at New Zealand between 1769 and 1777 during Captain Cook’s three voyages.

Chapter 1 is a useful introduction which sets in context the historical and scientific background to Cook’s travels. Over the next three chapters the author provides a wealth of detail about the astronomers, their instruments, equipment and observations made at New Zealand on each voyage, as well as fascinating anecdotes about the assistance, or otherwise, provided to the astronomers by various members of the officers and crew.

Even William Bligh (of Bounty fame) gets a mention since he was Master on Cook’s third voyage.

In the 18th Century astronomy and navigation went very much hand in hand. For his first voyage, after observing the transit of Venus in June 1769, Cook had secret orders from the Admiralty to discover and explore the supposed Great Southern Land. A key part of his objective was to map and accurately establish the latitude and longitude of any such new continent or islands. Latitude was relatively easy to ascertain with a good level of accuracy; longitude infinitely more difficult. At that time the two available methods (local time of occurrence of an astronomical event compared with Greenwich predicted time, or determining the angular separation of the Moon from certain stars or the Sun) both required a very accurate knowledge of local time. A race was also on to produce chronometers which would accurately record Greenwich time over prolonged periods. Voyages from England to New Zealand were usually some eight or nine months in duration hence an excellent test of such timekeepers. During Cook’s second and third voyages the bona fides of some early chronometers as highly accurate timekeepers were established beyond doubt.

The next two chapters give a succinct overview of Maori astronomy at the time of Cook’s voyages and of the development of astronomy in New Zealand up to the turn of this century. A concluding chapter is followed by a detailed bibliography which should allow the reader to follow up particular aspects of the subject matter.

It is a rare treat to review a book and discover a relatively new topic on the history of astronomy, entertainingly written but still conveying a wealth of information. A good read for anyone interested in the history of astronomy.

Ian Howard-Duff
Ian Howard-Duff works in the computer software industry, and is a former Historical Section Director of the BAA.

Other books received

