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# Book Reviews

## Journal of Astronomical History and Heritage

*J. L. Perdrix (Editor)*

Astral Press, Perth, Volume 1, Annual subscription (two issues) AU$30, ISSN 1440-2807

**Reviewed by L. R. Allen**

For more than thirteen years and thirty issues the *Australian Journal of Astronomy*, under the guidance of John Perdrix, has provided a valuable avenue for the publication of original astronomical research, reviews and reports from observatories and astronomical societies. It has also been a useful source of information on the development of technology for users of moderately sized telescopes. Contributions were accepted from both professional astronomers and those observers (sometimes referred to inadequately as Amateurs) whose income is not associated with their astronomical work and the Journal became a much needed link between the two communities. Of particular and permanent value were the many articles of historical interest which appeared at regular intervals. These contributions described the life and work of early Australian astronomers and quite often gave very detailed information on the instruments that they used.

It was therefore unfortunate that publication had to end with the thirtieth issue, perhaps because some of the original aims are now better served by the more immediate dissemination of information through the electronic media. But, as the Editor notes, 'all is not lost', as, just before the demise of the *Australian Journal of Astronomy*, a new publication was announced devoted specifically to the topic of the history of astronomy and astronomers, but this time on a much broader stage.

The *Journal of Astronomical History and Heritage* has been launched following extensive discussions at the General Assembly of the International Astronomical Union as an outlet for those authors who previously were able to publish in the *Quarterly Journal of the Royal Astronomical Society* or in *Vistas in Astronomy*. The new Journal has an impressive list of international astronomers as its Editorial Board and has as its 'Managing Editor', John Perdrix, and as the 'Papers Editor', Dr Wayne Orchiston from New Zealand.

The guidelines for the submission of papers make interesting reading for the wide range of topics that will be considered for publication. I can do no better than quote the Editor: 'Papers on all aspects of astronomical history are considered, including studies which place the evolution of astronomy in political, economic and cultural contexts. Papers on astronomical heritage may deal with historic telescopes and observatories, conservation projects (including the conversion of historic observatories into museums of astronomy), and historical or industrial archaeological investigations of astronomical sites and buildings.'

Certainly the first issue lives up to these expectations. There is an article on a thousand years of observation of the Leonid Meteors, and two biographical contributions, one on William Scott the first Director of Sydney Observatory, the other about Mary Evershed, solar physicist and Dante scholar. The historical bibliography, under the heading 'Recent publications relating to the history of astronomy', is all of ten pages long and the issue ends with an Essay review and a book review.

With this choice I would think the Journal is bound to attract both authors and readers in the future and my first reaction to the announcement of the new Journal (which was 'Oh Dear, not another journal to try to keep up with') is now totally withdrawn.

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## Applications of Time Series Analysis in Astronomy and Meteorology

*T. Subba Rao, M. B. Priestly and O. Lessi (Eds)*

Chapman and Hall, 1997

**Reviewed by C. J. Durrant**

This book collects a series of papers delivered at a conference held at the University of Padua in 1993. The aim of the meeting was to bring together statisticians, astronomers and meteorologists in response to what one of the contributors describes 'a surprising disregard [by astronomers] for statistical methods developed for other applications'.

What does it contribute to the dialogue? As with other proceedings, the collection is patchy. The volume is divided into three, containing separately the contributions of statisticians, astronomers and meteorologists. Some contributions make a laudable effort to review the subject area and to provide the guidance that a non-specialist would require. The reader will find almost everything here—detection of periodicities, stochastic models (linear and nonlinear), deterministic chaos, wavelets—but the presentation suffers from lack of consistency and systematic organisation, though the provision of an index does help substantially in the latter case. The limitations of space mean that these contributions are very general and often have to resort to simple lists of developments, but they are nonetheless valuable as a starting point for deeper mining of the literature. The citations reflect the date of the conference but some authors provide more recent references, generally to their own work.

Other contributions are reports of research findings which make few concessions and are therefore of little value to the general reader.

There are a fair number of typographical errors which one might have expected to have been eliminated in a book that has taken four years to produce.

The volume claims to be of interest to statisticians, astronomers, meteorologists and climatologists alike. This is true up to a point. It is a volume for browsing and would be useful to have on a library shelf. Each reader should find much stimulation from the section specific to their interests and, by judicious selection, from other sections. But it really highlights the inappropriateness of the collected paper format when addressing the problem of increasing mutual awareness across disciplines.

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## Nautical Astronomy in New Zealand: The Voyages of James Cook

*Wayne Orchiston*

Carter Observatory, Wellington, 1998, 131 pp.,
RRP NZ$36.00

**Reviewed by Mark Wardle**

The first voyage of Captain James Cook to the South Pacific was largely motivated by the Royal Society of London's desire to send an expedition to Tahiti to observe the 1769 transit of Venus and determine the Astronomical Unit. Astronomical observations also allowed the calculation of latitude and longitude, fixing the positions of islands encountered along the way. The successes of the first voyage led to two more, the third terminating with the death of Cook in Hawaii. Wayne Orchiston, Executive Director of the Carter Observatory in Wellington, has written this monograph to fill a gap in the accounts of the astronomical observations made from New Zealand during each of the three voyages.

A brief introduction outlining the motivation for the voyages is followed by chapters on the individuals responsible for the observations (including Cook himself on the first and third), and on the astronomical instruments. Of necessity, these prefatory chapters skim through and occasionally update subject material that has largely been covered by previous authors. It is an interesting read, and I found myself left with a desire to chase up some of the references in the bibliography. These prefatory chapters set the scene for the chapter on the New Zealand observations that forms the core of the book. The observations were made to determine precise geographic locations through measurements of latitude and longitude—Queen Charlotte Sound became one of the most accurately located places on the planet at the time. I would like to have seen some discussion of exactly how the instruments were used as my ignorance prevented me from fully appreciating the difficulty of the observations. On the odd occasion the text sags where the reader is subjected to, for example, a list giving the composition of the crew in percentage form. This material may need to be included for completeness in a book of this nature, but could have been presented differently.

The final chapter, entitled 'Cook Voyage Astronomy in Historical Perspective', briefly describes what little is known of Maori (pre-European) astronomy, and continues on to early (European) astronomy in New Zealand. These topics have their own intrinsic interest, but neither has links with the observations conducted during Cook's voyages. They do not at all provide any historical perspective on the voyages, and in this sense their inclusion in the book is somewhat forced. In the same vein the concluding chapter is a one-page summary of the history of astronomy in New Zealand. I was bemused by the statement that 'because about 20% of the entire human history of the nation is characterised by scientific astronomy, New Zealand is astronomically unique'.

This aside, the book achieves the aim of documenting the astronomical activities associated with the New Zealand legs of Cook's voyages, and even a casual reader will find it of interest.

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