

Preface

How well I remember that sweltering Saturday back in 1959, not long after my father had scored a new job and we all migrated across ‘the ditch’, from tiny Lincoln in New Zealand, and settled in Sydney, Australia’s largest city. With lunch pack in hand, I took the train from Wollstonecraft to Blacktown, in Sydney’s far-western suburbs, and the rickety little rail motor out to Windsor, some 30 miles distant (see Figs. P.1, P.2 and P.3 for Australian, greater Sydney and Windsor localities mentioned in this book). Then came a long hot walk from the station, my destination being a conspicuous cluster of tall trees just east of the town where the weekend before I had caught a fleeting glimpse of a dome-like structure amongst some old trees as my father and I sped through Windsor for the first time by car.

Could this possibly be the famous Windsor Observatory of John Tebbutt? Some years before, under the starry skies of my native New Zealand I had read with great fascination about Tebbutt, and when our family shifted to Sydney at the end of 1958 it gave me an unexpected opportunity to go in search of this remarkable Australian astronomer. But there was no point in raising my hopes unduly, for the Observatory may not have survived the ravages of time—after all, Tebbutt had died in 1916, more than 40 years earlier. These thoughts and others raced through my teenage mind as I walked with mounting excitement through the town, the distant trees growing ever nearer.

At long last, I reached the outskirts of picturesque historic Windsor (Fig. P.3), passed the old courthouse and headed down Pitt Street, with paddocks on either side, punctuated to the right by a line of willows marking South Creek. Upon nearing Palmer Street, I caught sight of the group of ageing trees I had glimpsed the week before, plus a stately old two-storey homestead and a cluster of farm buildings, all nestled on a little hillock, surrounded by the fertile alluvial silts deposited by flood-prone South Creek. As I moved ever closer, I suddenly saw it: one of the supposed farm buildings underwent a visual metamorphism to emerge as a handsome little brick cottage, but surmounted by a green dome. Beside it was another, much smaller, brick building, also topped by a dome (see Fig. P.4). There was no doubt—I had ‘discovered’ Windsor Observatory. The thrill of that moment will live with me forever!

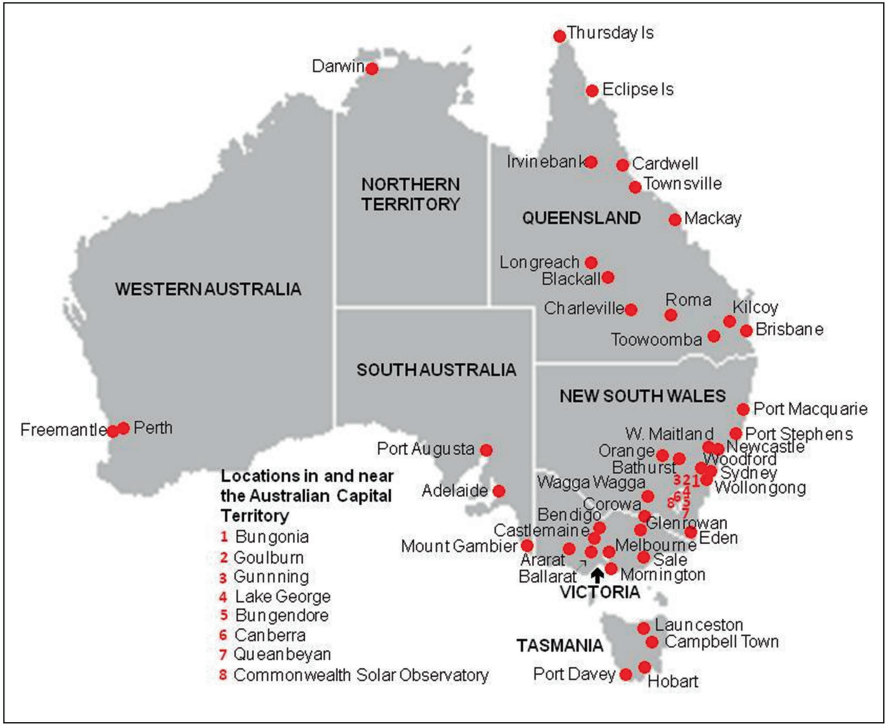


Fig. P.1 Australian localities mentioned in this book (*Map Wayne Orchiston*)

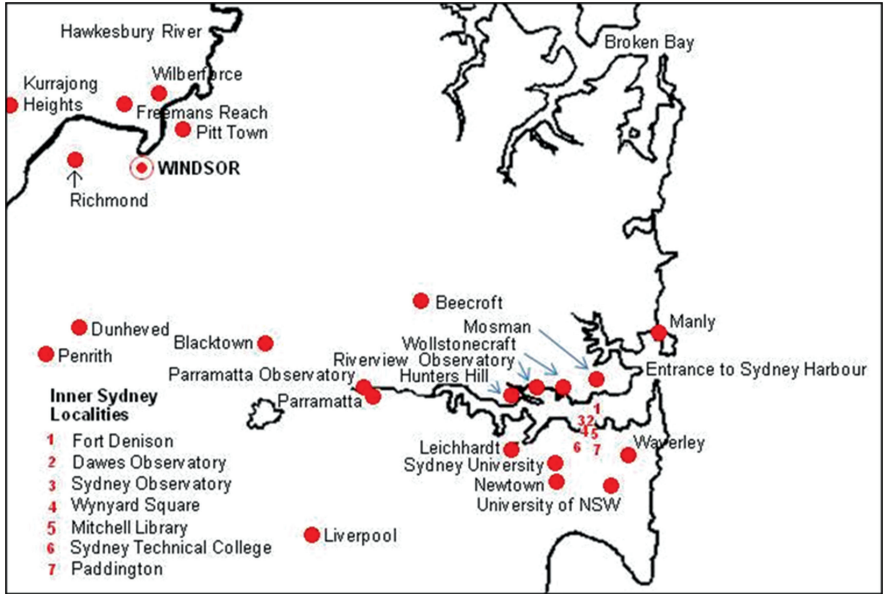


Fig. P.2 The 'greater Sydney region', showing localities and geographical features mentioned in this book (*Map Wayne Orchiston*)

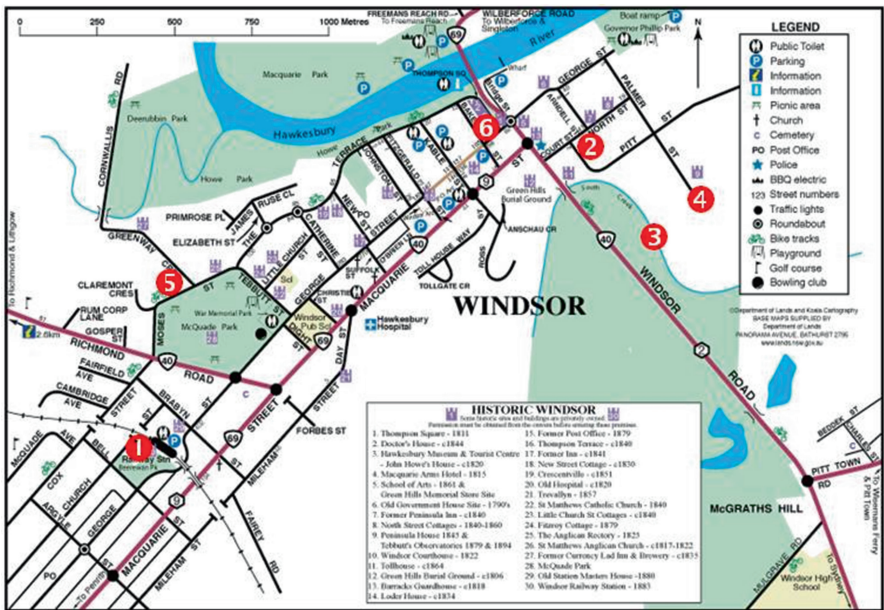


Fig. P.3 Present-day Windsor, showing the locations of the Railway Station (1), the historic Courthouse (2), South Creek (3), Tebbutt's Homestead and Windsor Observatory (4), St. Matthew's Church (5) and the Hawkesbury Museum (6) (*Map modifications* Wayne Orchiston)



Fig. P.4 This is very similar to my first view, in 1959, of the Tebbutt Homestead (in the trees left of centre) and assorted 'farm' buildings on the Peninsula Estate; initially, the dome of the 'little cottage' was not obvious because of the large tree directly behind it (*Photograph* Wayne Orchiston)



Fig. P.5 John Halley Tebbutt (on the *left*) and my brother Peter Orchiston at the John Tebbutt Observatories on 25 April 1992 (ANZAC Day); in those days, many people mistook Peter for my twin brother (*Photograph Wayne Orchiston*)

Thus, began a research project that was to extend, intermittently, over more than half a century and culminated in the writing of this book. In the process, I came to know the owner of the property, Bruce Tebbutt (1904–1963), who was a grandson of the astronomer, and his successor, a great-grandson named John Halley Tebbutt (b. 1942; Fig. P.5).

I also explored the treasure trove of material in Sydney’s Mitchell Library, deposited in 1917 by John Tebbutt’s son for the benefit of future researchers wishing to flesh out the astronomical skeleton of this greatest of Australian nineteenth century astronomers. In addition to 16 annual reports and several volumes of meteorological observations (all published at his own expense), John Tebbutt left us copies of his published papers, tomes of inwards bound letters, observational notebooks and a plethora of other invaluable archival material (for details, see the next chapter of this book).

During 1960 and 1961, there were numerous weekend sorties to Windsor, sometimes with other members of the North Shore Astronomical Society, and I began cleaning up the smaller observatory building with the intention of reassigning a telescope to it (Fig. P.6). I wrote my first Tebbutt ‘paper’ at this time (McDonagh and Orchiston 1961), a simple three-page year-by-year compilation of the sorts of astronomical objects and events that Tebbutt had observed. So, it was not really a research paper, or even a review paper, in the strict sense, but it did serve as an illuminating guide for other members of the Society and as a source of inspiration for me.



Fig. P.6 This July 1973 photograph shows the ivy-covered stand-alone observatory in which the North Shore Astronomical Society planned to instal an 18-in. (46-cm) reflector back in 1960–1961 (*Photograph Wayne Orchiston*)

For reasons that had mainly to do with my relative youth and poverty, unfortunately the Astronomical Society's plan to install Ignace Debono's historic 18-in. (46-cm) reflector (see Orchiston and Bembrick 1995) in the dome never materialised, but this did not dampen my programme of archival research on Tebbutt, and in 1968 I presented a 1 h lecture titled 'Biography of a gentleman astronomer: John Tebbutt, F.R.A.S.' at the 20 March meeting of the New South Wales Branch of the British Astronomical Association in Sydney. A two-page precis of my paper was printed in the Branch's *Bulletin* the following month (Orchiston 1968).

Four years later, Joseph Ashbrook (1972) prepared a general account on Tebbutt for international readers of *Sky & Telescope*, and in 1976 a volume of the *Australian Dictionary of Biography* appeared with an essay on Tebbutt by the late Dr. Harley Wood (1976), Director of Sydney Observatory. In the same year, Ann Moyal's fascinating *Scientists in Nineteenth Century Australia* was published, and Tebbutt was one of those who featured in the short section on 'Astronomical Pioneers' (Moyal 1976). Then, in 1979 and 1980, first Graeme White (Fig. P.7) and then Chris Kimpton published review papers on Tebbutt that specifically targeted Australian professional and non-professional astronomers, respectively.

Fig. P.7 In 1979, radio astronomer Graeme White was the first person to bring John Tebbutt's achievements to the attention of modern Australian astronomers (Photograph Wayne Orchiston)



While these developments were occurring, I was experiencing a self-imposed exile from astronomy as the challenges of Ph.D. research and the resulting job-quest took priority, and it was only in 1980 that I was able to return to my Tebbutt Project. This turned out to be particularly timely since 1981 marked the centennial of Tebbutt's discovery of the Great Comet of 1881, and I was moved to prepare a commemorative paper for the occasion (Orchiston 1981; cf. Orchiston 1999a).

Centennials then proved excellent catalysts for further research. The year 1882 marked Tebbutt's attempt to form Australia's first national astronomical group, and also the construction date of what was to become his largest and most important telescope, and two further commemorative papers were prepared (Orchiston 1982a, b). A summary of the second of these also was presented *in absentia*, and prior to publication, at the 1982 national conference of the Royal Astronomical Society of New Zealand. The late Dr. Frank Bateson, who was then the proud owner of the telescope in question, kindly read the paper on my behalf.

These papers focussed on what I saw to be specific 'critical events' that had a profound effect upon Tebbutt's subsequent astronomical career, and I identified three others. First, there was his discovery of the Great Comet of 1861; then, in 1862 he was offered (but declined) the vacant Sydney Observatory directorship; and in 1863 he established the Windsor Observatory. Papers on these last two topics were published in 1988 (see Orchiston 1988a, b; see, also, Orchiston 2001).

Tebbutt's appearance on the new Australian \$100 note in 1984 generated for the first time in nearly 70 years a heightened public awareness of who John Tebbutt was and a demand for information about his achievements. After submitting a letter to the editor of *Sky and Telescope*, I presented a review paper on Tebbutt as my Presidential Address to the Astronomical Society of Victoria on 20 February 1986, and followed this up with a feature article in *The Age* newspaper (Melbourne) on 8 February 1988 and a review paper in the English astronomical magazine, *Astronomy Now* (Orchiston 1988c). Tebbutt also featured prominently in 'The role of the amateur in early Australian astronomy' (Orchiston 1989), one of three commissioned review papers on the history of Australian astronomy that I prepared for *Search* in connection with the Australian Bicentennial.

An important milestone occurred in 1987 when Tebbutt's 1908 *Astronomical Memoirs* was reprinted (see Tebbutt 1986), complete with an excellent 'Introduction' by Graeme White (1986). White also took advantage of the return of Comet 1P/Halley in 1985 to examine Tebbutt's observations of this comet in 1910 (see Roser and White 1986). At about this time, I also published a number of short communications on different aspects of Tebbutt's work (Orchiston 1987, 1990, 1991).

In 1993, the Australian astronomical historian, Dr. Ragbir Bhathal, produced a short, popular paperback book titled *Australian Astronomer John Tebbutt: the Life and World of the Man on the \$100 Note*, and in 1996 Raymond and Ros Haynes, David Malin and Dick McGee produced the masterly *Explorers of the Southern Sky* ..., which included numerous references to Tebbutt and his work.

In more recent times, I have prepared papers on Tebbutt's Great Comets of 1861 and 1881 (Orchiston 1998b, 1999a) and on the history of the Windsor Observatory (Orchiston 2001), an overview of his wide-ranging observational programmes (Orchiston 2004b) and a detailed account of his variable star work (Orchiston 2000a). A case study relating to comets and amateur-professional tension in Australasian astronomy (Orchiston 1999b), and review papers on nineteenth century astronomy education in Australia and on the formation and development of Australia's earliest astronomical societies (Orchiston 1997, 1998a), all contain substantial material about Tebbutt, and his long-running feud with Sydney Observatory Director, H.C. Russell, is examined in Orchiston (2000b, 2002). At the General Assembly of the International Astronomical Union, which was held in Sydney in July 2003, I promoted Tebbutt's achievements as Australia's foremost nineteenth century observational astronomer by preparing a poster paper about his observational work (a précis of the Orchiston 2004b paper mentioned above) and presenting an oral paper on the Tebbutt Collection of manuscript material in the Mitchell Library, Sydney (see Orchiston 2004a).

After working on a range of other topics, Ragbir Bhathal eventually returned to write about John Tebbutt in 2009, and the following January a short popular article appeared in the Royal Astronomical Society's *Astronomy & Geophysics* (Bhathal 2010). Meanwhile, I presented a paper titled 'The amateur-turned-professional syndrome: two Australian case studies' at the StephensonFest Conference at the University of Durham in April 2011, and while this dealt mainly with R.T.A. Innes and C.J. Merfield, I did provide a theoretical framework within which to examine the 'ATP Syndrome' and included John Tebbutt in this discussion (see Orchiston 2015, pp. 330–335).

The most recent presentation in which I specifically focussed on Tebbutt was titled 'John Tebbutt and the formation of Sydney's earliest astronomical societies'. This was the Keynote Paper presented at the 14 March 2015 seminar organised by the Sydney City Skywatchers and Sydney Observatory to celebrate the 120th anniversary of the founding of the New South Wales Branch of the British Astronomical Association. John Tebbutt was the inaugural President in 1895–1896, and it was an honour for me to occupy this same office a little over a century later.

The foregoing narrative indicates that, one way or another, John Tebbutt has been a conspicuous part of my astronomical consciousness for more than half a

century, so it is only fitting that I should end up writing a book about him. And the timing is impeccable, for this year (2016) marks the centenary of his death.

I should mention that as an unexpected by-product of my Tebbutt research, the ‘Tebbutt Collection’—but particularly the numerous volumes of inward correspondence—in the Mitchell Library led me to study a number of other nineteenth century or early twentieth century astronomers (e.g. Beattie, Biggs, Bone, Butterfield, Gale, Grigg, Hoskins, Howarth, Swindlehurst, Innes, Macdonnell, Merfield, Roseby, Ross, Scott, Ward, Wooster and Hugh Wright), various cometary discoveries, notable historic telescopes, and the astronomical work of New South Wales Lands Department. What began as a simple narrow-focus Tebbutt study became the catalyst for a much broader trans-Tasman canvas which eventually extended to Innes’ work in South Africa at the Cape and Union Observatories!

This book attempts to bring some of these research themes together by drawing on my published works for many of the chapters. In the first Section of the book, I begin by overviews John Tebbutt’s life and achievements, and then discuss the remarkable ‘Tebbutt Collection’ of records in the Mitchell Library that made this study possible. Then follow two chapters which outline key developments in Australian astronomy during the nineteenth century. These two chapters provide a chronological context within which to place John Tebbutt’s astronomical contributions. Then follow ten different ‘Case Studies’, each of which deals with a different specialised aspect of Tebbutt’s wide-ranging ‘astronomical portfolio’. Most of these are based on published material, but parts of Chaps. 8, 11, 14 and 15 are new.

Despite the broad brush-strokes adopted here, I have not attempted to paint the definitive picture of John Tebbutt, Australian astronomer extraordinaire. Rather, this book is an introduction to what I feel are some of the more interesting aspects of his illustrious astronomical career. In the course of the following chapters, I hope that some of Tebbutt’s immense passion for astronomy comes through, together with the interesting interplay of power, patronage and politics which served to make him a key figure in late nineteenth century Australian astronomy.

Chiang Mai, Thailand

Wayne Orchiston

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