

but that was only at 22 bars.

The book includes a chapter on collisions with Jupiter, which are now thought to number on average about 6.5 observable events per year. Among these was a "... faint black spot ..." seen by Australian amateur astronomer Anthony Wesley on 19 July 2009. The text states it was an asteroid that caused the impact feature, not an icy object, but the accompanying diagram is unfortunately titled "A comet dies." (p. 150). There is also a chapter on the Juno space probe that is orbiting Jupiter until 2021, but only preliminary science observations were available at the time of writing.

This book is especially strong on a survey of amateur observations of Jupiter, and for that reason alone it is a useful addition to the literature. There is still work to be done for the most dedicated amateurs who use planetary cameras to capture 200 images per second that can then be processed with advanced software, as mentioned in the final chapter, but whatever your motive for observing Jupiter it will always inspire awe, as befitting the "... king of the gods of Mount Olympus." (p. 13).

Notes

1. In the interests of full disclosure, I should mention that I am writing the Asteroids book for the series.

References

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American Eclipse: A Nation's Epic Race to Catch the Shadow of the Moon and Win the Glory of the World, by David Baron (New York, Liveright Publishing, 2017). Pp. [xviii] + 331. ISBN 978-1-63149-016-3 (hardcover), 167 × 246 mm, US\$27.95.

On 21 August 2017 a total solar eclipse was visible across the USA, and received tremendous attention from the American public. It also inspired an avalanche of new books on

total solar eclipses. Some were written by experienced astronomers or astronomy journalists and published by leading astronomy publishing houses (e.g. Bakich, 2016; Littmann and Espenak, 2017) but as an astronomical historian I was particularly interested in any book that focused on the solar eclipse of 29 July 1878—especially if written by a professional astronomer or experienced science journalist. Fortunately there was one such book, written by award-winning science journalist David Baron.

It is clear from the outset that David Baron knows his craft, for he has written a book with 19 chapters and more than 340 pages that includes 44 pages of General Notes and notes specific to each chapter; a 20-page 'Select Bibliography'; and 7 pages of Acknowledgements.

Accordingly, this is a very well-researched book, and this is reflected in the chapters, where Baron succeeds in writing an entertaining narrative that weaves together scientific information, biographical details of the 'key players', and historical, cultural, political and economic factors that led to the success or otherwise of the various eclipse expeditions.

The book begins with a double page map that shows the path of totality, extending from the Rockies in Washington State, across the mid-west, and exiting the USA just west of the Mississippi delta.

In the course of the ensuing chapters we are introduced to a succession of well-known astronomers (Cleveland Abbe, Henry Draper, William Harkness, Samuel Pierpont Langley, Joseph Norman Lockyer, Maria Mitchell, Simon Newcomb, Christian Heinrich Friedrich Peters, Arthur Cowper Ranyard, James Craig Watson, and Charles A. Young), to telescopes, spectroscopes and Edison's revolutionary tasimeter (which was a dismal failure), and even to the 1874 transit of Venus and the postulated intra-Mercurial planet, Vulcan.

Of all those who ventured to the mid-West to view the eclipse, the inventor Thomas Edison was very much the celebrity, and for this reason Baron weaves considerable text around this remarkable character.

Although Edison possessed neither academic credentials nor experience with eclipses, the young inventor attracted the lion's share of press attention. (p. 101).

The other person to whom Baron devotes considerable attention throughout his book is Maria Mitchell, America's leading female astronomer, who also led an 1878 eclipse expedition to the mid-West.

The destinations of the different eclipse parties stretched like a ribbon across the mid-West, some with familiar names like Denver, Pikes

Peak, Fort Worth and Dallas, while Virginia City, Separation Point, Creston, Rawlins, Central City, Cherry Creek, Idaho Springs, Las Animas and La Junta were (almost) unheard of in the East. Denver was by far the largest and best-known population centre positioned in the path of totality, and the town was inundated:

The visiting hordes included prominent citizens—newspapermen, financiers, judges, U.S. senators—and with them came a less desirable lot: at least thirty assorted pick-pockets, till tappers, and other petty thieves ... But the most notable visitors were the astronomers, who grew as “thick as blackberries” in Colorado. (p. 121).

The actual eclipse itself is covered in two separate chapters (15: First Contact and 16: Totality). Clear weather prevailed, and so Baron is able to discuss the successful observations made by each of the ‘official’ eclipse parties. Meanwhile, Chapter 17 deals with the reactions to the eclipse in the month following the eclipse: Professor Watson claimed to have found Vulcan during the eclipse; for Maria Mitchell and her all-female eclipse team, the event produced no important scientific discoveries; but gave her further opportunities to promote women’s rights; while for Thomas Edison the eclipse was a great success, even if his tasimeter did not perform exactly as planned and measure the heat generated by the corona.

Chapter 18 deals with the period September 1878 to December 1880 and is mainly about the on-going careers and ideas of Cleveland Abbe, Maria Mitchell and James Craig Watson, although the U.S. Naval Observatory was able to claim some glory, and

... preened over what its efforts had produced: an abundance of new photographs, drawings, spectroscopic data, and other observations for scientists to ponder in the years ahead. (p. 209).

Professor Watson and Dr Peters continued to spar over Watson’s reported discovery of Vulcan. Most astronomers were happy to side with Peters, but this sorry saga took an unexpected turn in November 1889 when Watson died suddenly. So, too, did the Vulcan concept.

The final chapter of this book is reserved for our champion inventor, Thomas Edison, who is followed by 8 pages of fine-quality historical photographs that complement the many maps, sketches and woodcuts that are sprinkled liberally throughout the earlier pages of this interesting book.

American Eclipse is a wonder read. It is a mix of science and adventure, and above all it is entertaining. It shows the talents of a master science journal at the peak of his profession, and—I am sad to admit—is in sharp contrast to

the far less entertaining books that we astronomers tend to write. Buy it and read it—you will enjoy it!

References

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Imagining Other Worlds: Explorations in Astronomy and Culture, edited by Nicholas Campion and Chris Impey (Ceredigion, Sophia Centre Press, 2018). Pp. 351. ISBN 9781907767111 (softcover), 155 × 235 mm, £29 (Studies in Cultural Astronomy and Astrology, Volume 9).

The book presents 23 papers given in 2015 at the Ninth Conference on the Inspiration of Astronomical Phenomena, held in London’s Gresham College. In a book of this nature there are papers of varying worth. I read one chapter which did not pass peer review in a professional journal because it was too speculative, but overall the chapters are well written and informative across a broad range of disciplines, the most prominent being art and architecture.

An especially important paper in this regard is about Galileo’s Memorial Tomb, by Liana De Girolami Cheney. While several scholars have written about the edifice (done in 1737), Cheney states “... none have [*sic*] thoroughly addressed the symbolism of the tomb.” (p. 102). She believes the designer, Vincenzo Foggini, employed sculptural elements from Bernini’s tomb of Pope Urban VIII, thus vindicating “Galileo with a sculptural pun by appropriating papal alleged virtues of charity and justice to represent Galileo’s scientific accomplishments.” (p. 106). Galileo is also considered in a chapter (by David L. Morgan) about the modern operas of Philip Glass.

Sir Christopher Wren’s design for St. Paul’s Cathedral, by Valerie Shrimplin, is explained in astronomical terms. The South West Tower was meant to be the site of a telescope, perhaps to study stellar parallax, and “... pendulum experiments were also said to have been carried out.” (p. 272). More importantly, she explains why the cathedral was “... rotated to lie circa 6 degrees north of due east ...” with respect to the cathedral it replaced that was oriented directly on an east-west axis (p. 268).