

the shapes are caused by binary nuclei.

The general idea behind the book is to give the reader some idea of the background physics behind the kind of objects they may be observing. As such most chapters include examples of the kind of objects being discussed so that you have something to follow up on. Unfortunately, the coverage of topics has to be shallow as in most cases a whole book would be needed to cover them in much detail. I thought the chapter on amateur spectroscopy was good as this is an area more amateurs are getting into. I am not sure about the chapters on black holes and relativity. These are undoubtedly things that amateurs like to talk about but the detail here is shallow and the subject is complex.

I found a number of minor issues in the book. In the galaxy-cluster section, it is Stephan's Quintet not Stephen's Quintet. Wolf-Rayet stars are very massive stars that will explode as supernovae not planetary nebulae. In the galaxy section lenticular galaxies are mentioned but no indication is given as to how they form. My biggest quibble, however, was Inglis's use of Caldwell numbers in the sections where he gives objects to look at. There is enough of a problem in the literature with the tower of Babel of names for objects without adding another name to objects that already have perfectly good ones. No serious amateur would ever use a Caldwell number as it only adds to the confusion. Inglis also uncritically refers to some of the more extreme observations that are claimed in the (in particular US) amateur community. I would also question the reference section as it is mostly Springer books of variable quality and accuracy.

Given the above I would suggest that if someone wanted an overview of many of the topics the book would work but they would need to find another book to cover the interesting parts of many of the topics. I must admit I liked the earlier editions of the book, this one not so much. — OWEN BRAZELL.

**Essays on Astronomical History and Heritage: A Tribute to Wayne Orchiston on his 80th Birthday**, edited by Steven Gullberg & Peter Robertson (Springer), 2023. Pp. 700, 24 × 16 cm. Price £109.99 (hardbound; ISBN 978 3 031 29492 1).

Wayne Orchiston, who turned 80 in 2023, has a great many friends, and 37 of us have contributed to the chapters of this volume. Though planned several years ago, it was not quite ready for presentation on his birthday celebration, and many months after official publication, many of us are just receiving the complimentary copies that are our second most important reward for contributing. The most important, of course, was the opportunity to say good things about Wayne! Orchiston was the founder of the *Journal of Astronomical History and Heritage* and still keeps a few fingers in that pie. He also founded two IAU Working Groups, and has been a leading presence in history of astronomy for many decades. Editor Robertson, after a career in science publishing, went “back to school” and earned a PhD in history of science with Orchiston. Gullberg (also an Orchiston student) recently (2024 May) announced triumphantly that the IAU Working Group he had been chairing was being abolished. Why? Because it is going to become a Commission (C5) on Cultural Astronomy.

What is on these 700 pages? It has been claimed that a complete model of the Universe would have to be as large (and perhaps as old) as the Universe itself. That is, a proper description of this tribute volume would also be 700 pages long, exceeding the capacity of the brown paper envelopes in which *The Observatory* travels to us. But my late Aunt Esther from Missouri said every meal needed seven sweets and seven sour. So here are seven frivolous items

and seven serious ones (though the distinction is probably debatable for most, depending on whether you hear Mozart's last piano concerto as triumphant or mournful): (i) a five-metre-tall snowman on the campus of Williams College, posing with (sadly now deceased) author Jay Pasachoff and his wife Naomi, connoisseurs of solar eclipses; (ii) a Chuppah illustrating a transit of Venus, quilted by author Sarah Schechner for her 2013 marriage to the mechanic who had helped her dismantle a historic telescope, so that it could be reassembled and used for viewing the 2004 Venus transit; (iii) a calendar on which February has 30 days, while Sweden was switching from Julian to Gregorian calendar as described by author Lars Gislén; (iv) William Herschel claiming "the great probability, not to say almost absolute certainty of the Moon being inhabited" in the chapter by W.T. (Woody) Sullivan (more often associated with the history of radio astronomy); (v) a shepherd herding Inca constellations of the Serpent, the Toad, the Tinamou, the Mother Llama, the Baby Llama and the Fox, followed immediately by the Roasted Guinea Pig for dinner during author Steve Gullberg's trip to Peru; (vi) Joseph Weber with his childhood Jew-fro hairstyle only partly tamed by the US Naval Academy, shown to authors Trimble and Robertson; (vii) Joe Shklovsky wearing a 10-gallon Texas hat at the Fourth Texas Symposium in Dallas (1968 December) as immortalized by the camera of author Ken Kellerman.

And the Seven sours: (i) "the sad reality that this traditional [Australian Aboriginal] knowledge has been severely damned from the effects of invasion, colonialism, and community displacement" as discussed by authors Trevor Seaman and Duane Hamach; (ii) "the vexed and tendentious history of lunar nomenclature" that seems to have deprived some astronauts of "their" lunar craters, as pointed out by author William Sheehan (but, back at "frivolous" you should see Mount Marilyn!); (iii) the crew abandoning the incandescent USS Lexington in the Battle of the Coral Sea, shortly before John Bolton joined the British aircraft carrier HMS *Unicorn* which just barely fit under Sydney Harbour Bridge according to Trimble & Robertson; (iv) the rise and fall of time determination and dissemination as a justifying purpose for astronomical observatories, appearing in the chapters by Steven J. Dick and Roger Kinns; (v) what is apparently a genuine 1917 photograph of Sydney Observatory followed by dismissals from the government astronomer William Cooke in both 1925 and 1926 noted by author Nick Lomb; (vi) the sad-looking images of the sites of what were once the pioneering field stations of Australian radio astronomy, many photographed by author Harry Wendt; (vii) the narrow bounds of what astronomy should mean, as set by Bessel writing to Humboldt to encompass "precise measurement of the positions and orbits of celestial bodies...their appearance and the constitutions of their surfaces is not unworthy of attention, but is not the proper concern of astronomy," as quoted by [the late\*] Alan. H. Batten. Luckily he was outvoted by astronomers adopting photography and spectroscopy. And every one of the chapters from which no quote is given above has something in it to cheer, puzzle, or inspire astronomers who are interested in our own history! — VIRGINIA TRIMBLE.

**Atlas of the Messier Objects. Highlights of the Deep Sky, 2nd Edition**, by Ronald Stoyan (Cambridge University Press), 2024. Pp. 372, 31.5 × 27 cm. Price £59.99 /\$79.99 (hardbound; ISBN 978 1 00 936406 5).

The first edition of Ronald Stoyan's *Atlas of the Messier Objects* was an

\* See obituary on p. 268