

NEBULAE FROM HERSCHEL TO DREYER

Observing and Cataloguing Nebulae and Star Clusters: From Herschel to Dreyer's New General Catalogue. Wolfgang Steinicke (Cambridge University Press, Cambridge, 2010). Pp. xii + 648. £90/\$140. ISBN 978-0-521-19267-5.

This very remarkable book is more a tool for historians than a work of history itself. Its glossy, two-column pages are laid out in the manner usual for astronomy texts and are crammed with facts. Its subject matter is catalogues of nebulae and clusters from William and John Herschel to the New General Catalogue of Dreyer that we all use today, but with an introduction dealing with William Herschel's predecessors, most notably of course Charles Messier. It is clearly a labour of love, for who else would pursue the fate of a single entry in one of William Herschel's catalogues in the century that followed, or trace the prehistory of one of the nebulae in the NGC? The number of hours of painstaking research involved is mind-boggling.

The object index illustrates the nature of the enterprise. The individual entries that begin with 'NGC' alone run to well in excess of *two thousand items*. The name index has 545 entries, the references run to 36 pages.

As an illustration of the wealth of detail provided, consider what the author has to tell us about William Herschel. It now emerges that a few items in his catalogues of 2500 nebulae are duplicates, and one even occurs four times. Steinicke explores the reasons for the duplicates, and these shed light on the practical problems that faced Herschel as he observed. As a result of the duplication, the 2500 reduce to 2438, a modest reduction indeed, and evidence of the skills and care exhibited by Herschel and his sister Caroline. Again, if you want to know just how many nebulae and clusters Herschel discovered each year, you will find it in Figure 2.7. If you want to know the average declinations he searched each year, there it is in Figure 2.8 (he left the objects near the pole, which presented practical difficulties for his reflector, until last). Discoveries by constellation appear in Figure 2.9, discoveries by month in Figure 2.10; and so on.

Historians remember the distinction E. H. Carr drew a generation ago, between mere 'facts' — statements that are true — and 'historical facts' — facts that historians use to shed light on the historical process. This book is replete with 'facts', and historians now have these at their disposal; and so some of these 'facts' will in due course be promoted to become 'historical facts'. It is wonderful to have such a treasure trove available, and Cambridge University Press must be congratulated for undertaking the publication of such a demanding work.