

Preface

Many active amateur astronomers today, having already surveyed the clusters, nebulae, and galaxies contained in the popular Messier and Caldwell catalogs, are seeking new horizons to explore with their telescopes. None better can possibly be found than those discoveries made by the great English astronomer Sir William Herschel in the late 1700s to early 1800s. But rather than just over a hundred objects found in each of the former two listings, Herschel's catalog contains some 2,500 entries. This sheer number of targets has discouraged most observers – however avid they may be about deep-sky observing – from attempting to explore these unsung wonders.

In a letter in the April, 1976, issue of *Sky & Telescope* magazine the author suggested a way to make Herschel's list more attractive to observers. His discoveries were arranged into eight Classes, designated I to VIII (see Chapter 3). Of these, 1,893 lie in Classes II and III – his faint and very faint nebulae. Dropping these and taking only those entries in the remaining classes as a working list results in 615 objects – a much more manageable and realistic number of targets to view. This letter was followed by a full-length article on this concept in the January, 1978, issue of *Astronomy* magazine and (much later) another one in *Sky & Telescope* for September, 1992. As a result of these published pieces, observation of the Herschel objects began to grow in popularity among the stargazing community, and acting upon the author's suggestion an actual Herschel Club was started by the Ancient City Astronomy Club in St. Augustine, Florida. This local effort was eventually adopted on a national level by the Astronomical League, a federation of most of the astronomy clubs in the United States. (See Appendix 1 for more about this and other Herschel Clubs, including a short-lived one dating back to 1958.) Unfortunately, the target list adopted by these organizations contains a total of only 400 entries rather than the full 615 that I had recommended (although some of its founding members are now going after the entire Herschel catalog). Among them are many objects of Classes II and III – which are for the most part anything but exciting at the eyepiece – while a number of real Herschel showpieces are overlooked.

The book you are now holding in your hands is the author's answer to a long-standing need for a work devoted exclusively to the Herschel objects and their observation by amateur astronomers, with emphasis on the 615 objects of Classes I, IV, V, VI, VII, and VIII. We begin by examining something of Sir William's remarkable life and times (including a bit about his famous sister Caroline and son Sir John), his many amazing astronomical discoveries, and his home-made metal-mirrored reflectors ranging in size from around 6 inches in aperture all the way up to 48 inches (the famed "40-Foot" – for a time the largest telescope in the world), and take a look at his catalogs and his various Classes. Following a discussion on observing techniques, we shall then profile some 165 selected showpieces from his catalog suitable for viewing with backyard telescopes ranging from 2- to 14-inches

in size (along with a number of fainter objects lying in the same eyepiece fields with them). This constitutes the real heart of this work, and many readers may wish to jump ahead to those chapters immediately. However, knowing something of Herschel's background, the instruments he used to make his discoveries and the nature of each of his classes will add greatly to the ultimate pleasure of viewing those showpieces. We shall also sample some interesting specimens from Classes II and III so observers can get a feel for what these objects look like, and then highlight a number of showpieces that Herschel strangely missed in his "sweeps" of the heavens – plus several of his discoveries that apparently have disappeared from the sky! Various Herschel Clubs will be discussed in Appendix 1, followed by a selected list of Herschel references in Appendix 2 for those desiring to read more about this amazing astronomical family. Finally, rounding out this book in Appendix 3 is a working roster of the entire 615 objects contained in the above-mentioned six classes for those desiring to see all of them as per the author's original suggestion.

And so now dear reader, together let us retrace the glorious pathway in the sky left by this truly great and ardent observer!

James Mullaney
Rehoboth Beach, Delaware, USA
March 2007

<http://www.springer.com/978-0-387-68124-5>

The Herschel Objects and How to Observe Them

Mullaney, J.

2007, XVI, 167 p., Softcover

ISBN: 978-0-387-68124-5