

The Herschel 400 Observing Guide

by Stephen J. O'Meara

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The 'Herschel 400' is a list of 400 nebulae and star clusters selected from the 2,500 objects discovered by William and Caroline Herschel during their great surveys of the heavens in the late eighteenth century. The list has been popular in the USA for some years, though it is less well-known in the UK. Steve O'Meara, author of several deep-sky observing books and a world-renowned visual observer, has now produced a comprehensive guide to the Herschel 400, using notes from his own observations made under the crystal-clear skies of Hawaii with his 4-inch (101mm) refractor. All the objects are at least in theory accessible from southern England, since that is where the Herschels discovered them.

O'Meara groups the objects month by month, and each month is split into six or seven nights, with a manageable number of objects for each night. At the start of each night is a set of star charts for finding that night's targets. For each object, O'Meara provides some basic position and brightness data, followed by a photograph, a brief general description, some detailed directions for finding the object and finally some notes on the object's appearance through the eyepiece.

The star charts have a pixellated and slightly shoddy appearance, but they are quite accurate and are adequate for finding the objects when used in conjunction with the instructions in the text. For each night there is a small-scale chart of the general area of that night's targets, plus several close-up maps whose magnitude limit is somewhat fainter than *Uranometria 2000.0* and the scale usually rather larger. The photographs are from the *Digitized Sky Survey* and are well-reproduced. Even more importantly, the scale of each image is clearly marked. All images throughout the book are in black and white, which is no bad thing, because to the visual observer with a small telescope most deep-sky objects show no colour.

The most useful parts of the book are the meticulously detailed instructions for star-hopping to each object, starting with a familiar naked-eye star and then homing in on the target step-by-step using readily identifiable star patterns. These instructions are



obviously the work of someone who knows and loves the sky. O'Meara's experience and skill again come across in the object descriptions, in which he points out features to look for. However, although this book is primarily intended as a guide to finding the Herschel objects, rather than a detailed description, I feel that a sprinkling of astrophysical information and perhaps some

historical material would have made each night's tour more interesting and satisfying. For example, the description of the planetary nebula NGC 6543 in Draco could have mentioned that it was William Huggins' spectroscopic observations of this object that proved that some nebulae are gaseous.

In general, however, the *Herschel 400 Observing Guide* is a very good book, whose main strength is its instructions for locating objects. Even if you are not interested in seeing all the Herschel 400 objects, I recommend it as a good mid-range guide to the deep sky.

Lee Macdonald

Lee Macdonald is a former Secretary of the Deep Sky Section and has many years' experience of visual deep-sky observing. He is currently doing postgraduate work in the history of science at Cambridge University.

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