This book is a compendium of targets for owners of go-to telescopes observing from suburban and exurban (even further out than suburban) locations. Unlike most other books about the deep sky, this book doesn’t contain sky charts or star hops, since those aren’t needed by owners of go-to telescopes. Instead the aim is to provide information on as many interesting stars, star clusters, nebulae, and galaxies as possible. All are visible from suburban or exurban locations, and none require an aperture greater than 200 mm.

Within each season there are three categories of deep sky objects, and one category for stars. The section on wintertime objects, for example, contains 77 deep sky objects and 28 stars. The first of the deep sky object categories is one for showpiece objects; then there’s a category for interesting rather than exceptional objects, and finally a category of objects that are obscure or difficult to see under suburban conditions.

The stars included in each chapter include a variety of double stars, variable stars, unusually colorful stars, and stars that feature in unusual asterisms or clusters. Several stars are included because of their historical or scientific importance. Unlike deep sky objects, stars are largely unaffected by light pollution. This makes them especially rewarding targets for suburban observers.

Although written for owners of go-to telescopes, there’s nothing to stop owners of non-computerized telescopes from using this book. Used alongside a star chart or planetarium program, this book could help owners of traditional telescopes get ideas about what’s worth observing on a particular night.

One key difference between this book and most other deep sky books is the assumption that the observer will be working under light-polluted skies and using a telescope with an aperture of 200 mm or less. For the purposes of this book, a
200 mm telescope is considered a ‘large’ telescope, one around 150 mm a ‘medium’ telescope, and anything less than 100 mm a ‘small’ telescope.

Indeed, most comments on the brightness of objects will be subjective ones related to aperture and light pollution. Very little will be said about visual magnitudes, since with deep sky objects these values are often very misleading. Instead the reader will be told about how bright the object seems, how much contrast there is between the background sky and the object itself, and whether light pollution filters help to make the object easier to see.

Light pollution is one of the two most limiting issues that affect suburban astronomy (the other being obscuring objects such as trees and buildings close to the horizon). Most of the author’s observing was done in three different places, all subject to light pollution of varying severities. My observing in England is done in Berkhamsted, a little over 30 miles from London, and with skies that rate about 6 on the Bortle scale of sky darkness. In the United States, my observing from suburban Lincoln, Nebraska, is under skies of similar quality. Exurban Lincoln is quite a bit better, with the skies at the Olive Creek Recreation Park about 10 miles southwest of the city between 3 and 4 on the Bortle scale.

Although this is primarily a book about northern hemisphere observing, some southern sky objects are included. In my case, these objects were mostly observed during vacations to Hutchinson Island, not far from Stuart, Florida, and at a latitude of 27° north. While many of these objects can still be seen as far north as the American Midwest, observers as far north as southern England will find southern sky targets difficult or impossible to see. Where latitude is relevant to observing an object, it is mentioned in the text, usually with some indication of how far an object rises above the southern horizon, if it does so at all.

This isn’t a book about hardware. But that said, two pieces of hardware are so useful that suburban astronomers should consider owning them. The first is a light pollution filter. There are various kinds, each with its own strengths and weaknesses. The second must-have item is a reducer-corrector, a lens that allows Schmidt–Cassegrain telescopes (SCTs) to behave almost like wide field telescopes. More will be said about both of these accessories in the first chapter.

Finally, some words of thanks. The eyepiece simulations used here to suggest what would be seen through a telescope were put together using Starry Night Pro Plus, courtesy of Simulation Curriculum Corp, and AllSky data, courtesy of Main-Sequence Software Inc. The author must thank Pedro Braganca and Doug George for making these excellent tools available to him. The author also wishes to thank Michelle Meskill and Kevin Kawai at Celestron for providing him with photos of Celestron hardware and offering useful comments on the text, particularly with regard to the use and maintenance of go-to telescopes. More valuable comments on the text came from David W. Knisely at the Prairie Astronomy Club in Lincoln, Nebraska. His comments on the benefits of light pollution filters were especially useful. Finally, the help that John Watson and Maury Solomon provided getting this
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Two amateur astronomers passed away while I was putting together this book, David Brokofsky (of Lincoln) and David Schultz (of Omaha). In different ways, they each helped me enjoy this hobby and develop my observing skills. To both of them: Clear skies!
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