

Library - Book Review

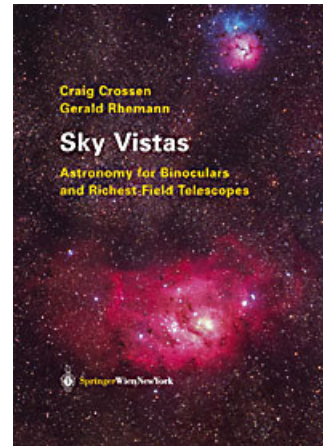
Sky Vistas: Astronomy for Binoculars and Richest-Field Telescopes Reviewed by: William Phillips

by Craig Crossen, Gerald Rhemann

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When I saw this book in the AAQ Library I was delighted – it has been on my radar for a while. This interest was prompted by Craig Crossen's articles in the July and November 1983 editions of "Astronomy" magazine titled "Studying Galactic Structure with Binoculars". I like the big picture. I also admit that, despite owning many telescopes, I could happily spend the rest of my life with 11x80 binoculars exploring the Milky Way.

As Crossen's 300 page book testifies, there is much to explore. For example, I would not have thought to look for the dark lane in M8 (Lagoon Nebulae) with binoculars. It is easy to forget how potent binoculars and small telescopes are under a very dark sky. The key factor is the knowledge and skills of the observer. Crossen's book is one of the means of acquiring this knowledge.



This book reminds me very much of a Northern Hemisphere version of Hartung's "Astronomical Objects for Southern Telescopes" (updated by David Malin and David Frew). It examines the northern sky, cataloguing types of binocular objects and their relationship to the structure of the Milky Way. The difference is that Hartung's book is organised by constellation with a southern hemisphere bias, whilst this book is organised by object type with a northern hemisphere bias. Hartung's book is, of course, an essential for southern hemisphere observers.

The first section of the book is an excellent introduction to astronomy, covering magnitudes, distances, spectra, stellar evolution, and an explanation of the types of objects visible in the heavens, and their physical nature. The astrophysics here is solid. Hartung's book has a similar introduction of basic concepts.

The book then devotes a section to examining Galactic (or Open) Clusters constellation by constellation along the Milky Way, a further section on HII regions of bright emission nebulosity, a section on Galaxies and Galaxy Groups and finally a section on Globular Clusters and Planetary Nebulae. In all cases bright objects suitable for binoculars and small telescopes are identified, their appearance noted and considerable information given on their physical nature, distance and location in the architecture of our Galaxy. It is not only small telescope owners who benefit from this book – the image on Plate IX of the Corona Australis Dust Cloud is very similar to my views through a 63cm telescope. A number of objects noted in the book as marginally visible in large binoculars, such as the stellar like nucleus and twin dust lanes of M31, become easier to see with aperture. The emphasis in the book is on Open Clusters and Galaxies, both of which are wide field objects visible in binoculars. You didn't know that galaxies are wide field objects? Crossen explains how the structural details of dozens of galaxies and galaxy groups are visible in binoculars and small telescopes. Larger telescopes merely provide a brighter image with larger scale.

This book is lavishly illustrated with many spectacular images of the objects and fields of interest. The gorgeous images by Gerald Rhemann, and the quality paper make this almost a coffee table book, to be enjoyed in a comfy chair rather than under the stars. The Great Sagittarius Star Cloud, the Small Sagittarius Star Cloud

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(M24), the Scutum Star Cloud and the Cygnus Star Cloud are illustrated and explained. Excellent stuff, except there is something missing here. An analysis and description of the Southern Hemisphere's bright clouds in Centaurus, Crux and Carina is absent. Mention is made of the Eta Carina nebulae, but this is almost an aside. Binocular objects abound in this area of the southern Milky Way, but you won't find them in this book. The northern hemisphere bias is shown as it gives up at -40° declination, at Puppis. The rich Clouds of Magellan, including the significance of the barred appearance of the Larger Cloud, sadly do not exist.

Another overlooked area is dark nebulae, only addressed by a small scale map on page 150. This map identifies the Milky Way's major northern hemisphere dark clouds, and omits naming the minor ones.

From a southern hemisphere perspective, dark clouds of obscuring matter in the plane of the Milky Way are very prominent, and clearly identify our Galaxy as a spiral type galaxy, with dust and gas and HII regions and OB stellar associations. The southern dark nebulae are spectacular enough to have motivated the native peoples of South America and Australia to create "dark constellations". The dark streams of nebulosity between the Coal Sack and Eta Carina, visible in my 11x80's, have to be seen to be believed. Taking the above into consideration, I am of the view that the essential guide to the southern Milky Way has yet to be written.

Craig Crossen has a reputation as an excellent writer, as this book shows. There was a review of this book in Sky & Telescope for June 2004, page 109 by Tony Flanders. He notes "Crossen's text is packed with information that I have encountered nowhere else in amateur astronomy literature. His passion is explaining the scientific significance of your observing targets. He does this extremely well." I agree. However, Tony found the complex organisation of the book baffling and exasperating. For example NGC 6822 and 6828 are discussed in three separate places and Cygnus is discussed at least twice, once under open clusters, and once under bright nebulae and star clouds. However, I personally don't find this a weakness. Finally, Tony Flanders considered that the book was not comprehensive as an observing guide. I don't think that this book is an observing guide – there are atlases for that. This book offers much more than a dry recitation of a list of objects and their appearance. It provides an awful lot of background facts to help observers understand what they are observing. This is what makes astronomy so fascinating, at least for me.

The book is generally free from errors, except for repeating the common misconception that the Milky Way galaxy is 100,000 light years in diameter. There is actually not much beyond 80,000 light years, as stated in Bart Bok's 1981 book "The Milky Way". Also, Crossen repeats the assertion in Burnham's Celestial Handbook that the star fields inside the arcs of the Veil Nebula are richer than those outside it because the supernova blew away the dust that would otherwise obscure the stars. To simplify a complex argument, the difference in the richness of the star fields on either side of the Veil Nebulae (easily visible on most images) is due to distance from the galactic plane where the extinction of starlight by interstellar gas clouds is less. It has nothing to do with the Veil Supernova. The fact that there appears to be the only these 2 things "wrong" with the book says a great deal about the information that you are getting. It is of very high quality.

For visual observers (and there aren't that many of us left with the explosion of digital imaging technology) who are interested in studying and understanding the appearance of the Milky Way, this book is almost an essential.