

more than an expensive 7x42 pair.

Chapter Two concerns observing techniques for deep-sky objects. The first four pages provide only an astronomical "pep talk", rather than useful hints for observing. The biggest problem that many beginners seem to have with deep-sky objects is finding them, and you would expect this book to have a section on location techniques. Unfortunately, the author devotes only two pages and one drawing to this subject. Finding things is THE most important step in deep-sky viewing with binoculars. The author should have put a bit more emphasis on star maps and atlases, giving a few more illustrated examples of where to find a few of the "showy" objects. Kozak's directions for finding the various objects in the catalog are based on celestial north, south, east, and west, and guide star distances measured in degrees. Many beginners have no idea what all this means and may end up getting lost trying to follow the catalog's instructions.

This book should have covered these items at least briefly. It also should have shown how to measure angular distance within the field of view of a binocular better than it did. The author does cover the use of items like red flashlight covers, notebooks, observing sites, and nebular filters fairly well,

Editors Note: Dave's review will be continued next month. The Reviewer, Dave Knisely, has been an avid amateur astronomer for 23 years and has been Observing Chairman of the Prairie Astronomy Club in Lincoln, NE, for the past 14 years. He received his B.S. in Physics/Astronomy from the University of Nebraska at Lincoln, and now lives in Beatrice. His primary interests are deep-sky observing, computer graphics, and observing the sun in H-alpha. The editor deeply appreciates Dave's monthly contributions to the Prairie Astronomer.

The Prairie Astronomer

c/o The Prairie Astronomy Club, Inc.
P.O. Box 80553
Lincoln, NE 68501



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Next Meeting May 30, 1989

The Prairie Astronomer

President's Message

by Ron Debus

At our next club meeting (May 30) come prepared to order your club t-shirts and jackets. I will have a price list, and an advertisement catalog. We need to make sure that we order the right SIZES as there will be no returns. After Tuesday the 30th we will have a few days for late orders, however you will have to deal directly with Deirs instead of going through the club so that additional checks will not have to be made out. The prices will still be the same.

Astronomy Day was fun. I've always enjoyed taking part in the displays talking to people who come in to see us, and just visiting with other club members. Rick Johnson set up his scope outside of the museum so that the public could take a look at the sun. If you haven't looked at the sun through Rick's telescope you're missing out on some fantastic viewing. But you'll have to wait until Rick comes back from Minnesota at the end of the summer. On May 8th I once again was able to get with some of the students from the Pound Jr. High astronomy class. With the help of Jake Winemiller, Steve Bornemeier and Dr. Manthey we reserved the observatory and gave a program on Astronomy Day displays, telescope making, viewing, and Hyde Observatory. It was quite an evening.

On the last day of school, Goodrich Jr. High will have what they call career day and I will be one of the many people there giving programs. I have to keep this program simple so I've decided to do a program on the moon.

That's all that's happening around here. I hope to see all of you at the next meeting.

p.s. BRING A FRIEND!!!

The Reviewer

by Dave Knisely

DEEP-SKY OBJECTS FOR BINOCULARS by John T. Kozak
Copyright 1988, Sky Publishing Corp Cambridge, Mass. 127 pages. Price \$9.95

Many amateur astronomers would not even think of using a simple pair of binoculars for serious deep-sky observing. Many books echo this feeling, much to the dismay of many beginners. Now comes a work that extols the pleasures of viewing deep space with an instrument that will never break your back or your pocket book. Deep-Sky Objects For Binoculars is a nice compact catalog of 130 selected deep-sky objects that are visible with common binoculars. It also can be a useful aid when purchasing a pair or observing with them.

The book has three chapters, the first of which is a discussion of deep-sky binoculars in general. Chapter one begins with "The Parable of Observer A and Observer B", a very amusing but fairly typical story of how two different people approach observing. Observer A obviously has more money than brains, spending a small fortune on equipment, only to be disappointed and nearly bankrupt in the end. Observer B doesn't have all that much money to begin with, but finds peace and contentment with a good pair of binoculars. This interesting parable really drives home the often forgotten point that you don't have to spend much money to get some real pleasure out of amateur astronomy.

Kozak covers the basics of binoculars fairly well, although his suggested prices for various instruments are a bit steep. The usual topics of aperture, magnification, and field of view are covered in detail, along with items like binocular types, quality, and accessories. The author then makes a few concrete recommendations about binoculars for deep-sky viewing, properly stressing aperture and quality over magnification. The problem of distortion is mentioned, but unfortunately, he does not define it for the beginner. Kozak does repeat himself on the topics of exit pupil and aperture when he makes his recommendations, but this hardly harms the work. His recommendation on a pair of 7x42 binoculars costing \$500 is a bit ridiculous however. You can purchase a good astronomical telescope for \$500 which will show you far

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Observing Chairmans Report

by Dave Knisely

THE NEXT SCHEDULED STAR PARTIES ARE JUNE 2nd AND JUNE 20th AT THE ATLAS SITE. Late spring skies continue to offer many interesting galaxies for the patient observer. One fairly bright one is M100, a face-on spiral that should be visible in anything over a 2" in aperture. Located about 1.75 degrees east and one north of 6 Comae Berenices, this object will show hints of spiral structure in eight or ten inch telescopes under good conditions. Several degrees away to the north-east is the famous "Black-eye Galaxy", M64. It can just be glimpsed in binoculars if you look a degree east and 1/4 north of 35 Comae as a tiny faint patch of light. A six inch will show it as a moderate to small elliptical hazy patch with a small bright center and a vague dark patch on the north side of the nucleus. Eight or ten inch instruments will show the dark "black-eye" feature as a dark arc rather than a spot when higher powers are used. A ten inch also hints at a vague smooth spiral structure in the galaxy. Take a short break from galaxies and look about a degree north-east of Alpha Comae for the faint globular cluster M53. Appearing as a moderate to small faint fuzzy ball in small instruments, this cluster begins to show stars in a six inch, while an eight resolves it fairly well. The cluster is beautiful in a ten inch and provides an interesting contrast when compared to the very faint globular, NGC 5053, about a degree to the south-east. This faint group shows a few stars in an eight inch and many faint ones in a ten, but is not very spectacular.

An interesting spiral in Virgo is M61, located 1.25 degrees north and a half east of 16 Virginis. While visible in fairly small instruments, this object doesn't show much detail until large apertures are used. An 8" shows a circular outer haze and a brighter patch to the north of the nucleus. Of course, the best galaxy in of Chi Virginis. Visible in binoculars, this object appears as a dim fuzzy elongated patch with a brighter middle when viewed in a 2.4". A six inch at high power will show a brighter nucleus and hints of the dark lane, while an eight or ten inch will make the galaxy look something like its picture.

For those of you with good south horizons, you may want to try the large spiral M83, located seven degrees south and 3.75 degrees east of Gamma Hydril. A 2.4" at very low power will show it as a moderate to large hazy circular patch with a slightly brighter middle. An eight inch will show some mottling in the outer haze, while a ten inch shows weak barred spiral structure and a dark inclusion into the nuclear region.

As a final target, look for the bright and easy globular cluster M3, located six degrees east of Beta Comae Berenices. Easily visible in binoculars, this globular is fairly tight, showing stars easily in a six inch. The sight in an eight or ten inch is spectacular, with thousands of faint stars filling the field at high magnification.