

Preface

Congratulations on your acquisition of this copy of *The Casual Sky Observer's Guide*. It is your starting point for a great journey through time and space.

On our journey, we are not alone. Each clear night thousands of amateur astronomers all over the world are making the same voyage with you. Many generations have gone before us. Our ancestors watched the stars with great intensity. The night sky was their timekeeper, calendar, and compass. The night sky announced the changing of the seasons. It dictated when to plant and when to harvest. The stars seemed to rule about life and death on Earth. Our ancestors saw patterns in the sky. They imagined things of importance, such as hunters and quarry, kings and queens, evil and good. They told great stories about the constellations in the night sky. We carry with us the oral traditions of thousands of years of stargazing.

When we see the twinkle of the stars, we look at the same stars our ancestors looked at. The stars are our origin and our destination. Today, society seems to ignore this legacy. During our modern day to day worries, we don't take the time to care about the rising and setting of a celestial object. We're simply too busy with our work and family. As if we don't want to know where we came from nor where we're heading.

In the year 2009, a year before the writing of this book, we celebrated the International Year of Astronomy (IYA2009). It was a time to reflect on the 400th anniversary of the first telescopic observations recorded by the Italian astronomer Galileo Galilei. Galileo discovered craters and mountains on the Moon. He was the first to note that Jupiter has its own moons, that Venus shows phases like our Moon, and that there are many more stars than the naked eye can see. Proud as he was, he wrote down his recordings and drawings in what we could call a first scientific treatise based on telescopic observations.¹ In 1610 he published his work *Siderius Nuncius*, or *the Starry Messenger*. Galileo's conclusions incurred the hostility of his contemporaries. Society was not ready to accept his discoveries, nor was the Catholic Church pleased with another world model. Freedom of thought was not encouraged in 1609. Although the telescope was eagerly accepted for its military use, its astronomical application was considered rather offensive. Galileo only tried to understand the universe as he saw it in his telescope. He was put on trial in 1633, for suspicion of heresy. He was ordered to abandon all ideas contradictory to the Holy Scripture.

¹ The English astronomer Thomas Harriot is credited as the first observer to draw an astronomical object with use of a telescope. He made a map of the moon, several months before Galileo did. Unfortunately, Thomas Harriot never published his work.

Publication of any of his astronomical work was strictly forbidden. Galileo eventually lived out his final days under house arrest.

Four hundred years later, we live in somewhat better times when it comes to scientific investigation. In a large part of the world, freedom of thought is widely accepted. Science has made great progress. And our views on the universe are totally different than 400 years ago. Humankind has slipped away from the center of the antique universe towards the crusty surface of an insignificantly little planet near a desolate dwarf star in the backyard of a mediocre galaxy. The telescopic instruments have been greatly improved. Galileo had to build his own telescopes. They were rather crude tools, and the images that they produced were blurred by the imperfections in the glass that was used for the ground and polished lenses. Today instruments are much improved and refined. For the price of a good meal, you can buy a decent pair of binoculars, which optical quality-wise will outperform any of Galileo's instruments by great measure.

The best news is that a pair of binoculars is all you need to join in our casual exploration of the Milky Way and the universe. Chances are good that you already own a pair of binoculars or that you know someone who has a pair you can borrow. It might surprise you, but many of the destinations that we will visit are even visible with the naked eye. So for the time being, there is absolutely no need to buy a large telescope.

Our exploration of the universe is divided in twelve monthly chapters. Each month, different wonders of the deep sky will be covered. As such, you can use the book throughout the year, as the seasons come and go. When you have a clear evening and some spare time to spend under the stars, just start with reading the appropriate chapter. Each object is accompanied by a finder chart and a drawing. The finder chart will help you to locate the desired object. The drawing will show you what to look for and what to expect to see with your binoculars. These drawings are the author's personal pencil sketches. They show my perception of the object. I deliberately did not use photographs, because they do not represent the night sky in the same way that our eyes do. Throughout this guide you will hone your observing skills, and when you understand the true nature of the deep-sky objects, you'll learn to see with your mind's eye as well. When you're not familiar with the constellations, you can use the all-sky star maps at the beginning of the book. These maps will help you to locate the constellations of interest.

Before you dive into one of the deep-sky chapters, do read the preceding chapters first. These will help you to prepare for your journey with additional equipment and techniques in the best possible way. *The Casual Sky Observer's Guide* is all you need to start observing from your own backyard as well as from a fine holiday spot.

Broaden your horizon and have yourself a great trip among the stars!

<http://www.springer.com/978-1-4614-0594-8>

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Stargazing with Binoculars and Small Telescopes

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2012, XIV, 292 p. 160 illus., 64 illus. in color., Softcover

ISBN: 978-1-4614-0594-8