appropriate given William Herschel's discovery of its companion NGC 2261 on the day after Christmas in 1764.

Acknowledgements

DSS/POSS: The Digitized Sky Survey / Palomar Observatory Sky Survey was produced at the Space Telescope Science Institute under US government grant NAG W-2166. The images of these surveys are based upon photographic data obtained using the Oschin Schmidt Telescope on Palomar Mountain and the UK Schmidt telescope. The plates were processed into the present compressed digital form with the permission of these institutions.

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Through My Eyepiece

Starting Out: Buying a Telescope

by Geoff Gaherty, Toronto Centre (geoff@foxmead.ca)

The year 2007 is a very special one for me. It marks the 50th anniversary of my becoming an amateur astronomer and, incidentally, a member of the RASC. I haven't been a member continuously for the last 50 years, but I have been a member for nearly half that time.

When I first joined the RASC, one of the major benefits I received from the Society was the accumulated wisdom of its members. This was shared with great generosity and has forever enriched my life. I've devoted a lot of time since then to helping other beginners get started, so I thought that, as a theme for 2007, I'd use my column to talk directly to our newer members and pass the torch on to them. In this episode, I will talk about telescopes: when, where, and what to buy.

When to Buy?

Most beginners buy a telescope too soon. As soon as they get interested in astronomy, they head straight to the nearest shopping mall, credit card in hand. Slow down! Ask yourself if you will be able to find anything with your new telescope. That's the number-one mistake most beginners make: they assume they'll just have to point their telescope at the sky and all sorts of celestial wonders will appear. The reality is that the sky is huge, and only a relatively few areas are interesting — you need to know what to point your scope at and how to point it.

Back in 1957, the world was a bit slower. Instead of the Internet, we had something called "mail order." At the beginning of May, when the astronomy bug first bit me, I immediately wrote off to a couple of the advertisers in *Scientific American*. A month later their catalogues arrived. I studied them intensively for a day or two and then mailed off an order for a telescope. A month later, the telescope arrived. Basically I had two whole months between impulse and satisfaction. Those two months were spent reading everything I could get my hands on about astronomy, and every clear night was spent under the sky, with nothing but my eyes and a 6×30 monocular. When the telescope finally arrived, on July 4, I already had an observing list as long as my arm, so the telescope was put to immediate productive use.

So my first advice is to take your time about getting a telescope. Learn the skies with your naked eyes, possibly enhanced by an inexpensive small binocular, 7×50 or 10×50. I was a 16-year-old kid, so didn't have much in the way of resources, and it was many months more before I discovered the RASC. If you're reading this, you're probably already a member. Make the most of it: get out to your local Centre's star parties, and look through and at as many telescopes as you can. The choices are much more varied today than 50 years ago, and it's possible to fall into "paralysis by analysis," whereby you spend so much time trying to make up your mind on the perfect telescope that you end up never buying one.

Where to buy?

Back in 1957, I had limited choices. I could buy a telescope at a local department store, but I quickly learned to be leery of the offerings of Simpsons and Eaton's. There actually was a store in Montreal at the time that sold telescopes. This was Harrison's on St. Catherine Street. They primarily sold surveying instruments but had a small display of Japanese refractors, Polarex brand, similar to the Unitrons I saw advertised in the States. However, telescopes were very much a sideline to them, and they definitely weren't friendly towards teenagers — which left the ads in *Scientific American,* primarily Unitron and Edmund Scientific.

When the catalogues arrived, the Unitrons were absolutely gorgeous, except that all but their low-end 40-mm refractor were outside my budget. The Edmund catalogue was more promising — in fact it was an absolute delight to a 16-year-old geek. I found that I could actually afford their second-smallest scope, and that's what I wrote away for.

Today there are still the department stores, camera stores, and nature stores — best avoided. We are blessed with a remarkable number of Canadian telescope stores, most of which operate e-stores as well as traditional storefront operations. Then there are the U.S. dealers, also after our Canadian business. If you have a local telescope store, that would be my first recommendation. These are all run by dedicated people really interested in earning your business and keeping it. If you're far from a walk-in store, then use the Internet. The competition is pretty fierce, so you probably won't find much difference in price. Ask around among your astronomer friends, and find out whom they've had good dealings with.

What to Buy?

This is where the writer traditionally describes the different kinds of telescopes, mounts, and accessories, and provides supposedly unbiased accounts of the pros and cons of each. I'm not going to do that. You're seriously interested in astronomy. That means you want the most aperture you can afford and transport. Unless you're blessed with dark skies where you live (most of us aren't), you're going to have to travel to a darker location pretty regularly if you want to observe much other than the Sun, Moon, and planets. For me, that makes the choice of telescope simple: get the biggest Dobsonian reflector you can afford and transport. If you visit my Web site (`www.gaherty.ca`), you'll see that I've owned a couple of dozen telescopes of all sizes and vintages. On any given evening, I usually have a choice of at least half a dozen scopes. Nine times out of ten, I'll choose the biggest one available. My favourite size is around 250-mm aperture. These typically have the same focal length as smaller scopes, around 1200 to 1250 mm. This is the size I've found perfect for comfortable "sit-down" observing. Observing while comfortably seated at the eyepiece will normally allow you to see objects about a magnitude fainter than if you're standing up.

I recommend Dobsonians because I find the Dobsonian mount the easiest to use and also the lightest in weight - that portability factor again. I don't do much imaging myself, and I also recommend that beginners put off any thoughts of imaging for at least a year or so. There's just so much to learn in your early days in astronomy as it is without the added complications of photography. Chances are, if and when you get around to imaging, you will have quite a different telescope in mind for that purpose.

As I indicated in my last column, I've recently become a convert to digital setting circles, though I'm still not convinced that they are the best way to get started in astronomy. An argument can be made for them if you're forced to do most of your observing under light-polluted skies. However, a better solution is to try to get out under really dark skies as often as you can.

The eyepieces supplied with most telescopes nowadays are generally pretty good, a big improvement since the 1950s. There are now excellent clones of premium wide-field eyepieces becoming available at much more affordable prices. Again, members of your Centre or your local dealer are good sources of advice on eyepiece choice.

Next time I'll talk about how to use your scope and what to look at on your first night out.

Geoff Gaherty started out as a teen when he joined the RASC in 1957. Now he's semi-retired but still enjoying his hobby in various ways — one is sharing his accumulated wisdom as a specialist for Starry Night Customer Support.

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