

Starting Out: What am I Going to Look at Tonight?

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

When I started this series of articles for beginners back in February, I promised I was going to make suggestions about what to look at, but I got distracted, and am only getting back to it this month. I find that many new telescope owners, after they've looked at the Moon and a planet or two, begin to lose their enthusiasm, and do not know what to do next. They know there are supposed to be lots of interesting things in the sky, but don't know where to start, or how to go about finding these things. Even if they have a computerized telescope, they may *look* at a bunch of things but hardly *see* anything through their eyepieces.

I actually find I have the opposite problem. Given the awful weather we experience so much of the year here in Canada, when I do get a clear night, I panic over trying to make up my mind about what to look at! The solution to both problems is to have a plan, a program.

When I set up my new Edmund 108-mm "Palomar Junior" reflector for the first time on 1957 July 4, I knew exactly what I was going to look at. I'd been hooked on astronomy for two whole months, and had been reading everything I could get my hands on — I had a list of targets as long as my arm. First and foremost was the Moon, 8 days old, just past First Quarter. I examined it carefully with the two eyepieces (a 28-mm Kellner and a 12.5-mm Ramsden) and the Barlow lens that came with the scope. I'd been following Saturn with my naked eye for nearly two months, so it was my second target: I was totally amazed. It *really* had rings! I'd been reading up on double stars and had been looking at them with my 6 × 30 monocular, so Epsilon Lyrae, and Mizar and Alcor were also on my agenda; I was now able to see the smaller components. Then, inevitably, the clouds rolled in. A couple of nights later, I set the scope up at our cottage near Weir, Québec, and again studied the Moon (I spotted the crater Copernicus for the first time), Saturn (was that Titan to its south? — 50 years later, *Starry Night* tells me it was!), and Jupiter and its moons, rapidly sinking in the west. Double stars dominated my "program" in those early weeks, as did my lucky independent discovery of Comet Mrkos on August 16.

When I joined the Montréal Centre on October 5, I found a whole palette of observational programs available to me. Like



Figure 1 — Geoff's fascination with the Horsehead Nebula is explained with this image taken by Toronto's Stef Cancelli. The luminance signal in H α was acquired from Toronto; the RGB colours were obtained several days later from New Mexico. Total exposure is 200 minutes in H α and 15 minutes each in R, G, and B. Stef used a Vixen VC200LDG for the hydrogen image and a Takahashi Epsilon for the other colours.

David Levy a few years later, I was immediately attracted to the Centre's lunar training program, which entailed identifying the 300 named craters on *Sky & Telescope's* lunar map and plotting them on an outline map of my own. Views through Centre's 6.5-

inch refractor got me interested in looking for deep-sky objects with my own telescope. I was soon observing aurorae and meteors for the International Geophysical Year programs directed by Dr. Peter Millman at the National Research Council in Ottawa.

Beginners starting out in 2007 have an even richer cornucopia of observational opportunities arrayed before them. Given the Canadian weather: freezing cold in the winter, mosquito-ridden in the summer, and cloudy 90% of the time [actually only 65% -Ed.], where do you start? My recommended entry point is the RASC's excellent Explore the Universe certificate program (www.rasc.ca/eu). This provides a balanced set of targets that will expose you to a very wide range of observing: constellations, stars, the Moon, the Solar System, deep-sky objects, and double stars. This will get you familiar with many aspects of the night sky and may give you some ideas that you want to pursue further.

Back in 1957, one of my first observing projects was trying to observe all of the objects in Charles Messier's catalog of deep-sky objects. This is something I encourage most people to try. Messier spotted the best and brightest of the "faint fuzzies," and hunting them down introduces an observer to the joys of starhopping in many of the most interesting areas of the sky. One list leads to another, as I discussed in an article last year on "cosmic bird watching."

As mentioned in that article, after working my way through Messier's list, Alan Dyer's Finest NGC list, and the Herschel 400 list, I'd begun to tire of faint fuzzies. Rather than sink into boredom, I've found new ways to occupy my observing time. In fact, I'm always on the lookout for new and different observing projects, as that's what keeps my interest in astronomy alive and growing. Here are some of the projects I currently work on.

Variable-star observing remains the central pillar of my observing program. Variable-star observing is fun and provides constant challenges. I've been observing the same list of variables for a number of years, mostly from the AAVSO's so-called "Stars Easy to Observe" list (www.aavso.org/observing/aids/easystars.shtml). "Oh, easy for Leonardo!" to quote Dylan Thomas. To these mostly long-period variables, I've added a few cataclysmic variables over the years, as they're such fun. This year I'm trying something new: adding a dozen new stars all from the same constellation, Andromeda, to give a bit of focus to my observations.

Some projects are pretty simple. The other day, someone on the Toronto Centre Yahoo Group posted a

link to the Great World Wide Star Count Web page at www.windows.ucar.edu/starcount. This is a project designed to measure the actual limiting magnitude of the night sky around the world during a two-week period (now past, but I think the plan is to do this annually). Everything you need is included on the site, and anybody can do it. Neat!

Some projects are long overdue. Back in 1957, when I was first getting hooked on astronomy, one of the books I tried to read was Fred Hoyle's *Frontiers of Astronomy* (Harper 1955). I'm not sure I got much out of the text, but the first plate in the book immediately burned an image into my brain: "THE HORSE-HEAD NEBULA: The 'horse's-head' is a cold cloud of gas and opaque dust that is being squeezed by hot surrounding gas, The hot gas is being illuminated by radiation from the nearby stars.... Nebulae like this have dimensions that are measured in tens of millions of millions of miles." That early Palomar black-and-white image has always been one of my favourites, yet I have never observed the Horsehead Nebula with my own eyes. Well, I just ordered a Hydrogen-Beta filter, and the Horsehead is one of my targets for this winter.

So, whenever you're at a loss for something to look at with your telescope, remember Robert Louis Stevenson's words:

*The world is so full of a number of things,
I'm sure we should all be as happy as kings.*

Clear skies! ●

What's New?

EfstonScience is dedicated to providing the latest and widest selection of observing equipment that you just can't find in other astronomy stores.

From big names like Celestron and Meade, to specialty products like Apogee, Astrotech A&M, ATIK, Scope Armor, Moonlight Focusers & Vixen, EfstonScience offers Canada's best selection for the amateur and seasoned astronomer. When in Toronto, drop in to the Astronomy SuperStore where you can actually try out many of these products since they're in stock and on display! And visit www.telescopes.ca for our entire product offering, pricing and specs.

ON DISPLAY
By Star
DOD
NOW!

EfstonScience
The Science & Astronomy SuperStore
3350 Dufferin Street, Toronto, ON, Canada M6A 3A4
(416) 787-4581 (888) 777-5255 www.telescopes.ca

1970