

Drawing at the Eyepiece

by Kathleen Houston, Saskatoon Centre (e.b.a@sasktel.net)

Astronomy notebook entry: "After three nights and two-and-a-half days of sustained rain, thunderstorms, hail, and fog at Saskatchewan Summer Star Party, we truly earned our last but not least, *clear* Saturday night."

Some club members like to keep an astronomy journal or notebook, draw and describe with words what they saw, make notes on how to get there, record the conditions, degree of difficulty, and the triumphs. I was delighted with our hard-earned single star night at Cypress Hills Interprovincial Park in southwestern Saskatchewan, and decided to do something different for my precious star time – draw¹. I had a hot new birthday present from my husband Rick to explore with: a 2-inch 41-mm Panoptic eyepiece by Tele Vue. I think that Rick was just as excited as I was about the new addition. With this “holy hand grenade” out-weighing last year’s RASC General Assembly swap-table birthday gift, a well-used 13-mm Tele Vue Nagler, I had to find more counterweight for my 10-inch Meade Lightbridge Dobsonian reflector. I used a 2-pound ankle weight that I brought for the 13-mm eyepiece and added my Stephen O’Meara book, strapping them on with two bungee cords. Not very pretty, but very effective. I am sure Steve would be honoured!



Kathleen Houston

The O’Meara Method

Stephen James O’Meara was the guest speaker at the 2009 George Moore workshop near Edmonton. His book *Deep-Sky Companions: The Messier Objects* has been my main resource on “how to get there” and read about the highlights of any given object. Steve includes a photo of the field, a go-to map as viewed through the eyepiece, and his sketches for each Messier object. He advocates spending extended time at the eyepiece: “Each drawing was based on several hours of observing each object over several extremely transparent nights.” In the evening after the workshop presentations, I made sure to have a talk with Steve. I wanted to know more about his drawing process. He demonstrated his pencil work and described his technique. He begins in wide field and draws his guide stars and main details, gradually working up to more magnification. At each stage, he told me that he “exhausts all the details” before moving on. So, Saturday night I was motivated to try out “the O’Meara method.” I wondered “what could I see,” and “how far can I go?”

My 41-mm eyepiece staged for me a wider field of view that was more grounding with more guide stars. This eyepiece revolutionizes how I work. I felt well oriented before entering into the field with my 22-mm and 13-mm eyepieces. I started with the Lagoon Nebula to the south, because I like the variety of details of smoky textures and distinctive locally defining stars. I quickly realized how time consuming this was, but was keen to go the distance. I liked feeling connected to the stars in my field of view, as if I was introducing

myself to them on an elemental level, somehow revealing their character to me. I savoured the pencil exploration of the diffuse luminous texture, wisps, and layering on my paper.

The Astronomer’s Drawing Tool Kit and Darkroom

I was new to spending extended drawing time at the eyepiece, and needed to learn how to make a nighttime drawing-friendly environment, with the resources at hand. There are simple logistics. I have two hands, two eyes. I need to hold my clipboard, I have a telescope to manoeuvre, and if I am lucky, a seat that is the right height to keep me from wavering around while squinting through the eyepiece. My night drawing tool kit consists of a clipboard with paper, in my left hand, illuminated with a book flashlight with red gel, and a 6B pencil in the other. I even tried using an eye patch to cover the squinting eye, but found that drawing required two eyes, plus I preferred to simplify things. So, I made several attempts to position myself for the least fidgety and shortest pathway from eye to hand, making a juggler’s job look easy.

Let’s see, I need a light-free view at the eyepiece, and light on the paper for drawing: I minimized exposure to my red flashlight by flattening the head on my paper, to maximize my dark-adapted eyes when I was at the eyepiece. People walking around with relatively bright red flashlights were distracting while I was deeply focused on my task. They soon learned “be careful, Kathleen is drawing!” No I don’t have a fancy hood or cloth over my head à la Sue French to shield stray light, to improve my darkroom. Is an astronomer’s toolkit ever complete?

I went into the brightest nebulosity of the Lagoon, then followed the dark dust lane that Rick pointed out, and then across to the star cluster and its fainter nebulosity. Was that a smaller dust lane entering the star cluster? Rick suggested jiggling the eyepiece to allow the nebulosity to “jump out,” which worked well but averted vision was better. A favourite of O’Meara is to inhale several times in a row to improve seeing by oxygenating. I recommend trying any or all of these to experience more from seeing in the dark. I wanted my eyes and instincts to take me “out there,” explore everything my eyes could devour, and know this place so mysterious, intricate, and exciting.

I zoomed in from 41 to 22 mm and then to 13 mm, and then went back to the 41, zooming out to see how it all “reads” together. I suspect I took about an hour drawing the Lagoon Nebula. Then I moved on to the galaxy trio of M81, M82, and NGC 3077, a fainter



Figure 1 — The Lagoon Nebula, real and inverted drawings.

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fuzzy easily seen with averted vision. I tried to make sure I would move around from time to time, instead of just getting cold perched on Rick's terrific wooden observing chair. By 1:50 a.m., it was time for a more sustained break, and by then waves of light cloud were trickling in from the west, and contrast was poor. I wondered if Sue French's light-pollution filter might have been useful. My third drawing would have to wait until next time. Rick borrowed my new 41-mm gift, and went off exploring for himself. I worked on my drawing in the daylight before I felt it was complete.

Diverse Approaches

I looked for other examples of drawing at the eyepiece and found authors Mark Bratton and Sue French helpful. In *Celestial Sampler*, Sue French includes some of her terrific drawings, and advocates for note taking because it "has made me a better observer." She calls her astro pencil work "negative drawing (dark stars, white sky)." Her North America Nebula is particularly divine, as well as Bill Ferris's Helix, included in the book. I found two examples where French includes both the negative and the positive versions of a drawing, and in others where she compares a drawing with a photograph to show how seeing works.

I am a Mark Bratton fan. He showed me M81 and M82 in his 16-inch Dobsonian some years ago in Montreal at the Morgan Arboretum during a public star night, and I haven't looked back since. He also gave me advice on buying a telescope after I moved to Saskatchewan. As much as I enjoyed Bratton's article "Become a Better Observer: Sketch!," I was disappointed that he published only the positive (inverted) versions of his terrific drawings. I wish he included the original "negative drawings" on paper to demonstrate the process. The images look so photographic that a reluctant artist would be discouraged even to try. We don't see his style – the direction of the pencil as he darkens an area to produce the contrast and likeness of his object. When O'Meara drew for me, he showed me pretty much all that Bratton talked about, including smudging and erasing to clarify detail. And, yes, I asked Steve to sign the drawing!

O'Meara includes written observation descriptions in his book, as did Charles Messier in his journal. French states that "Writing a description or penciling a sketch forces me to pay attention and look for details." Seeing other people's stargazing notes and drawings helps me to participate in the sharing of their stories and experience, benefit from different approaches, and inform my own.

I have talked to many people about drawing at the eyepiece since George Moore's Workshop: Richard Huziak (Saskatoon Centre), Kim Hay (Kingston Centre), Sherry Campbell (Edmonton Centre), Jack Milliken (Calgary Centre), and others. There are many more astronomy sketchers out there, but they tend to be quiet about it. The drawing category is new at SSSP, as an extension of the photography contest and art display. At the RASC General Assembly last year, there were two superb sunspot drawings, and this year I was delighted with Regina teenager Jennilea Coppola's naked-eye full Moon entry. At SSSP 2011, I plan to host a drawing workshop with the objective of attracting more competition entries. Drawing is such a big adventure and each individual has a personalized reason to draw. What is yours? Clear skies and happy drawing! ☽

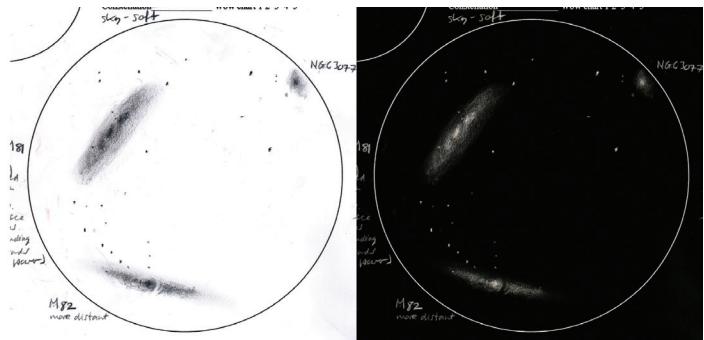


Figure 2 — Messier 81 and 82, real and inverted drawings.

Further resources:

- Bratton, Mark (2009). "Become a Better Observer: Sketch!" *SkyNews*, July/August 2009.
- French, Sue (2005). *Celestial Sampler, 60 small-scope sampler tours for starlit nights*. Cambridge, MA: Sky Publishing Corp. ISBN 1-931559-28-7.
- O'Meara, Stephen James (1998). *Deep-Sky Companions: The Messier Objects*. Cambridge: Cambridge University Press. ISBN 0521553326.

Kathleen is an artist and teacher and is a member of RASC Saskatoon Centre. She gave a talk at SSSP 2010 entitled "Holes in the night sky" on one rainy evening. She does digital "land art light drawing" and is involved in a group show at Eastend, SK. She welcomes tips on drawing, because one can never have all the angles!

¹ So, what is the difference between drawing and sketching? O'Meara uses the term drawing in his book *Deep-Sky Companions*, Bratton uses sketching in his *SkyNews* article "Become a Better Observer: Sketch!", and French uses both terms in "Celestial Sampler." I will use the term draw instead of sketch, and here is why. A drawing is intended to produce a substantial stand-alone work, whereas a sketch is a "quick unrefined drawing" (Wiki), usually as a preparation for something more substantial. Both drawings that I produced at SSSP took about an hour or more each, and were intended to explain my observation experience with as much detail as I could achieve.

Astrocryptic

by Curt Nason

The Solution to last issue's puzzle.

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