



Lunar Sketching

by Daniel Mounsey [click to email author](#)

Introduction

Although we regard the Moon as a nuisance at times, it can also be a fascinating wonder of topographical highlights. Contrary to popular belief and even with today's CCD imaging, I am noticing more observers attempting to sketch once again since many regard this as a dying art. Sadly, I am surprised that SKY&TEL and ASTRONOMY do not publish more sketches, since they always appear to show the same celestial objects so many times over. As we proceed, I will share some tips on how you can make your own attempts at the drawing board, and with a little practice you may have a pretty good sketch of your own.

Although numerous books have been published on how lunar sketching should be conducted, my technique is slightly unorthodox or actually backwards as you will see because it's the only way I know. Drawing is like art, it's not a mechanical procedure, it's a feeling that you express on paper. Remember though, that the attempts at helping others learn to sketch as most books describe may still be an easier way, so do what feels best for you.

Two of the most inspiring planetary sketch artists currently on-line are Carlos Hernandez and Sol Robbins. Although others exist, these two are remarkably active and are constantly posting work which can often be seen on ALPO, Astromart or right here on Cloudynights. Even though their sketches are usually planets, I strongly recommend you check them out and try to learn from it. Both use modest instruments, Carlos, a 9" Mak and Sol, a 6" achromat and sometimes a 9" Newtonian, yet they both produce drawings exceeding what most observers would see in larger instruments. Hopefully, they too will provide us with a lesson on sketching planets or even the Moon for that matter.

Recommended Telescopes

You can use just about any telescope for lunar sketching, even a 60mm refractor. Although I use and own a variety of telescopes, I sometimes use a 60mm refractor. Remember that this is all relative. Choose the instrument that's good enough to capture the features you wish to scrutinize. Sometimes you may want to sketch a feature that requires more aperture. If that's the case, then do so. Discovery makes wonderful 8" F-7 Newtonians that I highly recommend for lunar planetary and the sono tube they utilize has better thermal properties than competing models with metal tubes.

Some of the sketches featured in this review were conducted at about 160x, with my Takahashi FS102, which is a 4" fluorite refractor pictured below. This type of refractor is great because you can mount it and track for long periods of time. I always use a binoview because they are more relaxing on the eyes, and images appear to look larger even though it's an illusion. If you ever get the chance and you are always forced to use barlow with your binoview while using a refractor, take the barlow and diagonal out and view straight through with your binoview. Seeing the entire Moon at low magnification at once is probably one of the most memorable sites you will ever see, even though it can be a neck cracker.

Eyepieces

I strongly recommend a good set of orthos or plossls. One of my personal favorites for lunar observations are the HD's from University Optics, which only cost about \$80 and the Edmund RKE which are only about \$60 now. Don't worry about the narrow fields. This can actually help you focus more specifically on the area you are sketching so you are not distracted by anything else.

Materials

These materials should be available from a local art store for about \$20.

1. Cotton balls.
2. Sand paper pad.
3. Black chalk.
4. Soft HB pencil (make sure it has a small eraser on top).
5. Paper pencil.

6. Design Ebony 6325 soft thick pencil.
7. Razor blade (be careful)!
8. 8.5" x 11" white paper.

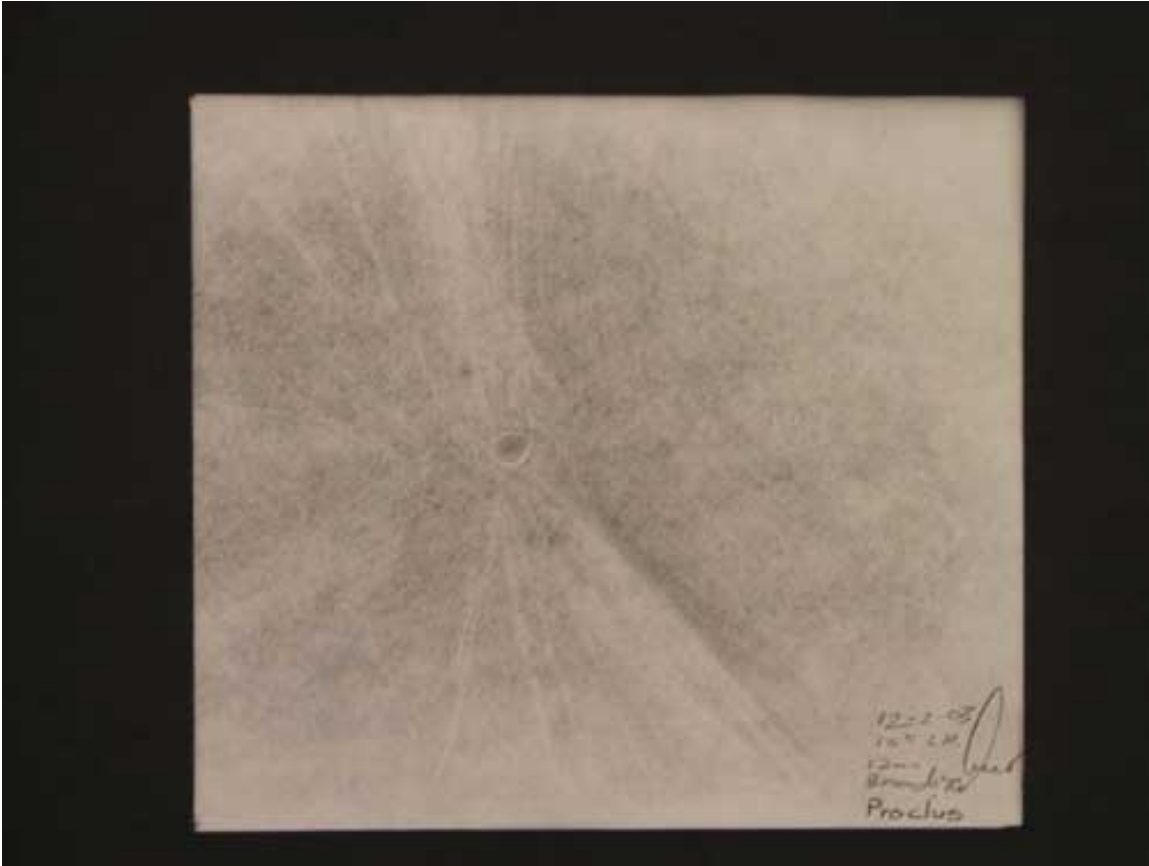
Getting Ready

I don't recommend a red light while you're sketching the Moon for three reasons. One, is that your night vision is not necessary since the Moon ruins it anyway and puts more stress on your eyes. The second reason is that a red light makes it harder to judge the contrast between the features you want to sketch lighter or darker. When you switch back and forth between the telescope and a white light over the sketch pad, there won't be any time for the eyes to dark adapt and you will feel more comfortable over the duration of the evening. The third reason is that features look sharper when your pupils are contracted.

Make sure the standard HB pencil is slightly sharp while the thick Ebony pencil is dull and round. Take a plain, white sheet of computer or sketch paper if you wish and cut it in half. You want to have about four or five of these prepared sheets on hand in case you want to sketch a different feature as well or wish to start over. Take the black chalk with the razor blade and scrape it over the paper. Next, take a cotton ball and rub it into the paper using circular motions as seen in the picture. You will soon notice that with this technique you are not going to sketch just yet and instead, are going to erase the features in, which may actually seem like you are working backwards.

Timing

Choose a night when the seeing or steadiness of the air is at it's best. Depending on what feature it is you wish to see, it is advantageous to pick a target near the terminator (the line that divides light and dark) so the feature may be highlighted with shadows. One of my favorite lunar phases is two or three days after first quarter. Some observers feel it is best not to observe during a full lunar phase. Although that may be true, don't forget that there are still some features, particularly "white" features such as rays which stand out really well during a full lunar phase, for example "Proclus" which was sketched using a 10" Newtonian seen below or "Tycho" for example. These features can be stunning during the full lunar phase, even in a simple pair of binoculars.



Sadly, I am absolutely terrible with dates and organization. I think I'll need a lesson from Carlos. I get more enveloped in the work, where as Carlos Hernandez has his planetary sketches set up in universal time and is incredibly organized. Later when I realize I didn't date the sketch or even write down the instrument used, I finally enter a day that was close to the time I observed along with the scope but I'm getting better at it. When you are sketching planets though, timing is more crucial, since events and features can change at a moments notice.

Your First Attempt

Start out with something easy. For example, "Copernicus" is not a simple target at first because it entails some very complex and detailed features. Try something more simple like "Hesiodus A" which is best seen 2 to 3 days after 1st quarter or "Proclus" which can even be viewed during a Full Moon.

Let's Begin

I want you to imagine a black cue ball seen in a picture. One of the only ways in which an artist can convince you that it's round is by erasing a small portion of the black paint on the ball so it appears that there is a white reflection on its surface, giving it a 3 dimensional appearance. Now your perception of the cue ball is that it actually looks round. Lunar sketching is the same thing. Much of what we see are white reflections and

dark shadows. When I begin, I don't even know what I'm going to sketch or even what time it is for that matter. I usually observe for about ten minutes until I find something that intrigues me in the eyepiece and try to identify it later if it looks unfamiliar.

Pick the feature you wish to sketch. If you are sketching craters for example, take the eraser on the back of the HB pencil and erase so there are white dots. The shadows will follow later using a pencil. For rays, which are white streaks, just draw white lines with the eraser. For shadows, depending on their size, use the soft, thick pencil or the smaller, sharper HB pencil. When the shadows are big, you may have to scribble them in and this will leave black streaks, but that's OK because you will eventually smear it smooth with the paper pencil so it looks more natural.

The paper pencil takes some time to break in when they are new. In some areas of the Mare or surface areas, you may notice that it appears to look lighter or darker. Take your eraser and whiten up the areas you wish, then carefully use a cotton ball to blend the lighter areas in more naturally with the darker ones. You will begin to see that this is all a method of blending.



This sketch of Alpine Valley took about 30 minutes to complete with my Takahashi 4" apo. When I first started it, I took a paper pencil and simply made a thick, darker line along the middle. I then focused on everything that looked white and began erasing those features. After that, I started to add shadows in the areas that looked dark. Before I knew it, Alpine Valley and the surrounding area started taking shape. I usually finish off by

blending features to make them look smoother and more natural but remember, there are shadows which can be black on white, so it just depends.

Rills or faults like Rupes Recta for example should be drawn in as a dark line with a soft pencil because they are usually followed with a shadow. One of the most interesting features on the Moon are lunar domes which are abundant near Hortensius and Milichius. These will push your scope and eyes to the limit. You'll want to crack these little features about 2 or 3 days after first quarter because you want to have a terminator to see them. For these, I use the paper pencil and make little dark circles, and take the small eraser to put the tiny white craterlets on the top. I then use the HB pencil to put the shadows in and around the domes. These are just some of the techniques involved.



This is Messier and Messier A. These are good about 3 or 4 days after New Moon but quite low off the Earth's horizon, oriented so it appears the way you see it on Maps.



This is Euler, probably best seen about 2 or 3 days after first quarter.



Unfortunately I can not identify this feature which stood so memorable to me. I call it the Pyramids of Giza. I looked in vain trying to find them on a chart and can not even remember where it was located. I sketched this with the 4" Tak on 5/20/99 at 8:30 pm PST. I'll not make that mistake again, but it was sometime around two days before first quarter. I really wish I knew, so I could see them again.

Recommended Books

One of my favorite lunar books is the “Rukl Atlas,” by ASTRONOMY, however they are hard to find and are sometimes even sold used for as high as \$500. The lunar chapter in “Turn Left At Orion” is another interesting read. The “Peterson Guide” is also a good read filled with pictures. Unfortunately the pictures in the newer Peterson Guide seems to be printed a bit too bright. The older book’s photos make the lunar surface look more natural, the way it actually looks in the telescope. There are many books to choose from, but the most important thing is to simply get outside and just look.

My Greatest Lunar Experience

If I could remember where this feature was I’d tell you. About 10 years ago, my buddy Vernon Kifer and I were studying the same feature on the Moon with our 4” and 5” Tak refractors using binoviewers to compare resolution differences. The huge crater or basin we were studying had a cleft at one side and the floor of the crater during this period was dark. Literally in seconds out of nowhere, the light from the sun beamed right through the cleft on the rim of the huge crater and into the basin floor. Truly the most spectacular and exciting experience in all our years of astronomy.

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