



STARS 'N' STUFF

*by
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MESSIER MOMENTS

This time of year, amateurs around the country will be planning their annual Messier Marathon. The creator of the messier list of deep sky objects, Charles Messier, began recording these fairly bright objects as he scanned the skies for comets. Famous for his comet hunting, he wanted to make sure these objects wouldn't be mistaken for any comet. So, in 1754, while comet hunting in the constellation Taurus, he came across the first of many objects, M1 the Crab Nebula. He decided to begin a catalogue to avoid confusion for others. Some of the biggest and brightest were already known and his fellow hunter and friend, Pierre Mechain also added to this catalogue to the total of 110 objects including open star clusters, globular clusters, galaxies and nebulae. The list is called the Messier catalogue because it was his idea to record their positions. The Messier objects are still designated an M number in sky charts today, even although they've been reassigned New General Catalogue numbers (NGC). It's an official nod to one of the first astronomers.



Marathoners are amateurs who like to challenge themselves to find all 110 messier objects in one night starting as soon as possible after civil twilight and ending just as dawn begins. Now this takes a bit of skill and not every amateur's pleasure. Some of us enjoy meandering through the seasons. The nice thing about the Messier list is that there are always objects you can find in any given month. Some months are better than others but March/April is considered the prime time for the marathon due to the usual clarity of the sky. The winter sky offers up 16 objects, mostly open star clusters, but there's a few galaxies as well. There's a whopping 42 objects in the spring sky, mostly galaxies. The summer sky is also busy with 46 objects, mostly globular and open sky clusters with a few planetary nebulae thrown in for good measure. As we begin to turn away from the summer milky way in the Fall, we find about 15 objects waiting for us. Hunting messier objects turns the dark sky into a place of wonder and beauty year round. You don't need a lot of gear either. You do need to know some basics especially if you're just starting out in the hobby. If you know the major constellations of the seasons then you're off to a good start.

Although you can see a number of the messier objects with binoculars, you'll need a telescope to finish off the entire list. The largest telescope available in Messier's day had a primary mirror of less than 8". They were made of a metal alloy called Speculum which tarnished quickly in the night air. In other words, the optics weren't that great. Today's telescopes are light years ahead-literally. For a beginner I recommend a dependable Reflector telescope on a Dobsonian mount with an 8" primary mirror. Many camera stores carry this kind of telescope.



If you're just in the buying stages, then I would also recommend you purchase 3 good eyepieces. The one's that come with the scope will be ok, but won't give you the flexibility of magnification. A good 30-40mm low power eyepiece is a must. A good size for a medium power eyepiece is around 17-20mm. For your high power eyepiece I recommend 10-13mm. I use 2" eyepieces. My low power is a Nagler 31mm which gives me a 2.2 degree field of view at 50 power in my 12.5" Portaball reflector. The low power eyepiece helps you to narrow down the field to find your object. My

mid-power is an Ethos 17mm which doubles the magnification of the field. I use this eyepiece once I'm confident of the star field. I have several high power pieces, but my favorite is the Ethos 13mm. This eyepiece increases the magnification to about 120 power and I find this more than enough for the Messier objects. I use this eyepiece once I've identified the Messier and want to look for details. The seeing conditions have to be very good for higher magnifications, so I find the mid power eyepiece works very well if the conditions aren't perfect.



I would also like to encourage you to document what you have found and describe what the object looks like under different magnifications. This will improve your observation skills in short order. There are so many telescopes sitting in closets because their owners lost interest. Part of the reason is not having a plan. You're outside with your scope and assuming it is set up correctly, you stand there and say "now what?" One fellow told me that although stars were wonderful, they got boring pretty quickly. So I showed him M13, a globular cluster filled with stars. He asked me where my scope was pointing and when I showed him he exclaimed, "Oh, you're looking between the stars!"



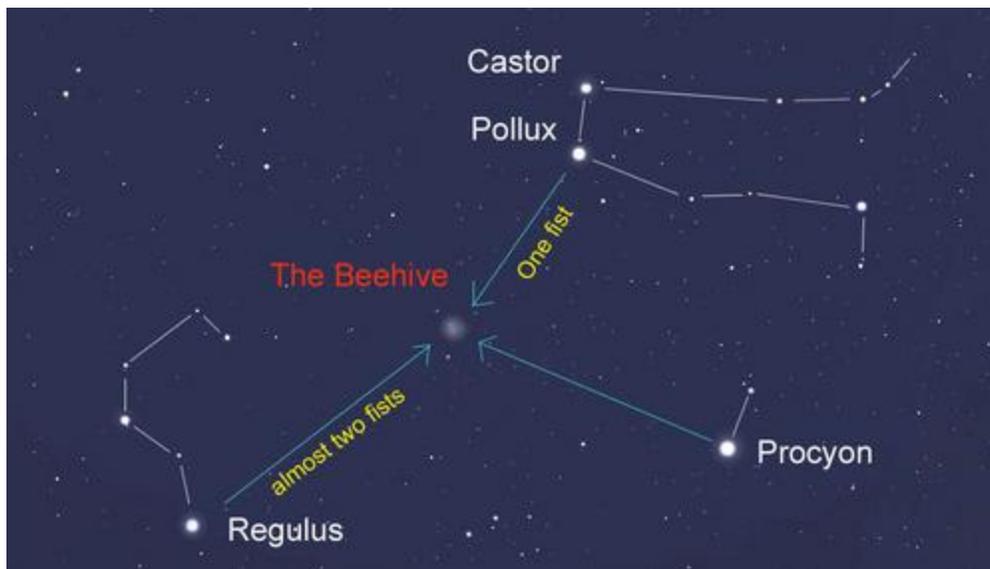
That's right. Most of the most beautiful objects in the sky are hidden from view because they're so far away they can't be seen with the naked eye. With a little knowledge, a telescope brings a whole different world into view. So, for the Messier list, I would recommend a book called *The Year Round Messier Marathon Field Guide*, written by Harvard Pennington and published by Willmann-Bell, Inc. You can buy this book online directly from the publisher. It's chocked full of charts, maps, descriptions and drawings as well as excellent observing tips. If you google the word Messier, you'll discover a ton of websites devoted to helping you find these objects. One of my favorite interactive websites is www.wikisky.org. I just type the number of the object I want to find in the search bar and I can use the zoom bar to get the big picture then zoom right in to images taken by a number of earth orbiting satellites including the Hubble Space Telescope. The more you plan, the more successful you will be. The next new moon observing window for the Messier's occurs between the 15th and 24th this month. Even if you're just starting out and want to learn the constellations first, this will be the best time to get out and look around. Dress warmly. There's nothing worse than being driven indoors because you're underdressed. Nothing will ruin your outdoor experience more than cold seeping into your hands and feet. It doesn't hurt to have a thermos of hot tea, coffee or chocolate handy either. So, let's get you started with a couple of binocular objects currently in the



sky. You can begin your Messier list with them. The first is Messier42, the Great Orion Nebula. Orion will still be positioned nicely in the southwest just after civil twilight. Look for the constellations hourglass shape around 8 pm. Locate the three belt stars and the sword hanging from the middle belt star. That bright

fuzzy naked eye object is M42. There, you can log your first object! A pair of 10x50 binoculars will much improve the view.

The second object is a bit harder to locate, but is still naked eye. It's just that the constellation you have to find is faint, so if you don't know where it is you can miss this little beauty known as M44 or the Beehive Star Cluster. With the naked eye this cluster presents as a fairly large faint glow that brightens with averted vision. In binoculars, it's spectacular. The constellation you're looking for is Cancer, the Crab. During new moon, you'll find the constellation almost overhead lying between Gemini the twins to the west and Leo the lion to the east. If you recognize the sickle shape of the lion's head, just slowly sweep your eye about 5 degrees or a hands width west. Using averted vision, look for a hazy glow. Once you've found it, use the binocs. This cluster reminded Galileo of a cluster of busy bees buzzing about their hive. What do you see?



And there you go, you've located, observed and described two Messier objects. Only 108 to go. Next month, we'll take a look at the giant galaxy cluster in Virgo. Happy hunting.