MONTHLY OBSERVER'S CHALLENGE

Compiled by:

Roger Ivester, North Carolina

&

Fred Rayworth, Nevada

With

Sue French, New York, Special Advisor

Thanks to Robert Lambert, Alabama, for his dedicated work as LVAS Webmaster 2009 – 2019
RIP – You will be missed!

AUGUST 2019

Report #127

M11 Open Cluster in Scutum

"Sharing Observations and Bringing Amateur Astronomers Together"

Introduction

The purpose of the Observer's Challenge is to encourage the pursuit of visual observing. It's open to everyone who's interested, and if you're able to contribute notes, and/or drawings, we'll be happy to include them in our monthly summary. We also accept digital imaging. Visual astronomy depends on what's seen through the eyepiece. Not only does it satisfy an innate curiosity, but it allows the visual observer to discover the beauty and the wonderment of the night sky. Before photography, all observations depended on what astronomers saw in the eyepiece, and how they recorded their observations. This was done through notes and drawings, and that's the tradition we're stressing in the Observers Challenge. We're not excluding those with an interest in astrophotography, either. Your images and notes are just as welcome. The hope is that you'll read through these reports and become inspired to take more time at the eyepiece, study each object, and look for those subtle details that you might never have noticed before.

M11 Open Cluster in Scutum

Messier 11 is also known as NGC 6705 and carries the nickname The Wild Duck Cluster. It's an open cluster in the constellation of Scutum. It was discovered by Gottfried Kirch in 1681 and Charles Messier included it in his catalog of "non-comets" in 1764. The cluster lies approximately 6,120 light-years away, and shines at about mag. 5.8.

It gets its name from the brighter stars in the cluster forming a triangle that resembles a flying flock of ducks, hence the name.

This bright object is one of the most massive open clusters known, and has approximately 870 stars, from the brightest at mag. 8 down to mag. 16.5. The cluster an easy one to find in virtually any telescope, but of course, the larger the instrument, the more details emerge.

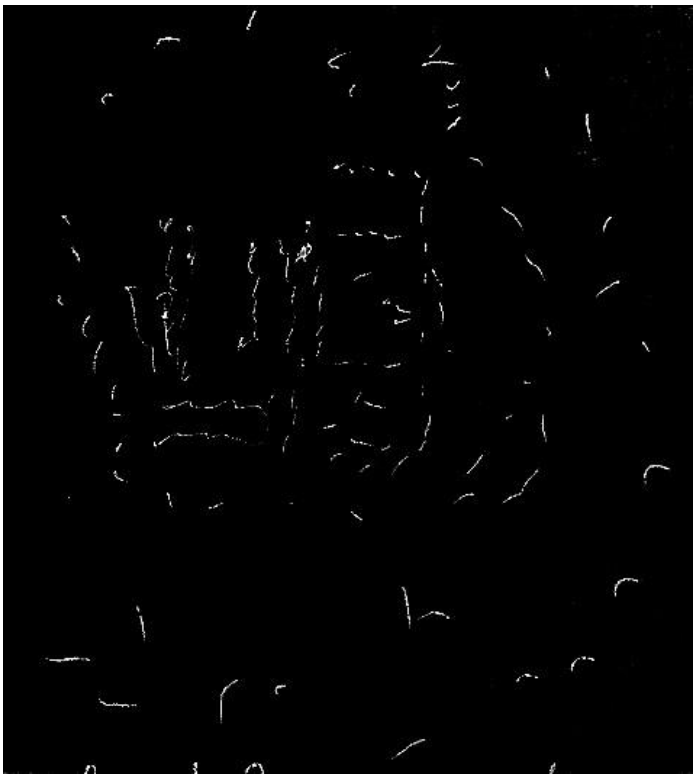
Observations/Drawings/Photos

Viadislav Mich: Observer from Massachusetts

NOTE: We'd like to welcome new participant Viadislav Mich from Massachusetts. Welcome Viadislav!

Viadislav observed M11 on August 1 & 2, 2019 from White Mountains National Forest, New Hampshire, using a 22-inch f/3.3 Dobsonian reflector and a 17mm EP @108× (50′ FOV).

The first thing I saw when I got M11 into the view was a square window containing four square window panes. This "window" was surrounded by dozens of stars.



Tom Bryant: Observer from Kentucky

NOTE: We'd like to welcome new participant Tom Bryant from Kentucky. Welcome Tom!

I viewed M11 last night with my 127 mm refractor at 38× and 66×. It was an exceptionally clear night. At 66×, I noticed the central brightness slightly off center, and the many small pinpoint stars within M11. The Milky Way was very bright last night, too.

Tom English: Observer from North Carolina

M11 is one of my favorite open clusters. When I was in grad school in the 1980s, I conducted regular observing sessions for astronomy lab students on the rooftop of the physics building with an old orange 8-inch SCT, and M11 was one of the staples of those sessions. It's an easy star hop using the tail stars of Aquila, even in moderately light-polluted skies.

At our public sessions at Cline Observatory, we usually encourage our visiting observers to see if they see any sign of wild ducks in the view. Most aren't able to stretch their imaginations to see anything of note, but a few see something of Admiral Smyth's "flight of wild ducks," and others construct a single bird spreading its wings.

Through smaller scopes, I've always seen a vaguely fan-shaped glow, with the embedded bright star at its eastern edge. Closer inspection has always revealed jagged edges and a few voids, but I've never tried to delineate the structure until this month's Observer's Challenge provided the motivation. So, at the close of our public viewing on August 30, 2019, I spent a few minutes at the eyepiece (28mm) of our 24-inch CDK looking for details to describe.

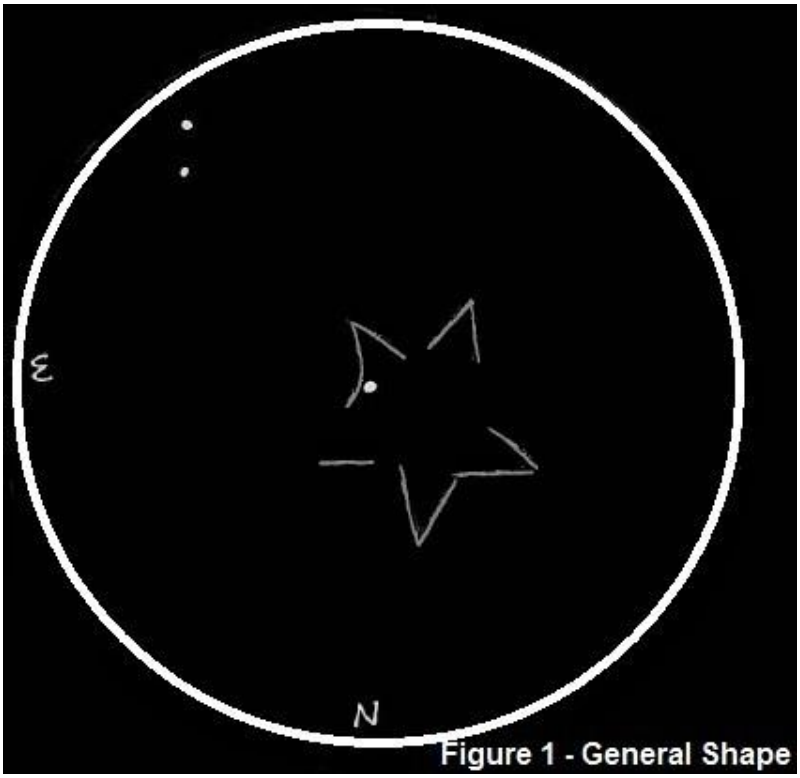


Figure 1 - General Shape

My approach to cluster observing and recording has always been motivated by identification of notable structure and features, rather than by capturing the overall appearance, so the descriptions & sketches below will reflect that.

In this view (about 140×), the cluster appears as a rich wash of stars with embedded voids (Figure 2) and an overall star-shaped structure (Figure 1). The bright mag. 8 star that dominates the cluster is at the eastern side of the star shape, and there's a pair of relatively bright (mag. 9) stars beyond the confines of the cluster to the east.

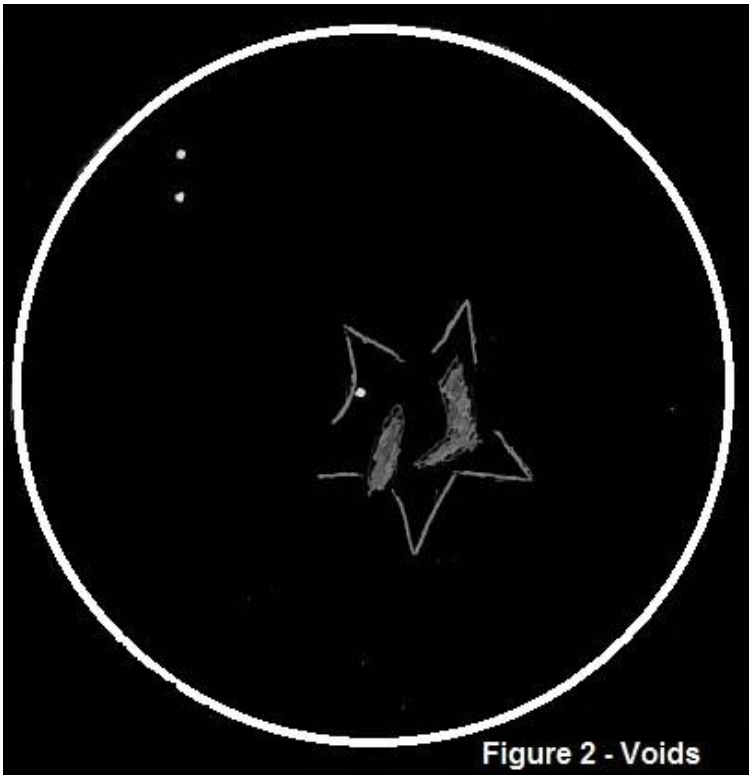


Figure 2 - Voids

Closer inspection reveals a few distinct features (Figure 3). There's a central knot of stars that marks the core of the cluster, and the southernmost point of the overall star structure is reminiscent of a shark fin. To the west side, there's a roughly rectangular group of stars, and the eastern edge, surrounding the bright mag. 8 star, is a vaguely diamond shaped concentration that looks a bit like a warped version of the asteroid-shaped (not asteroid) star icon seen on the steelmark logo used by the Pittsburgh Steelers. At the south end of this shape, there are two equally bright mag. 11 stars that act as a pair of eyes at the top of the diamond (if viewed south-up).

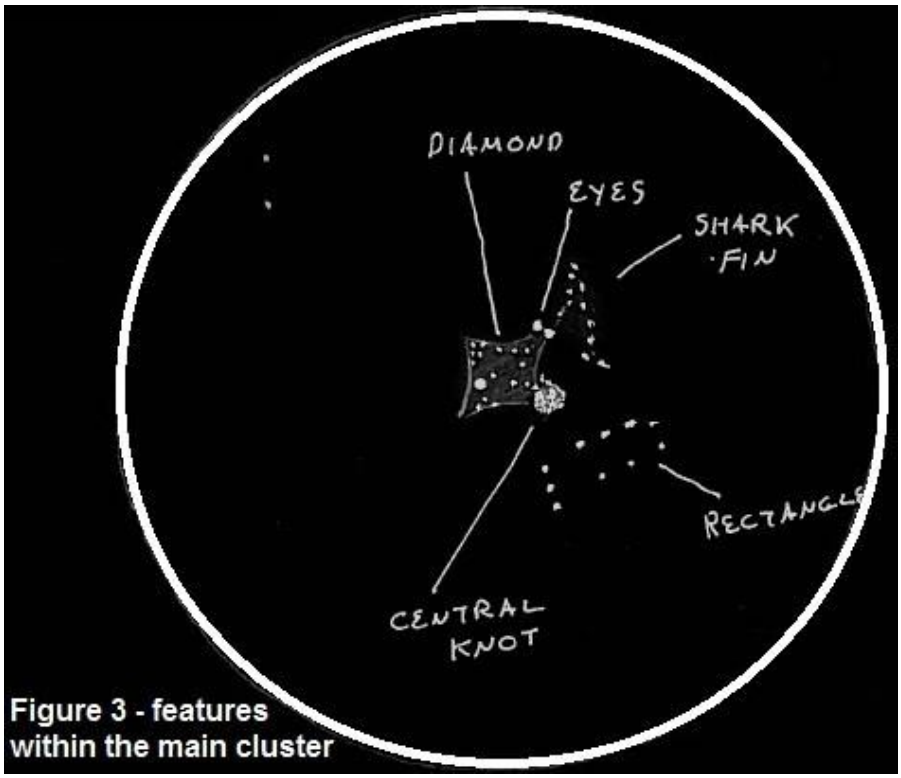


Figure 3 - features within the main cluster

Finally, there are a few notable features on the periphery (Figure 4). I see a T-shaped group at one edge of the cluster on the north side, and there's a prominent tight triangle on the south side. A long, snaking chain of stars separates the cluster from the mag. 9 pair on the east side. Another shorter chain hovers outside the shark fin, ending near the triangle.

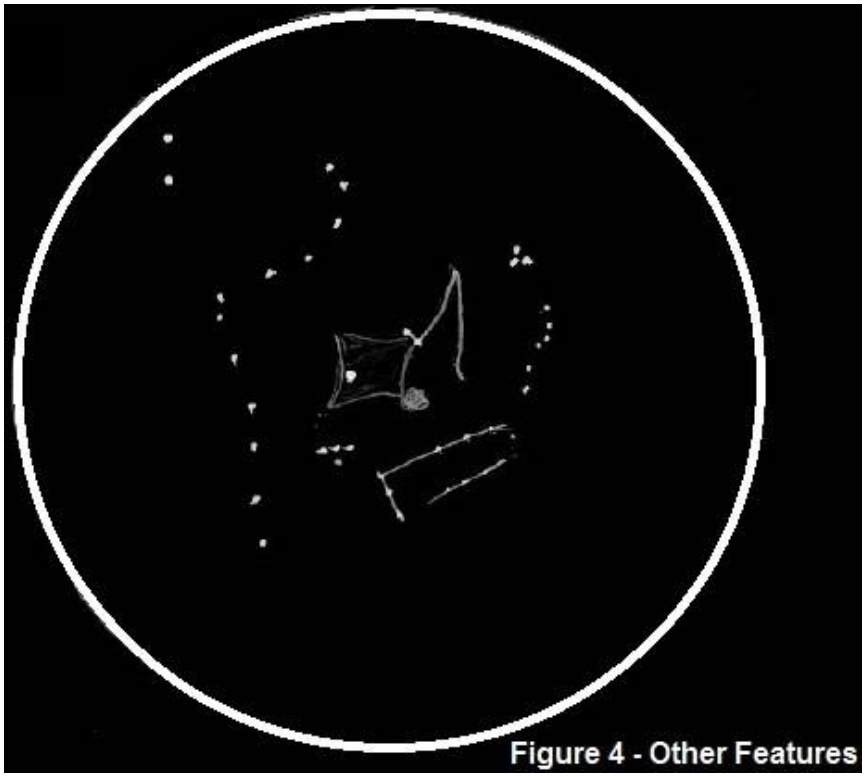


Figure 4 - Other Features

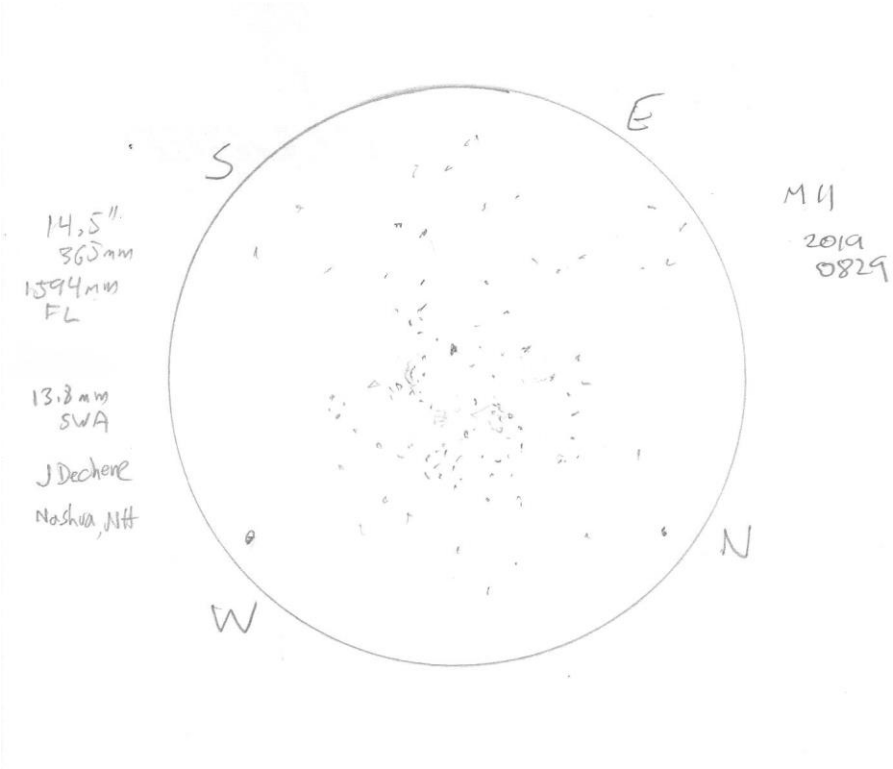
After seeing these features starkly in the 24-inch, it’s not difficult to pick them out in a moderately powered view through an 8-inch Dob.

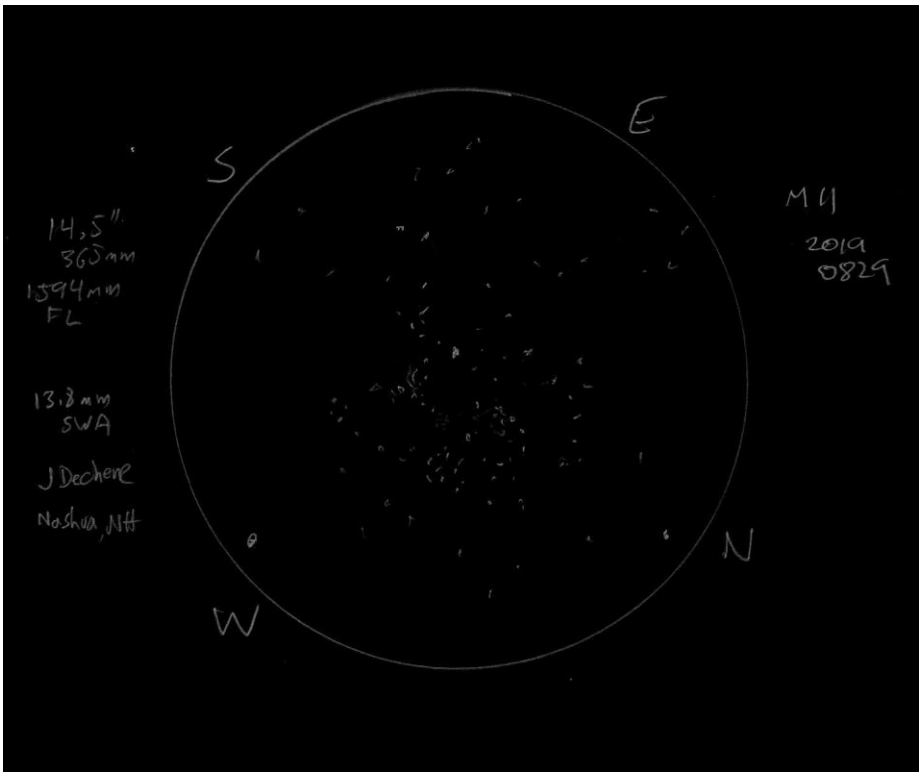
Joe Deschene: Observer from New Hampshire

I went out last night and observed from my home in Nashua, NH.

Here's a drawing I made at the eyepiece.

M11 had a distinct pattern that I tried to capture as opposed to getting every star position exactly right. I expect to improve my drawing skills with practice.

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Michael Brown: Observer from Massachusetts

Attached is a photograph of M11 (quite imperfect), taken last night (August 29, 2019). I do astrophotography with a Canon digital SLR camera, through my 8-inch SCT. This photo is from 12 30-second exposures (6 minutes total) at ISO 3,200.

I visually observed M11 on August 4, 2019 on a beautiful, crystal clear night during my annual family summer vacation in Paradox Lake, New York. This is often my best chance of the year to observe from a dark sky. On the same night, I observed about 20 clusters, nebulae, and galaxies, as well as Jupiter, Saturn, and Neptune.

Like many amateurs, I've observed M11 dozens (or possibly hundreds) or times over the years. I believe my first time seeing M11, and learning of its nickname (Wild Duck Cluster), may have been at Stellafane, through the Porter Turret Telescope, as a teenager in the 1970s.

My visual impression in the August observation was of a rich star cluster with a central portion shaped like a square of densely packed stars. Near the center of the square was a tight group of about 10 faint stars. Outside the square were several lines of stars oriented in different directions. The west side of the square had a patch that appeared to have no stars. Near the southeast corner of the square was the brightest star in the field. I'd be interested to find out whether this star is the most intrinsically bright member of M11, or is instead a foreground star (my guess is the latter, as luminous stars have short lives).

Something I didn't notice visually, but discerned in the photograph, was a curious line of faint stars going across the central portion of the cluster from east to west. This line went through the brightest star.

Jim Mullaney: Observer from Virginia

Smyth's Wild Duck Cluster is a richly concentrated, glittering fan-shaped swarm of some 500 suns, with a mag. 8 star near its apex – a beauty! It's so rich that it's actually been classified as a "semi-globular" by some authorities (a cross between an open and globular cluster). I've observed this magnificent stellar commune on literally thousands of nights over the past 60 some years, with hundreds of telescopes. These ranged from a 2-inch glass at 25× to a 30-inch refractor at 600×. However, my most vivid and memorable view has been with a 13-inch refractor using a 16mm wide-angle (for that time) eyepiece at 190×. Don't miss this one!

Keith Caceres: Observer from Nevada

I observed the Wild Duck Cluster (Messier 11/NGC 6705) on the evenings of August 3 and September 7, 2019 at various places around Las Vegas, Nevada. The August 3rd observation was during our event at Red Rock Canyon. High clouds started rolling in at the time, so my photo was disappointing. I photographed it again on September 7th, during our Lake Mead event, when the skies were clear. The Lake Mead photo turned out much better, so I've submitted it for this report.

The central area of this open star cluster is surprisingly dense and luminous, almost looking like a loose globular, rather than an open star cluster. In past observations, I've never noticed anything "duck like" about the cluster, but this time, my mind's eye saw the appearance of a duckling running toward and to the left of the viewer, though I see from the descriptions that the astronomer that gave the cluster its common name didn't intend this interpretation.

The cluster is approximately 6,100 light-years away, and covers about 14 arc-minutes of our sky in the constellation Scutum (The Shield). The actual diameter of the cluster is about 95 light-years. It was shot using an 80mm (3-inch) APO refractor using a Canon 70D DSLR camera. The submitted photo is a crop of the original photo containing just the cluster. The image scale is 1.76 arc-sec/pixel, with the up direction being 261° east of north. The original uncropped wide-field photo covers a 2.68° × 1.78° field of view.

My interpretation of the “duck.”

2.68° × 1.78° uncropped original photo.

Richard Nugent: Observer from Massachusetts

Of all the deep sky objects I've ever observed, Messier 11 is at the top of my "favorites" list! Located some 6,200 light years away, and containing about 2,900 stars (500 of which are brighter than mag. 14), the cluster occupies a volume of space about 20 light-years in diameter, and is one of the richest bright galactic clusters visible through backyard telescopes.

The cluster is located in the constellation of Scutum (formerly Antinous), just south of the arc of stars comprised of Lambda Aquilae, 12 Aquilae, Eta Scuti, and Beta Scuti. The mag. 6.2 cluster is likely visible to the naked eye under dark skies. From my home in Framingham– under NELM 5.0 conditions–I could see the cluster using direct vision through a pair of 8×21 binoculars. Telescopically, the view is spectacular!

In 1836, Admiral Smyth, using a 5.9-inch f/17.6 refractor, suggested the cluster resembled a flight of wild ducks in shape. At low magnifications, the cluster appears fan-shaped to me, but it has never appeared as the v-shaped formation sketched by Smyth, and included in his Bedford Catalog. Perhaps our modern, coated optics show more than Smyth could've seen.

In my 75mm (2.9-inch) refractor at low powers, the cluster appeared as a nebulous glow sprinkled with stars. Indeed, one of the cluster's brighter members is mag. 8 HD174512. At 136×, the cluster resolved into dozens of stars. The view improved with aperture. In my 10-inch reflector (at all powers), the cluster was remarkable. With my 20-inch Dob, the view was nothing short of spectacular! In this scope, my favorite eyepiece yielded 195× with a 0.52° true field of view. The cluster was framed nicely, with hundreds of stars visible and was surrounded by a generous amount of space. For me, higher magnifications offered less aesthetically pleasing views.

I use M11 as a waypoint when searching for geostationary satellites. Many of these objects lie in an arc across the sky, with a latitude-dependent declination that can be found using CalSky.com. At my latitude of 42.3°N, the arc lies around declination –6° 20′. 16 arcminutes to the south of HD174512 is a tiny, triangular shaped asterism of mag. 11 and 12 stars I call the "Christmas Tree." From my location, the arc of these satellites passes between this asterism and M11. Geostationary satellites are faint—typically between mag. 10 and 13—so some aperture is required. If you're running a clock drive, the satellites will appear to drift across your eyepiece field. When the drive is turned off, you suddenly realize that the satellite is stationary and the stars are drifting along. I've noticed an interesting illusion when using an unguided scope. At first, the satellite appears to be drifting through the field of fixed stars, but in a moment you realize it's stationary. The satellites are often clustered together and so pairs, triads, and quad formations can sometimes be seen. These satellites can even reach naked-eye visibility for brief periods of time if the sun angle allows for specular reflections! Once you've become practiced, these objects can be fun to observe.

Finally, while you're in the neighborhood of M11, be sure to check out the carbon star, V Aquilae, globular cluster, NGC 6712, and planetary nebula, IC 1295. Happy Observing!

Corey Mooney: Observer from Massachusetts

I live stacked M11 on multiple nights from June to August.

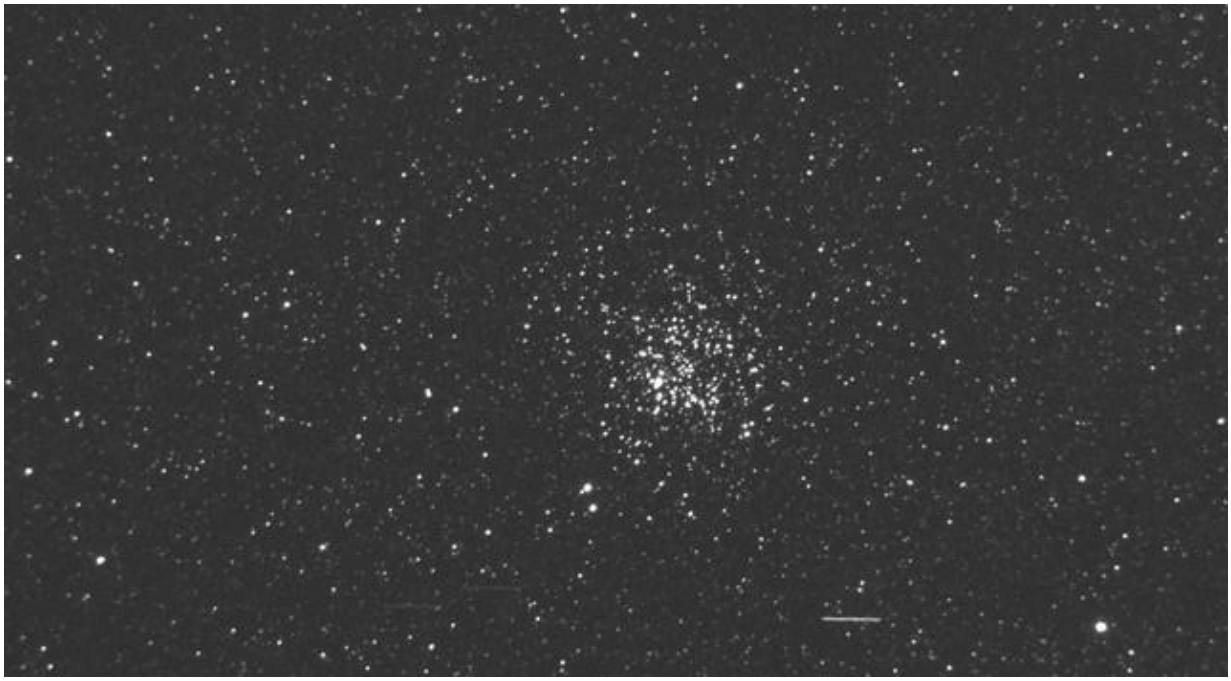
On June 7, 2019, I used my color IMX224 camera in my 4.5-inch f/4 Newtonian. M11 was placed in a lovely star field. The cluster was very bright and concentrated. I noticed some bare darker splotches lacking stars running through the body of the cluster.

You might notice some funny colored stars in the field, but I think that's an artifact of the stars landing on the same colored pixel of the Bayer filter in the camera.

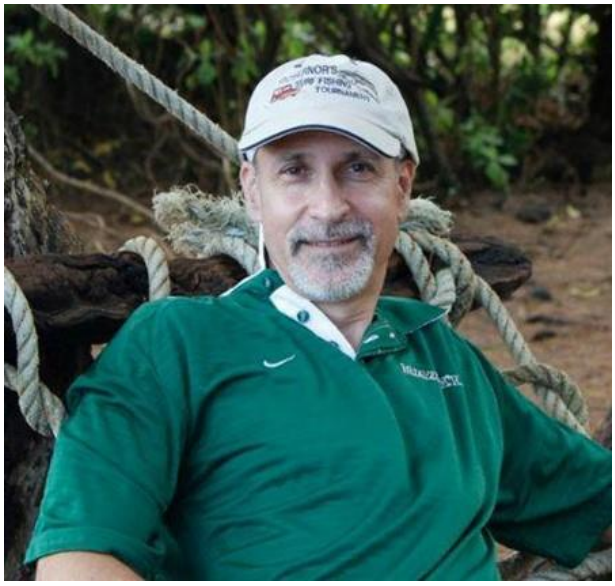
M11 - max gain 8-seconds × 21 frames = 168seconds.

On August 21, 2019, I used my mono IMX290 camera. While I was framing the shot, I noticed a satellite slowly drifting across the FOV. Instead of stacking, I watched it drift by. This satellite was moving way too slow to be in low earth orbit, and from my latitude, M11's declination is close the geo-stationary's equatorial tack. I checked in *Stellarium*, and sure enough, it was geostationary satellite "DirecTV 15". After googling it, I found out this was a massive 6,000kg satellite, with a 30m solar panel span. Very neat.

M11 - half gain, single 8-second exposure (DirecTV 15 below and right of M11).



James Dire: Observer from Illinois



M11 is one of the richest open star clusters in the sky. It resides in the constellation Scutum, lying approximately half way between mag. 3.84 Alpha Scuti, and mag. 3.44 Lambda Aquilae. The cluster measures 22 arc-minutes in diameter and shines at mag. 5.8. The cluster is easily visible in binoculars, and can be spotted naked eye in clear dark skies.

The German astronomer Gottfried Kirch was the first to discover M11 in the year 1681. The English theologian and scientist William Derham was the first to resolve it into individual stars in 1733. Charles Messier added M11 to his catalog in 1764. Admiral William Henry Smyth observed it with his 5.9-inch refractor in Bedford, England, writing that the cluster took on a V-shaped appearance. He coined the name Wild Duck Cluster.

While it may resemble a globular star cluster, M11 is really just a rich open star cluster. It's thought to contain 2,900 stars with 500 brighter than mag. 14. The cluster is 250 million years old, and has an absolute brightness of 48,000 suns. The cluster is 6,000 light-years away.

I spied M11 with binoculars in the Bahamas onboard the vessel *Mariner of the Seas* during the July 2019 ALCON convention hosted by *Royal Caribbean Cruise Line*, along with 20 other *Astronomical League* members, earning a binocular marathon certificate. In 7×50 binoculars, the cluster appeared as an unresolved bright patch residing in the Milky Way.

On July 28, 2019, I observed M11 with an 11-inch f/10 SCT, which resolved hundreds of stars among the flock of thousands. I also spied it the same night through my 5.2-inch apochromatic refractor, an instrument whose objective is near the same size as Admiral Smyth's. However, my optics and eyepieces were so superior to his 19th century telescope, that my view was substantially superior.

I offer two images of M11. The first was taken with a 102mm (4-inch) f/7.9 refractor using an SBIG ST-2000XCM CCD camera. The exposure was 10 minutes. One to two hundred stars from the cluster are resolved in this image. The second image was taken with a 10-inch f/6.9 Newtonian with the same camera. The exposure was 30 minutes. Most of the stars in the image belong to the cluster, perhaps 500-1,000 visible here. The faintest stars in the image are mag. 16!

Joseph Rothchild: Observer from Massachusetts

I've observed the Wild Duck Cluster almost each and every time when I go out in the summer months. It's visible in all of my instruments, from binoculars to a 10-inch reflector.

I caught it on July 29, 2019 on Cape Cod in dark skies, specifically for the August challenge. M11 was easily visible in 14×70 binoculars, but appeared as a fuzzy ball without structure.

In my 10-inch reflector, the appearance changed somewhat, depending on the magnification. At 88× and lower power, there were 2 parallel bands of stars, and the cluster appeared almost square overall, and with a thin line of stars making a V with one of the thicker bands of stars. There was also a brighter star over one of the bands, which I presume was a foreground star.

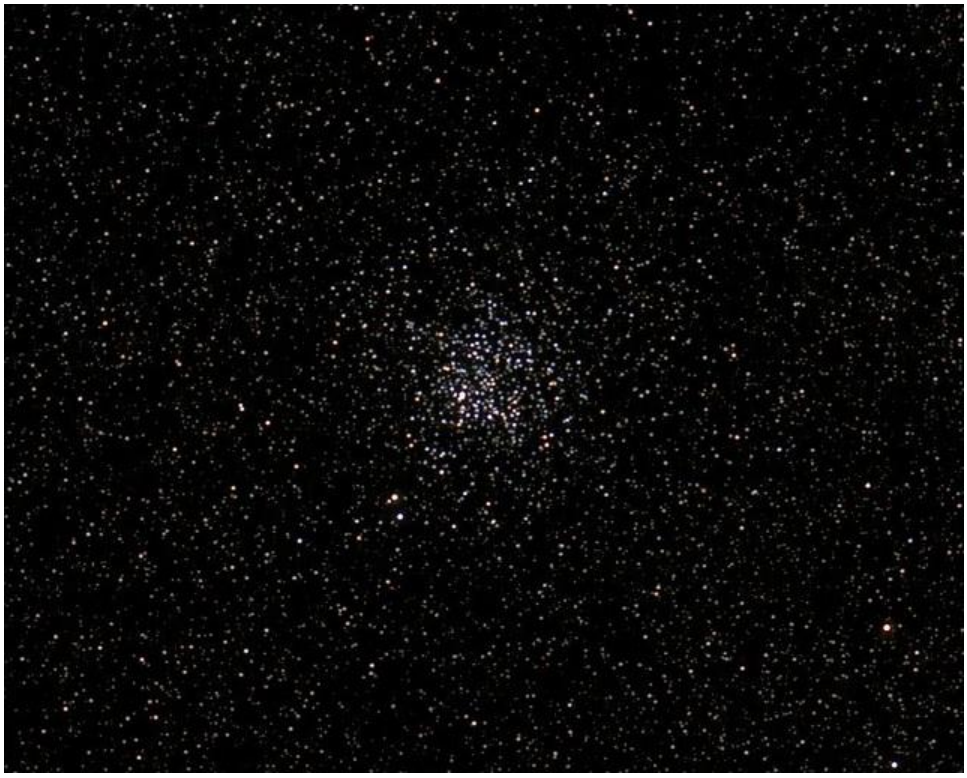
At higher magnification (155×), the cluster tended to fill in with fainter stars, and the 2 parallel bands were less apparent.

Doug Paul: Observer from Massachusetts

I imaged the Wild Duck Cluster (M11) back in late June, 2019. Visibility had been initially poor (NELM ~3.3) that evening, but improved somewhat by the time I imaged it. The moon had been up for about an hour, but given M11's mag. of 6.3, it was an easy target. In fact, the cluster was bright enough that I was able to produce a very similar image to my stacked one from just one 30-sec sub.

As usual, shot from my lovely light-polluted (Bortle ~8) backyard.

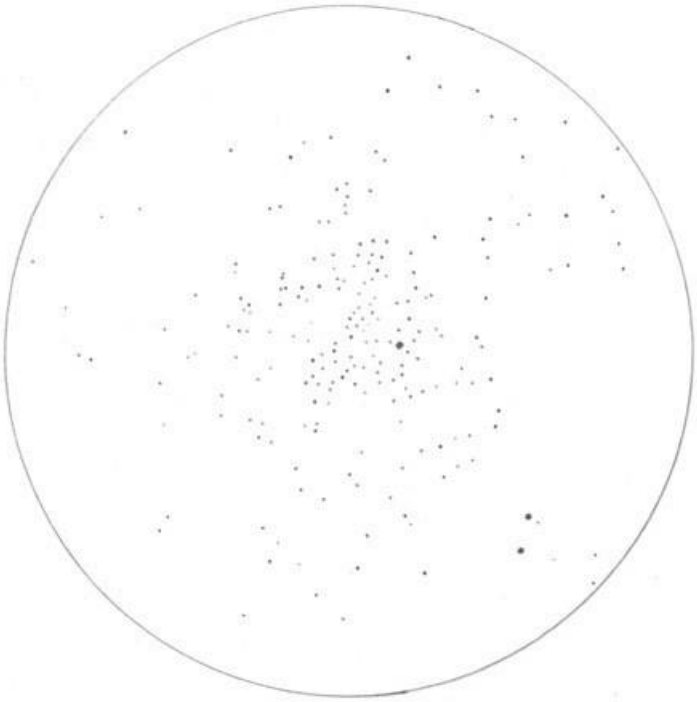
Stats: Stock Canon 80D, 400mm f/2.8 lens, ISO 800, 35 subs × 30 seconds = 17.5 minutes total exposure, 1/2 scale (4 arc-seconds/pixel). No filters.

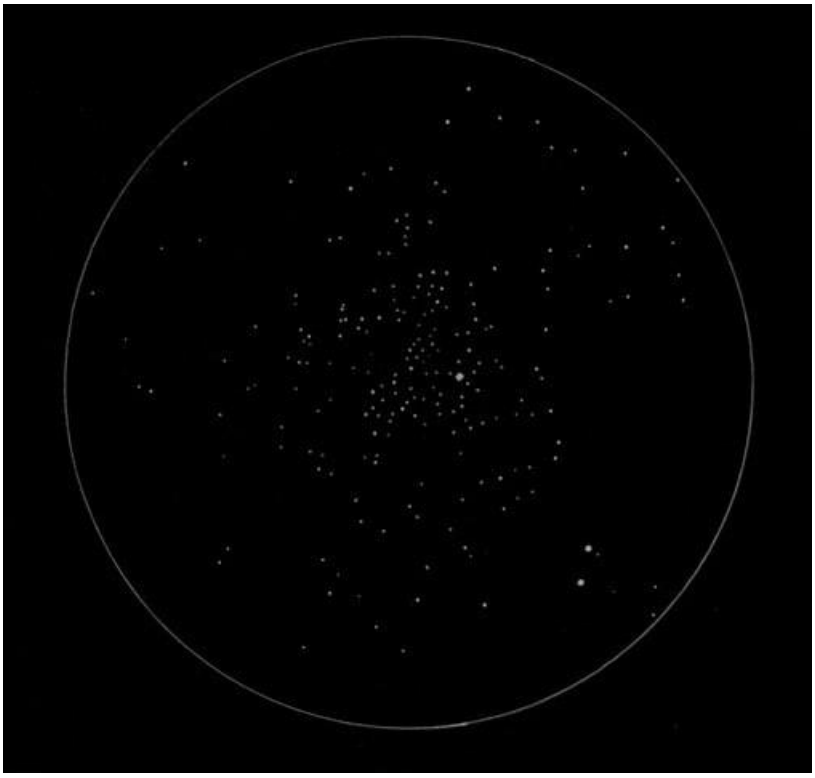


Sue French: Observer from New York

About 6,100 ±100 light-years away from us, we see, Messier 11 back-dropped by the north-eastern fringe of the teeming Scutum Star Cloud. M11 is a beautiful thing to behold through any telescope. In my 130-mm (5.1-inch) refractor at 23×, the main mass is a sparkly mix of crystalline specks and powder, with a brighter shard embedded in its southeastern edge. Farther offset in the same direction, a prominent star pair attends the sparse fringes of the cluster. At 102×, gleaming rafts of stars parted by dark lanes are closely gathered in the large, densely settled core, which is sheltered by a bedraggled, eastward-pointing V of suns. M11 was sketched at 164×, but my drawing doesn't do justice to the impressive, eyes-on view. North is up, and east is to the right.

I confess that I've never been inspired by the cluster's common name, the Wild Duck cluster. Not only is the outlying V-shaped rather unconvincing, geese fly in V-formation, ducks don't.





Glenn Chaple: Observer from Massachusetts

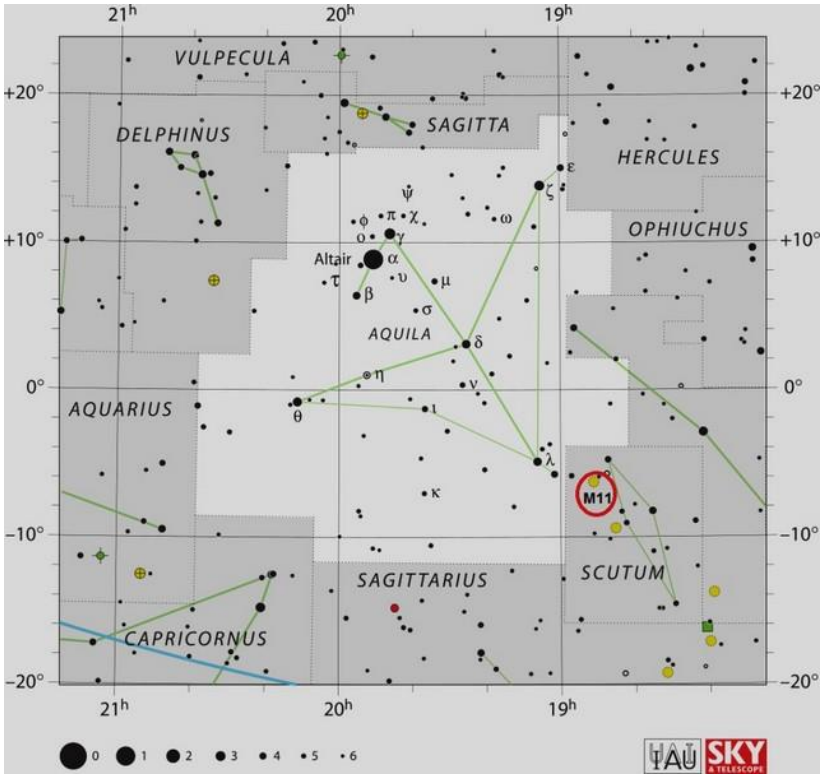
If prolonged squinting at our recent spate of Observer's Challenge mag. 11 galaxies has left you with a severe case of eye strain, you'll appreciate this month's "eye-opener" - the open cluster Messier 11. Slightly brighter than mag. 6, the cluster is visible to the unaided eye from dark-sky locations.

The object is a small (only about ¼° in diameter), but rich stellar assemblage. It contains nearly 3,000 stars, 500 of which are mag. 14 or brighter.

Using 10×50 binoculars on a hazy and humid summer evening, I had no trouble spotting M11 just southwest of a sleigh-shaped asterism comprised of the stars 14, 15, lambda (λ), and 12 Aquilae, plus eta (η) and beta (β) Scuti. It took on a grainy appearance when viewed with my 4.5-inch f/8 reflector – especially when I used averted vision. I had no need for averted vision when I turned my 10-inch f/5 reflector on it! A grainy haze became a splash of dozens of stars brighter than mag. 12. A 9mm wide-field eyepiece, which yielded 139× and a 0.6° field, provided the best view.

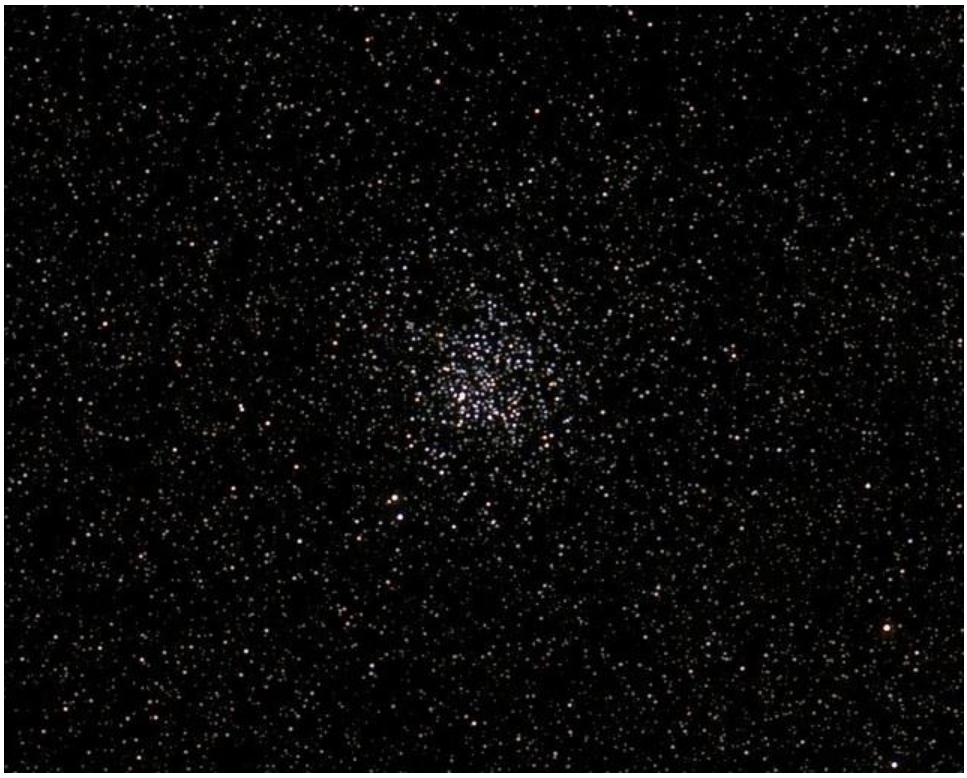
So what sort of challenge would a naked eye cluster offer? Where M11 is concerned, I'd focus on its nick-name, the "Wild Duck" Cluster. The moniker arises from the cluster's supposed V shape, reminiscent of a flock of migrating ducks. I just don't see it, and the images by Mario Motta and Doug Paul bring to mind a circular flock of starlings or blackbirds. What do you see?

M11 was discovered by the German astronomer Gottfried Kirch in 1681 and catalogued by Messier in 1762. It lies about 6,200 light years away.

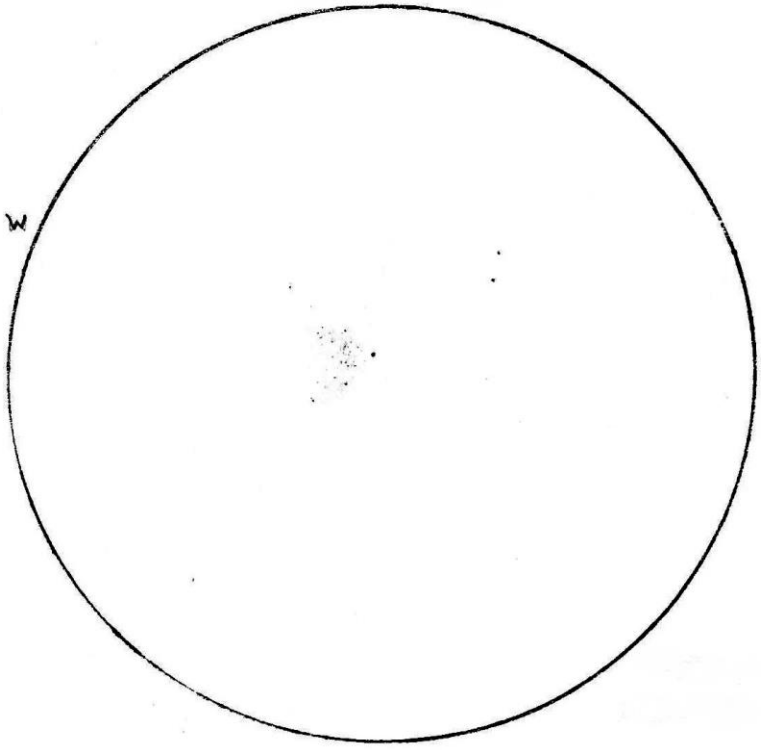


www.messier-objects.com, IAU, and *Sky and Telescope*

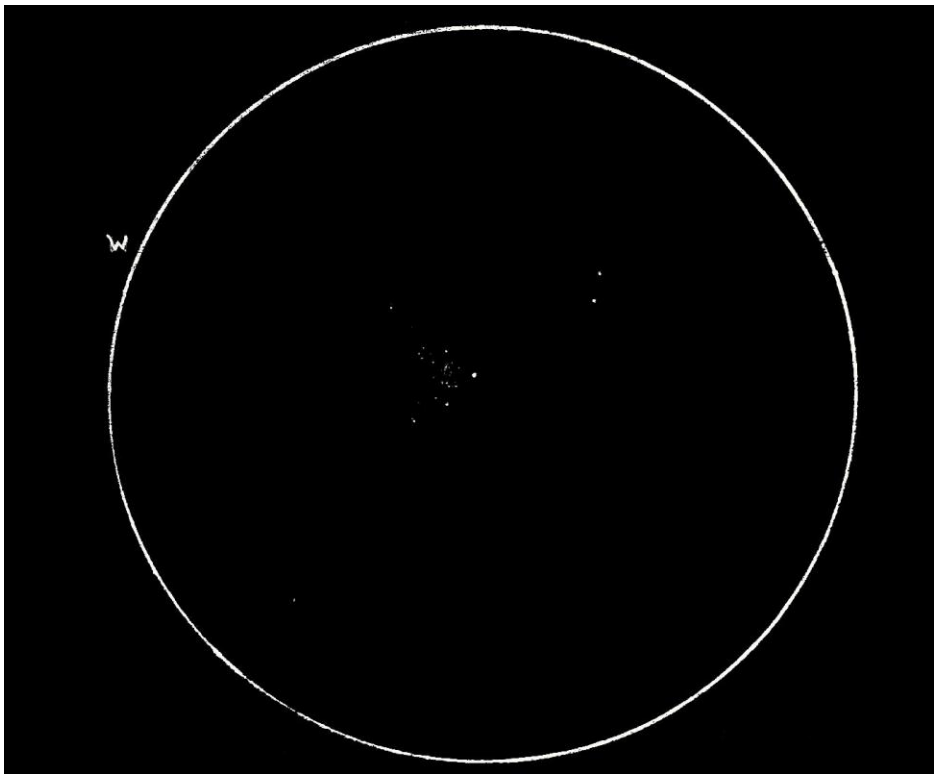
Mario Motta, MD (ATMoB)



Doug Paul (ATMoB)



Sketch by Glenn Chaple (ATMoB) Uninverted



Sketch by Glenn Chaple (ATMoB) Inverted

Chris Elledge: Observer from Massachusetts

On August 2, 2019 @11:15om EDT, I used a 10-inch f/5 reflector to observe M11 from Stellafane. Sky conditions were: Bortle Scale 4. NELM 5.5. Transparency: Average. Seeing: Average.

Stellafane had a darker sky to the south compared to the ATMoB Clubhouse that I usually observe from. Finding the cluster was much easier as a result. I simply pointed the telescope about 1° south of the midpoint between Beta and Eta Scuti. I'm normally not able to see those stars when searching for it.

At 35× (35mm 1.9° FOV), M11 appeared as a grouping of faint mag. 10 and fainter stars surrounding a brighter mag. 8 star (HD174512). A couple of bright mag. 9 stars were about 5′ to the SE of the mag. 8 star.

At 51× (25mm 1.4° FOV), the SW side of the cluster had a tight grouping of faint stars with the mag. 8 bright center star in the upper right portion of the group. There were a couple of dark lanes stretching from the S going toward the NE. There was another dark lane SE of that, with a small strip of stars between them. The two brighter mag. 9 stars framed the SE side of that dark lane. To the NW of the tight grouping of stars, there was a darker area with just a few faint stars speckled through it. To the NE of the cluster were a few more mag. 10 stars just across an empty span of sky.

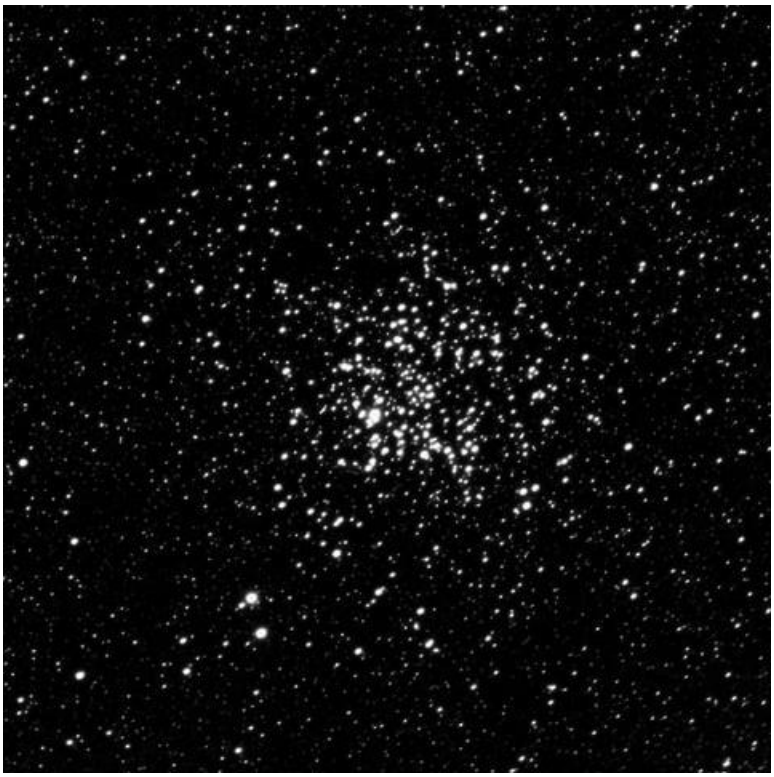
At 115× (11mm 0.71° FOV), the cluster took up much of the view. The center looked like a square labyrinth with a few different star paths with dark breaks between the paths. There was a dark route coming from the SW, an extended dark lane coming into the cluster from the SE, and a dark area to the N with a few star paths running through it. There was another set of

stars trailing off from the E corner of the square heading to the S followed by a break and a couple of stars to the SE of those. There was a small arc of stars across a dark region to the N.

Mario Motta: Observer from Massachusetts

27 stacked 45 second images (bright stars longer exposure started saturating).

Taken with my 32-inch scope.



Roger Ivester: Observer from North Carolina

After several months of very faint galaxies, it's nice to have a bright open cluster to observe. I really enjoy observing open clusters, however, not sketching them! They can be tough indeed!

Over the past 30 years, I've observed open cluster, M11 many times with a variety of telescopes, with my notes as follows:

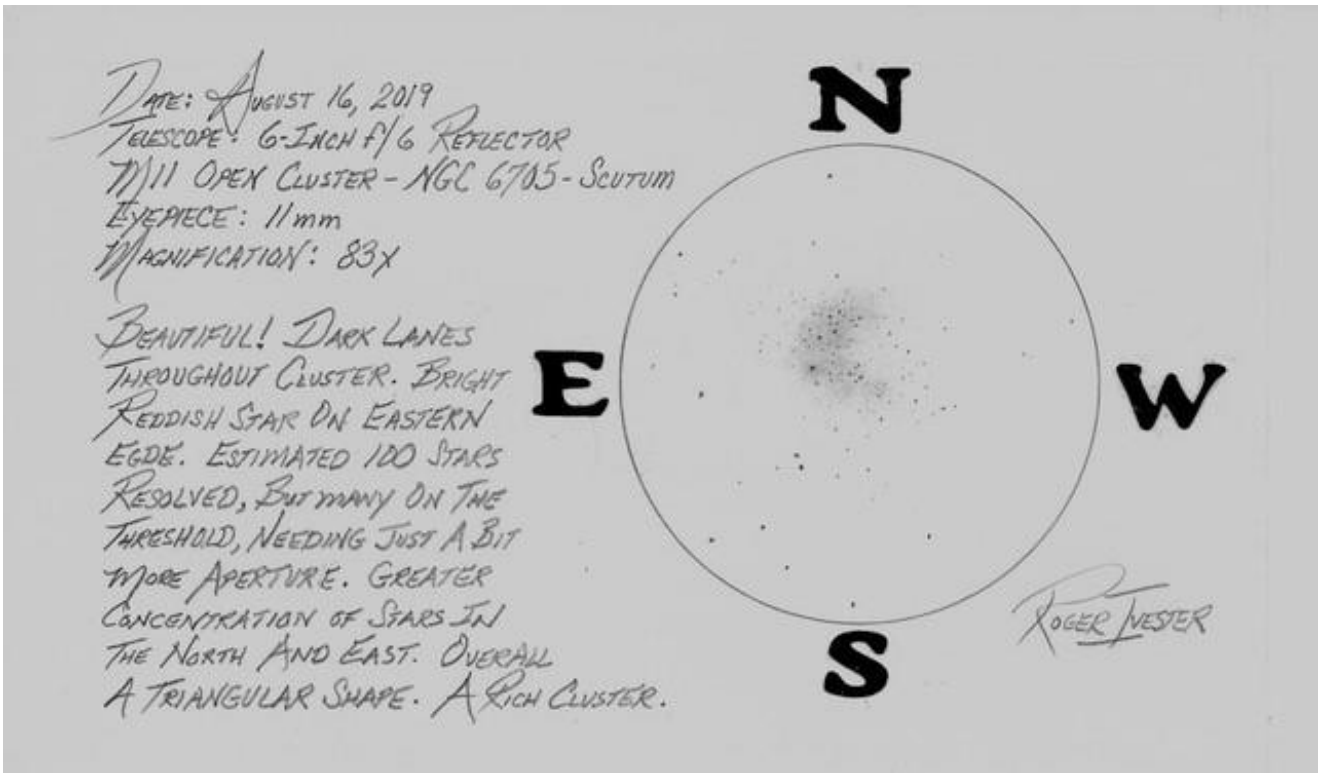
80mm (3-inch) refractor at 100×. No resolution, appeared nebulous, with a triangular shape with one bright star on the eastern edge.

3.5-inch Maksutov-Cassegrain at 78×. Couldn't resolve any of the stars, except a bright yellow star on the eastern tip. The cluster had an overall triangular shape. When increasing the magnification to 218×, still got no resolution, but noted a few bright foreground stars.

102mm (4-inch) refractor at 166×. It was a sprinkling of faint stars in the central region with averted vision, and saw about five brighter foreground stars. There was a bright star on the eastern tip that appeared yellowish.

6-inch reflector at 83×. Resolved about 100 stars, with many more on the threshold, needing just a bit more aperture. The bright star on the eastern tip appeared reddish. With careful and patient observing, the overall shape became less irregular, to more of a triangular-crescent.

10-inch reflector at 142×. Excellent resolution, large, rich and compressed. I saw dark lanes throughout the cluster, with a very prominent lane near the southern edge. There was a greater concentration of stars in the NE. It had an irregular round shape. The bright eastern star appeared reddish.


Date: August 16, 2019
Telescope: 6-Inch f/6 Reflector
M11 Open Cluster - NGC 6705 - Scutum
Eyepiece: 11mm
Magnification: 83x
Beautiful! Dark lanes throughout cluster. Bright reddish star on eastern egde. Estimated 100 stars resolved, but many on the threshold, needing just a bit more aperture. Greater concentration of stars in the north and east. Overall a triangular shape. A rich cluster.
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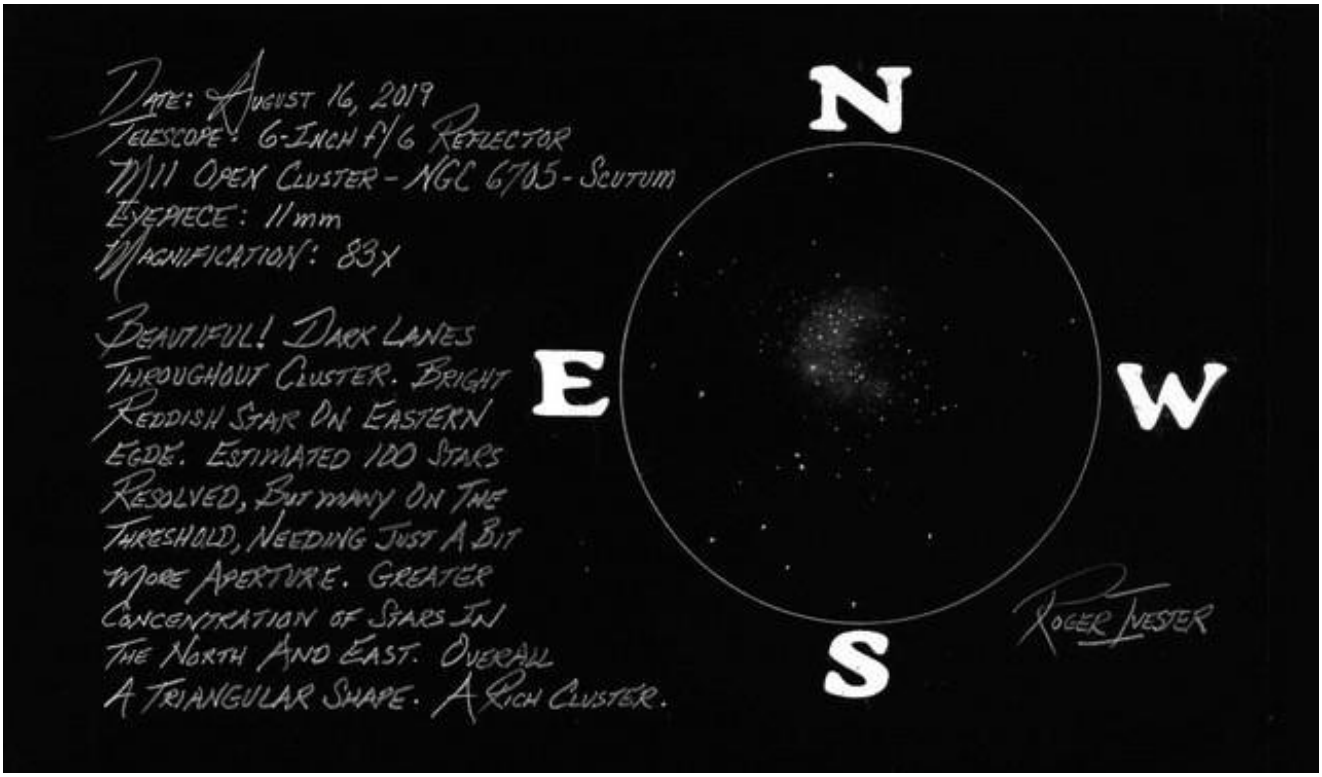
Roger Ivester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Fred Rayworth: LVAS AL Coordinator and Observer from Nevada

I've observed M11 multiple times over the decades. However, as a fresh observation for the Challenge, I observed it twice recently. Once on August 3, 2019, and most recently on August 24, 2019.

The August 3rd observation was done from the Red Rocks Visitor's Center on the far west side of Las Vegas for a public outreach event. The skies were far from ideal. At 3,790 feet, it was partially cloudy with occasionally gusty winds. Clear for the most part. Seeing was poor, with the sky boiling most of the time, and calming down occasionally. When it finally got dark, it was surprisingly dark for that area, despite the light pollution. The clouds stayed away once it got really dark.

Using my 16-inch f/4.5 @102×, M11 was wow! It stood out against a rather bland background. Since it was in the Scutum Star Cloud, part of the Milky Way, I think the light pollution helped it stand out. For an open cluster, it was pretty dense, and I guessed around 80-100 stars. The stars were uneven mags, with two bright red ones off to the side, and one prominent red one within the cluster. The rest of the stars were the usual blue-white. Nice!

My second observation was at the "undisclosed location" at Lake Mead, at 2,100 feet. It was warm, mostly calm with occasional gusty breezes. However, the winds never were much of a factor. There were some high, thin haze bands that occasionally interfered with transparency throughout the evening's observing session, but despite the Clear Sky Clock predictions, we got some incredible viewing done amongst some spectacular failures as well.

M11 looked fantastic. However, unlike the last observation, with the much darker skies, this time it brought out some really weird patterns. What really struck me was the box-like structure at its core. I've never seen anything quite like it. There were two thick bars of stars

with a dark lane in the middle. At one end, off to the side of the dark bar, was the bright red star I noted the last time I observed the cluster. Off to the southeast, on the same side of the cluster as the red star, were another pair of bright red stars as well.

The cluster was loaded with white-blue members, at least 80-100 or so that seemed to be associated with it, plus a fog of many, many more in the background. I caught slight patterns of other things but nothing I could quite make out, at least nothing like that boxy thing, which in a way, was kind of like a thick equal sign. The stars on one side, maybe the south side, appeared brighter and coarser than on the north side. That was the biggest difference. A lot of the peripheral stars seemed more homogenous in brightness yet there were plenty of odd mags to disrupt the evenness as well.

Overall, an intriguing cluster. My drawing below doesn't even do it justice, but then again, I never proclaimed to be a great artist. When I put out the notice for one and all to turn in their drawings, images and "chicken scratches," I know to which category I belong.