



CAPE FEAR Skies

Monthly Newsletter
Cape Fear Astronomical Society
Serving Wilmington, NC and Surrounding Areas

May 2026

Cape Fear Astronomical Society is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.

"The universe is not only queerer than we suppose, but queerer than we can suppose." *— J.B.S. Haldane*

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President's Message

by Karl Adlon

What a week it's been!

Saturday, Part 1: First, you need to know that I belong to the Cape Fear Cruisers car club of which I am the Lead Photographer and Webmaster. Our car shows open (supposedly) at 8:30 and awards are at 2. I arrived before 9 with my 1974 MGB and found the parking over ½ filled. Wow! I took pictures of all of the entered cars (238, like uranium), took pictures of them all and other pictures – over 300. Awards got pushed back to 2:30. I got a trophy (you'll have to ask) and left about 3:30.

Saturday, Part 2: Before going to the car show, I had packed the Outback with Red, my 8: Dobsonian telescope, and accessories. Mary Jean came along and we arrived around 6 PM. Hopefully you've read me emailed report. The Planetarium is considering another observing event in the Fall. We need to help them not schedule it for the same night as Carolina Beach State Park.

Sunday: We went to Church and lunch at Duffers at the Oak Island Golf course – good food and drinks reasonable priced. Then I started classifying the pictures: cars entered, people, scenes, more cars, etc.

Monday and Tuesday: I collected other photographers' photos and classified them, then uploaded them (only 50 at a time) to the website. Done!!

Also Tuesday: For a long time I had the thought to try to observe Vanguard 1, the oldest artificial satellite still in orbit. Heavens-above.com gives times and magnitudes (~12.5) and I've tried with an 8", 10" and even 20" but without luck. ChatGPT AI says it isn't observable and is tracked by radar. I searched CloudyNights where I found that others have attempted to observe it and failed. Giving up? See the last article in this newsletter!

Wednesday: Did volunteer work on a house owned by a low income person that included bathroom repair and replaced unsafe outside stairs.

Thursday: Today I'm composing President's message and 2 other articles.

Future: Monday may be a day of rest!

Upcoming Calendar of Events

MAY

01 Full Moon

01 Club Observing @ Starfields – 5:30 PM

02 Club Observing (Full Moon Planets) @ Starfields – 5:30 PM

Sunday, May 3

Gastronomy - Mission BBQ (351 S College Road, Suite 23 Wilmington), Menu is here.

Cape Fear Astro Monthly Meeting - 7:00pm – 9:00pm

Room 212 - DeLoach Hall; UNCW

Program: The Cygnus Walk: An easy way to tour the Cygnus Milky Way with eyes, binoculars, and telescope.

presented by Jon Raymond, who has received the AL observing awards for Planetary Nebulae, Carbon Stars, and Multiple Stars. John has participated with astronomy outreach for many years in Richmond and with the NEAF Solar Star party. He is married, has four cats and works in the medical laboratory.

Also simulcast via Zoom

2026 Monthly Meeting Dates

June 14th
July 12th
August 9th
September 13th
October 11th
November 8th
December 13th

05 Eta Aquarid Meteor Shower 21 UTC; ZHR 50; Waning gibbous moon

06 General SIG – 8 PM

08 Club Observing (last quarter moon); 07:00 PM @ Starfields

09 Last Quarter Moon

09 Club Observing (last quarter moon); 07:00 PM @ Starfields

15 Club Observing (new moon); 07:00 PM @ Starfields

16 New Moon

16 Club Observing (new moon); 07:00 PM @ Starfields

20 New Astronomers SIG – 7:30 PM

21 Venus-M35; 3/4 degree apart; 32 deg from sun; evening

23 First Quarter Moon

23 Public Observing; 07:45 PM to 10:pm; starts at sunset @ Carolina Beach State Park

JUNE

28 Sunday – Kure Beach Air Force Rec Center - 9 PM

Especially for Beginners / New Astronomers

by Jon Stewart-Taylor

A number of people have expressed interest in a Special Interest Group (SIG) for less-experienced club members. They mentioned a wide variety of topics, from learning the night skies visually, gaining familiarity and experience with operating telescopes, and finding objects (visually, binoculars, and telescopes). We hope to address these topics both on-line and in person (see the bottom part of the message).

We've started a new monthly meeting via Zoom:
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Topic: New Astronomer SIG
Time: Every month on the Third Wed, starting at 7 pm and running until 8:30
Join Zoom Meeting
Meeting ID: 878 6705 3721
Passcode: NewAstro

If you can't join via a device, you can also use a regular phone to get the audio portion:
+13126266799,,87867053721#,,,,*84047631# US (Chicago)

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Please note that although the "official" start time is 7 pm, you're welcome to drop in any time between 7 and 7:45 and we'll fold you in to the meeting.

I mentioned an in-person component to the SIG. I try to be at the club observatory every scheduled observing session (Fri and Sat closest to the last-quarter and new moon). You're welcome to come to these with or without personal equipment for laser-guided sky tours, help with using binoculars and scopes, or just share views on the club equipment as more experienced users find things. You can find our club calendar at the Member Home Page.

But, I know that some members find the trip to the observatory in western Pender county to be too long a drive. I would like to be able to hold some sessions closer to members, at sites in New Hanover and Brunswick.

One possible location would be the Battle Acre Monument grounds south of Wilmington. We don't currently have a good designated observing site in Brunswick. The light pollution map shows some quite dark areas between Supply and Lake Wacamaw (such as Green Swamp Preserve and Juniper Creek Gamelands). Even the Brunswick Botanical Gardens might work if we can get permission. Worst comes to worst, we can try a meeting in people's back yards.

If you're from Brunswick and have a suggestion for a site, please let me know. And, if you have a topic you'd like addressed, send me an email or bring it up at a meeting. This SIG is for you, and we want to make it meet your needs.

Book Review:
Tales of the Night Sky: A Gentle Introduction to Star Gazing

Written by Rob Drew, Illustrated by Elaine Drew
Published by TaeranArts, Pleasanton, California, 2011

Review by Kathleen Stewart-Taylor

I understand what this slim book is trying to do. Really, I do. Who wouldn't want the major constellations of the entire night sky (All four seasons!) to make up a unified story? Let's add in modern ideas of powerful, respected and worthy, women leaders; supportive, compassionate husbands, and headstrong teen girls. Heck, let's throw away everything but the names of the constellations and vague outlines of the mythos and rewrite the mythology to something more "acceptable" to modern sensibilities.

There is a word of this in English: Bowdlerization. "Bowdlerization is a form of censorship that involves purging anything deemed noxious or offensive from an artistic work or other type of writing or media." (https://en.wikipedia.org/wiki/Expurgation retrieved April 28, 9:42 PM)

Bowdlerization is exactly what the author did to the Greek myths. The original myths are all but unrecognizable in this books retelling. To make matters worse, a teenaged girl decided to commit suicide to escape a planned marriage by chaining herself to a rock (sculpted to look like Pegasus) and being eaten by a sea monster. Couldn't Andromeda have done what other teen girls did in the same situation and commit murder?

Setting aside the dubious retelling, the writing is simply bad. Not poor, Bad: Pedestrian, boring. Imagine Beowulf without Grendel or his mother, Lord of the Rings without Sauron, StarTrek without Khan or the Klingons. The stories are pointless.

This whole debacle reminds me of Bruce Lansky's The New Adventures of Mother Goose: Gentle Rhymes for Happy Times but without the humor. For me, as a teacher, one of the worst things about this retelling was if children read it (I suspect they won't, too dull) they will be ill informed about the real mythology. Which is full of death, glory and derring do. And sex. Don't forget the sex.

Now for the Astronomy. What little there is, is good. But if you are trying to find your way around the night sky The Stars (or Find the Constellations for younger folk) by H. A. Rey are better. And you won't "learn" that Aries is a skinny lamb keeping Andromeda company while she waits in a fit of pique for a sea monster to devour her.

I wish I could recommend this book, but I think it's best avoided.

Three Events in Two Nights

by Jon Stewart-Taylor
(with quotes from posts by Damain, Karl, and Terry)

Cape Fear Astro did something out of its ordinary the weekend of April 24/25: we attended three public events in two nights. Damain started things off with a Friday night State Wide Star Party (SWSP) event in Jacksonville (JAX). Karl, Skip, Laurie, and Rick made sure we covered the SWP event at Ingram Planetarium on Saturday. And, Terry and I provided scopes and the model solar system for our usual monthly public observing at Carolina Beach State Park (CBSP).

The weather forecast was pretty good for Friday, but Extremely Unfavorable for both locations on Saturday. We were very fortunate with good skies Friday, and decent if not wonderful conditions Saturday. All three events were well-attended.

Damain posted about his night in JAX:

> We had a good event last night in Jacksonville. It was sponsored by Jacksonville Parks and Recreation. There was a 1 kilometer solar system walk, arts and craft tables and snacks. As it turned dark they handed out glow sticks. The telescope was very popular and we looked at the Moon, Jupiter and Venus. The event was from 7 to 9 and was very well attended.

Thanks very much to Damain for extending our reach north into Onslow for this event.

Rick with an S50 and Karl with an 8" dob made sure the moon was covered, while Skip pulled in Jupiter. You can read Karl's post for all the details, but he ended with:

> Strange. At least 10 people walked by the line of telescopes, even though I shouted, "Look at the Moon?", they just kept on going looking straight ahead, walking. Most of the 25 or so people who looked through our scopes were impressed with the view; many asking when we were planning to return.

In the recent past we'd tried to reach out to Ingram about possibly doing some public sessions with them, and although the staff haven't shown any great interest, I think this shows at least some of the public would be interested.

For the CBSP public session, I brought two scopes: my standard public-session Skyscanner 100 dob, and for Terry to use, an 80mm Celestron "Sky Sense" alt-az refractor (although we didn't use the cell-phone on it that night).

I ran a solar system tour for some early arrivers, then started showing people the moon in both scopes well before it was dark. The refractor is almost a "Christmas trash" scope, very inexpensive, but that meant that we could let the kids at it without worry about damage to expensive stuff. And, with the legs barely extended, it was at a very good height for even the very young children.

We used the Skyscanner primarily on the moon, in part because it has a good wide field of view, and an occultation of Regulas was scheduled. The refractor spent some time on the moon, and then switched over to Jupiter. Terry was pretty excited about the occultation:

So the clock hit 8:33 and I'm watching, trying not to blink, because this really is a "blink and you'll miss it" event. Time passed. Star was still there. I called out to Jon who's not far away. "Are we at 8:34 yet?" A few seconds later, bam! Regulus was gone. As it went behind the moon on its unlit side, and I couldn't see the unlit part at all, [...] this was an instantaneous cut off. Very cool!

At CBSP we had between 15 and 20 people. Ingram had more folks, but only about 25 stopped for telescopic views. The pictures Damain posted showed a lot of folks at the JAX. Between the three events, we reached quite a few people on the two nights. Thanks to everybody who helped out to make it possible.

Something About the Moon

by Karl Adlon

From Wikipedia, here's a record of the early missions attempting to hit the Moon:

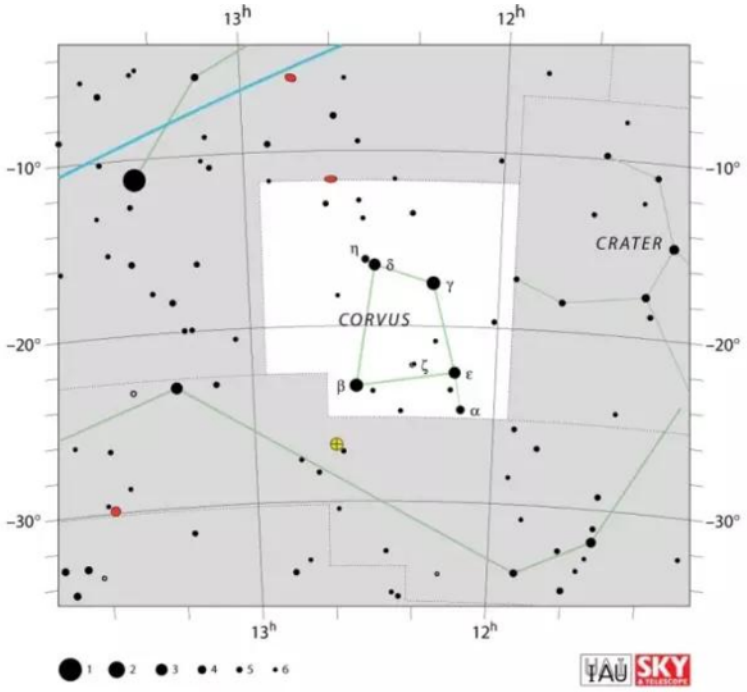
	Mission	Launch date	Operator	Carrier rocket	Spacecraft	Mission type	Outcome
1	Pioneer 0 (Able I)	17 August 1958	USAF	Thor DM-18 Able I	Pioneer 0	Orbiter	Launch failure
	First attempted launch beyond Earth orbit; failed to orbit due to turbopump gearbox malfunction resulting in first-stage explosion. Reached apogee of 16 kilometres (10 mi).						
2	Luna E-1 No.1	23 Sept.1958	OKB-1	Luna	Luna E-1 No.1	Impactor	Launch failure
	Failed to orbit; rocket disintegrated due to excessive vibration.						
3	*Pioneer 1* (Able II)	11 Oct.1958	NASA	Thor DM-18 Able I	Pioneer 1	Orbiter	Launch failure
	Failed to orbit; premature second-stage cutoff due to accelerometer failure. Later known as Pioneer 1.[6] Reached apogee of 113,800 kilometres (70,700 mi).						
	Luna E-1 No.2	11 Oct.1958	OKB-1	Luna	Luna E-1 No.2	Impactor	Launch failure
	Failed to orbit; carrier rocket exploded due to excessive vibration.						
5	*Pioneer 2* (Able III)	8 Nov.1958	NASA	Thor DM-18 Able I	Pioneer 2	Orbiter	Launch failure
	Failed to orbit; premature second-stage cutoff due to erroneous command by ground controllers; third stage failed to ignite due to broken electrical connection.[6] Reached apogee of 1,550 kilometres (960 mi).						
6	Luna E-1 No.3	4 Dec. 1958	OKB-1	Luna	Luna E-1 No.3	Impactor	Launch failure
	Failed to orbit; seal failure in hydrogen peroxide pump cooling system resulted in core-stage underperformance.						
7	*Pioneer 3*	6 Dec.1958	NASA	Juno II	*Pioneer 3*	Flyby	Launch failure
	Failed to orbit; premature first-stage cutoff.[6] Reached apogee of 102,360 kilometres (63,600 mi).						
8	Luna 1 (E-1 No.4)	2 January 1959	OKB-1	Luna	Luna 1	Impactor	Partial failure
	Carrier rocket guidance problem resulted in failure to impact Moon, flew past in a heliocentric orbit. Closest approach 5,995 kilometres (3,725 mi) on 4 January. **First spacecraft to fly by the Moon.**						
9	*Pioneer 4*	3 March 1959	NASA	Juno II	*Pioneer 4*	Flyby	Partial failure
	Second-stage overperformance resulted in flyby at greater altitude than expected, out of instrument range, with 58,983 kilometres (36,650 mi) of distance. Closest approach at on 4 March. First U.S. spacecraft to leave Earth orbit.[						
10	E-1A No.1	18 June 1959	OKB-1	Luna	E-1A No.1	Impactor	Launch failure
	Failed to orbit; guidance system malfunction.						
11	Luna 2 (E-1A No.2)	12 Sept.1959	OKB-1	Luna	Luna 2	Impactor	Success
	Successful impact at 21:02 on 14 September 1959. **First spacecraft to impact the lunar surface**. This made the Soviet Union the first country to impact the surface of the Moon.						

From Wikipedia: *Luna 2 (Russian: Луна 2), originally named the Second Soviet Cosmic Rocket and nicknamed Lunik 2 in contemporaneous media, was the sixth of the Soviet Union's Luna programme spacecraft launched to the Moon, E-1 No.7.* ***It was the first spacecraft to touch the surface of the Moon, and the first human-made object to make contact with another celestial body.*** *The spacecraft was launched on 12 September 1959 by the Luna 8K72 s/n I1-7B rocket. It followed a direct path to the Moon. In addition to the radio transmitters sending telemetry information back to Earth, the spacecraft released a sodium vapour cloud so the spacecraft's movement could be visually observed.*

Corvus

by Jon Stewart-Taylor

Corvus (the Crow) is one of the ancient constellations, included in Ptolemy's Almagest. The crow was the servant of the god Apollo. The crow appears on the back of Hydra (the water snake), below Virgo and beside the even dimmer Crater (the cup). As you might expect with such dim stars, the constellation can be difficult to find in light-polluted skies. It's also fairly far south, so a good southern horizon helps.



The main part of the constellation appears as 4 stars. in a lop-sided trapezoid. Surprisingly, the brightest star is Delta (about magnitude 3.6, while Alpha, usually the brightest, Is actually only the 5th brightest star in the constellation. It's a very small constellation, 70th in size of the 88 constellations.

The constellation is pretty far away from the bright arms of the Milky Way, so it's the home of galaxies. The most well know is M 104 (the Sombrero), which is right on the Corvus-Virgo border. There are a couple of asterisms nearby which help finding the galaxy. The "Stargate" is a close triplet of stars inside a wider triplet. It's easy to find in binoculars or a magnifying finder.

The "Stargate". Photo by by Mark Johnston https://commons.wikimedia.org/w/index.php?curid=115089808

The "Stargate" is technically in Virgo, since it's one degree north of M104. But, once you find, you can slide one degree south to find the other asterism. I call it "the Scythe", but many call it "Jaws", assuming some resemblance to a shark. Then the galaxy is in the same wide-field eyepiece field of view.

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M 104 imaged by Jon Stewart-Taylor

At almost exactly the center of the trapezoid is NGC 4361, called the "Lawn Sprinkler". It's a planetary nebula, quite small, and looks square at low magnifications.

4261 cropped and magnified, from an S50 image by Jon Stewart-Taylor

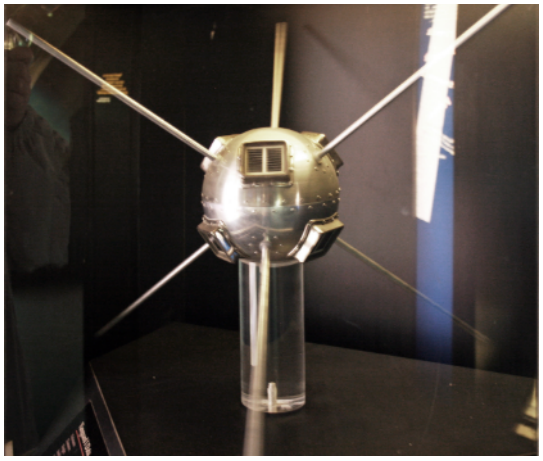
The NGC 4038 Group is a collection of about a dozen galaxies, magnitude 12 and dimmer. The most prominent of these are 4038 and 4039, the "Antennae". It takes a big scope and some magnification to get a good view of it, as the image shows.

4038/4039 cropped and magnified, from an S50 image by Jon Stewart-Taylor

Credit: NASA - National Aeronautics and Space Administration ,ESA - European Space Agency , NASA's Hubble Space Telescope

Can Vanguard 1 Be Seen With a Telescope?

by Karl Adlon



For a long time I had the thought to try and have tried to observe Vanguard 1, the oldest artificial satellite still in orbit.

ChatGPT says: *No—Vanguard 1 is far too small and faint to be seen with a telescope. Here's why:*

- ★ *Size: Vanguard 1 is only about 16 cm (6.4 inches) in diameter—basically the size of a grapefruit.*
- ★ *Distance: It orbits Earth at hundreds to thousands of kilometers up.*
- ★ *Brightness: Because it's tiny and doesn't reflect much sunlight, its apparent brightness is extremely low—estimated around magnitude +14 to +16 or dimmer, and often effectively invisible due to its tumbling and non-reflective surface.*

Even with excellent conditions and a large amateur telescope, Vanguard 1 is not realistically observable visually. It's tracked using radar and precise orbital predictions—not by eye.

Is that right?

Problem: Heavens-Above says it's ~12.5 magnitude but this says dimmer. Another ChatGPT run agreed that 12.5 is possible under favorable conditions. It also evaluated the following:

With an 18" telescope: Vanguard 1 moves from "essentially impossible" → "rare but achievable under ideal conditions."

You'd need:

- ★ *A bright pass (~12.5–13)*
- ★ *Dark sky (mag 6.5+)*
- ★ *Accurate timing and pre-pointing*
- ★ *Patience and experience*

And even then: Expect it to be a fleeting, barely-there detection, not a clean visual track.

OK! That's better!

I can address all of these except 1.

It won't be as *fleeting* if I put the 18" on my equatorial platform.

I'll pick a bright pass from heavens-above.com which also gives the time.

Time.gov on my cell phone gives accutae time.

I'll try in winter with better transparency and I'll try at Starfields.

Dark sky (mag 6.5+) is the remaining problem.

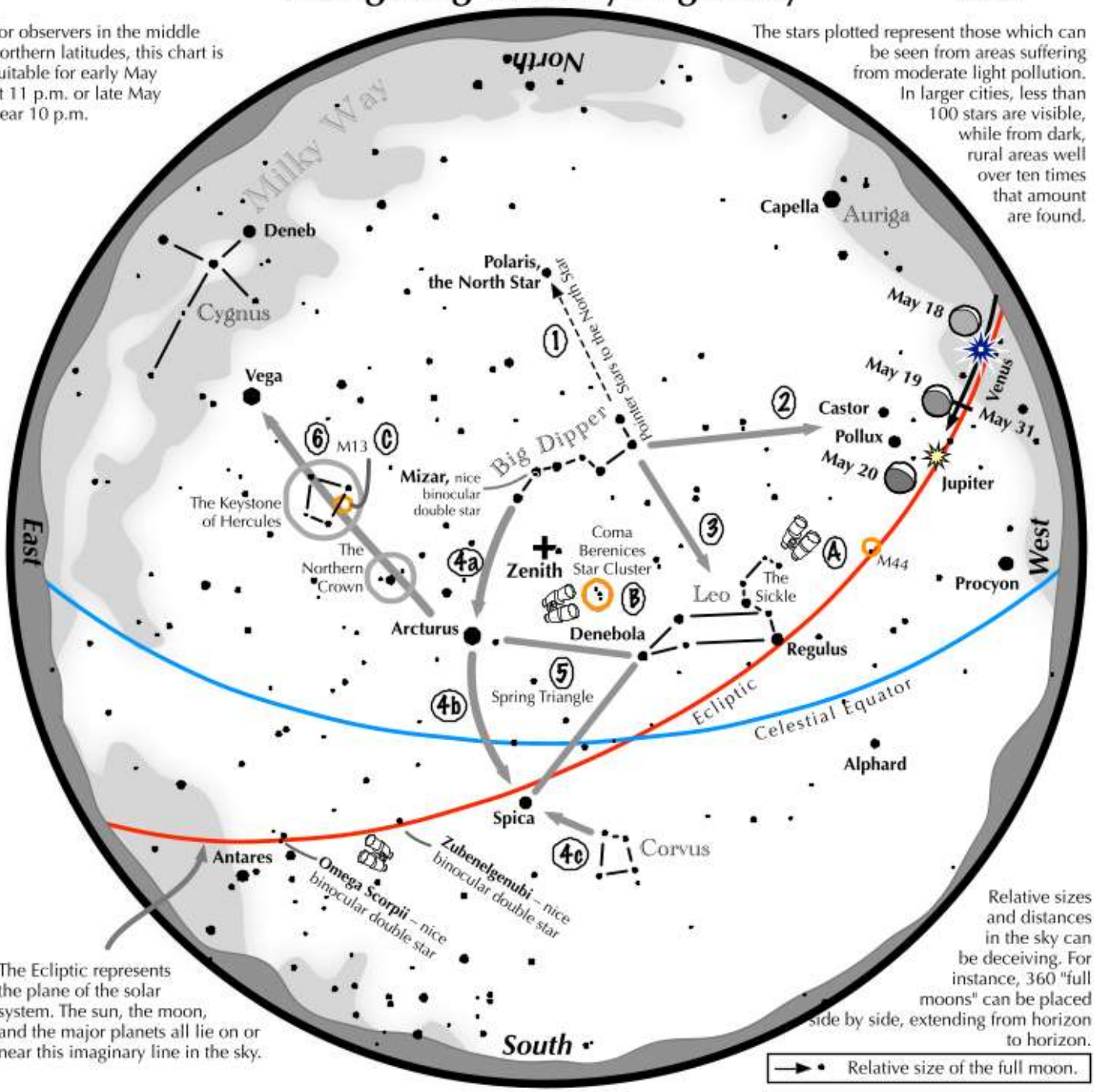
Anyone have a Night Vision eyepiece?

Navigating the May Night Sky

2026

For observers in the middle northern latitudes, this chart is suitable for early May at 11 p.m. or late May near 10 p.m.

The stars plotted represent those which can be seen from areas suffering from moderate light pollution. In larger cities, less than 100 stars are visible, while from dark, rural areas well over ten times that amount are found.



The Ecliptic represents the plane of the solar system. The sun, the moon, and the major planets all lie on or near this imaginary line in the sky.

Relative sizes and distances in the sky can be deceiving. For instance, 360 "full moons" can be placed side by side, extending from horizon to horizon.

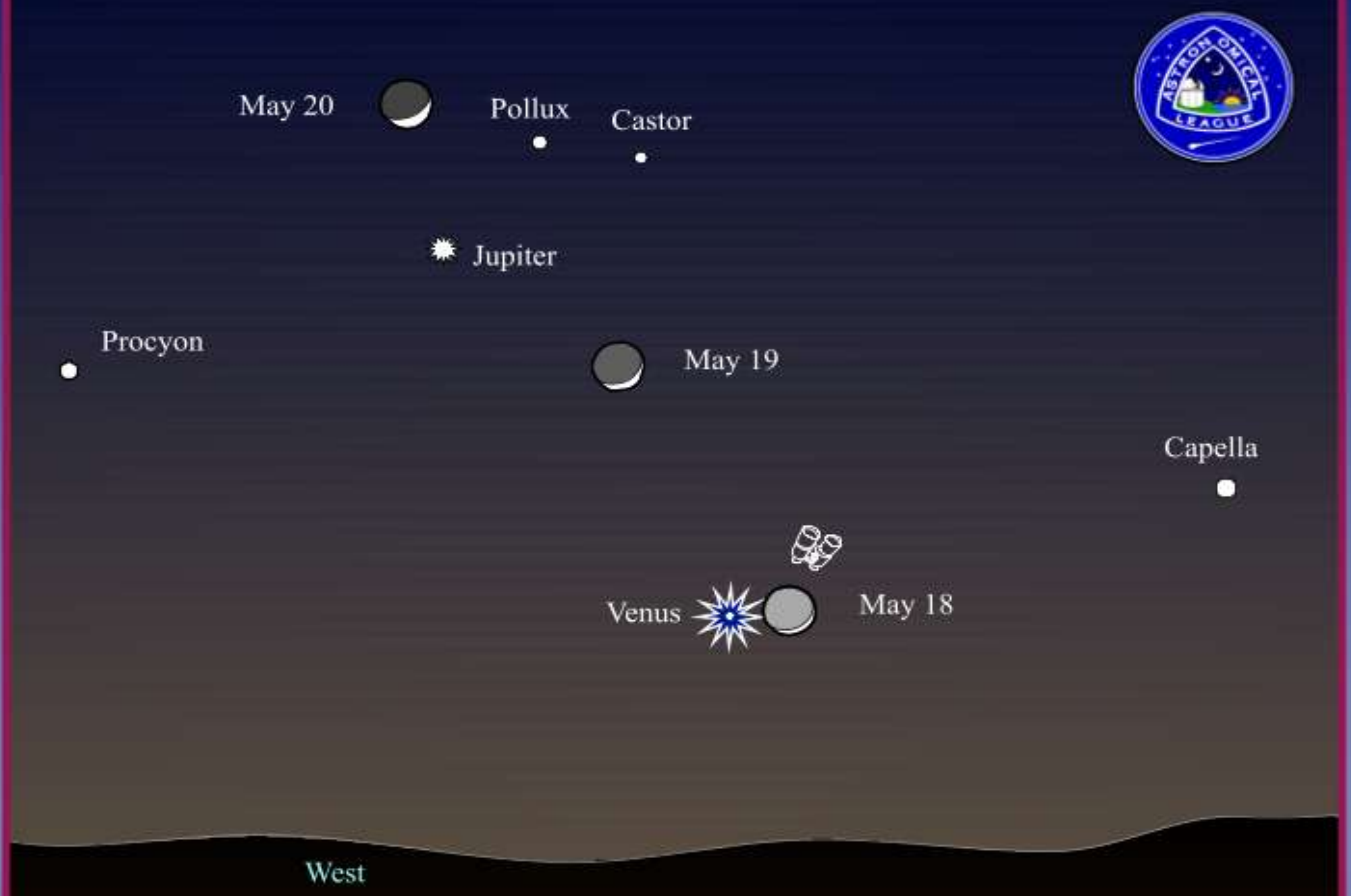
Relative size of the full moon.

Navigating the May night sky: Simply start with what you know or with what you can easily find.

1. Extend a line northward from the two stars at the tip of the Big Dipper's bowl. It passes by Polaris, the North Star.
2. Through the two diagonal stars of the Dipper's bowl, draw a line pointing to the twin stars of Castor and Pollux in Gemini.
3. Directly below the Dipper's bowl reclines the constellation Leo with its primary star, Regulus.
4. Follow the arc of the Dipper's handle. It first intersects Arcturus, then continues to Spica. Confirm Spica by noting that two moderately bright stars just to its southwest form a straight line with it.
5. Arcturus, Spica, and Denebola form the Spring Triangle, a large equilateral triangle.
6. Draw a line from Arcturus to Vega. One-third of the way sits "The Northern Crown." Two-thirds of the way hides the "Keystone of Hercules." A dark sky is needed to see these two dim stellar configurations.

Binocular Highlights

A: M44, a star cluster barely visible to the naked eye, lies to the southeast of Pollux. **B:** Look near the zenith for the loose star cluster of Coma Berenices. **C:** M13, a round glow from a cluster of over 500,000 stars.



If you can see only one celestial event this month, see this one.

The crescent moon passing Venus then Jupiter

Look to the west-northwest 60 minutes after sunset on May 18, 19, and 20.

- On the first evening, the crescent moon full with earthshine glows immediately next to brilliant Venus.
- The next evening finds a somewhat thicker crescent moon sitting midway between Venus and Jupiter.
- On May 20, the moon lies above Jupiter and in a line with Castor and Pollux.
- The bright stars Capella and Procyon act as boundaries helping frame the scene.

End your day with this magical scene!

Get to Know
YOUR Astronomical League

The Astronomical League (Astroleague or AL) is one of the largest amateur astronomical organizations in the world. The organization serves to encourage an interest in astronomy (especially amateur astronomy) and promote the science of astronomy by:

- ✓ *fostering astronomical education;*
- ✓ *providing incentives for astronomical observation and research;*
- ✓ *assisting communication among amateur astronomical societies.*

CFAS is one of over 300 member societies affiliated with the Astroleague. Your membership in CFAS allows you take full advantage of this relationship so periodically review the AL links below to see how the Astroleague can support your astronomical interests and endeavors.

Astroleague Home Page	www.astroleague.org
Astroleague YouTube Channel	https://www.youtube.com/channel/...
AL Observing Programs *(Alphabetical Listing)*	https://www.astroleague.org/alphabeticobserving/
Night Sky Tools	https://www.astroleague.org/navigating-the-night-sky-guides/
Remembering Al Nagler	https://www.astroleague.org/wp-content/uploads/2025/10/Nagler.pdf
Current and Past Issues of *Reflector Magazine*	https://www.astroleague.org/reflector/

AL Related News, Information and Reminders

Information: Click HERE for the Astroleague News Page and be sure to check the Astroleague Home Page weekly for new and important posts.

REMINDER - Beware of Fraudulent Emails appearing to originate from the AL. Click HERE for more information.

Contact the CFAS ALCOR for any changes to your Reflector delivery preferences (US Mail, Email or Both).

CFAS Correspondence:
Please contact the society at: CFAS, P.O. Box 7685, Wilmington, NC 28406

Cape Fear Astronomical Society is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.

CFAS Officers:

President:	Karl Adlon
Vice-Pres:	Damain Smith
Associate VP	Alan Hilburn
Secretary:	Jon Stewart-Taylor
Treasurer:	Ben Steelman
ALCor	Ben Steelman

Dues: Dues for 2026 are $25 for Individual and $32 for Family Membership. Students dues are $7 per year.
Mail to: CFAS, P.O. Box 7685, Wilmington, NC 28406
Or you can pay electronically by following this link: https://www.capefearastro.org/payment.htm

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