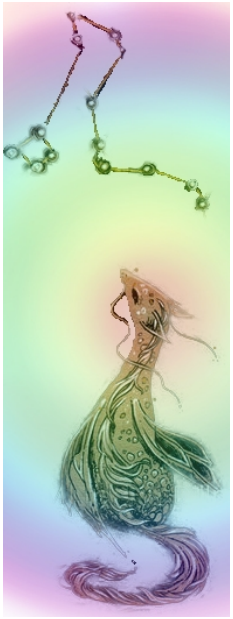
Another Look
May 2024 Draco

May 3, waning crescent, moon occults Saturn. 1.5 deg apart, in So Ca and Arizona it is a pre-sunrise event
May 4 waning crescent moon occults Mars, in So Ca and Arizona they are very close at sunrise
On May 31 the moon occults Saturn and Neptune. Both have a very close approach in the AM. The Saturn occultation will be visible from Tierra del Fuego and Neptune's from Cape Town.

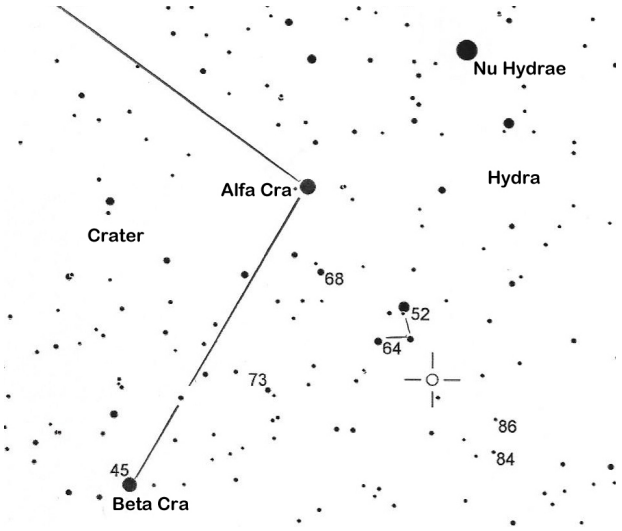
The New moon in May is on the 7th at 2023 PDT The Full moon in May is on the 23rd at 0653 PDT
In Spanish the New Moon is Mayo Luna Ilena, in German Vollmond im Mai, in Latin Maii Plenam Lunam, in Italian Luna Piena di Maggio, in French Pleine Lune de Mai, in Ukrainian Травневий Новний Місяць- Travnevyy Povnyy Misyats' and in Greek Πανσέληνος Μαΐου, Pansélinos Maΐou

Lots of early morning stuff to see. On May 9, Mercury is at greatest western elongation, on the 13th, Mercury is at its highest in the morning sky, and on the 14th Mercury is at dichotomy. (half moon shape). On May 18 Jupiter is at solar conjunction

Latin Dragon, Spanish Dragòn,
French Dragon, German Drache,
Greek δράκων drakōn, Italian Drago
Meteors this month are the Eta Aquarids. They range from April 15 thru to May 27, peaking at May 05, around 0400.
The moon will be 26 days old, so should not be too great a hindrance.

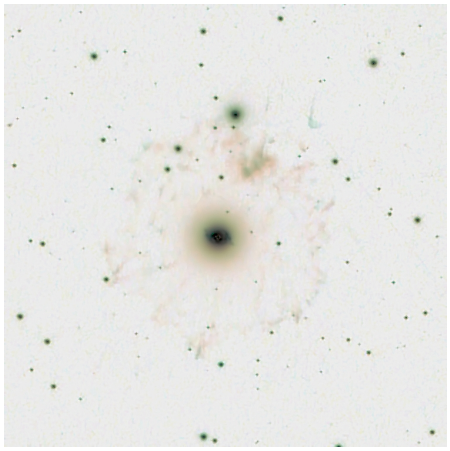


Variable star this month is V Hydrae
https://www.aavso.org/featured-variables

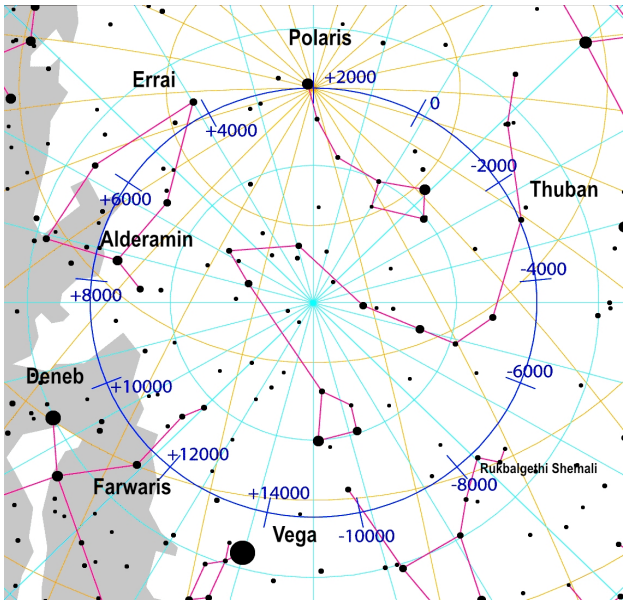


"You are all poets." I told a gathering of amateur astronomers at the 1983 annual Texas Star Party. At first they reacted with silence. Then they began to agree. The common thread that binds amateurs together is a love of the grandeur and beauty of the starry deeps. While some may claim it's the science of astronomy that interest them. I believe that deep down it is the ultimate experience of the night sky that hold the real attraction.
"Deep Sky Wonders" Walter Scott Houston published in "Sky and Telescope" magazine.
https://www.meredithdillman.com/art-shop/draco-constellation-art-print

When Scotty wrote this, it was a preamble to a column on NGC 6543, the "Cat's Eye Nebula".
Scotty went on to talk about its appearance in everything from a 1" homemade refractor to a 4" Clark to a 20" Dob and even to the 60" at Mt. Wilson. He wanted you to look at the Cat's Eye and really see it. What is its color? Is is blue or do you see green? How big is it? What power are you using to get the best view? Can you see it's central star? Is it 9th or is at 11th magnitude? How about the shell? Scotty never heard from an amateur reporting on seeing it. Back then in the early days the shell wasn't thought of as possible. It wasn't until 2002 that APOD published an "Isaac Newton" image of the shell. What can we see with our modern optics and (hopefully) refined skills.? John Garrett uses a variety of amateur telescopes to record what the Cat's Eye will look like to you. The reverse image below shows what Eric Seavey captured in 2018.
http://www.jgscience.org/astronomy/messiers.html
https://ocastronomers.org/wp-content/uploads/2018/12/Cats-Eye-Nebula.jpg Eric Seavey 2018



The north ecliptic pole lies in Draco, and the south ecliptic pole in Dorado. It is usually explained that the earth wobbles on its axis like a kids top spinning in circles. The wobble the earth makes is a 25,800 year cycle and the cone is about 23½^0 from the vertical. Deneb will be the pole star in about 8,000 years, Vega in about 12,000 years and Thuban will be back to being the north star in 21,500 years. Can't wait.



The funnest story about Thuban is its relationship to the pyramid builders. Thuban was the pole star 4500 years ago and while it is clear that the ancient Egyptians of the 4th dynasty used astronomy to mathematically align the great pyramid, the science dates and the archaeological dates do not coincide to give Thuban any special role.

Draco contains eighty stars, including two of the 2d magnitude, three of the 3d, and sixteen of the 4th--

" The Dragon next, winds like a mighty stream:
Within its ample folds are eighty stars,
Four of the second order.
Far he waves His ample spires, involving either Bear."

Draco has 14 named stars that go back to very early in its defined life. γ Draconis is Eltanin, the brightest star in Draco at 2nd mag. The name come from the Arabic meaning the great serpent.

β Draconis's name is Rastaban meaning the head of the serpent. δ Draconis is named Altais meaning the goat. ζ Draconis's name is Aldhibah coming from the Arabic for Hyenas.

Edasich is the name for ι Draconis. Edasich is famous. She is the first giant star found with a planet. Also she has a debris disk. The exoplanet's name is Hypatia. Edasich is derived from the Arabic for male Hyena, Hypatia who was named much later, from the Greek meaning highest or supreme.

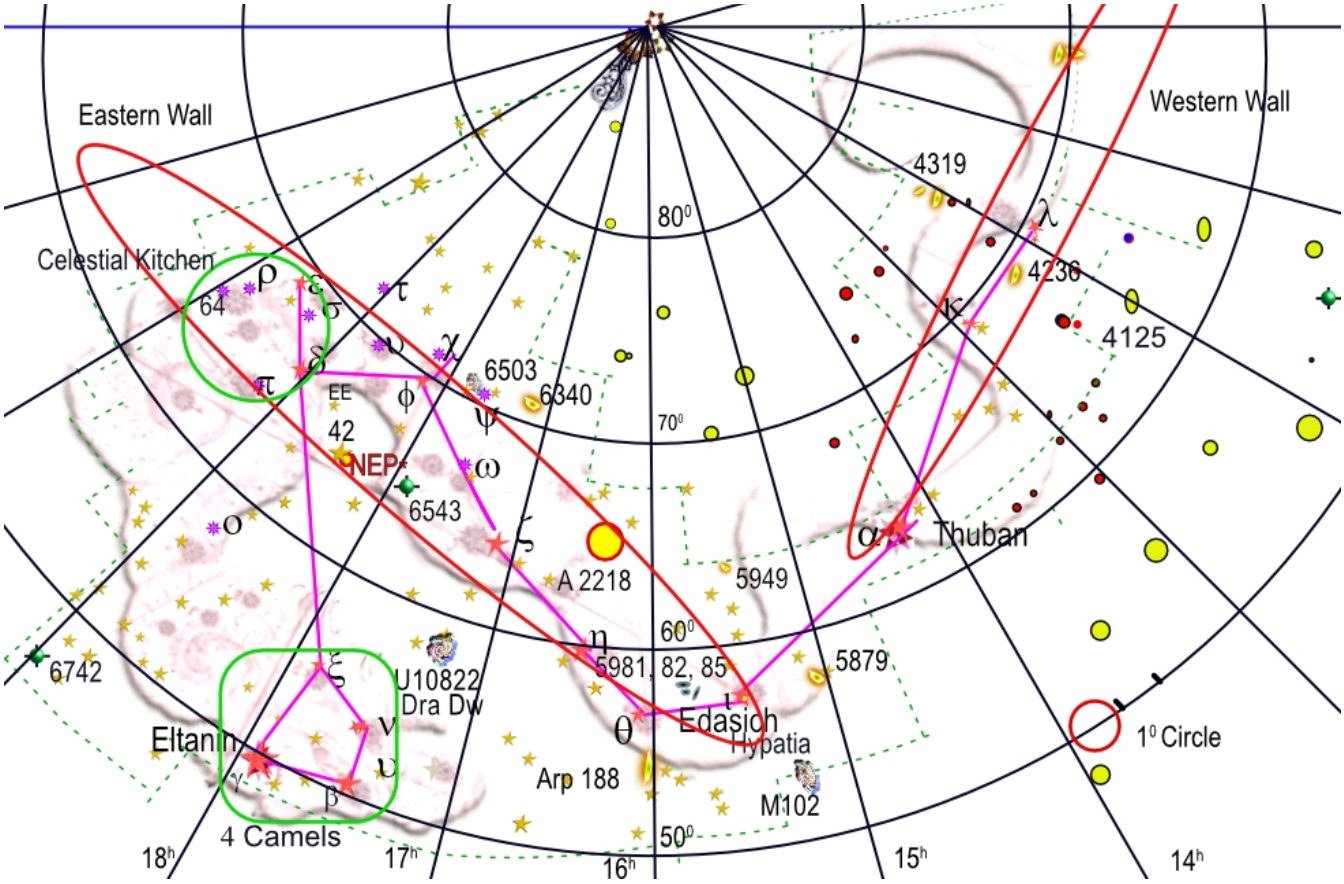
χ Draconis and φ Draconis are named Batentaban Borealis and Batentaban Australis. Being right there at the first loop after the head of Draco, their name means the belly of the serpent.

α Draconis is more famous for its position than for its brightness. Its name is Thuban which means the snake and is between 3rd and 4th magnitude. His claim to fame came 6000 years ago when for 4300 years he was the pole star. There is some question about its variability. Different magnitudes have been given it over the centuries. Admiral Smyth in 1844 measured it at 3.25. Today it is measured half a magnitude fainter at 3.7.

ξ Draconis's name is Grumium, not Greek and not Arabic, but Latin, given its name by Ptolomy. Xi is down by Draco's jaw. Grumium comes from the Latin for snout.

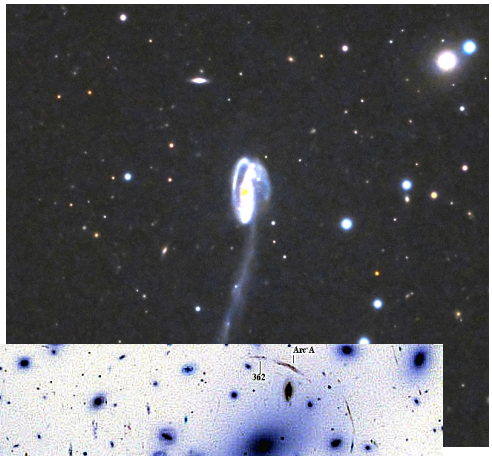
Shǎowèi, κ Draconis, almost 4th magnitude, has an interesting history. On the chart you will see a partial oval from Thuban up past λ and on into Ursa Major and Camelopardolis. This is the "right wall" or historically, "the Second Star of Right Wall of Purple Forbidden Enclosure", representing the "Second Chief Judge". Kappa κ also has an interesting history as an ignored pole star. Kappa was closest to the pole after Thuban vacated the spot for almost 1800 years but was never acknowledged because Kochab, β Ursae Minors, was also nearish and 2nd magnitude.

Alsafi is the name for σ Draconis. It is historically a part of a three star asterism containing sigma, epsilon and tau. Alsafi is the official name of σ sigma. The name comes for the tripod that held the nomad's cook pot. Interestingly, it is also part of a kitchen in Chinese astronomy, marked on the charts and consisting of rho, pi, delta, epsilon and **64** Draconis.



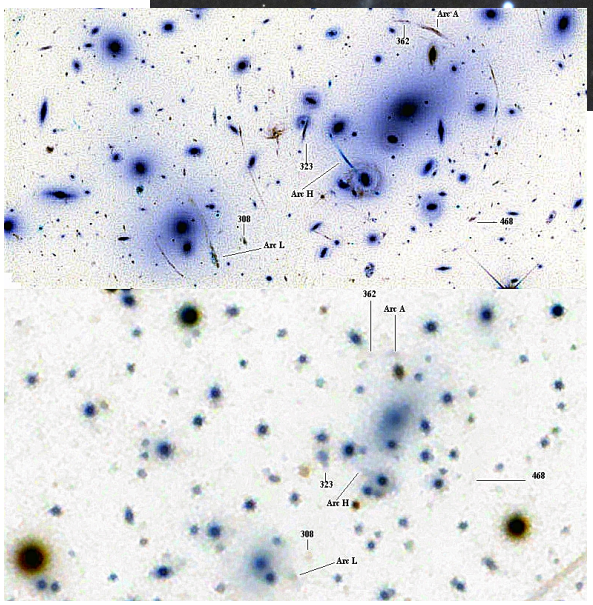
Nu Draconis along with gamma, Mu and Xi make up the head of the dragon and the "Mother Camels" in Arabic. Kuma, the proper name for Nu, seems to have no etymology. If you ask Google, it will tell you it translates to the Japanese for bear.

You will find 42 Draconis up by the NEP in the curve of the neck. 42 is named Fafnir and its planet named Orbitar. Orbitar is a made up name referring the NASA space launches. Fafnir is a Norse dwarf that was turned into a dragon. The names were nominated to the exoplanets competition by Brevard County, FL.



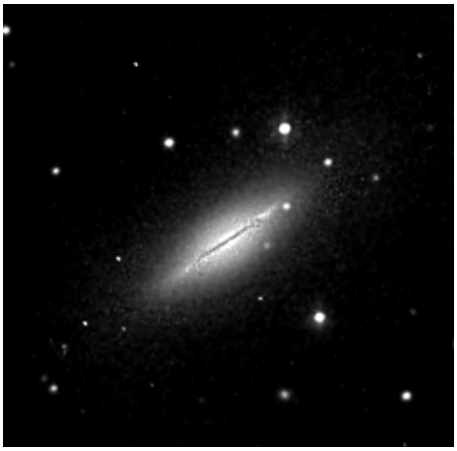
I read and reread all of Frank Herbert's Dune books. Admiring the Freman and despising the Harkonnens. μ Draconis is Arrakis, now spelled Alrakis. Mu is a multiple star system. Alrakis B is a double and Alrakis C is at 14th magnitude. In the novels, Arrakis is a planet in the Canopus star system.

Draco is big, over 1000 square degrees, in the top ten of constellation's size. It has over 300 extrasolar planets, 19 galaxies of 12th magnitude and brighter and the number goes up to 29 when we go into the 13th.
There are two spectacular planetary nebula and two Caldwell objects, C-3, NGC 4236, up by **κ** kappa, is a loosely mottled galaxy that can be seen at 10th magnitude. C6 is NGC 6543,the Cats Eye Nebula. Burnham lists 116 double and multiple star systems and 49 variables.

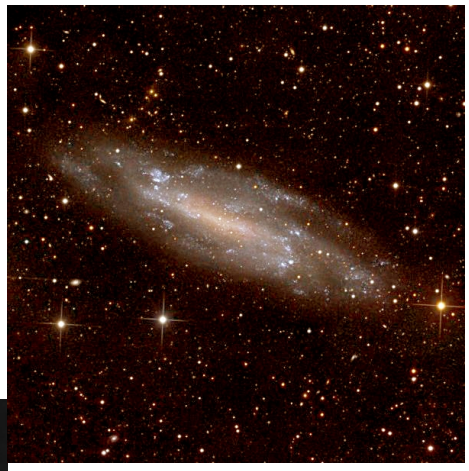


There are a number of deep sky objects in Draco that would stretch the imagination and equipment of just about any amateur. Abell 2218 is huge. Nearly 10,000 galaxies and one of the strongest gravitational lenses known. Then there is the Tadpole galaxy, official name Arp 188, or the even more compelling name of UGC 10214.
https://www.astrobin.com/full/288378/B/
At 14th magnitude the Tadpole will not be easy to see. But it is possible to see the tidal tail and maybe even its disrupter galaxy hidden between its spiral arms with enough aperture.

The professional images by Hubble of Abell 2218 are something to marvel at, but visually it will be hard to find. A diligent search found that the brightest galaxy in the frame is UGC413.
14" LX200R @ f/10, L=6x20' RGB=2x20', STL-11000XM, Paramount ME (*Image by Rick Johnson, now deceased*)
https://images.mantrapskies.com/catalog/OTHER/ABELL2218/
I included the specs on this image, finding it hard to believe that an amateur could do such work. If you connect to the link and blow up the image, the arcs show up quite well.



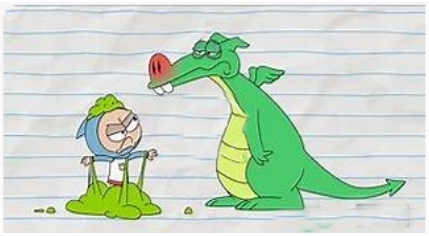
M102, 9th mag, also known as NGC 5866 has been an enigma since added to Messier's list It was discovered in the late 1700's by Messier or maybe Méchain and almost certainly a decade later by Herschel. Since we amateurs today seem to believe the giants on whose shoulders we stand could do no wrong, the controversy over which galaxy they were talking about continued until recently when the IAU decided that M102 and 5866 were the same animal. Photographs tend to blow out the galaxy somewhat. A decent night and some power should resolve the dark lane in the middle of the spindle with even a six inch Newtonian.
https://ocastronomers.org/wp-content/uploads/2018/12/NGC-5866-36m-6F8r1-copy.jpg



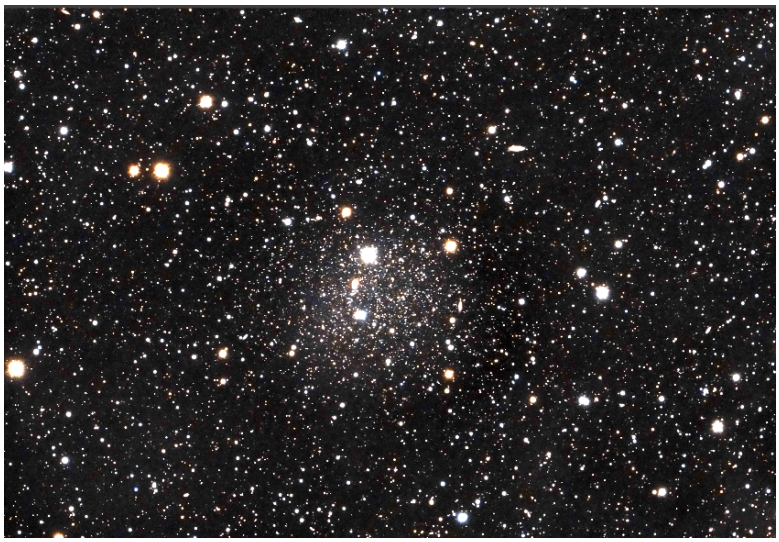
N4125 and N4236 are up by the tail of Draco and noticeable because they are both in the 10th magnitude. 4125 is a slightly flattened elliptical that Burham tells us has a bright nucleus that should be easy for you to pick out. 4236 is different. It is a mottled spiral with faint surface brightness but as big as the ¾ moon on its large dimension. Try to find the knots of star formation on the spiral arms.
https://www.coldphotons.com/zen_astro/astro_images/NGC4236_LRGB_web.jpg

https://www.astrobin.com/full/252823/0/

This rather remarkable image, of 4125 taken by Kathy Walter in 2016, also shows the supernova.



https://www.astrobin.com/full/169092/0/
N 5981, 82, 85 Jussi Koponen
https://cosmic-colors.com/galaxies/draco-dwarf/ **Jarrett Trezzo**



You may be able to see 5982 visually. Its 11th magnitude with a somewhat brighter nucleus, but small. 5985 is 12th, the big spiral next to it and 5981 is the other edge-on galaxy, listed at 14> mag. The small group is known as the Draco Triple.

As we continue our discussion on Dwarf galaxies, Draco offers us an object that should be one of our easier. The Draco dwarf is 10th magnitude and, as you can see, has a number of stars usable as finders. The galaxy is listed as a spheroidal dwarf galaxy but is slightly more oval than round. Still, it is slightly larger that the full moon so I expect it to nearly fill the field of view of a 25mm to 32mm eyepiece.

Draco is old. Writers concentrate on the Greek legends, with a few references to Phoenician, Chaldean and Roman authors. But, Draco goes back much further than that. 30,000 years ago Thuban was the pole star. That is near the peak of our last ice age and people were migrating from Africa to the east and to the west and Neanderthals were living in the frozen north. Draco was right there for the cave artists, hunters and spiritual leaders.

The stars of Draco have certainly moved, and our rock art could also be serpents and imaginative steeds.

What we do know is that our ancestors in the last ice age ascribed importance to that sinuous line of stars circling the north. And, as Scotty said; Since Then, Till Now, We are All Poets.

Dark Skys Dave