WEYMOUTH ASTRONOMY

Sky Watcher

Volume 16, Issue 11
8 April 2022

Trips / Events

Ideas for trips and events always welcome!

events@weymouthastronomy.co.uk

Society Meetings

Apr 20-CADAS– Is Dark Matter ordinary matter? By Richard Miles

3 May—WAS—Historical Observations of Mars by David Strange

7 June—WAS—The Birth of the Solar System by James Fradgley

15 June—CADAS—Bob Mizon *The Cape York Meteorite*

5 July - WAS—The Green Flash by Mike Frost

Lots more to come in the new year. Stay tuned!

WAC Upcoming Events:

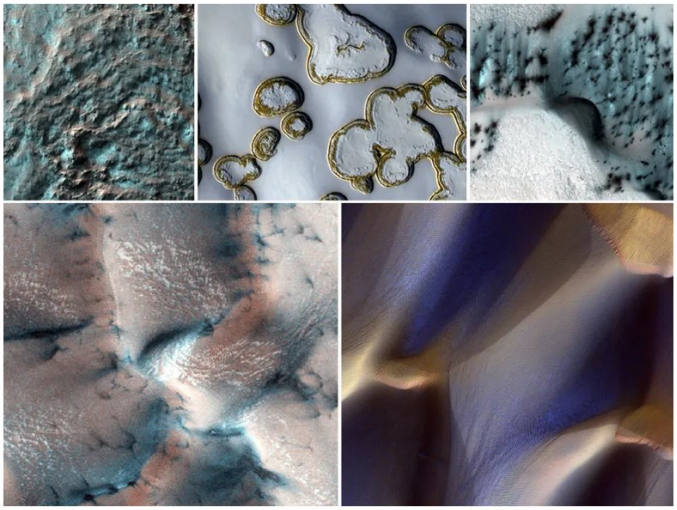
13 May	AGM - James Fradgley (Face to face and Zoom)
17 June	Solar System Walk in Weymouth Bay - Sara Harpley and John Macdonald
8 July	Bob Mizon - Stars over the Nile: Ancient Egyptian Astronomy. (Zoom only)

Latest News:

A recent article from EOS is quite interesting entitled 'Mars's Dust Cycle Controls Its Polar Vortex and Snowfall.' It discusses the theory that on Earth, the water cycle is a dominant climate force. On Mars, it's the dust.

You may have seen this for yourself when observing Mars during opposition when a dust storm rapidly encircles the planet thereby obscuring all the surface features.

https://tinyurl.com/4345424t



Images from the Mars Reconnaissance Orbiter showcase the variety of snowy landscapes that grace Mars's surface. Clockwise from top left: frost in late fall, summer ice at the south pole, crescent dunes at the north pole, frost in the dunes of Aonia Terra in the southern hemisphere, and cracked ice over dunes in springtime. Credit: Mars Reconnaissance Orbiter/NASA, Public Domain

Happy Easter to All and Until next month...Clear Skies! ~ Sheri

Springtime Catspotting: Lynx and Leo Minor

by David Prosper

Many constellations are bright, big, and fairly easy to spot. Others can be surprisingly small and faint, but with practice even these challenging star patterns become easier to discern. A couple of fun fainter constellations can be found in between the brighter stars of Ursa Major, Leo, and Gemini: **Lynx** and **Leo Minor**, two wild cats hunting among the menagerie of animal-themed northern star patterns!

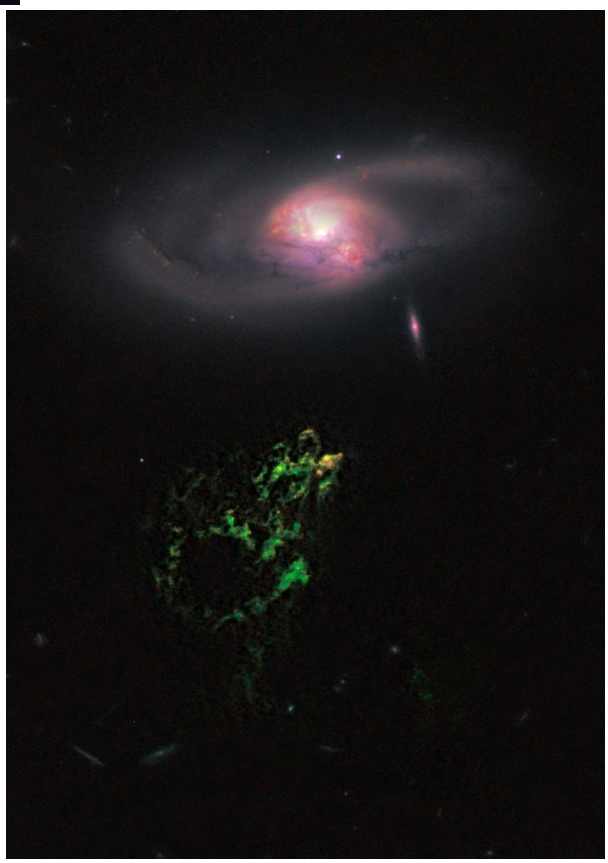
Lynx, named for the species of wild cat, is seen as a faint zigzag pattern found between Ursa Major, Gemini, and Auriga. Grab a telescope and try to spot the remote starry orb of globular cluster NGC 2419. As it is so distant compared to other globular clusters - 300,000 light years from both our solar system and the center of the Milky Way - it was thought that this cluster may be the remnants of a dwarf galaxy consumed by our own. Additional studies have muddied the waters concerning its possible origins, revealing two distinct populations of stars residing in NGC 2419, which is unusual for normally-homogenous globular clusters and marks it as a fascinating object for further research.

Leo Minor is a faint and diminutive set of stars. Its "triangle" is most noticeable, tucked in between Leo and Ursa Major. Leo Minor is the cub of Leo the Lion, similar to Ursa Minor being the cub to the Great Bear of Ursa Major. While home to some interesting galaxies that can be observed from large amateur scopes under dark skies, perhaps the most intriguing object found within Leo Minor's borders is Hanny's Voorwerp. This unusual deep-space object is thought to be a possible "light echo" of a quasar in neighboring galaxy IC 2497 that has recently "switched off." It was

Cats (more!)

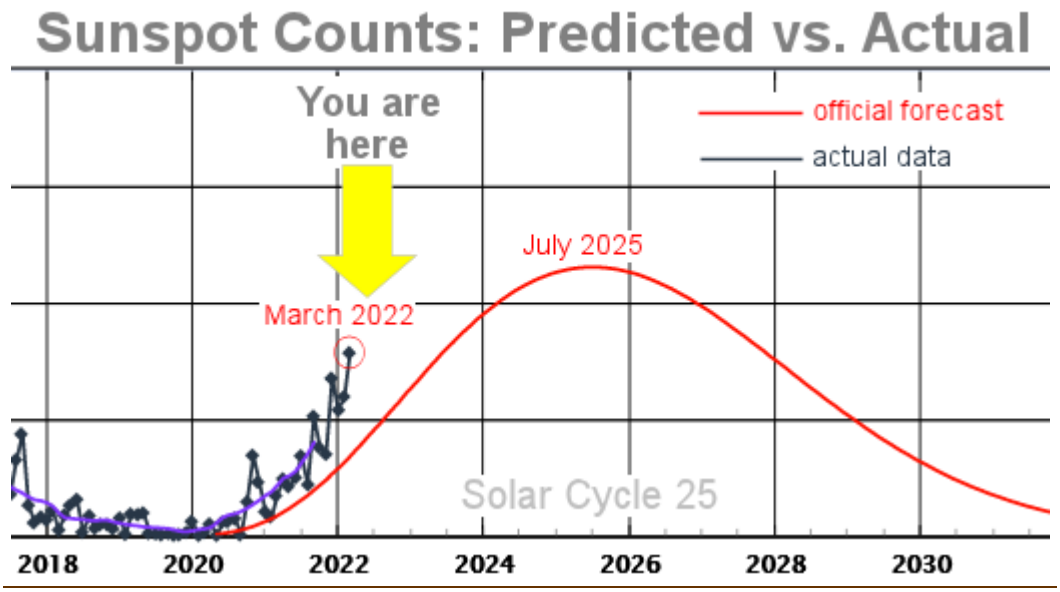
found by Hanny van Arkel, a Dutch schoolteacher, via her participation in the Galaxy Zoo citizen science project. Since then a few more intriguing objects similar to Hanny's discovery have been found, called "Voorwerpjes."Lynx and Leo Minor are relatively "new" constellations, as they were both created by the legendarily sharp-eyed European astronomer Johannes Hevelius in the late 1600s. A few other constellations originated by Hevelius are still in official use: Canes Venatici, Lacerta, Scutum, Sextans, and Vulpecula. What if your eyes aren't quite as sharp as Johannes Hevelius – or if your weather and light pollution make searching for fainter stars more difficult than enjoyable? See if you can spot the next Voorwerp by participating in one of the many citizen science programs offered by NASA at science.nasa.gov/citizenscience! And of course, you can find the latest updates and observations of even more dim and distant objects at nasa.gov.

Map of the sky around Lynx and Leo Minor. Notice the prevalence of animal-themed constellations in this area, making it a sort of celestial menagerie. If you are having difficulty locating the fainter stars of Leo Minor and Lynx, don't fret; they are indeed a challenge. Hevelius even named the constellation as reference to the quality of eyesight one needs in order to discern these faint stars, since supposedly one would need eyes as sharp as a Lynx to see it! Darker skies will indeed make your search easier; light pollution, even a relatively bright Moon, will overwhelm the faint stars for both of these celestial wildcats. While you will be able to see NGC 2419 with a backyard telescope, Hanny's Voorwerp is far too faint, but its location is still marked. A few fainter constellation labels and diagrams in this region have been omitted for clarity.



Hanny's Voorwerp and the neighboring galaxy IC 2497, as imaged by Hubble. Credits: NASA, ESA, W. Keel (University of Alabama), and the Galaxy Zoo Team Source: hubblesite.org/contents/news-releases/2011/news-2011-01.html

SOLAR CYCLE UPDATE [5 April 2022]: New sunspot counts from NOAA confirm that Solar Cycle 25 is racing ahead of the official forecast--and the gap is growing:



See the complete labeled plot or play with an interactive version from NOAA

Sunspot counts have now exceeded predictions for 18 straight months. The monthly value at the end of March was more than twice the forecast, and the highest in nearly 7 years.

The "official forecast" comes from the Solar Cycle Prediction Panel, a group of scientists representing NOAA, NASA and International Space Environmental Services (ISES). The Panel predicted that Solar Cycle 25 would peak in July 2025 as a relatively weak cycle, similar in magnitude to its predecessor Solar Cycle 24. Instead, Solar Cycle 25 is shaping up to be stronger.

In March 2022, the sun produced 146 solar flares, including one X-flare and 13 M-flares. Auroras were sighted as far south as Colorado (+38N) and Nebraska (+42N). Multiple shortwave radio blackouts disrupted communications on ships at sea and airplanes flying over the poles. If current trends continue, April will be even busier. Stay tuned.

A few recent images from Chris Bowden of the Running Man and the Orion Nebula.

A great farewell to the winter constellations as the nights are getting lighter.

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Skymaps.com—Feel free to download the full article directly each month.