Tāhuna GLENORCHY DARK SKIES SANCTUARY

Newsletter May 2026

Autumn has got off to the great start with a decent dump of snow on the tops in April. Although snow increases the amount of reflected light in the night sky, it also makes for great astrophotography.

This month we have a blue moon. (The full moon is seen twice in a month) so all those things that only get done once in a blue moon? This is the month to do it!

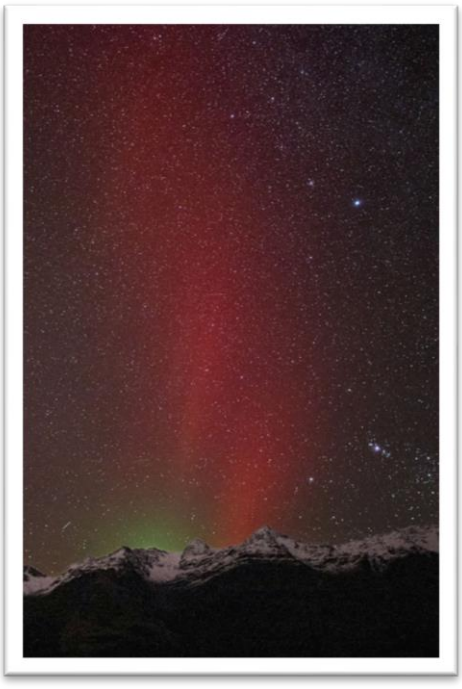
The Dark Sky group has been working with the Liger Academy, and the ideas presented so far have been inspiring. One of the first ideas we hope to get off the ground is a phone app for the Glenorchy area to assist with astrophotography. This just needs a few tweaks and some funding to get it onto the app store. We're hoping it will be "live" in the next couple of months.

This month we're looking at Saturn. In mythology Saturn is the father of Jupiter. As a planet it is the second gas giant, and the second largest planet in the solar system.

At the moment Saturn is visible in the sky just before dawn. This is another planet that astonished Galileo. For a while he thought the planet might have enormous jug ears!!! No one had ever seen a planet with rings around it before.

Coming up this month:

- 1st May: Full Moon
- 6th May : Eta Aquariid meteor shower maximum
- 16th May: New Moon
- 31st May: Antares 0.4 degrees north of the moon. An occultation will be visible from New Zealand
- 31st May: Full moon (Blue moon)



The archaeoastonomy course this month was all about methodology. We had to take readings with a compass to work out where the sun, moon or stars might be rising or setting on the horizon. We then worked out how to correct for the difference between magnetic and true readings, and how to correct your readings for the mountains or buildings that may be in the way.

This is exactly what we need to know for laying out the position markers for the star compass. The next course will go into this in more depth including how our ancestors worked out these directions without precision compasses and clinometers. Our homework for the next month is to go out and take readings around the town and find out if there are any alignments. Does our wharf shed face true East?

With the return of the galaxy centre (and dark night getting earlier) astro-photography is popular again. Especially since the solar maximus is continuing for longer than expected and we are still getting some awesome auroras.

photo credit: Aurora McLennan

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World Astronomy News

NASA's Artemis 2 moon mission

This month it is all about the successful Orion flight around the moon AND safe return to Earth.

A quick explaination of terms ...

Artemis is the "Mission" (i.e. the name of the project).

Orion is the brand name of the space ship...Like Ford is the brand name of a car.

Integrity is the name the astronauts called their particular space ship.

We were all treated to an awesome array of new Moon and Earth photos. The live stream was also spectacular, if a little nerve wracking at times.

It is sad to see that this new influx of images has kicked off a new flood of conspiracy theories; such as, why are there no stars in this image? It must be fake! Although being sceptical of images you see on the internet is a good thing, a wee bit of knowledge is also helpful. There are no stars because of the way a camera works.

Stars are extremely dim. Our sun is so bright even its reflection on things like our moon, on the Earth and on spacecraft, blows out any possibility of seeing subtle light sources such as stars millions of light years away. That's why space looks mostly "black" in these photos.

The Artemis crew could also see an eclipse from their space ship that lasted almost an hour. The bright spots in this photo (left) are the planets Venus, Mars and Saturn. You can also see a bit of reflected light from the Earth on the left side of the moon...some Earthshine.

AND Splashdown!!!

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Learn the night sky

This month...

The Moon will be full on the 1st and 31st of May and the New Moon is on the 16th of May.
Dark night begins at 7:25 pm on the 1st of May and begins at 7:00 pm by the end of the month on the 31st of May.

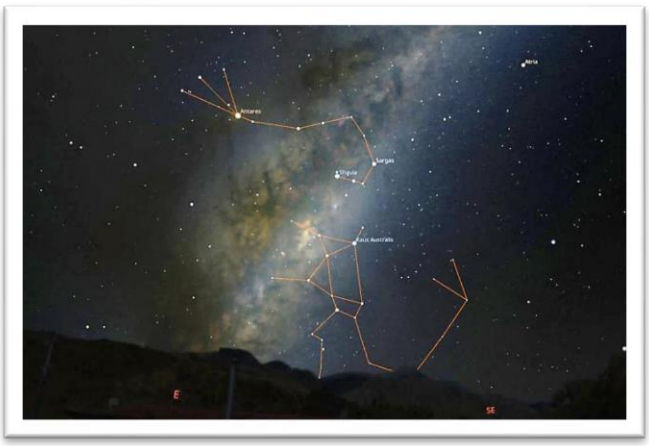
In the Morning Sky

The Eta Aquariids Meteor Shower is best viewed before dawn, with elevated activity expected around May 4-6. This shower produces fast, bright meteors originating from the Aquarius constellation. Saturn is visible just before sunrise, as is Mars.

In the Evening Sky

Comet C/2025 R3 (PANSTARRS). Here in the Southern Hemisphere we had to wait until late April, early May to try to spot Comet PanSTARRS, low in the western horizon just after sunset. But the situation rapidly improves in early May as the comet gets higher just after dusk. The comet is barely visible to the eye but an easy target with binoculars. Look just above where the sun sets.

Venus starts the month in Taurus, and then moves into Gemini and is visible after sunset.



Jupiter is still in Gemini and is visible from sunset until about midnight.

Sagittarius is now seen rising in the east with Scorpius above it. Sagittarius marks a bright bulge in the Milky Way and also contains Sagittarius A, the supermassive black hole at the centre of our galaxy.

Scorpius is the zenith constellation for New Zealand. In other words, this constellation will pass directly overhead in New Zealand and so was (and still is) an important navigation aid.

Notable Deep Sky Objects in Sagittarius and Scorpio

Sagittarius, being the direction of the centre of the galaxy, is rich in deep sky objects to observe in binoculars or a telescope such as;

Lagoon Nebula (left)
Trifid Nebula
Small Sagittarius Star Cloud
M22 (Great Sagittarius Cluster)

While Scorpio is another area rich in deep sky objects

Messier 7 (Ptolemy's Cluster, Butterfly Cluster)
Messier 4 (NGC 6121): One of the closest globular clusters to Earth, easily found near the star Antares.
Cat's Paw Nebula.

Let's talk about Saturn

Saturn in Roman mythology, and Kronos to the Greeks, was the father of Jupiter /Zeus, the God of agriculture and also known as Father time.

Saturn, the planet, is the second of our gas giants in the solar system but is smaller than its neighbour Jupiter. Jupiter is 11 times wider than Earth, while Saturn is just 9 times wider, although its rings make it appear about the same size.

Fun fact: Saturn is the least dense planet in the solar system. If you had a big enough pool of water, then Saturn would float! This is because Saturn is composed mostly of hydrogen and helium.

The distances between the planets are now much bigger. Saturn is an average distance of 1.4 billion kilometres, or 9.5 astronomical units away from the Sun. One astronomical unit is the distance from the Sun to Earth. From this distance, it takes sunlight 80 minutes to travel from the Sun to Saturn.

One day on Saturn (the time it takes for Saturn to spin around once) takes only 10.7 hours, and Saturn makes a complete orbit around the Sun in about 29.4 Earth years.

Its axis is tilted by 26.73 degrees. This means that Saturn has seasons like Earth. It also means we see Saturn's rings from a different perspective throughout the year.

Saturn has more than 274 moons! The more than any other planet in our solar system.

During its many years in Saturn's orbit, NASA's Cassini spacecraft discovered previously unknown moons, solved mysteries about known ones, and studied their interactions with the rings and uncovered new mysteries – including the discovery on an ocean moon with potential ingredients for life – that will engage a whole new generation of space scientists.

Saturn is *not* the only planet with rings, but Saturn's rings *are* the most spectacular.

Saturn's rings are thought to be pieces of comets, asteroids, or shattered moons that broke up before they reached the planet, torn apart by Saturn's powerful gravity. They are made of billions of small chunks of ice and rock coated with other materials such as dust. The ring particles mostly range from tiny, dust-sized icy grains to chunks as big as a house. A few particles are as large as mountains. Interestingly, each ring orbits at a different speed around the planet.

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A reminder about quality Lighting at night

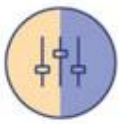
The Five Principles of Responsible Outdoor Lighting at Night

Useful

All light should have a clear purpose. Use lighting only when and where it is needed.

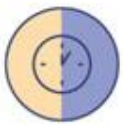
Targeted

Shield and aim your light so it only falls downward and where it is useful.



Low-level

Light should be no brighter than necessary to save money and reduce glare.



Controlled

Lighting should only be on when needed. Use timers and motion sensors.

Warm-colored

Warm-colored light causes less skyglow. Use amber-toned lighting when possible.

That's all this month. Keep it starry, and keep looking up.