Tāhuna GLENORCHY DARK SKIES SANCTUARY

Newsletter June 2026

Wow, next month we will have completed one year of Dark Sky newsletters!

All previous newsletters are available on our website for you to read. We've certainly come a long way.

This month we're looking at the planet Uranus. In mythology Uranus (Ouranos) is the father of Kronos (Saturn). The planet it is known as an ice giant, and is the 7th planet in our solar system.

At the moment Uranus is visible in the sky for about an hour before dawn. You may need a telescope or binoculars to see it clearly, but it **is** visible with the naked eye, so if you are up early ... see if you can find it.

The archaeoastonomy course this month has emphasised the importance of research. So I'm reading all I can about Pacific star compasses, and star lore of the early Maori. There is a lot of information to get through.

I have been able to download the desk top version of Stellarium, and import some custom Glenorchy backgrounds so I can play with stellar alignments for our compass site. I am pleased to report that there are indeed some fun alignments that we can consider for the future.

This month:

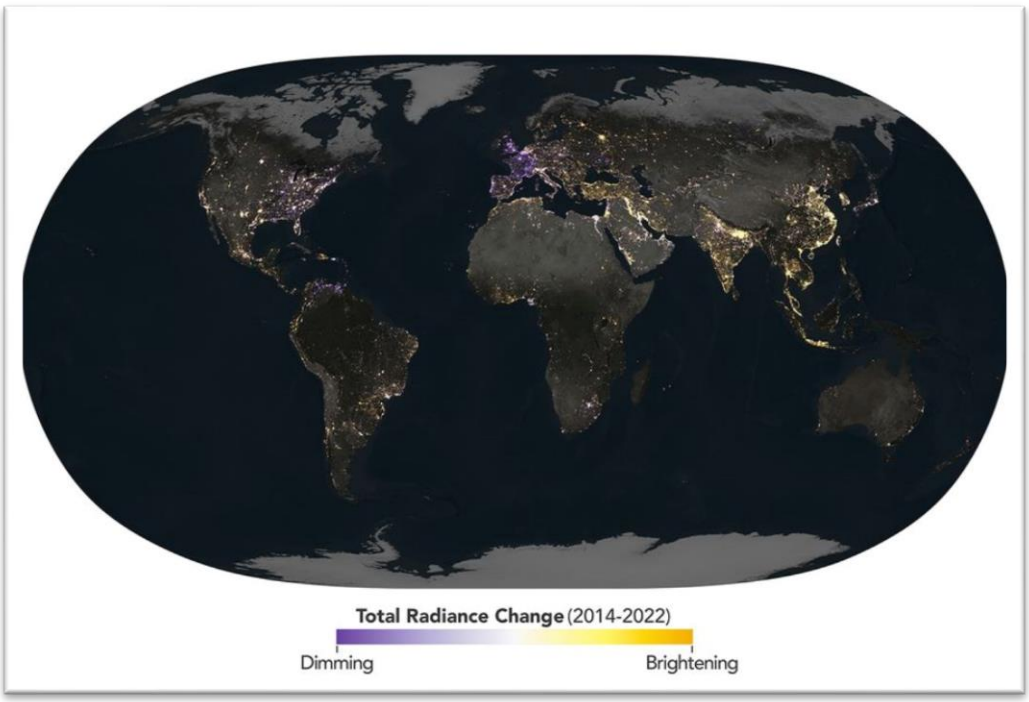
- 8th and 9th June : Venus and Jupiter in close conjunction
- 15th June: New Moon
- 18th June: Try to see Venus during the day. Look North at 3:30 - 4:00pm
- 21st June: Winter Solstice
- 29th June: Full Moon
- 11th July: Save the date...Matariki Midwinter Dinner. Theme: Get your skink on! Lizards, geckos, skinks...mokomoko at their finest

World Astronomy News

After the excitement of the Artemis 2 moon mission, there doesn't seem to be much to report about in astronomy worldwide. NASA is struggling with budget cuts, but we are assured that the next stage of the Artemis mission(s) will be going ahead.

This mission (Artemis 3) won't be the expected lunar landing, but instead astronauts will be practicing docking manoeuvres in Earth's orbit. The launch for this mission is scheduled for 2027.

Meanwhile NASA missions are tracking record-breaking solar radio bursts, while the recently launched SMILE mission (a joint ESA and Chinese Academy of Sciences venture) is investigating how Earth's magnetic shield interacts with the solar wind.



Another important project is **Night time Climate Mapping:** NASA's Black Marble project is rolling out high-resolution global satellite imaging to map shifts in artificial lighting and human energy consumption across the globe.

In the image to the left, the golden areas have increased in light pollution while the areas in purple have decreased. Although It is probable that some of this dimming is caused by power outages due to the war in Ukraine, some is likely to be increasing use of LED lights with better outcomes for dark skies. It's awesome to see parts of Europe have decreased their light pollution. It can be done!!!

If you go to the NASA website and take a close up look of the map, sadly it seems New Zealand has increased in brightness.

Learn the night sky

This month...

The New Moon is on the 15th of June, and the Moon will be full on 29th of June. Our winter solstice is on the 21st of June. Solstice literally means the sun is standing still. It seems to rise on the same spot on the horizon for about a week before it can be seen to be travelling back the other way. Back towards Hine Raumati, the summer wife. Dark night begins at 6:59 pm on the 1st of June and begins at 6:39 pm by the end of the month on the 30th of June.

In the Morning Sky

Saturn is rising earlier and is well up in the east in the morning sky and Mars is now visible as well.

In the Evening Sky

Venus and Jupiter can be seen in the northwest sky just after sunset, earning their nickname as the 'evening stars.' Venus is hanging just below Jupiter at the start of the month. Venus sets below the horizon shortly after 7 pm, while Jupiter sticks around until about 8. Night by night, Venus climbs higher, and Jupiter slowly drifts lower.

By the 10th of June , they'll look really close—only about the distance of three full moons apart—setting together near 7:40. The next evening, they'll line up side-by-side. After that, Venus takes the lead, soaring above Jupiter.

Keep an eye on the Moon too—it'll be near Jupiter on the 17th and floats above Venus on the 18th. If you're up for a challenge, there's even a chance to spot Venus in the daytime on the afternoon of June 18. Around 3:30-4:00pm, look toward the north where Venus will be about four degrees left of a thin crescent Moon, both low in the sky. It's not often you can see planets during the day.

Next in our line-up of constellations is Capricorn.
It rises fairly late in the evening, around 10.00 in mid-June. This strange constellation is half goat, half fish and made of fairly faint stars. Its main claim to fame is the Tropic of Capricorn.

The Tropic of Capricorn is the southernmost circle of latitude where the Sun can appear directly overhead, at noon on the December solstice. Located at roughly 23.4 degrees south of the Equator, it acts as a critical boundary separating the tropical and temperate zones in the Southern Hemisphere .It is named after the constellation *Capricornus* because over 2,000 years ago, the Sun aligned with this constellation during the December solstice.
Due to changes in Earth's axial precession, the Sun is actually located in the Sagittarius constellation during the December solstice today.

Notable Deep Sky Objects in Capricorn

The brightest star in Capricornus is Deneb. It is an eclipsing binary star system located just 39 light-years from Earth. You can also find...

Messier 30 (M30): The only prominent Messier object in the constellation. It is a dense, centrally condensed globular cluster about 27,000 light-years away, visible with small telescopes or binoculars. And also...

NGC 6907: A large, barred spiral galaxy. It requires a medium to large telescope to spot.

Let's talk about Uranus

Uranus (Ouranos) is the only planet to be named after a Greek god rather than a Roman one.

Uranus was the first planet to be discovered with a telescope. It can be seen with the naked eye, but it is very faint and slow moving and so ancient people thought it was a star. It wasn't recognised as a planet until 1781.

William Herschel had the naming right for the discovery of the planet, and he tried to name it Georgium Sidus (George's star) after King George III. This was eventually vetoed, but his ploy worked and he was appointed the Court Astronomer (sometimes referred to as the Private Astronomer to the King). This royal patronage allowed him to quit his career as a musician and focus entirely on astronomy.

Although the planet was eventually named for a Greek God, Ouranos - the father of Kronos (Saturn) all 27 moons of Uranus have names from the works of Shakespeare and Alexander Pope.

Fun fact: *Uranus spins on its side. It seems to roll around its orbit rather than spinning like the rest of the planets. It also rotates in the opposite direction to the other planets. (Except for Venus which also spins backwards).*

Uranus is known as an ice giant, and unlike rocky planets, it doesn't have a solid surface. Instead, it's mostly made up of swirling icy fluids, on top of a small rocky core. A day on Uranus lasts about 17 hours, while a full trip around the Sun takes roughly 84 Earth years.

What really sets Uranus apart is the way it spins: its equator tilts almost completely sideways compared to its orbit. Scientists think this odd tilt happened after a huge collision with a planet-sized object long ago. Because of this, Uranus experiences some of the wildest seasons in the solar system. For about a quarter of its long year, one pole basks in constant sunlight while the other side plunges into a dark winter that lasts about 21 years.

The planet has a faint set of 13 rings. They are hard to see as they are made of dust and rocks and very small particles of ice rather than larger reflective ice particles like Saturn.

In 2018, scientists got a closer look at Uranus's upper atmosphere and discovered something surprising—the clouds are made of frozen hydrogen sulphide. That's the same stuff that smells like rotten eggs.

Not only that, but deep in Uranus's atmosphere, the crushing pressure and blazing heat likely turn carbon into diamonds, making it rain gems far below the clouds. Scientists think Neptune might experience an even more intense diamond rain.

Uranus is a wild place—strange, beautiful, and full of surprises. Far from the boring planet it was once thought to be. And has a much better name than Planet George!

Tāhuna GLENORCHY DARK SKIES SANCTUARY

A reminder about quality lighting at night

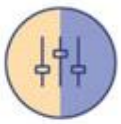
The Five Principles of Responsible Outdoor Lighting at Night

Useful

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

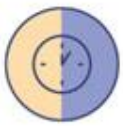
Targeted

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.