The Night Sky in August

Bright stars are widely scattered over the sky. Whanui Vega on the north skyline is balanced by Atutahi Canopus low in the south. Both twinkle with all colours as their white light is broken up by the air, but Whanui, being fainter, is less obvious. Orange Ruawāhia Arcturus is in the northwest, twinkling red and green as it sets. Atutahi is the second brightest true star. (Takurua Sirius, the brightest star, is in the morning sky.)

North of the zenith is orange Rehua Antares, marking the body of Scorpius. Te Tauihi the Scorpion's tail hooks around the zenith like a back-to-front question mark. Rehua and Te Tauihi make the fish-hook of Maui in Māori star lore. Rehua is a red giant star: 600 light years̽ away and 19 000 times brighter than the sun. Below or right of Te Tauihi is 'the teapot' made by the brightest stars of Sagittarius. It is upside down in our southern hemisphere view.

Midway down the southwest sky The Pointers, Ranginui Beta and Hakihea Alpha Centauri, point down and right toward Mahutonga Crux the Southern Cross. Hakihea is the third brightest star in the sky and the closest of the naked eye stars, just 4.3 light years away. Ranginui, like most of the stars in Mahutonga, is a blue-giant star hundreds of light years away and thousands of times brighter than the sun.

Te Mangoroa The Milky Way is brightest and broadest overhead in Scorpius and Sagittarius. In a dark sky it can be traced down past the Pointers and Crux into the southwest. To the northeast it passes Pou-tu-te-rangi Altair, meeting the skyline right of Whanui. Te Mangoroa is our edgewise view of the galaxy, the pancake of billions of stars including the sun. The thick hub of the galaxy is in Sagittarius while the actual centre is hidden by dust clouds in space. The nearer dust clouds appear as gaps and slots in the Milky Way. Binoculars show many clusters of stars and some glowing gas clouds in the Te Mangoroa.

Tuputuputu and Tioreore The Large and Small Clouds of Magellan and look like two misty patches of light low in the south, easily seen by eye on a dark moonless night. They are galaxies like our Milky Way but much smaller and about 180 000 light years away.

**Whiro Mercury** makes its best evening sky appearance of the year in August. At the beginning of the month it is above and right of Kōpū Venus, and is the second brightest body in the western sky after Kōpū. At mid-month Whiro is setting due west two hours after the Sun. You can tell it is a planet and not a star as it doesn’t twinkle, reflecting rather than making light. Whiro sinks lower in the twilight in the second half of August as it moves between us and Sun. It also fades as more of its sunny side is turned away from us. Marama the Moon will be below Whiro and Matawhero on the 18th .

**Kōpū Venus** is the brilliant evening star at the beginning of the month, setting around 7:30pm in the north-western sky. It slips lower each night as it moves between us and the Sun. By the 10th it is setting 40 minutes after the Sun. It disappears in the twilight soon after that. After passing between us and the Sun on the 13th Kōpū appears in the eastern dawn sky. By the 20th it is rising an hour before the Sun.

**Matawhero Mars** is above and right of Whiro, looking like a reddish star in the western sky. Marama will be below Whiro and Matawhero on the 18th and above and right of Matawhero on the 19th .

**Hine-i-tīweka Jupiter** rises after 1 a.m. at the beginning of the month, and before midnight at the end. It is the brightest body in the northern morning sky till Kōpū appears and shines with a steady golden light. Marama will be near Hine-i-tīweka on the morning of the 9th.

**Pareārau Saturn** rises due east before 8 pm at the beginning of the month. It looks like a medium bright star with a cream tint. By the end of the month it is up at dusk. The rings of Pareārau are visible in any telescope magnifying 20x or more. Its biggest moon, Titan, is four ring-diameters from the planet. Big telescopes show other moons looking like faint stars closer in than Titan. Marama will be near Pareārau on the night of August 2nd – 3rd and again on the 30th – 31st. At dawn Pārerau is low in the western sky.

Adapted from Alan Gilmore, Mt John Observatory of the University of Canterbury