# The August Night Sky

Bright stars are widely scattered over the sky. Whānui/Vega on the north skyline is balanced by Atutahi/Canopus low in the south. Canopus twinkles with all colours as its white light is broken up by the air. So does Vega but, being fainter, it's not so obvious. Orange Ruawāhia/Arcturus is in the northwest, twinkling red and green as it sets. Canopus is the second brightest true star. (Takurua/Sirius, the brightest star, is in the morning sky this month.) Arcturus is the fourth-brightest star in the sky and the brightest north of the equator. Vega is the fifth brightest of all the stars and the second brightest north of the equator.

North of the zenith is orange Rehua/Antares, marking the body of Te Matau a Māui/Scorpius. The Scorpion's tail hooks around the zenith like a back-to-front question mark. Antares and the tail make the 'fish-hook of Maui' in Māori star lore. Antares is a red giant star: 600 light-years away and 19,000 times brighter than the sun. Below or right of the Scorpion's tail 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 ', Beta and Alpha Centauri, point down and rightward to Māhutonga (also known as Crux or the Southern Cross. Hakihea/Alpha Centauri is the third brightest star in the sky and the closest of the naked-eye stars, 4.3 light-years away. Ranginui/Beta Centauri, like most of the stars in Crux, is a blue-giant star hundreds of light years away and thousands of times brighter than the sun.

Te Māngōra/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 Potū-te-rangi/Altair, meeting the skyline right of Vega. The Milky Way is our edgewise view of our galaxy, a pancake of billions of stars. The thick hub of the galaxy, 27,000 light years away, is in Sagittarius. 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 Milky Way. Nga Pātari/The Large and Small Clouds of Magellan 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. The LMC is about 160 000 light years away; the SMC about 200 000 light years away.

Six of the other seven planets are visible in July, rising in the east & setting in the west.

*Whiro/Mercury*: May be visible just below a very thin moon before sunrise in the northeast, with the beehive cluster close by. Difficult to see at the start of the month.

*Kōpū/Venus*: The ‘morning ‘star’, Venus rises in the northeast soon after 5 am at the beginning of the month and around 5:20 at the end. This brilliant silver orb will be close to Jupiter all month, only a degree (two full moon widths) apart, on the 12th & 13th. The Moon will be near the 2 planets on the 20th & 21st.

*Matawhero/Mars*: Mars is the only planet in the early evening sky, setting soon after 9 pm mid-month. It looks like a medium-bright orange-red star low in the west. It is 330 million km away, so appears tiny in a telescope. The Moon will be near Mars on the 26th.

*Kōpūnui/Jupiter*: At the beginning of the month Jupiter appears below and right of Venus, rising before 6 am. It rises four minutes earlier each day as it moves up the sky toward Venus. Compared to the morning ‘star’, Jupiter is a bit fainter and has a golden tint. Jupiter continues to move up the sky, rising around 4:20 at the end of August.

*Rongo/Saturn*: Saturn rises due east around 9:40pm at the beginning of the month and around 7:30 at the end. It looks like a medium-bright star with a cream tint, all on its own. It is likely to be fuzzy in a telescope when low in the sky. The ring is nearly edge-on to us so looks like a line on each side of the planet. The shadow of the ring makes a dark line across Saturn. Saturn’s larger moons orbit in the same plane as the rings so their shadows also cross the planet. On August 3rd, the shadow of Titan, Saturn’s biggest moon, will be on the planet when it rises. The shadow moves off just after 11 pm. On the 18th Titan’s shadow will again be on Saturn when it rises and will move off at 10 pm. The near-full Moon will be beside Saturn on the night of the 12th -13th.

*Tangaroa/Neptune*: Neptune shines with a blue-green light although it offers little detail on its tiny disk. Close to Saturn.

Star groups and single stars are coloured at 1st mention

References: RSNZ, Cosmic Pursuits, Astronomy.com, Pixieplots