**The October Night Sky**

The brightest stars are low in the north and south. Atutahi Canopus is low in the southeast at dusk, often twinkling colourfully. It swings up into the eastern sky during the night. On the north skyline is Whānui Vega, setting in the early evening. Places in the north of Aotearoa NZ will see Deneb near the north skyline in the middle of Te Māngōroa the Milky Way. Deneb is the brightest star in the cross-shaped constellation of Cygnus the swan. It is one of the most distant stars visible to the naked eye, around 2600 light years away.

High in the northeast the star ō-tama-rākau Fomalhaut, to the right of Rongo Saturn, marks the Southern Fish, Piscis Austrinus. Below and right of Fomalhaut is Marere o tonga Achernar, the same brightness as Rongo Saturn. The line continues down the sky to Atutahi Canopus.

Orange Rehua Antares is midway down the western sky. It marks the body of the Scorpion, a prominent constellation in October. Te tauihi the Scorpion's tail loops up the sky, making a back-to-front question mark with Rerehu Antares being the dot. The curved tail is the 'fish-hook of Maui'. Rerehu Antares is a red giant star, 20,000 times brighter than the sun. Above and right of the Scorpion's tail is 'the teapot' made by the brightest stars of Kaikōpere Sagittarius, upside down from the southern hemisphere.

In the southwest are 'The Pointers ', Hakihea and Ranginui, Alpha and Beta Centauri, making a vertical pair. They point down to Māhutonga Crux the Southern Cross. Hakihea, the top Pointer, is the closest naked eye star, just 4 light years away. Ranginui is a blue-giant star, very hot and very luminous, but much further away.

Te Māngōroa the Milky Way is brightest and broadest in Scorpius and Kaikōpere Sagittarius. In a dark sky it can be traced down to the south. In the north it meets the skyline right of Whānui Vega. Te Māngōroa the Milky Way is our edgewise view of the galaxy, the pancake of billions of stars of which the Sun is just one. The thick centre of the galaxy, with a large black hole, is just outside the Teapot's spout, but hidden by dust clouds. The dust clouds appear as gaps and slots in Te Māngōroa the Milky Way.

Tuputuputu and Tioreore the Large and Small Clouds of Magellan, look like two misty patches of light in the southeast sky above Canopus. Easily seen by eye on a dark moonless night, they are galaxies like our Milky Way but much smaller.

On moonless evenings in a dark rural sky the Zodiacal Light is visible in the west. It looks like late twilight: a faint broad column of light reaching up toward Antares, fading out at the Milky Way. It is sunlight reflecting off dust from a long-gone comet in the plane of the solar system.

**Whiro MERCURY:** Mercury stays too close to the Sun to be visible for most of the month.

**Kōpū VENUS:** The ‘morning star’, rises two hours before the Sun all month in the north-eastern sky. It is brighter than Jupiter and silver- white in colour. Marama the Moon will be below Venus on the 11th.

**Matawhero MARS:** In October the red planet becomes difficult to see as it slips into the glare of the setting Sun.

**Kōpūnui JUPITER:**  This planet rises just after 10 pm in early October though by month’s end is rising soon after sunset and visible all night. It is the brightest ‘star’ in the night sky, shining with a steady golden light. Marama will be near Jupiter on the 1st and 2nd and again on the 28th and 29th.

**Rongo SATURN:** In the mid-evenings beautiful Saturn is high in the northeast sky, well placed for telescope viewing and a unique cream colour. Saturn appears as an oval in a low-powered telescope as the ring and planet merge. Larger telescopes show the ring and Saturn's biggest moon, Titan, 4 ring-diameters from the planet. Smaller moons are closer in. A bright Marama is very close on the night of 24th October.

References:

Notes by Alan Gilmore at Mt John Observatory

<https://www.stardome.org.nz/star-charts--sky-spotter>

<http://www.pixieplots.co.nz/Maori-Star-Names>