**The October night sky**

The brightest stars are low in the north and south. Atutahi/Canopusis 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 Kaipō**/**Deneb near the north skyline in the middle of Te Māngōroa/the Milky Way. Kaipō/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.

 Midway up the northeast sky, the star Ō-tama-rākau/Fomalhaut marks the Southern Fish, Piscis Austrinus. Below and right of Fomalhaut is Marere-o-tonga/Achernar, a little brighter than Saturn. Fomalhaut, Achernar and Canopus make a long line down the sky.

 Midway down the western sky is orange Rehua/Antares, marking Mairerangi/ the body of the Scorpion. The Scorpion's tail loops up the sky, making a back-to-front question mark with Antares being the dot. The curved tail is the prow of the waka of Tamarereti this month. Above & right of the Scorpion's tail is an upside down ‘teapot' made by the brightest stars of Sagittarius.

 In the southwest are 'The Pointers ', Uruao/Alpha and Ranginui/Beta Centauri. They point down to Māhutonga/the Southern Cross. Alpha Centauri, the top Pointer, is the closest naked eye star 4.3 light-years away. Beta Centauri is a blue-giant star, very hot and very bright, hundreds of light-years away. To the naked eye, *Omega Centauri* looks like a small, hazy circular patch.  A good telescope will show the structure of this, the most striking globular cluster in the entire sky.

 Te Māngōroa/the Milky Way is brightest and broadest in ScorpiusandSagittarius. In a dark sky it can be traced down to the south. In the north it meets the skyline right of Vega. The Milky Way is our edgewise view of the galaxy, the pancake of billions of stars our Sun is part of. The galaxy centre, with a black hole four million times the sun's mass, is hidden by dust clouds in space. Its direction is a little outside the Teapot's spout. The dust clouds appear as gaps and slots in the Milky Way. A scan along the Milky Way with binoculars shows many clusters of stars and some glowing clouds of left-over gas, especially in Scorpius and Sagittarius and in the Carina region below Crux.

 Ngā Pātari/The Large and Small Clouds of Magellan, LMC and SMC, look like two misty patches of light in the southeast sky above Canopus. These small galaxies are easily seen by eye on a dark moonless night. They are both about 200 light years away.

 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 enclosing Venus and reaching up toward Antares, fading out at the Milky Way. It is sunlight reflecting off meteoric dust in the plane of the solar system.

 The **Orionid meteor shower is** active this month, peaking around the 22nd. It will appear just above the horizon at about 5am. Although 10 meteors per hour are forecast, a bright moon in the morning sky will make it hard to see. Meteor showers are never very good from the southern hemisphere.

 Comet Tsuchinshan-ATLAS C/2023 A3 is forecast to be visible close to the horizon just before sunrise in the east. It then passes between us and the Sun and appears low in the evening sky. It is expected to fade over the month. All this means, again, we may not see much.

The visible planets

WHIRO MERCURY appears as a medium-bright star setting in the southwest about 8:40 at month’s end.

KŌPŪ VENUS is the brilliant ‘evening star’ appearing in the west soon after sunset. It sets soon after 10 pm at the start of the month and around 11:20 at the end. It is bright enough to cast shadows in dark locations. The Moon will be near Venus on the 5th and 6th. Antares will be left of Venus around the 27th.

KŌPŪNUI JUPITER is the brightest ‘star’ in the morning sky, shining with a steady golden light. It rises in the north-east around 1:20 a.m. at the start of the month 11:20 p.m. at the end, being due north at dawn.

RONGO SATURN appears midway up the northeast sky at dusk and is due north by 11 pm. It looks like a medium-bright star with a cream tint. In this side-on view we see a ball with a spike through it in low-powered telescopes. Larger telescopes show the ring and Saturn's biggest moon, Titan, looking like a star near the planet. Smaller moons are closer in. The moon will be close to Saturn on the 14th and 15th.

Star groups and single stars are coloured at 1st mention

Refs

<https://www.rasnz.org.nz/in-the-sky/the-evening-sky/august-evening-sky-1>

<http://www.pixieplots.co.nz/Maori-Star-Names> With thanks to Alan Gilmore.