The Night Sky for September

The bright star Ruawāhia **Arcturus** is on the northwest skyline. Its orange light is often broken up into red and green twinkling. On the north skyline is **Vega**, a white star, the second-brightest northern star after Arcturus. Vega is balanced by Autahi **Canopus**, the brightest true star in the evening sky, skimming along the southern skyline. Both stars are shining through a lot of air which makes them twinkle colourfully. From the north of the country the star **Deneb** can be seen near the north skyline in the Milky Way, well right (east) of Vega. Deneb is the brightest star in **Cygnus** the Swan, a large cross-shaped constellation.

Orange **Antares**, northwest of the zenith, marks the body of the Scorpion. The Scorpion's tail hooks toward the zenith like a back-to-front question mark – the fish-hook of Maui. 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 are 'The Pointers ', Beta and Hakihea **Alpha Centauri**. They point down to **Crux** the Southern Cross, also known as Te Pūtea iti a Tama Rereti. Hakihea Alpha Centauri is the third brightest star. It is also the closest of the naked-eye stars. As with most of the stars in Crux, Beta Centauri is a blue-giant star hundreds of light years away.

Te Magoroa the **Milky Way** spans the sky from north to south. It 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 **Vega**. 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 hub of the galaxy, 27 000 light years away, is in Sagittarius. Dust clouds near us appear as gaps and slots in the Milky Way. Binoculars show many clusters of stars and some glowing gas clouds in the Milky Way.

The Large and Small Clouds of Magellan, **LMC** and **SMC**, look like two misty patches of light in the south sky. They are 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.

On moonless evenings in a dark sky the Zodiacal Light is visible in the west. It is a broad faint column of light extending upward (around Mercury at the beginning of the month.) It is sunlight reflecting off meteoric dust in the plane of the solar system. The dust may have come from a big comet, many centuries ago.

Three bright planets light up the evening sky along with some of the brightest stars – Mercury, Saturn & Jupiter. Worth a look in any telescope, Jupiter’s moons and Saturn’s rings will be clearly visible.

Mercury: Appears low in the west at dusk in the first half of the month. This lone planet shines with a medium bright white colour & sets 2 hours after the sun. It fades and falls lower in the twilight, disappearing by the 18th, ending its best evening sky appearance of the year,

Mars: is in the morning sky rising after 1 a.m. It glows orange-red, brighter than Saturn but much fainter than Jupiter. At the beginning of the month it will be between the Matariki star cluster and Taumata-kuku Aldebaran, a similar colour to Mars but fainter. The Moon will be near Mars on the morning of the 17th.

Saturn: this bright cream-coloured body is seen in the east, with the Moon will be nearby on the 8th

Jupiter: This golden planet is the brightest body in the sky, appearing after 8pm at the beginning of the month. Rising 4 minutes earlier each night, it is in the evening sky at dusk by the end of September. The moon will be near Jupiter on the 11th.

Zenith = the point in the sky directly above an observer.

Adapted from Alan Gilmore, RASNZ