The June Night Sky

Just before dawn, from around mid-June, Matariki begins to peak over the north-eastern horizon, heralding the Māori New Year. For several days, brilliant Venus sits above and on the 26th the moon forms a triangle with Venus and Matariki. YYou can find Matariki by looking to the east and finding Tautoru, the three stars of Orion’s belt. Follow the line of Tautoru to your left until you reach a small, tight cluster of stars low on the horizon – Matariki.

As Matariki appears low in the sky in the winter, it can’t be seen everywhere across the motu (islands of NZ), so although it is the name of the holiday, Matariki isn’t the constellation that is celebrated or observed by all iwi. For many hapū and iwi, other stars are more visible and more significant, especially in places where maunga (mountains) might obscure the view of Matariki. Other stars that signal the new year include Rehua, the husband of Matariki (located on the opposite side of the sky), and Puanga above Tautoru.

The zodiac constellations of winter are Libra, Scorpius, Sagittarius and Capricornus. The first three are particularly distinctive and won’t be forgotten once identified.

In the northern sky during June, the bright orange star, Ruawāhia or Arcturus, is the main feature.

Above and to its left, roughly twice as high, is white Spica or Whiti-kaupeka in the constellation of Virgo. Below and right of Arcturus, a faint semicircle of stars named Corona Borealis (the Northern Crown) is rising.

Scorpius is partway up the eastern sky with orange Rehua or Antares at its centre. Below its tail (Maui’s fishhook) Sagittarius resembles a teapot tipped onto its handle. To the teapot’s right, faint Corona Australis (the Southern Crown) shimmers like a necklace.

The Southern Cross, Taki-o-Autahi, is high in the south. The Diamond and False Crosses lie below right, whilst above left, the globular cluster Omega Centauri is a fuzzy spot. Autahi or Canopus is bright in the southwest and Achernar or Marerer-o-tonga twinkles on the southern horizon.

The Southern Hemisphere winter solstice marks the time when the Sun reaches its northern most point in our sky – and therefore it is lowest in the sky at noon. The solstice, 9:08pm on 21 June, signals the shortest day of the year. After that date, the Sun begins moving south again, extending our daylight and shortening the nights.

As the winter Sun is low in our day-time sky, any planets opposite the Sun in our night sky will be high above the horizon by the middle of the night. So the winter months provide the best opportunities to view the planets through a telescope. The solid blue line marked on the star charts is called the ‘ecliptic’, the plane of our Solar System along which the Sun and the planets are found.

All five naked eye planets are visible in the early mornings. Yellowish Saturn rises in the late evenings followed by bright Jupiter after midnight. Orange Mars, close to Jupiter in early June, rises soon after 2 a.m. Just before sunrise these three are high in the northern sky while brilliant Venus dazzles lower in the north-eastern sky. Mercury, a little lower to Venus’ right, is especially well placed around mid-month.

#### MERCURY: The best morning opportunities to observe Mercury are around the middle of June low in the northeast before sunrise.

#### VENUS: Throughout June Venus continues to dominate the north-eastern sky before sunrise. On the 26th, the weekend of our 1st Matariki holiday, the Moon forms the apex of a pretty triangle with Matariki and Venus below.

#### MARS: At the beginning of June Mars is close to bright Jupiter in the predawn sky. It rises about 2 a.m, high in the northeast at dawn. The Moon makes very close passes in the early hours of June 23.

#### JUPITER: At the beginning of June bright Jupiter is rising at 2 a.m. along with much fainter Mars. These planets quickly separate as Jupiter rises a little earlier each night. The Moon pairs up nicely with Jupiter on June 22nd.

#### SATURN: In early June Saturn rises before 11 p.m. and is high in the northwest as day begins to dawn.

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