

## STAR WATCHING ON WAIHEKE

As the year progresses, with Earth orbiting the Sun, the night sky changes as new stars appear in the East. Likewise, the constellations (the 88 defined star patterns over the entire sky) also change. This is a slow process however, with the change from month to month being very gradual.

In April, the sky for naked-eye or small binocular viewing is similar to that in March, except now the seasonal constellation, **Scorpius**, is visible in the South-East while the planet **Saturn** makes its appearance a little later in the night.

Our spotlight this month will be on the well-known constellation of **Orion**, which is bright and easy to identify.

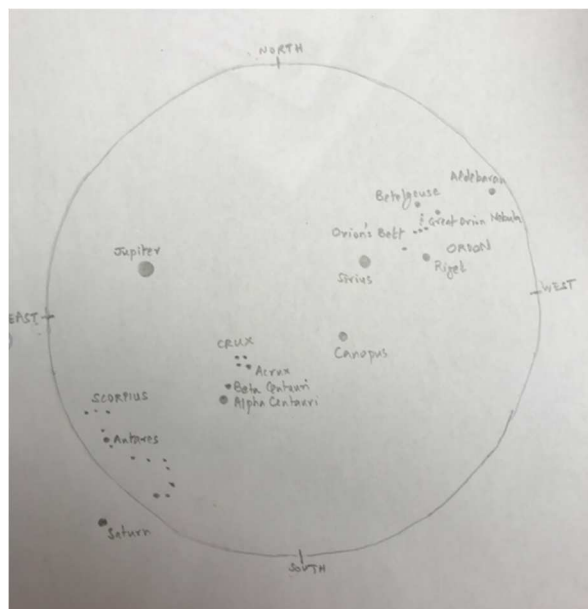
### WHEN IS THE BEST TIME FOR VIEWING?

With the end of daylight saving, astronomical twilight now ends earlier, around 7.40 pm, and gets progressively earlier, moving to 7 pm by the end of the month. For the period 20 to 28 April, the moon will not be in the sky at night, so any clear night during this period will be free of moonlight and therefore ideal for stargazing, though you will still be able to clearly view most objects in the sky before and after this period.

### STAR CHART

The celestial objects easily visible this month are shown in the accompanying Star Chart. When you go outside and raise this page over your head with North pointing to the North and will find that this chart will point to the correct directions.

Image 1: Star Chart for April



### PLANETS

The brightest object in the sky this month is the planet **Jupiter** rising from the East soon after sunset. A small telescope or powerful binoculars will show the four bright moons that orbit it. Saturn, not as bright as Jupiter, rises in the South East around 11 pm at the start of the month and around 8 pm by the end.

### CONSTELLATIONS

**Crux** (the Southern Cross) spotlighted in last month's column along with "The Pointers", **Alpha Centauri** and **Beta Centauri** is high in the sky, as is **Orion** (discussed more fully in the April Spotlight section below). **Scorpius**, an S-shaped constellation containing the bright star **Antares**, now makes its appearance in the South East.

### BRIGHT STARS

April is a good month for naked-eye observing with nine of the fifteen brightest stars in the sky. They are **Sirius** (the brightest) appearing at dusk; and **Canopus** (2<sup>nd</sup> brightest) which follows soon after Sirius; the brighter of "The Pointers", **Alpha Centauri** (3<sup>rd</sup> brightest); **Rigel** in Orion (7<sup>th</sup> brightest); **Betelgeuse** in Orion (10<sup>th</sup> brightest); the other "Pointer" star, **Beta Centauri**, (12<sup>th</sup> brightest); **Alpha**



**Cru**x, the brightest in the Southern Cross (13<sup>th</sup> brightest); **Aldebaran** (14<sup>th</sup> brightest); and **Antares** in Scorpius (15<sup>th</sup> brightest). Of course, it must be remembered that our Sun is actually the brightest and closest star to us!

#### APRIL SPOTLIGHT

Image 2: Constellation Orion (Credit: Matthew Spinelli)

Orion is an easily recognisable naked-eye constellation. Image 2, taken through a telescope, shows its prominent features: the orange colour of the cool, red giant Betelgeuse at the lower right; the blueish-white colour of

hot, supergiant Rigel at the upper left; 'the sword' dangling upwards (downwards in the Northern hemisphere where Orion is visible during the winter and early spring) from Orion's Belt (the line of three stars in the middle of the constellation); and the fuzzy-pink star-making stellar nursery, the Great Orion Nebula, found at the centre of 'the sword'.

Image 3: Orion the Hunter

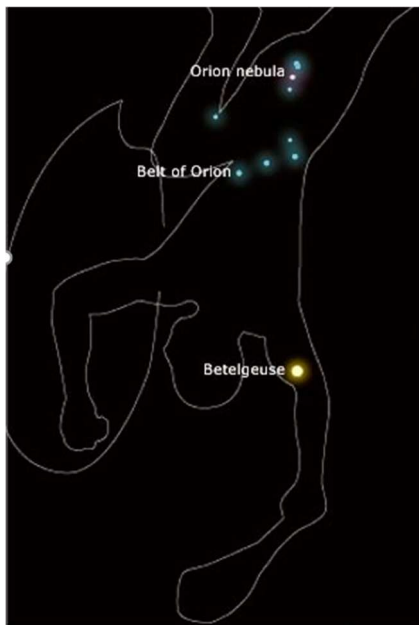


Image 4: "The Pot"



Viewing Orion the Hunter (of ancient Greek fame) upside down (Image 3), the star pattern was likened in New Zealand to a saucepan and called "The Pot" (Image 4). Orion is well known to the Maori. They know Rigel as Puanga and Orion's Belt as Taururu. The left most star in Orion's Belt (see Image 2) is Mintaka which rises and sets within a degree of true East and West and has therefore been used over the millennia for celestial navigation (i.e. finding one's way using the objects visible in the sky). Orion is an impressive constellation with a long history among many cultures. Enjoy it now, before it hides

for the winter.

**Clear Skies!**

Nalayini Davies