

The chart is oriented for:
 Dec. 1 at 1 a.m. NZDT
 Dec. 15 at midnight "
 Jan. 1 at 11 p.m. "
 Jan. 15 at 10 p.m. "

Evening sky in January 2026

To use the chart, hold it up to the sky. Turn the chart so the direction you are looking is at the bottom of the chart. If you are looking to the south then have 'South horizon' at the lower edge. As the earth turns the sky appears to rotate clockwise around the south celestial pole (SCP on the chart). Stars rise in the east and set in the west, just like the sun. The sky makes a small extra clockwise or westward rotation from night to night as we orbit the sun.

Jupiter is the 'evening star', appearing low in the northeast soon after sunset. Sirius, the brightest true star, appears high in the east at dusk. Below and left of it is Orion, containing 'The Pot'. Below and left of The Pot is the V-shaped face of Taurus. The Pleiades/Matariki star cluster is further down and left, toward the north. Canopus, the second brightest star after Sirius, is southeast of the zenith. Crux, the Southern Cross, and the Pointers are low in the south. From northern New Zealand the bright star Capella is near the north skyline. Saturn is a medium-bright 'star' on its own in the west

The Evening Sky in January 2026

Golden **Jupiter** is the 'evening star', appearing low in the northeast soon after sunset. **Sirius**, the brightest true star, appears east of the zenith as the sky darkens. **Canopus**, the second-brightest star, is southeast of overhead. **Achernar**, fainter than Canopus, but one of the brightest southern stars, is southwest of overhead. Low in the west is **Saturn**. It sets around 1 a.m. at the beginning of the month; around 11 pm at the end. The Moon will be close to Saturn on the 23rd. It will be near Jupiter on the 3rd and 4th and again on the 31st.

Jupiter and Saturn are worth a look in any telescope. The disk of Jupiter is obvious in small telescopes. Dark parallel stripes in its clouds can be seen in larger telescopes. The four 'Galilean' moons are lined up on each side of the planet, or sometimes hidden as they pass in front of, or behind, Jupiter. Saturn looks like a ball with a spike through it as the ring is nearly edge-on to us.

Sirius is called 'the Dog Star' because it marks the head of **Canis Major** the big dog. A group of stars to the right of Sirius make the dog's hindquarters and tail, upside down just now. Sirius is bright both because it is relatively close, nine light-years* away, and 23 times brighter than the sun. **Procyon**, in the northeast below Sirius, marks Canis Minor, the smaller of the two dogs that follow Orion the hunter across the sky.

Left of Sirius, as the sky darkens, are **Rigel** and **Betelgeuse**, the brightest stars in Orion. **Rigel** is a bluish supergiant star, 70 000 times brighter than the sun and much hotter. It is 800 light-years away. Orange **Betelgeuse** is a red-giant star, cooler than the sun but hundreds of times bigger: a ball of extremely thin hot gas. It is around 400 light-years away. Between them, but fainter, is a line of three stars making Orion's belt. To southern hemisphere star watchers, Orion's belt makes the bottom of 'The Pot' or 'The Saucepan'. A faint line of stars above and right of the belt is the pot's handle or Orion's sword. It has a glowing cloud at its centre: the Orion Nebula.

Left of Orion is the V-shaped pattern of stars making the face of **Taurus** the Bull. The V-shaped group is called the Hyades cluster. It is 150 light-years away. Orange **Aldebaran**, making one eye of the bull, is not a member of the cluster but on the line of sight, at half the cluster's distance.

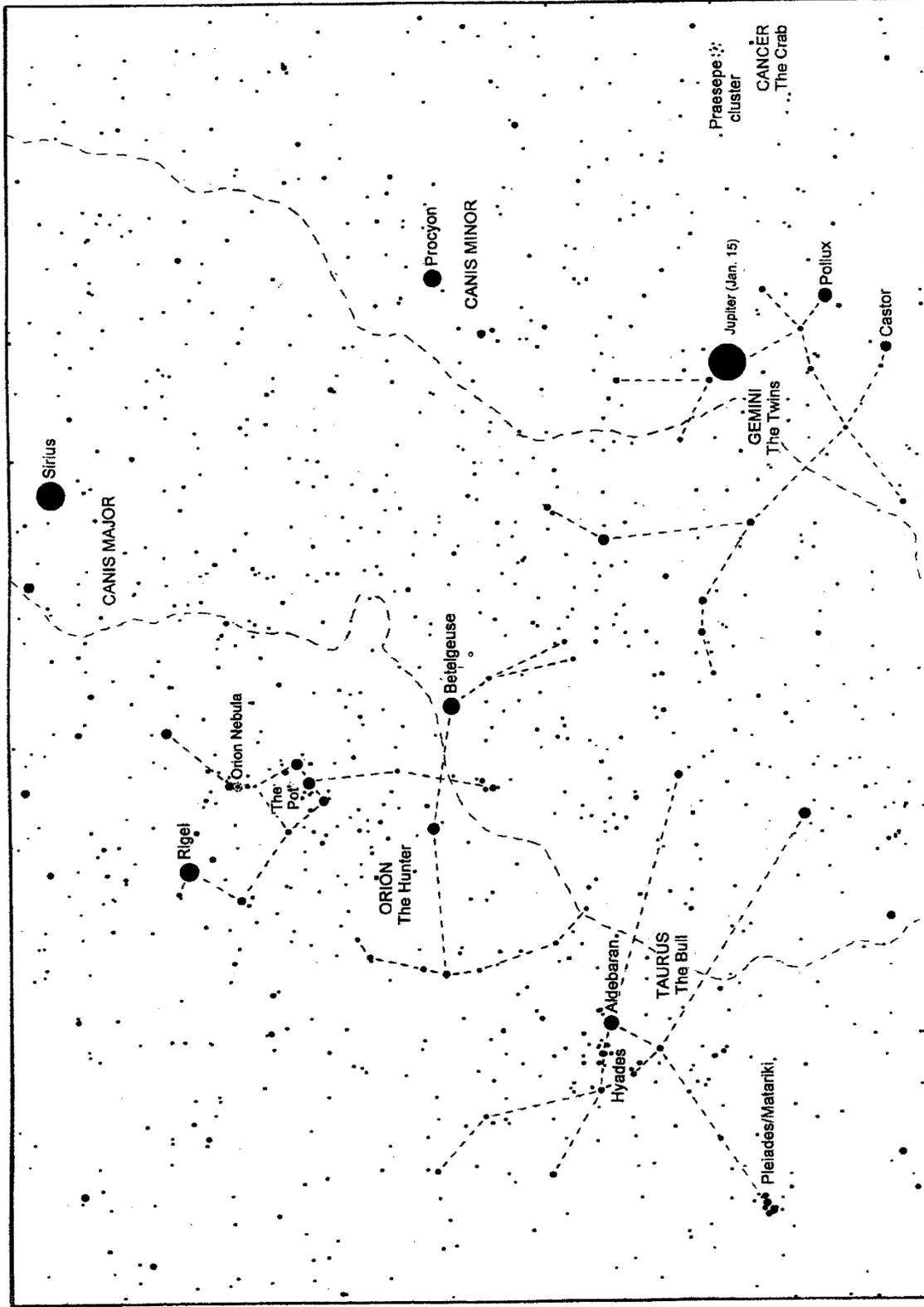
Left again, toward the north and lower, is the **Pleiades/Matariki/Seven Sisters/ Subaru** star cluster. Pretty to the eye and impressive in binoculars, it is 440 light-years from us. It is visible from everywhere in the world except the extreme south. So all cultures have names and stories about the cluster. From northern New Zealand the bright star **Capella** is on the north skyline. It is 90,000 times brighter than the sun and 3300 light-years away.

Low in the south are **Crux**, the Southern Cross, and Beta and **Alpha Centauri**, often called 'The Pointers'. Alpha Centauri is the closest naked-eye star, 4.3 light-years away. Beta Centauri, like most of the stars in Crux, is a blue-giant star hundreds of light years away. **Canopus** is also very luminous and distant: 13 000 times brighter than the sun and 300 light-years away.

The **Milky Way** is in the eastern sky, brightest in the southeast toward Crux. It can be traced towards the north but becomes faint below Orion. The Milky Way is our edgewise view of the Galaxy, the pancake of billions of stars of which the sun is just one. The Milky Way is faint left of Orion because we are looking toward its thin outer edge. The centre region of the Galaxy, in Sagittarius, is hidden by the sun at this time of year.

The Clouds of Magellan, **LMC** and **SMC** are high in the southern sky. They appear as glowing patches, easily seen by eye on a dark moonless night. They are two small galaxies about 160 000 and 200 000 light-years away.

*A **light year** is the distance that light travels in one year: nearly 10 million million km or 10^{13} km. Sunlight takes eight minutes to get here; moonlight about one second. Sunlight reaches Neptune, the outermost major planet, in four hours. It takes sunlight four years to reach the nearest star, Alpha Centauri.



Northeast Evening Sky in January 2026

Golden Jupiter is a beacon for the region, appearing low in the northeast soon after sunset. Then Sirius, the brightest true star, appears midway up the northeast sky. Below and left of Sirius is Orion with 'The Pot' at its centre. Above the Pot is Rigel, a bluish star. Below the Pot is Betelgeuse, an orange 'red giant' star. The line of three stars making the bottom of the Pot point down and left to orange Aldebaran, making one eye of Taurus the Bull. Below and left of Aldebaran is the Pleiades/Matariki/Seven Sisters star cluster.

Chart produced by Guide 8 software; www.projectpluto.com. Labels and text added by Alan Gilmore, Mt John Observatory of the University of Canterbury, P.O. Box 56, Lake Tekapo 7945, New Zealand. www.canterbury.ac.nz

The Northeast Evening Sky in January 2026

Jupiter appears low in the northeast soon after sunset, shining with a steady golden light. As the sky darkens, **Sirius** becomes visible midway up the northeast sky, often twinkling colourfully. There is an unreliable rule that stars twinkle and planets don't. It certainly works for Jupiter.

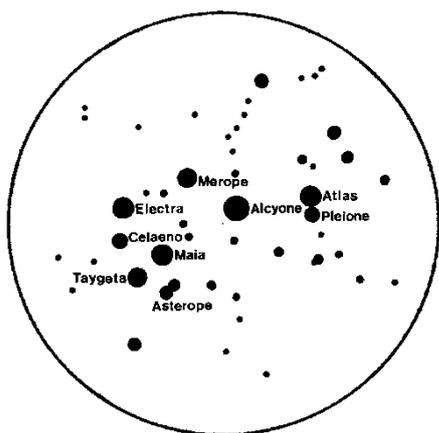
Below and left of Sirius is the constellation of **Orion** with its bright stars, bluish-white **Rigel** and orange **Betelgeuse**. Between them is the line of three fainter stars making Orion's belt or, in the southern hemisphere view, the bottom of **The Pot** or Saucepan. The stars of Orion's belt point down and left to orange **Aldebaran**, one eye of Taurus the Bull. The bull's face is made by the V-shaped cluster of stars called the **Hyades**, upside down in our view. Continuing the line down and left finds the **Pleiades/ Matariki** star cluster.

Jupiter is a good target for any telescope. Its big moons are easily seen, lined up on each side of the planet. All four are not always seen at the same time as they pass in front of and behind Jupiter and into its shadow. Larger telescopes show parallel stripes in Jupiter's clouds. The dark stripes are where (relatively) warm gas is welling up from inside Jupiter. The light-coloured clouds are where cold gas is sinking.

Orion, in the northern hemisphere view, has a shield raised toward Taurus and a club ready for action. The line of faint stars above and left of the belt then form Orion's sword dangling from his belt. In the southern hemisphere it makes the handle of The Pot. A modern variation on this is 'the shopping trolley'. The Pot is the trolley's basket. Betelgeuse and Bellatrix, the star above and left of Betelgeuse, make the wheels. Like most constellation pictures, it requires imagination.



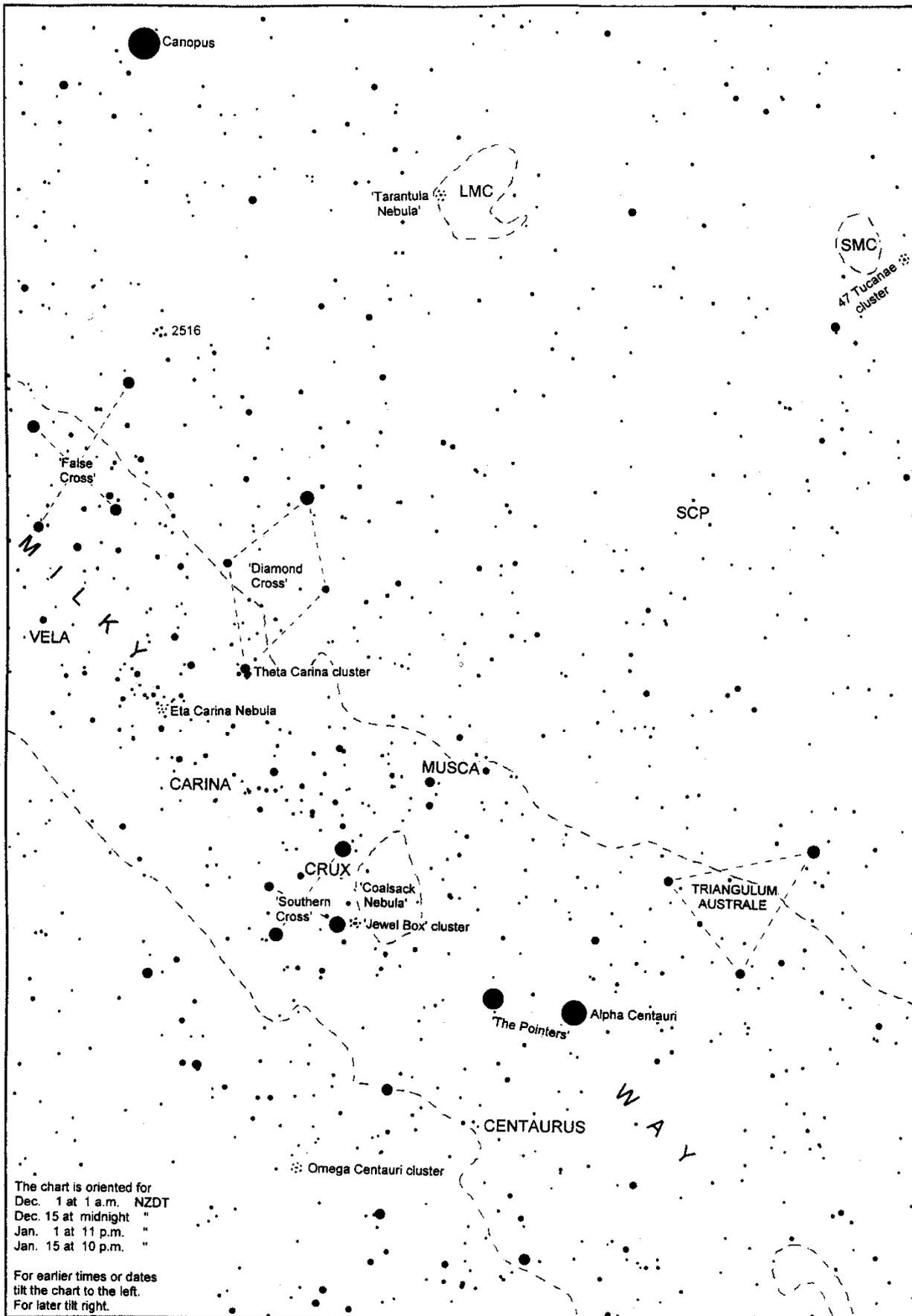
The **Orion Nebula** is visible in binoculars as a misty glow around the middle stars of Orion's sword or the handle of The Pot. It is a vast cloud of dust and gas about 1300 l.y. away and more than 20 l.y. across. Ultra-violet light from massive, extremely hot stars in the cloud causes it to glow. Some stars in this region are only two million years old. The sun, by contrast, is 4.6 billion years old. Stars continue to form in a giant cloud behind the glowing nebula. There are many bright and dark nebulae in this region. The Horsehead nebula, a favourite of astronomy books, is beside the right-hand star of Orion's Belt, but too faint to see in small telescopes.



The **Pleiades / Seven Sisters / Matariki / Subaru**, and many other names, is a cluster of stars well known in both hemispheres. Though often called the Seven Sisters, most modern eyes see only six stars. Dozens are visible in binoculars. The cluster is 440 light years away. Its brightest stars are around 200 times brighter than the sun.

One **light-year (l.y.)** is the distance light travels in one year: about 10 million million km or 6 million million miles. Light from the sun reaches us in 8 minutes; from the moon in 1 second. Sunlight takes 4 hours to reach Neptune, the outermost significant planet, and 4 years to reach Alpha Centauri, the nearest star.

Below Jupiter are **Castor** and **Pollux**, marking the heads of the **Gemini** twins. Though paired in mythology, the two stars are distant from each other and very different. Castor is 51 light years away. Pollux is 34 light years away. A telescope shows Castor to be a double star: two stars close together. Pollux is the closest red giant star to the Sun. Though cooler than the Sun, hence its orange colour, it is nine times wider so is 33 times brighter than the Sun.



Southern Evening Sky in January

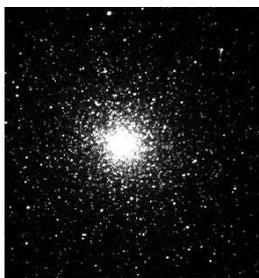
The chart shows the lower southern sky. Interesting star clusters and nebulae are indicated with asterisks. They are described on the other side of this page.

Chart produced by Guide 8 software; www.projectpluto.com. Labels and text added by Alan Gilmore, Mt John Observatory of the University of Canterbury, P.O. Box 56, Lake Tekapo, 8770, New Zealand. www.canterbury.ac.nz



Interesting Objects in the Southern Sky

Large & Small Clouds of Magellan (LMC & SMC) appear as two luminous patches, easily seen by eye in a dark sky. They are two galaxies like the Milky Way but much smaller. Each is made of billions of stars. The Large Cloud contains many clusters of young luminous stars seen as patches of light in binoculars and telescopes. The LMC is about 160 000 light years away and the SMC 200 000 l.y away, both very close by for galaxies. (1 light year is about 10 000 billion km, 10^{13} km.)



47 Tucanae, looks like a faint fuzzy star on the edge of the SMC. It is a globular cluster, a ball of millions of stars. A telescope is needed to see a peppering of stars around the edge of the cluster. Though it appears on the edge of the SMC it is much closer, 13 000 light years away, and it has no connection to the Small Cloud. Globular clusters are mostly very old, 10 billion years or more; at least twice the age of the sun. **Omega Centauri**, very low in the south, is a similar cluster.



Tarantula nebula is a glowing gas cloud in the LMC. The gas glows in the ultra-violet light from a cluster of very hot stars at centre of the nebula. The cloud is about 800 light years across. It is easily seen in binoculars and can be seen by eye on moonless nights.

This nebula is one of the brightest known. If it was as close as the Orion nebula (in The Pot's handle) then it would be as bright as the full moon.

Canopus is the second brightest star. It is 14 000 times brighter than the sun and 300 light years away. Sirius, high in the east, is the brightest star in the sky.

Alpha Centauri, the brighter Pointer, is the closest naked-eye star, 4.3 light-years away. Alpha Centauri is a binary star: two stars about the same size as the sun orbiting around each other in 80 years. A telescope that magnifies 50x splits the pair. (A very faint and slightly closer star, Proxima Centauri, orbits a quarter of a light-year, or 15 000 Sun-earth distances, from the Alpha pair.)

Coalsack nebula is a cloud of dust and gas about 600 light years away, dimming the more distant stars in the Milky Way. Many similar 'dark nebulae' can be seen, appearing as slots and holes in the Milky Way. These clouds of dust and gas eventually coalesce into clusters of stars.

The Jewel Box is a compact cluster of young luminous stars about 7000 light years away. The cluster formed about 16 million years ago. To the eye it looks like a faint star.



Eta Carinae nebula is a glowing gas cloud about 8000 light years away. The golden star in the cloud, visible in binoculars, is Eta Carinae. (Eta is the Greek 'e'.) It is a binary star: two massive stars orbiting each other in 5.5 years. The bigger star is 80 times heavier than the Sun; the smaller is 60 times the Sun's mass. Together they are about five million times brighter than the Sun but are dimmed by dust clouds around them. The bigger star is expected to explode as a supernova any time in the next few thousand years.

Many star clusters are found in this part of the sky.

The **Theta Carina Cluster** at one point of the 'Diamond Cross'. It is also known as the 'Five of Diamonds' cluster, the reason obvious when it is seen in a telescope. A newish name is 'Southern Pleiades', though this cluster appears much fainter and smaller than the real Pleiades in Taurus. The cluster is about 500 light years away and is around 30 million years old.

NGC **2516**, above the Diamond Cross, looks like a faint comet without a tail. It is a star cluster nicely seen in binoculars. It is 1200 light years away.