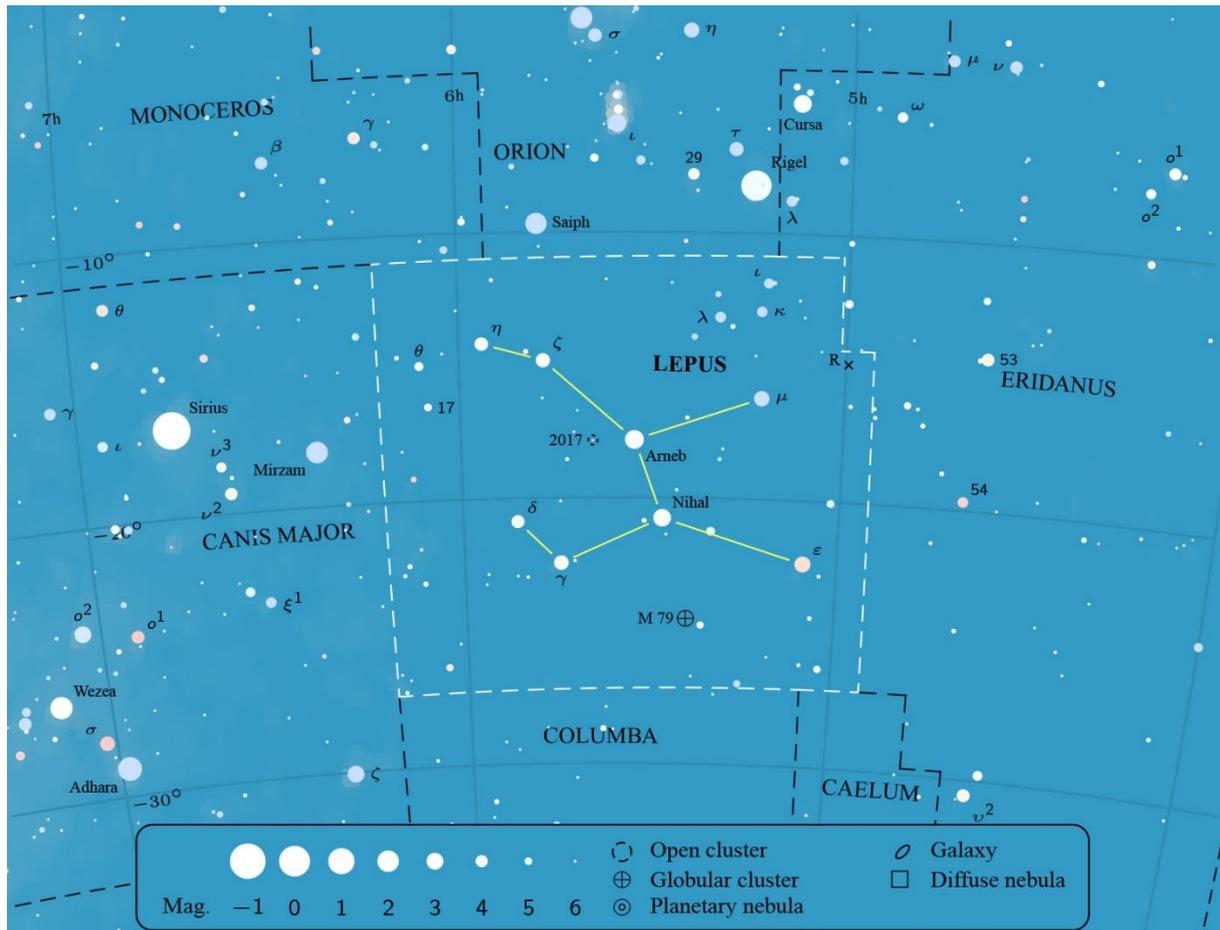


LEP

LEPUS

LEPORIS



Lepus, the hare, is a small constellation situated beneath the feet of Orion. There are no specific Greek legends associated with Lepus but it is one of the original 48 constellations listed by Ptolemy in the 2nd century AD. Several of the stars in Lepus (plus others in neighbouring constellations) are also included in a Chinese constellation – the Toilet!

In the UK Lepus is best seen during winter evenings but it is always low above the southern horizon.

STARS

α Leporis (**Arneb**, mag. +2.6) is a white supergiant star at a distance of about 2,200 light-years.

β Lep (**Nihal**, mag. +2.8) is a bright yellow giant star about 160 light-years away. Nihal has just left the main sequence and has an inert helium core; this is a relatively brief phase of its evolution before it begins fusing helium to make carbon. Nihal is a double star with a 7th magnitude companion separated by just 2.2 arcseconds; telescope with apertures of 6 inches or more should be able to resolve the pair.

γ Lep (mag. +3.6) lies just 29 light-years away and is just 1.2 times more massive than the Sun. It is a showpiece double star for telescopes of all sizes. The primary is a yellowish star and the secondary is 6th magnitude and described as brick-red with a wide separation of 97 arcseconds.

δ Lep (mag. +3.8) is an orange giant star about 114 light-years away.

ϵ Lep (mag. +3.2) is an orange giant star about 213 light-years away.

ζ Lep (mag. +3.5) is a white main sequence star at distance of 71 light-years. Observations in the 1980s showed an excess of infrared coming from the star – indicative of dust. Follow up observations from the Keck Observatory in 2001 strongly suggest the star has a substantial asteroid belt – containing perhaps 200 times the mass of the belt between Mars and Jupiter in our solar system.

η Lep (mag. +3.7) is a yellowish main sequence star at an estimated distance of 49 light-years. The Spitzer Space Telescope has detected a dust disk around this star.

κ Lep (mag. +4.4) is a blue white star at a distance of about 730 light-years. It has a close 7th magnitude companion with a separation of about 2 arcseconds.

μ Lep (mag. +3.3) is blue-white star at a distance of 186 light-years. It is a suspected variable star with a period of around 2 days.

R Lep is a celebrated variable star popularly known as Hind’s Crimson Star after the British astronomer J.R. Hind who observed it in 1845. Hind described the star as being “like a drop of blood on a black field”. R Lep is a Carbon Star – a type of evolved red giant with more carbon than nitrogen in its outer layers. The presence of carbon filters the star light making it appear even more red than typical red giants. R Lep varies in brightness between mag. +5.5 and +11.7 over a period of roughly 430 days. The star appears reddest near minimum brightness.

DEEPSKY OBJECTS



M 79 (mag. +7.7) is a globular cluster at an estimated distance of 42,000 light-years. It is easy to locate by extending a line from Arneb through Nihal (the two brightest stars in Lepus).

There is some evidence that M 79 may not have formed with Milky Way. Rather, it may be part of a dwarf galaxy (provisionally named the Canis Major Dwarf) currently undergoing a close encounter with the Milky Way. The origin and existence of the Canis Major Dwarf is a contentious issue among astronomers at present!

M 79 is visible in binoculars and small telescopes but for UK astronomers – it is never far above the horizon at best.

NGC 2017 was initially classed as an open cluster but may not be! In any case it is a tight group of 5 stars with contrasting colours. A sight for telescopes of any size.