



Lepus - a Storybook Rabbit

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Lepus the Hare is generally seen as the animal being chased by Orion's hunting dog, Canis Major, but looked at differently it could also be seen as a chair in the star formation for Orion the hunter.

Looking at the constellation, the magnitude 3.2 mu Leporis could represent the rabbit's large eye, while kappa and lambda further to the north represent the two ears. These parts are directed westwards within the constellation, with Canis Major hot on the rabbit's heels on the eastern side.

Not only can an animal story be seen in the star formation, but various land animals are also frequently associated with children's story books. The rabbit is a little animal like that which is a popular favourite in children's stories. Such stories enrich a child's imagination to an exciting level of enjoyment. Now people are wondering whether the rabbit constellation has any connection with the little animal we know as a rabbit. What is beyond question, however, is that the constellation holds wonderful stories of the objects located in it.

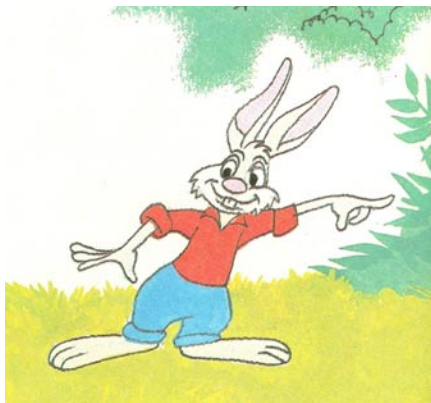
The northern part of the constellation houses a special planetary nebula, **IC 418**,



Image source: Stellarium.org

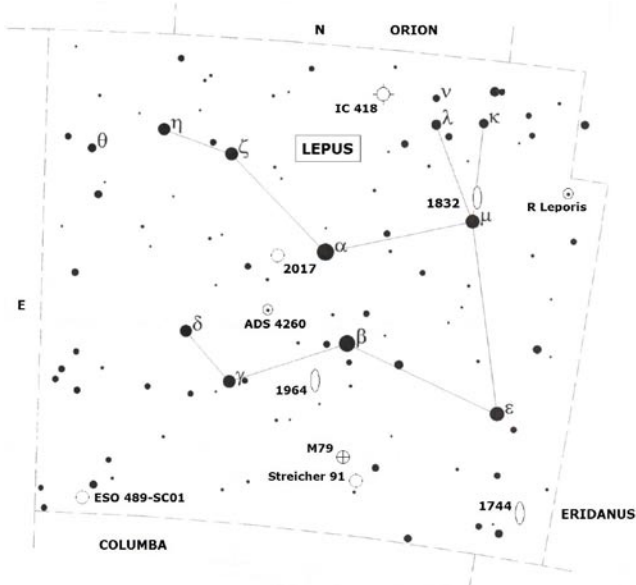
one of the best objects with its outstanding blue-green colour. Although small in size the impression is that of a light-bulb peeping through a misty halo. With higher magnification an outer frosted halo can be seen glowing around a magnitude 10 star. The north-western side is slightly hazier, but overall the planetary nebula is well outstanding against the background star field.

NGC 1832 is situated only 30' north-west of mu Leporis and in sight of the hare's bright eye. A pretty, oval-shaped galaxy in



A children's favourite - the Rabbit!

lepus a storybook rabbit



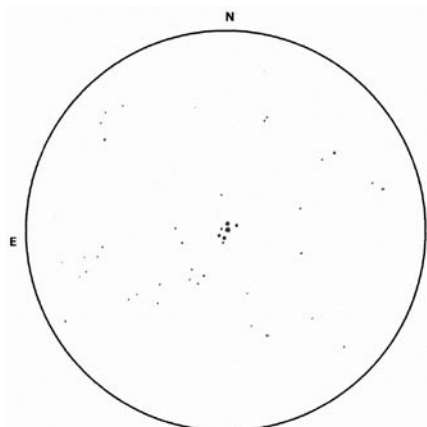
very distinctive red hue which changes from deep orange to a strong ruby-red.

The magnitude 2.6 star alpha Leporis, situated more or less in the middle part of the constellation, is also known as Arneb, which is Arabic for “hare”. The unusual open cluster **NGC 2017**, which would be better referred to as an asterism, or a multiple star group,

a north-south direction with an outstanding bright nucleus, although not star-like. With careful observation and high magnification through moderate telescopes a few bright spots can be picked up.

The long-period pulsating red variable star **R Leporis**, better known as Hind’s Crimson Star, can be found close to 30’ east of the Eridanus constellation boundary. It was discovered by the English astronomer John Russell Hind in October 1845. The variability of approximately 432 days was detected again from observations made between 1852 and 1855. Historically R Leporis varied between magnitude 5.5 and 11.7, but lately it hasn’t been seen brighter than about magnitude 6. This type of red star, also known as a Mira-type, displays strong bands caused by carbon compounds. R Leporis has its own

is situated just 1.5° east of alpha Leporis. Five stars with an unusual appearance stand out clearly against the background star field. With its variety of colours it can truly be described as one of the most beautiful stellar groupings one can see. The magnitude 6.4 primary star has a very smooth grey-blue colour. Towards the south is a yellow magnitude 8.8 star, accompanied by a fainter member. On the eastern side of the group, between these two stars, the magnitude 10 star displays an ashy colour. A magnitude 7.7 star is located on the northern edge and displays a strong orange colour; it is also the most outstanding member. To conclude the grouping the magnitude 8.2, a slightly dirty-yellow-coloured star, is situated further west. These stars seem to form a physical system (see sketch). Hartung describes it as an “attractive group of six



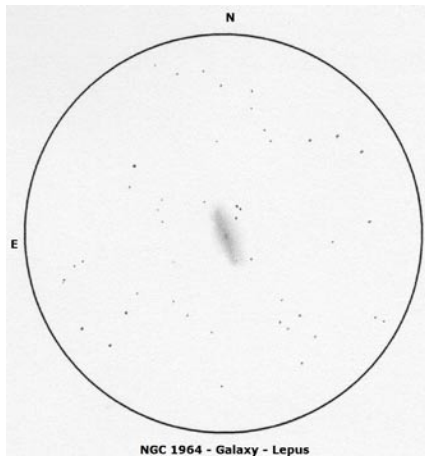
NGC 2017 - Open Cluster - Lepus

This small open cluster, NGC 2017, could also be thought of as an asterism.

stars, which shows different colours in blue, yellow, orange blue and ashy”.

The characteristic arched back of the starry hare is represented by the stars eta and zeta Leporis in the northern part of the constellation. With imagination the magnitude 4.6 theta Leporis can be seen perhaps as the fluffy tail? All sorts of shapes and impressions can be seen in the patterns of a star-filled night sky!

The double star **ADS 4260** forms a triangle to the north with the bright stars beta and delta Leporis and is by far one of the most beautiful contrasting-colour stars. The magnitude 6.9 primary shines crispy white, while its magnitude 7.9 companion is a seldom-seen blue-purple colour. The pair is currently in a separation of 11” with a position angle (PA) of 123°.



NGC 1964 - Galaxy - Lepus

NGC 1964 a rather pretty, comet-like galaxy.

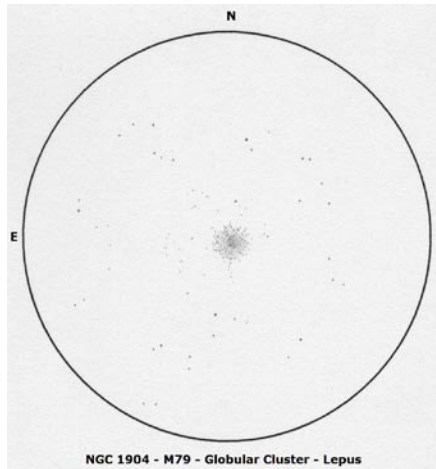
Situated only 1.5° south-east of the beautiful yellow-coloured beta Leporis is **NGC 1964**, a relatively bright galaxy. A first impression brings to the fore the sight of a very faint comet, slightly elongated in a north-east to south-west direction. The edge of the galaxy appears to be very hazy, fading away into a nebulous veil. Higher magnification, however, brings out the star-like nucleus surrounded by a haze halo. A triangle with three prominent stars can be seen immediately north-west of the galaxy. Faint stars are situated in the south-western part of the galaxy (see sketch).

About 2.5° south-east of the galaxy is the prominent, colourful double star gamma Leporis. It is an easily split double star with a bright yellow-coloured primary and orange companion. This

double star is a member of a larger stellar collection called the Ursa Major moving group, discovered in 1869 by English astronomer Richard Proctor. This group includes the well-known Big Dipper asterism.

Of course, our little rabbit constellation does not disappoint us. Among many other beautiful objects it is also home to the exceptional globular cluster **NGC 1904**, also known as Messier 79 and Bennett 34, which is situated in the southern part of the constellation. The object brightens gradually towards the middle, which does not appear very dense. Numerous star strings on the outskirts of the globular cluster extend like lace to give a refined appearance. With higher magnification the broad core appears to be surrounded by a soft hazy envelope. The southern edge of the globular cluster displays a somewhat lengthened appearance, possibly created by faint stars. With averted vision faint stardust can be pick up covering the surface. A more prominent star string stands out towards the southern edge (see sketch).

A mere one degree south of NGC 1904 a perfect half-moon of faint stars curves its way down to the south from the magnitude 8.4 (HD 35285) star at the north-eastern tip. **STREICHER 91** contains approximately a dozen colourful stars in various magnitudes.



NGC 1904 this beautiful globular cluster is also known as **M79** and **Bennett 34**.

The galaxy **NGC 1744** displays itself only as a very soft, barely visible smear of light. This spindle galaxy is very elongated in a north-south direction with just a slightly brighter nucleus surrounded by a soft halo. Two faint stars are superimposed on the dusty surface.

The grouping **ESO 489-SC01** is situated in the far south-eastern part of the constellation and consists of more or less a dozen varied-magnitude stars. The middle part of this grouping is highlighted by four stars in a square shape with fainter members intervening. The southern part of the group seems slightly busier in starlight. The brighter magnitude 10.4 (TYC 65002358) star is situated towards the south-western end of the group. ☆

deep-sky delights

Object	Type	RA (J2000.0)	Dec	Mag.	Size
R Leporis	Variable star	04 ^h 59 ^m 6	-14°48'	5.5-11.7	Per. 432 d
NGC 1744	Galaxy	05 00 0	-26 01	11.3	5.1'x2.5'
NGC 1832	Galaxy	05 12 1	-15 41	11.3	2.1'x1.5'
STREICHER 91	Asterism	05 22 4	-25 41	7	13'
NGC 1904 M79	Glob. Cluster	05 24 5	-24 32	7.7	9.6'
IC 418	Planetary Neb.	05 27 5	-12 42	10.7	20"
NGC 1964	Galaxy	05 33 4	-21 57	10.7	5.0'x2.1'
NGC 2017	Open Cluster	05 39 4	-17 51	7.5	4.5'
ADS 4260	Double-star	05 39 7	-20 26	6.9&7.9	Sep. 11"
ESO 489-SC01	Open Cluster	06 05 0	-26 44	9.5	10'

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