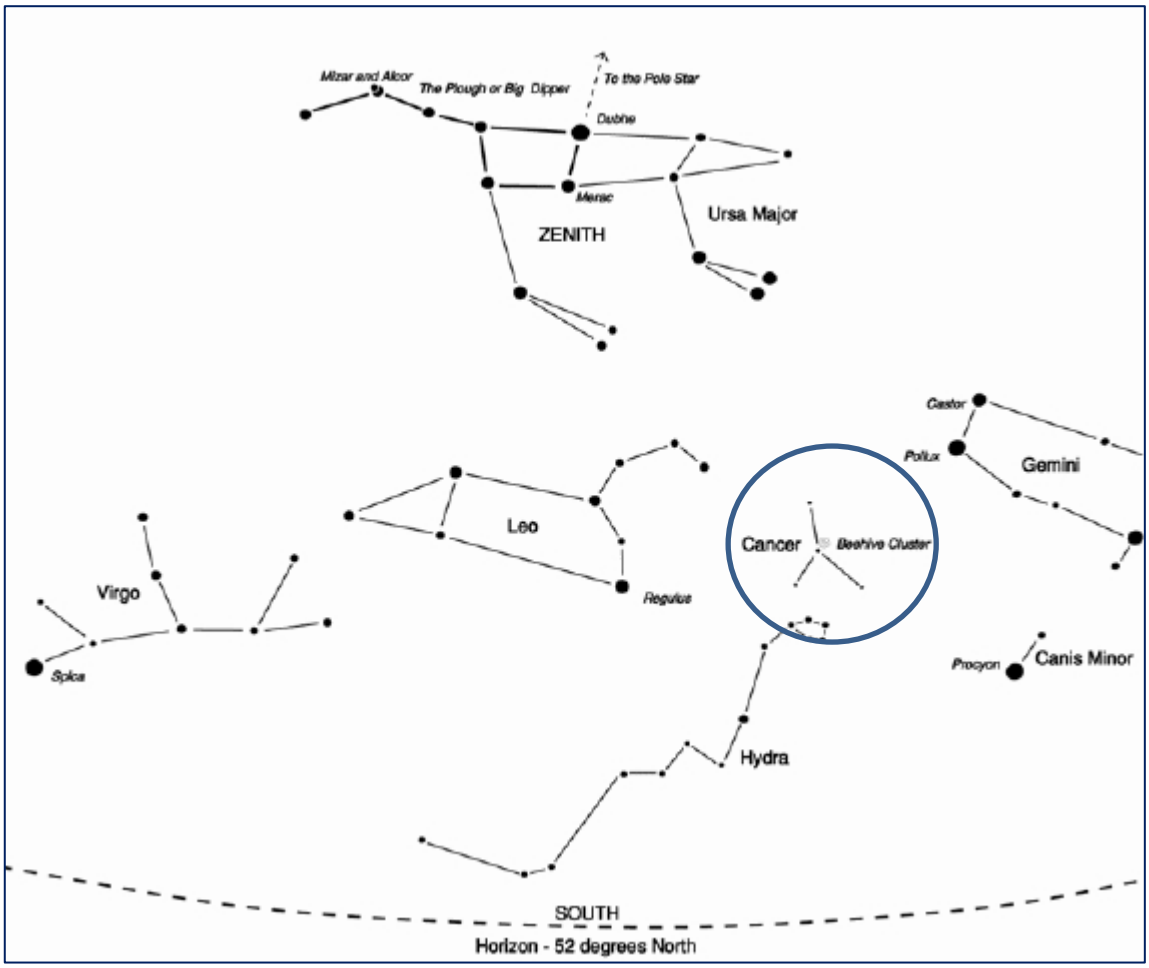
St Benedict's NIGHT SKY NEWS – Apr 2022

St Benedict's is a member of the **SOCIETY FOR POPULAR ASTRONOMY** and receives regular newsletters regarding astronomical events and information. If you would like to be included on the mailing list for these, please contact JGregory@st-benedicts.suffolk.sch.uk

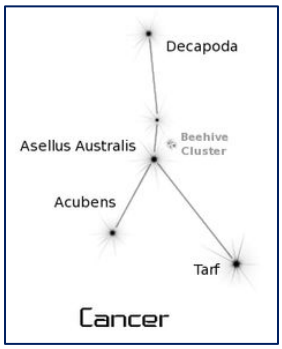
STARS IN YOUR EYES

Last month's featured constellation, Leo, is still riding high in the south in the evening. This month we shall focus on a somewhat less prominent constellation just to the right (west) of Leo – **CANCER**.

APRIL NIGHT SKY – AROUND 9pm – LOOKING SOUTH



Cancer is one of the "zodiacal" constellations – you can see three others: Virgo, Leo and Gemini along a line in the southern sky either side of Cancer. Cancer is actually the faintest of the zodiacal constellations, so is often overlooked by stargazers. However, every self-respecting stargazer should make the effort to spot it and find out a little more about it.

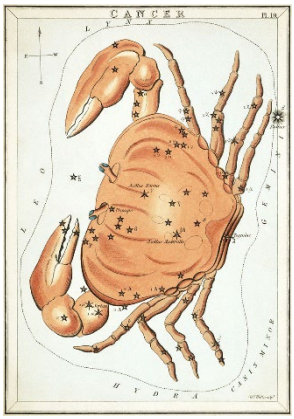


The four brightest stars are Tarf (mag 3.5), Asellus Australis (mag 3.9), Decapoda (mag 4.0) and Acubens (mag 4.2). At these magnitudes you will need good, dark sky conditions to spot them. Fortunately, the location of the bright, distinctive constellations of Leo and Gemini either side will help you narrow in on Cancer. The four brightest stars make the figure of an inverted "Y".

The name, Cancer, means *"the crab"* in Latin. The constellation was first catalogued in the 2nd century CE by the Greek astronomer, Claudius Ptolemy. He published a mathematical and astronomical treatise known as the *Almagest* and it has become one of the most influential scientific texts in history

Cancer was the backdrop to the Sun's most northerly position in the sky (the summer solstice) in ancient times. This is also the time that the Sun is directly overhead at 23.437°N and the constellation gives its name to this particular line of latitude: the **Tropic of Cancer**.

Cancer is also home to a notable star cluster officially catalogued as M44/NGC2632, but universally known as the "**Beehive Cluster**" as people thought that it looked like a swarm of bees through their telescopes! Its classical name is **Praesepe** (the Manger). Although it is faint, it can be seen with the naked eye on a good, dark night – it appears as a blurry patch of light. Binoculars will give you a better view. There are more than 1000 stars within the cluster, but only the most powerful telescopes will reveal them all. The cluster has a similar age and direction of motion to the Hyades cluster (in Taurus) and it is likely that the two clusters share the same origin. The best time of year to observe the Beehive Cluster is from February to May, when Cancer rises high in the sky for northern hemisphere observers.



The constellation Cancer, the crab, has been identified within Greek mythology when **Hercules** – son of **Zeus** – fought against a horrendous creature with multiple heads, **Hydra** (another faint constellation that you can spot in the south – see the star map on page 1). The crab bit Hercules on the foot while the two fought which caused Hercules to slay it. So, how did it get a place within the stars? After all, it was usually Zeus and other gods that made creatures heroes in the night's sky. Well, Cancer was in fact placed in the sky by **Hera**, the goddess of childbirth, family, marriage and women. Hera was an enemy of Hercules, so she was the one to immortalise the crab in the sky as the Cancer star constellation. However, because the crab failed in its mission to kill Hercules, the constellation was made by Hera, in a fit of petulance, to be faint.

THE MOON THIS MONTH

PHASE

New Moon	1st
1st Quarter	9th
Full Moon	16th
3rd Quarter	23rd

This month's Full Moon rises on the night of Saturday, April 16. Traditionally called the **Pink Moon**, this Full Moon is also the **Paschal Full Moon** this year.

Although we wish the name Pink Moon had to do with the colour of the Moon, the reality is not quite as mystical or awe-inspiring. In truth, April's Full Moon often corresponded with the early springtime blooms of a certain wildflower native to eastern North America: *Phlox subulata*—commonly called creeping phlox or moss phlox—which also went by the name "moss pink."

In April Moon names in North America, references to spring abound! **Breaking Ice Moon** (Algonquin) and **Moon When the Streams Are Again Navigable** (Dakota) reference the melting ice and increased mobility of the early spring season, while **Budding Moon of Plants and Shrubs** (Tlingit) and **Moon of the Red Grass Appearing** (Oglala) speak to the plant growth that will soon kick into high gear.

Common names in Europe also referred to the budding and birth of spring: The Anglo-Saxons called it **Egg Moon**, the Celts had names like **Budding Moon**, **New Shoots Moon**, **Seed Moon**, and **Growing Moon**. A Neo-Pagan name is **Awakening Moon**.

The April Full Moon can also be the **PASCHAL MOON**, and is used to calculate the date for **EASTER**:

Easter falls on the first Sunday after the Full Moon date, based on mathematical calculations, that falls on or after March 21. If the Full Moon is on a Sunday, Easter is celebrated on the following Sunday.

Although Easter is liturgically related to the beginning of spring in the Northern Hemisphere (March equinox) and the Full Moon), its date is not based on the actual astronomical date of either event.

- March 21 is the Church's date of the March equinox, regardless of the time zone, while the actual date of the equinox varies between March 19 and March 22, and the date depends on the time zone.
- The date of the ***Paschal Full Moon***, used to determine the date of Easter, is based on mathematical approximations following a 19-year cycle called the ***Metonic cycle***.

Both dates *may* coincide with the dates of the astronomical events, but in some years, they don't. According to the Metonic cycle, the Paschal Full Moon falls on a recurring sequence of 19 dates ranging from March 21 to April 18. Since Easter happens on the Sunday following the Paschal Full Moon, it can fall on any date between March 22 and April 25. (Note: this applies only to years 1753 - 2400).

WHY DO WE HAVE THE CUSTOM OF EASTER EGGS?

A clue is in the old, traditional name **Egg Moon**. Easter is possibly the most important date in the Christian calendar. Every year, Christians around the world remember Jesus' crucifixion and celebrate his resurrection three days later. But how did the egg come to represent Easter?

Throughout history, people across the world have given each other eggs at spring festivals to mark the seasons. Early Christians in Mesopotamia dyed eggs in the period after Easter. The practice was adopted by the Orthodox Churches, and from there it spread into Western Europe. Eggs represent new life and rebirth, and it's thought that this ancient custom was absorbed into Easter celebrations.

During Lent, when Christians fasted to mark Jesus' time in the wilderness, eggs were one of the foods that people weren't allowed to eat (incidentally, this is why we make pancakes on Shrove Tuesday). So when Easter Sunday came around, tucking into an egg was a real treat.

Over time, various traditions and superstitions sprang up around the egg at Easter. Eggs laid on Good Friday were said to turn into diamonds if they were kept for 100 years. Some thought that eggs cooked on Good Friday and eaten on Easter would promote fertility and prevent sudden death, and it became the custom to have your eggs blessed before you ate them. It was also said that if your egg had two yolks, you'd soon become rich. In Devon and Cornwall, people used to play a game like conkers with their eggs, hitting them against each other until one of them cracked.

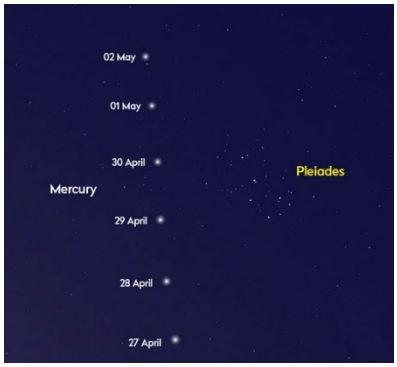
One tradition just about clings on in some parts of England – the '**pace egg**', and pace egg plays. The word 'pace' comes from '**paschal**', the Latin name for Easter. They were hard boiled hen, duck or goose eggs with a colourful, painted shell. The first mention of pace eggs comes from early 18th-century Lancashire, and they grew in popularity over the century. They were given as presents or at "pace egg plays", and sometimes they were rolled along the ground in a race – perhaps to symbolise the rolling away of the stone from Jesus' tomb. There's still an annual egg rolling event in Preston. The world's most famous egg roll takes place every year on the White House lawn in Washington DC.

The custom of the **Easter egg hunt**, however, comes from Germany. Some suggest that its origins date back to the late 16th century, when the Protestant reformer Martin Luther organised egg hunts for his congregation. The men would hide the eggs for the women and children to find. This was a nod to the story of the resurrection, in which the empty tomb was discovered by women.

https://www.almanac.com/content/full-moon-april
https://www.timeanddate.com/calendar/determining-easter-date.html
Why Do We Have Easter Eggs? | English Heritage (english-heritage.org.uk)

THE PLANETS THIS MONTH

All of the planets are fairly low in the sky this month, but there is a good opportunity to spot Mercury.



MERCURY: This is a good month to spot Mercury in the evening sky as, by the end of the month it does not set until 2 hours after sunset. It will, as always, be low to the horizon so you will need a clear view. Also, at the end of the month, it will be seen very close to the distinctive **Pleiades** open cluster, which you can use as a "guide".

VENUS: Bright morning "star", low before sunrise. Near Mars and Saturn at start of month, close to Jupiter at end.

MARS: Morning planet. Very close to Saturn on 5 April. Rises 90 minutes before sunrise at end of April.

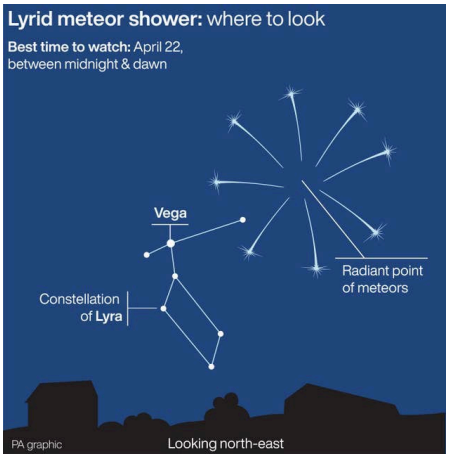
JUPITER: On 30 April, morning planets Jupiter and Venus appear very close together, rising one hour before sunrise.

SATURN: Morning object, never gaining much height. Mars is close by on the morning of 5 April.

METEORS THIS MONTH

At last, a meteor shower to report - April is the month of the annual **LYRIDS**.

The shower spans 14-30 April, with the peak rate occurring on the night of the 22-23. Although the peak rate is fairly modest, around 18 per hour, the Lyrids often produce very bright, fast meteors often that break up into a "train".



The Lyrid meteor shower is associated with the long-period **Comet C/1861 G1 Thatcher**. It is the oldest recorded meteor shower still visible today, and was first recorded in 687 BCE. While the Lyrid meteors will be visible all across the sky, following their path backwards they will appear to originate from the constellation of **Lyra**, the lyre, which contains the bright star **Vega** – this is known as the "radiant point". Lyra rises in the northeast.

In reality the meteors have nothing to do with this constellation of stars. The direction they appear to come from is dictated by the motion of the Earth and the debris itself. All of the meteors are coming in approximately parallel to one another, like lanes of traffic on a straight motorway. Our perspective makes them appear to travel sideways across the sky. Just as a person standing on the central reservation of the motorway will have cars pass on either side of them, the meteors will appear to diverge from the so-called radiant point in Lyra and streak across the sky in all directions.

As with all meteor showers, the main thing for seeing the Lyrids is to find a dark site with an unobstructed view of the sky. The number of meteors you actually see will depend on all sorts of things, from the time of night to the level of background light. A bright sky will drown out the fainter meteors making them much more difficult to see. Unfortunately, this year the Lyrids begins on 14 April, two days before the Full Moon, and comes to a maximum on 22-23 April, two days before the last quarter Moon, so conditions are unfavourable this year.

ISS SIGHTING TIMETABLE

For this month's sightings, please use the following link:

Newmarket, England, United Kingdom | Sighting Opportunity | Spot The Station | NASA

PRINCIPAL SOURCES OF INFORMATION

https://www.constellation-guide.com/constellation-list/cancer-constellation/

https://www.rmg.co.uk/stories/topics/lyrid-meteor-shower-2022-when-where-see-it-uk

https://www.skyatnightmagazine.com/advice/skills/astronomy-guide-viewing-planets-night-sky/