

Learning Series: Birthstones – June

Moonstone – The June Birthstone

Background

Ancient Romans theorized that moonstone, with its unearthly shimmer, was formed from frozen moonlight. The Greeks thought the stones were droplets of moonlit dew hardened on the ground. In reality, moonstone is composed of two feldspar species, orthoclase and albite; the two species are intermingled. Essentially, as the newly formed mineral cools, the intergrowth of orthoclase and albite separate into stacked, alternating layers creating an inner luster that make the stones seem to carry their own light source within. In most circumstances, this iridescence phenomenon is known as schiller, but in moonstone it is called adularescence. Light falling between these thin, flat layers scatters in many directions creating a billowy, floating blue to white scintillation. When the stone is moved back and forth, the brilliant silvery rays appear to move about like moonbeams playing over water.

"Adularia", the orthoclase feldspar and the most common moonstone, was originally named for an early mining site at Mt. Adular in Switzerland. It is from this tradition that we derive the term "adularescence". The other type is albite moonstone, which is sodium rich. The two types of moonstones are very similar in appearance when cut in cabochon, however, very thin layers (also known as scales or lamella) produce blue schiller and thicker layers produce white. The milkier looking moonstone is sometimes referred to as Adularia Moonstone, while a moonstone with a higher sheen and that is much denser is referred to as an Albite Moonstone.

About half the earth's crust is composed of feldspar. This mineral occurs in many igneous and metamorphic rocks, and also constitutes a large percentage of soils and marine clays. Moonstones are found in areas of volcanic and hydrothermal activity; it is these conditions that are needed to allow the chemical and physical processes to form the stone. Mined from the earth where plagioclase and orthoclase layers are most abundant, the stones can be found in irregular shapes among other gems, clay debris and gravel. When found in the rough, moonstone is not an impressive sight.

Even after it is cleaned and processed, moonstone contains a number of typical inclusions. Pairs of tiny stress cracks running parallel to the vertical axis of the crystal with smaller cracks aligned along them have been called "centipedes" and are diagnostic of moonstone. There are also inclusions that look like characters from Chinese writing, negative cavities that look like rectangular crystals, and needle-like shapes. If present in large numbers, the needle-shaped inclusions can cause a cat's eye (chatoyancy) effect. Both chatoyancy and multi-rayed asterism is rare in moonstone, but when asterism does occur in moonstone the star is four-legged.

Really top quality blue moonstone shows an incredible "three-dimensional" depth of color which one will see clearly only when playfully tilting the stone and moving it. In general, the more transparent moonstone is and the more blue its adularescence, the higher the value.

Composition, Chemical Formula, Colors, and Sources

Composition – potassium aluminum silicate

Chemical Formula – KAlSi_3O_8

Colors – found in transparent to opaque colors that span a range from blue, grey, pink, peach, green, orange, yellow and brown that exhibit blue, white, or rainbow color adularescence.

Sources – Moonstone is mainly found in Sri Lanka, Burma (Myanmar), India and Madagascar, but there are also deposits in Australia, Brazil, Germany, the Austrian Alps, Norway, Poland, Tanzania, Mexico and the United States. The best and the rarest forms of moonstone originate in Sri Lanka and it is often referred to as the country's national stone.

Note: The month of June has two modern birthstones – the pearl and the moonstone.

Identification

Streak – white

Hardness – 6 – 6.5

Crystal system – monoclinic, prismatic

Transparency – transparent to translucent

Specific gravity – 2.56 – 2.59

Luster – vitreous

Cleavage – good, two directions at 90°

Fracture – uneven

Fluorescence – weak; bluish orange

Associated Minerals – usually found in volcanic rocks with quartz, muscovite and K-feldspars

Best Field Indicators – cleavage, hardness, color, crystal habit

Folklore, Legend and Healing Properties

Folklore links the stone with the moon in many ways. Placing a moonstone in the light of a moon reaching its fullness—not a full or waning moon—can revitalize its healing properties, and a moonstone placed beneath the tongues of lovers at full moon will refresh memories and awaken tender passions.

Superstition says it has the power to hypnotize the person who gazes at it as it moves back and forth. Similarly, in the middle ages people thought you could look into a moonstone and fall into a deep sleep that would tell you of the future, however, to dream of a moonstone was said to be a warning of impending danger. If you simply place a moonstone under your pillow at night it will help you sleep well.

Moonstone is used by healers to stimulate the functioning of the pineal gland and balance internal hormone cycles with nature's rhythms. Its healing properties are said to promote digestion, protect against epilepsy and sun stroke, calm emotions, help with backache (by aligning the spine), and cure headaches and nose bleeds.

Trivia

Moonstone is the accepted gem for the 13th wedding anniversary. Typical stones are 1 to 25 carats, but cut stones up to 250 carats are known.

Amulets of moonstone have been hung in fruit trees to encourage an abundant harvest season.

In Arab countries, women often sew moonstone into their garments, because it's considered a symbol of fertility.

Moonstone is a feminine stone – it is the stone worn by the High Priestess in the second of the Major Arcana cards in most tarot decks.

Shortly after Neil Armstrong and "Buzz" Aldrin landed on the moon on July 20, 1969, the State Legislature of Florida—seeking to memorialize America's unprecedented international, scientific and technological triumph—passed and sent to the Governor a bill adopting the moonstone as the official State Gem. Ironically, the moonstone is not found naturally in Florida.

Sources:

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