

GARNETS:
BEAUTY
THROUGH
COMPLEXITY



Color shift garnet, 8.35ct. Courtesy of Pala Gems. Photo by Mia Dixon.

There are many ways we think of garnet: as the birthstone for January, or as an affordable alternative to ruby. We may perceive it as a collection of shiny burgundy beads for fun jewelry. To the ancients, garnets had even greater value. From the small tumbled beads put in gold necklaces in pre-dynastic Egypt in 4th millennium BC, to beautifully carved garnet intaglios excavated throughout the vast Roman Empire, one can sense the significance that this material represented in these cultures. More garnets are seen in Europe around and after Alexander the Great's invasion of Persia, later trade becomes more regular between Greeks, Asian and African cultures.

Modern mineralogy identifies garnet as a mineral group containing 24 related species. Of these, fewer than 10 are known as gemstones. Due to their complex structure, garnets are one of the most intriguing mineral groups. Structurally similar, gem garnets differ from one another by interchanging chemical compositions through solid solutions. Garnet group minerals possess high refractive index and display high vitreous luster that is unmistakable to the trained eye.

Red garnets generally contain fissures and fractures due to their formation. The irregular structure of these fissures and fractures also creates weakness in the stone. Conchoidal breaks, chips or even deep cavities can occur easily during or after fashioning of garnets.

Garnets grow in various genetic processes of the igneous and metamorphic cycles. They occur in basic igneous rocks, granites, pegmatites, schists, certain marbles and

skarn zones. In each deposit, garnets feed from various chemical sources. This may cause the members of the same group of gem garnets to originate from entirely different parent rocks within the same geography. Garnets are pretty common in nature and have been used as abrasives for thousands of years. However, the gem quality material is not as common.

Red garnets tend to have darker tones and lower saturations of red, purplish red or orangy red compared to other red gems, ruby, tourmaline or spinel. The ancients cut these—often almost black looking—stones with a hollow back so the thin cabochon would display a rich red color. Today, the word carbuncle is still used in the British market to refer to garnets with hollowed-out backs.

There are very few examples of yellow garnets used in ancient times. Likewise, the green garnets are a relatively recent discovery. Demantoid garnet from Russia was not discovered until the 19th century. Likewise, the very vibrant green garnet, tsavorite, is the newest discovery of all. It was first identified in Tanzania in the late 1960s. The most interesting and recently discovered varieties such as color shift garnet and purple rhodolite are also associated with African sources.

Garnets of all colors have been gaining popularity in recent years. Red garnets are typically on the lower end of the pricing spectrum, yet pure oranges such as mandarins and more recently discovered purple rhodolite and color-change garnets are very popular and as such demand much higher per carat prices than classic red varieties like



Mint garnets from Merelani.

Courtesy of Pala Gems. Photo by Jason Stephenson.

almandine and pyrope. While calibrated small sizes are readily available in the market at a few dollars each, once the stones are larger than classic, popular 8 to 10 carat sizes, prices rise dramatically and can be hundreds of dollars per carat or more. Green garnets are the most expensive of all due to rarity and market demand. As in any colored stone grading, more saturated colors with good clarity are the key to higher per carat prices.

Market outlook for garnet is positive as the garnet prices are still reasonably affordable compared to other gems that share similar colors. Although many gem varieties have seen their prices dip slightly off of their highs, garnet prices remain higher than historical average. ♦

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