

Jade: Symbol of Beauty, Nobility, and Perfection

by Eric J. Hoffman

For thousands of years jade has been revered throughout Asia as the most precious of all stones, one that ensures good luck and good health and banishes evil spirits. For jewelry, the Chinese value jade above all other gems, believing, as Pearl S. Buck wrote, that “jade is the most sumptuous jewel against a woman’s flesh.” Jade-- the “Stone of Heaven”-- is now appreciated worldwide for its beauty, rarity, and durability.

More than 8000 years ago, before metals came into use, the Chinese discovered jade’s unique toughness and began to use it for plow points, axe-heads, and weapons. Those who possessed this remarkable material gained significant advantages over their neighbors. Jade’s subtle colors, translucence, and rarity added to its allure, and it soon began to be used for ritual objects. Before long, royalty and high-status individuals were wearing jade ornaments as jewelry. Ancient poetry mentions the tinkle of a gentleman’s jades as he walks, and the Chinese symbol for jade (*yu* 玉) in fact looks like three jades suspended on a string. The king of the most powerful of the Warring States (475-221 BC) even offered to exchange 15 of his cities for one particularly desirable jade; his offer was refused!

The name “jade” refers to two distinctly different stones, nephrite and jadeite, which have similar properties. Nephrite, the jade carved in China for thousands of years, is a calcium magnesium silicate with hardness of 6 to 6.5 on the Mohs scale (slightly softer than quartz). Nephrite’s tightly packed microscopic fibers, much like the felt in a hat, make it uniquely tough, the hardest to break of all natural materials. Translucent to opaque, nephrite’s subtle colors include creamy white, celadon, spinach, russet, and yellow.

Jadeite (*fei cui* in Chinese) is a sodium aluminum silicate, slightly harder and a bit less tough than nephrite. Jadeite’s colors are more vivid and include green, white, russet, black, and a delicate lavender. Jadeite’s green comes from chromium impurities (just like an emerald’s) and is a different hue than nephrite’s iron green.

Jade for Jewelry

Jadeite was relatively unknown in China until the late 1700s. Once China gained control over the upper Burma mines, jadeite quickly found favor with the Qing Imperial court. Today nearly all jade jewelry is made from Burmese jadeite.

The best quality jadeite exhibits a pure, saturated, even color with no yellow or blue tinting, no off-tones such as brown or grey, and no inclusions. Translucency ranges from opaque to near transparent, with the best quality resembling honey in transparency. The polish should be flawless. Less desirable jadeite will exhibit dull or uneven color, opacity, cloudiness, mottled or blotchy texture, a dehydrated appearance (so-called “dead” jade), or even fine surface fissures.

The most highly sought jadeite is the famous “Imperial Green” whose clear, flawless transparency and pure emerald green color give it the appearance of a drop of green oil. Exceptionally rare, a single cabochon of such jade has sold for \$1.7 million, more valuable carat-for-carat than diamond. In contrast, lowest grade opaque white jadeite is crushed and used for road fill in Burma. No other gemstone has such a wide range of value.

To best show off the precious material, top-grade jadeite is usually cut as plain polished shapes such as cabochons, cylinders, bangles, disks, or beads. Material with small flaws or cracks may be cut as carved designs to disguise the defects, jade’s unique toughness permitting thin and delicate carvings.

Although most jade jewelry today is jadeite, three types of nephrite deserve mention. Antique Chinese adornments carved from white or green nephrite include hairpins, belt buckles, appliqués, and “fondling stones.” These can often be worked into contemporary jewelry designs. Taiwan Jade is a grass-green nephrite mined on that island since the late 1960s. The top-grade material-- with clear, even color and no inclusions-- was quickly exhausted and can now be found only in old stock. A rich green, translucent, hard nephrite from near the Canadian Arctic Circle is marketed as Polar Jade.

Jade is usually mounted in yellow or white gold, each of which imparts its own look. Common sidestones for jadeite include diamonds, rubies, and pink tourmaline. A single ring, pin, or beaded necklace will sometimes contrast five or more colors of jadeite.

Imitations and Fakes

When buying jade, first assure yourself that what you are buying *is* jade. Any stone as highly sought as jade will be widely imitated. Federal Trade Commission rules on gemstones allow only nephrite and jadeite to be sold as “jade.” Unfortunately, this rule is often flouted, with lesser hardstones sometimes offered as “a type of jade.” That’s about as honest as calling cubic-z “a type of diamond.”

Burmese jadeite has several imitators. These include dyed quartz (so-called “Malaysian Jade”), chrysoprase (“Australian Jade”), and glass. Usually these are easy to detect. Chrysoprase’s green, for example, comes from nickel, not chromium, giving it a completely different hue. Glass reveals itself, under a 10x lens, by its tiny swirls and bubbles.

Nephrite’s imitators include serpentine, bowenite, white chalcedony, aventurine, and even Peking glass. These are of concern mainly to buyers of Chinese jade carvings, not jewelry. Several of the Bibliography references discuss pseudojades.

Dyed jade has always been with us, as the structure of jade allows easy absorption of dyes. But in 1989 something more insidious appeared on the market to fool the unwary jade buyer: polymer injected jadeite. This material starts as cheap white jadeite. Chemically bleached of impurities, it is then back-filled under pressure with a green polymer (plastic) to enhance its color and translucency. Polymer injected jadeite is called “Type B,” to distinguish it from natural color (Type A) jadeite. Type A jade is

permitted no treatment other than a traditional washing with plum juice and polishing with beeswax. Jadeite that has simply been dyed, without polymer injection, is sometimes called Type C.

The central issue with jadeite-- especially "Imperial Green"-- is whether or not the color is natural. C jade's colors (typically green and lavender) are usually so garish they are easy to spot. But B jade can be quite deceptive when made well. When Type B first appeared, sales of jadeite jewelry plunged 50% or more in some countries until effective detection methods were found. The fakers kept pace, however, and reliable detection now requires a costly infrared spectroscope operated by a trained technician. Any expensive jadeite purchase should therefore be made from a reputable and competent dealer or auction house. Above a certain value, a certificate from the Gemological Institute of America or similar organization would be expected.

B jade sold at B prices can make attractive, inexpensive jewelry, but B jade sold as Type A is pure fraud. The acid bleaching, injecting, and dyeing alter and weaken the jade structure. And the color is by no means permanent, eventually fading or yellowing in sunlight or even turning cloudy in hot dish water.

Whether you wear a million-dollar Imperial Jade necklace or an inexpensive jade bauble, you are not simply adorning yourself with a beautiful stone. You are honoring a remarkable gem that for thousands of years has symbolized beauty, nobility, perfection, endurance, and immortality.

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Fig. 1: Nephrite jade beads, Han Dynasty (206 BC - 220 AD) type.



Fig. 2: Jade floral rosette for ladies' clothing or headdress, Ming Dynasty. (K. M. Fung Collection, Hong Kong)



Fig. 3: Jadeite flower brooch with yellow and white diamonds (estimate \$100,000-190,000). Courtesy: Christie's.



Fig. 4: Superb emerald-green jadeite bead necklace (largest bead 17 mm, estimate \$1.5-1.9 million). Courtesy: Christie's.

Fig. 5: Inexpensive Type B jade with imitation diamonds.



Fig. 6: Jade belt buckle with Chinese word Fu (good fortune) and two deer symbolizing longevity, Ming Dynasty. (K. M. Fung Collection, Hong Kong)

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Brief Contributor Info

Eric Hoffman is a space systems engineer with a 30+ year interest in Chinese jades. He is writing a book on the subject.