

The Various Meanings of 'Fei Cui'

By Renée Newman, GG

With the terminology applied to Jade currently under debate, Renée Newman clarifies the current landscape and the arguments for and against a change.

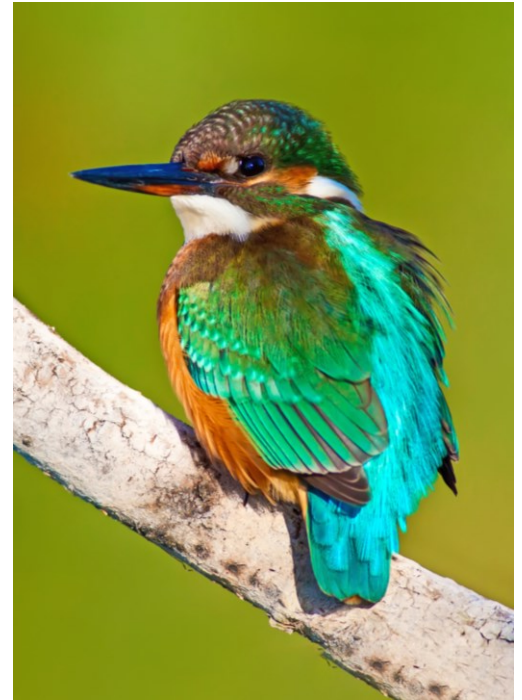
'Fei Cui' (aka 'Fei-Ts'ui') was originally the name of the kingfisher bird found in the Kuangsi province of China. According to Chinese historian T'ang Jung-tso and *Jade, a gemologist's guide* (p.21), edited by Richard W. Hughes, the name 'Fei Cui' was applied to vibrant green Nephrite as early as the eleventh century AD because of its resemblance to the feathers of the kingfisher.

In 1784, Emperor Qianlong extended China's jurisdiction into northern Burma (now Myanmar) where large amounts of Jadeite were found and then transported to the Beijing workshops of China's finest Jade carvers. *Jade, a gemologist's guide* (p.107) states: *Emperor Qianlong preferred the rich hues of this 'new' jade (jadeite) and soon the finest semi-transparent rich green 'fei cui' ('kingfisher') material came to be known as "Imperial jade"*.

In the Jade section of *The curious lore of precious stones*, George Frederick Kunz wrote: *The name jade includes two distinct minerals: nephrite and jadeite... A variety having a rich emerald green hue is called by the Chinese, feits'ui "Kingfisher plumes", it is also denominated Imperial jade.*

In *Jade* (p.23) edited by Keverne, Jill Walker says: *The Chinese called the intense green jadeite "fei cui" (kingfisher) after the brilliant green plumage of the bird of that name.*

**Imperial Jade ring and photo
courtesy of Jye's International.**



The common kingfisher displaying its iridescent plumage. The Chinese subspecies (bengalensis) is especially bright, with upper feathers of green or blue (depending on the lighting).

Image by Greens and Blues / Shutterstock.com.



Richard Gump, in his book *Jade: Stone of heaven* (p.181), agrees that the Chinese applied 'Fei Cui' to rich green Jadeite and states: *Moreover, the new stone was occasionally a brilliant vivid emerald-green color heretofore unseen in nephrite. The Burmese called it 'kyaukseim' or 'green stone'. The Chinese named it 'fei-ts'ui', or 'kingfisher jade' after the brilliant green plumage of the bird. The name had been used before Sung times, but not after, to denote a certain Khotan nephrite of distinctive green.*

The Hong Kong Government's Definition of 'Fei Cui'



Opaque blackish-green Kosmochlor Jade cabochons. Photo by Dr. Dominic Mok.

Recent research has shown that the gem known as 'Jadeite Jade' is actually a rock composed mostly of Jadeite and other minerals such as Kosmochlor and/or Omphacite. Distinguishing Jadeite Jade from Omphacite Jade and Kosmochlor Jade can be difficult, so in China and Hong Kong, the umbrella term 'Fei Cui' is used to identify them on commercial lab reports. The official Hong Kong definition states: *The expression 'fei cui' when used in the course of trade or business to describe an article, means the article is a granular to fibrous polycrystalline aggregate which is composed solely or principally of any of the following or any combination of the following – (a) jadeite, (b) omphacite, (c) kosmochlor.*

Semi-translucent greenish-black Omphacite Jade viewed by reflected light and transmitted light. Photos by Dr. Dominic Mok.



Identification Tests for Pyroxene Jades ('Fei Cui')

According to the *Standard methods for testing Fei Cui for Hong Kong*, the refractive index (RI) ranges for the three Pyroxene Jades (Jadeite Jade, Omphacite Jade and Kosmochlor Jade) are:

- Jadeite Jade: 1.65–1.67 (± 0.01)
- Omphacite Jade: 1.67–1.68 (± 0.01)
- Kosmochlor Jade: 1.68–1.72 (± 0.01)

Advanced labs rarely run RI tests because they have far more precise, reliable, and recordable tests they can run to differentiate Jadeite Jade from Omphacite Jade and Kosmochlor Jade.

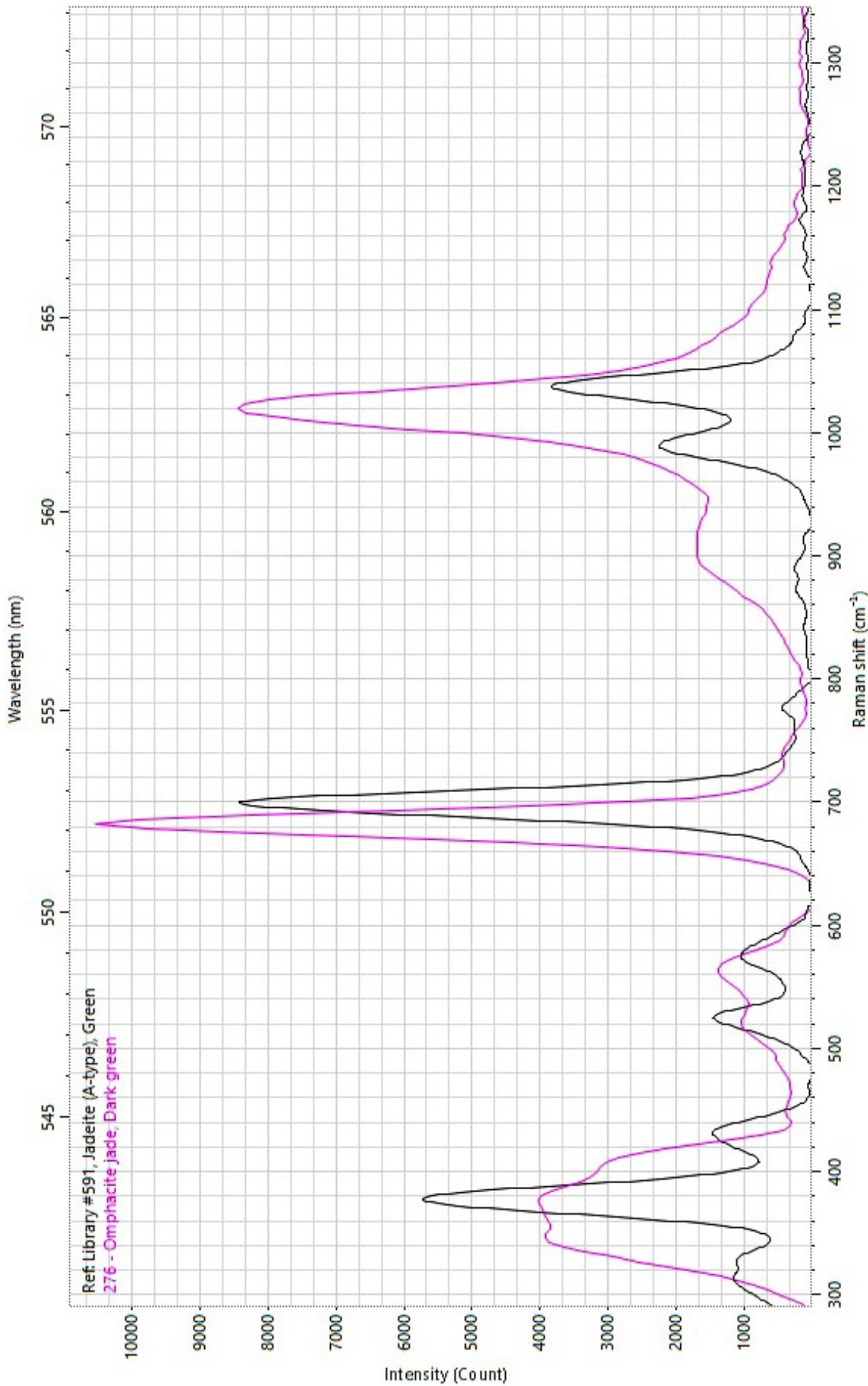
I asked Bear & Cara Williams of Stone Group Labs, if it was possible to identify Pyroxene Jades using only FTIR spectroscopy since their lab has analysed a lot of Jade. Here is their reply:

FTIR reflectance readings should be sufficient by itself (with those familiar with the spectra, and have comparison spectral data to carefully compare). Raman can also be used to differentiate, but we use the FTIR in order to see how they subtly change or overlap within the species.

If using Raman, it is true (for some rocks) that you may need to take readings in different spots. This could also be true for lower grade or fairly included jadeites. But for the most part, any omphacite or jadeite of halfway decent quality will be homogeneous in its inter-growth to produce an accurate reading just about anywhere the beam hits. FTIR utilises a broader beam that takes in a larger surface area, so those readings will show a better landscape averaging.

I think the confusion of needing Raman tests in differing spots is related to those who are trying to obtain readings on the polymer treatments. As you know, the treatment can be located in different areas and could be missed if not aimed in the area where the treatment mostly resides.

A 2014 *Journal of Gemmology* Jade article (Volume 34, No 3, pp.210–229) also says that FTIR spectroscopy can identify the three Pyroxene Jades. It states at the end: *We propose analysing a sample using Raman or FTIR spectroscopy on a point grid, with the most abundant mineral giving the name (i.e. 'jadeite jade', 'omphacite jade' or 'kosmochlor jade'.*



Raman spectra of Jadeite versus Omphacite spectra. Image courtesy of Stone Group Labs.

Colours of Pyroxene Jades

The previously referenced 2014 *Journal of Gemmology* article also indicates that colourless, white, lavender, brown and yellow colours of Pyroxene Jade are always Jadeite Jade (p.224). Omphacite, on the other hand, is found in medium green to very dark green or black colours. Kosmochlor has a dark green to black colour and is opaque. If the stone is medium to dark green or black, FTIR or Raman spectroscopy will be needed to prove a stone is Jadeite Jade. A bigger challenge is to determine if the stone has been treated with resin and/or dye and for that FTIR spectroscopy is required.



Jadeite Jade rainbow ring by Mason Kay. Image courtesy of Mason Kay.

Pros and Cons of Replacing 'Jadeite Jade' with 'Fei Cui'

In 2000, Jade researcher Prof. Ou Yang proposed that all gemstones previously known as Jade and composed of pyroxene group minerals should be termed 'Fei Cui' because research had showed that Myanmar Jade was not only composed of Jadeite but also Kosmochlor and Omphacite (*Fei Cui Jade* by Ou Yang, Chiu Mei and Humphrey Yen, pp.19-20).

Edward Liu, Chairman of the Gemmological Association of Hong Kong, has also encouraged the gem trade to adopt 'Fei Cui' in place of 'Jadeite' in presentations to the World Jewellery Confederation (CIBJO) and in a YouTube video entitled *Jadeite Jade or Fei Cui*: www.youtube.com/watch?v=eYB-ocSe3oA.

Another source that promotes the replacement of 'Jadeite' with 'Fei Cui' is *Broken bangle* by Edward Liu, Richard Hughes, Zhou Zhengyu and Kaylan Khourie. It was published in 2024 and explains why the authors believed the trade should adopt the name 'Fei Cui' and use it instead of terms such as Jadeite Jade, Omphacite Jade and Kosmochlor Jade. Listed below are arguments for and against the replacement of 'Jadeite Jade' with 'Fei Cui':

1. Pro: Jadeite Jade is a rock composed of Jadeite, Omphacite and Kosmochlor. It is not scientifically correct to name a rock after a mineral. Geologists call rocks composed of Jadeite 'Jadeitite'. Marble cannot be named as calcite. Other gem rocks like Lapis Lazuli, Maw Sit Sit, Unakite and Sanan Skarn are not analysed to determine the percentages of their component minerals.

Con: it has been common practice to name rocks after their main mineral constituent since the 1800s. Other examples include Rhodonite, Sugilite, Howlite, Turquoise, Malachite, Azurite, Chrysocolla, Cuprite, Eudialyte, Kyanite, Lepidolite, Phosphosiderite, Smithsonite, Tugtupite, Vesuvianite, etc. In some cases, the rocks may also have a separate aggregate name such as Charoitite, but gemmology considers commercial interests and shortens it to Charoite to make it easier for buyers and sellers to pronounce. In the case of Jadeite, gemmologists identify the rock form as 'Jadeite Jade' on lab reports to differentiate it from the mineral Jadeite.

'Jadeite Jade' is often shortened to 'Jadeite' with the understanding that it is not the single mineral, especially in conversation and on signs. Jadeite Jade that is not green to black contains no Omphacite nor Kosmochlor.

Lapis Lazuli was named "blue stone" long before people knew its main constituent was Lazurite. Marble derives from an ancient Greek term meaning "shining stone" and

consists of varying carbonate minerals. Unakite, Maw Sit Sit, and Sannan Skarn do not have a primary mineral component.

2. **Pro:** Some Pyroxene Jade contains similar amounts of Jadeite and Omphacite. Pyroxene stones may even be Jadeite on top and Omphacite on the bottom.

Con: This is rare, and gem labs identify the stones as 'Jadeite/Omphacite Jade'.

3. **Pro:** Destructive testing is required to accurately identify Jadeite Jade because it is a rock containing other minerals. These components grow in a submicroscopic aggregate with grains so small that normal lab instruments cannot easily determine the true composition.

Con: Highly respected jade researchers and gem labs disagree and say that translucent to near transparent Jadeite Jade can be accurately identified and differentiated from Omphacite and Kosmochlor with Raman and FTIR spectroscopy, which must be done to confirm Pyroxene Jade is untreated. As previously mentioned, colourless, white, lavender, brown, and yellow colours of Pyroxene Jade are always Jadeite Jade so there is no good reason to not call Pyroxene Jade with these colours 'Jadeite Jade'.

4. **Pro:** All the Chinese are using 'Fei Cui' and they are the main buyers of jade.

Con: All of the Chinese jade retailers and wholesalers I met in Hong Kong at shows and in stores use terms like 'Jade', 'Jadeite', and 'Burma Jade', not 'Fei Cui' when selling to English speakers. Chinese Americans think 'Fei Cui' is a colour and quality term for high-grade untreated green Jadeite Jade.

5. **Pro:** Creating divisions between Jadeite, Omphacite and Kosmochlor is petty and just mineralogical bureaucracy.

Con: Trade members don't think it's petty to create divisions among members of the Garnet family. In fact, doing so has increased sales of all Garnets because collectors, hobbyists and consumers are now encouraged to buy all of the species and varieties, not just a typical dark red Garnet. When Tiffany's had a hard time selling transparent green Grossular, they just gave it a different name – Tsavorite, which designers and dealers would rather use than simply 'green Garnet'.

Most people who own Liddicoatite prefer that name over the name 'Tourmaline', which does not sound as special. Creating divisions can boost sales and encourage collecting.



Omphacite Jade and Diamond ring. Photo © Heritage Auctions (HA.com).

6. **Pro:** ‘Fei Cui’ is a more scientifically accurate name than ‘Jadeite Jade’.

Con: How can a commercial term with multiple conflicting meanings be more “scientific”?

7. **Pro:** Culture & tradition matter. Raw fish + rice + seaweed is called “sushi” even in English.

Con: If culture and tradition matter, then the trade should use the traditional meaning of ‘Fei Cui’ which Chinese Americans are still using – untreated high-quality green Jade. However, ‘Fei Cui’ proponents are even recommending the use of the term ‘Fei Cui’ for dyed and resin treated Pyroxene Jade. They think labs should add ‘Fei Cui’ on lab reports and call it “Fei Cui Type B+C-jade.”

Terms Chinese Sellers Use to Sell Pyroxene Jade to English Speakers

When I was in Hong Kong in 2024, all the Jade exhibitors and jewellery stores I visited only used English terms such as ‘Jade’, ‘A-Jade’, ‘Jadeite’, ‘Jadeite Jade’, and ‘Burmese Jade’ when talking to me in English and on their English signs and English company names. On the following page is a sign seen at many of the Jade booths at the Hong Kong International Jewellery Show. It includes the Chinese characters for ‘Fei Cui’ and ‘Hard Jade’ (Jadeite). Not a single seller used the term ‘Fei Cui’ with me when describing their Jade. They only used ‘Fei Cui’ on their Chinese signs and when speaking to Chinese speakers. The only places I saw ‘Fei Cui’ written in Roman letters was on lab reports and the announcements for a seminar on the Internationalisation of the ‘Fei Cui’ Standard.

All jade jewellery on display
are made of natural jadeite
(Type "A" Goods)

所有翡翠展品均為天然硬玉
(A貨)

Sign on display at several Jade booths at the Hong Kong International Jewellery Show. Photo by Renée Newman.

What Does 'Fei Cui' Mean to Hong Kong Jade Sellers?

I visited many Jade sellers at the Hong Kong show and in jewellery stores in Tsim Sha Tsui and Hong Kong Island. After they showed me their Jade jewellery, I asked them what 'Fei Cui' meant. Most told me it was Jadeite. Some other responses were:

- Jade.
- The customs term for Jadeite.
- The name of a bird with green feathers that is also used for Jade.
- Burmese Jade
- Natural Jadeite. 'Fei Cui' is not treated. (The official government meaning, however, includes treated Jadeite of all colours.)
- Burmese Jadeite. When I asked if Jadeite from other countries was 'Fei Cui', some told me "no" and that Jadeite from Guatemala and Italy is not 'Fei Cui'. (The official government meaning of 'Fei Cui' includes Pyroxene Jade from all countries.)

Every jeweller and exhibitor I talked to in Hong Kong said 'Fei Cui' was used for all colours of Jadeite. However, one native Chinese Hong Kong woman who was a translator for an American exhibitor but not a trade member said 'Fei Cui' was top quality green Jadeite that could cost millions of dollars.

Not a single jeweller, salesperson or exhibitor in Hong Kong told me that 'Fei Cui' was a family name for Jadeite, Omphacite and/or Kosmochlor. It appeared that only gem lab personnel and officers of gem trade organizations used 'Fei Cui' as an umbrella term for all Pyroxene Jade.

What Does 'Fei Cui' Mean to Chinese American Jade Sellers?

I asked a Seattle-based Chinese American Jade connoisseur and jeweller what the meaning of 'Fei Cui' was. He was a former AGS store owner who now brokers gems and does a lot of buying and selling in Hong Kong and China. He told me that 'Fei Cui' is the Chinese term for 'Imperial Jade' and showed me three examples on his phone. I wondered how other Chinese Americans interpreted 'Fei Cui' so I visited a major Chinese jewellery store in Los Angeles County. I told a sales associate that a friend had advised me to buy some 'Fei Cui' Jade. She took me to a counter with some bright green Jadeite and I tried on a ring. Then I pointed to some lavender, light green and multi-coloured Jadeite pieces and asked if they were 'Fei Cui'. She said no; they were just Jade. Afterwards I started asking Chinese jewellers and booth owners who sold Jadeite in the downtown Los Angeles jewellery district and Chinatown if they had any 'Fei Cui'. These are some responses I received from US Chinese jewellers and jade booth owners:

- We don't have any. 'Fei Cui' is very expensive green Jade.
- That's Imperial Jade and we only have a few pieces. This apple green Jade is not considered 'Fei Cui' because it is not as bright and transparent as this Imperial Jade.
- We don't have any because we only sell treated jade. 'Fei Cui' is not treated.
- We don't have any 'Fei Cui', but here is some other Jadeite.
- I don't have any 'Fei Cui'. It's too expensive. Most of my Jade is B-Jade.
- No. 'Fei Cui' is greener than our Jade but we can order it for you. However, it would cost more than \$10,000 per piece.

Based on the sellers I visited, Chinese Americans are still using the traditional definition of 'Fei Cui' as a colour and quality term referring to high quality untreated emerald green Jade.

Should We Replace 'Jade' and 'Jadeite' with 'Fei Cui'?

The terms 'Jade' and 'Jadeite' should be preserved. Even sellers in Hong Kong know they must use terminology customers can understand in order to successfully sell Jade. Besides being meaningless to English speakers, 'Fei Cui' has multiple meanings and different interpretations especially depending on where one lives. I saw lots of Jade at the Hong Kong Jewellery Show wholesaling for tens, and hundreds of thousands of dollars and it was all being sold as 'Jadeite' to English speaking buyers, not as 'Fei Cui'. It is common sense that that if expensive jewellery is sold as Jadeite, the buyer should get a lab document saying it is Jadeite Jade. Minerologists, geologists and gemmologists worldwide have acknowledged that 'Jadeite Jade' is an appropriate gemmological term for an aggregate composed primarily of Jadeite. Sellers want to use terms their English-speaking customers understand such as 'Jade' and 'Jadeite Jade' and buyers who pay high prices for stones sold as 'Jadeite Jade' want to continue to get lab reports that confirm the stone is actually Jadeite Jade. It is a positive term that helps sell Jade. Let's keep it.



Ice Jade ring by Mason-Kay. All colourless Pyroxene Jade is Jadeite Jade. Photo courtesy of Mason-Kay.