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SPECIAL REPORT  
GEMMOLOGICAL COMMISSION

**Bringing clarity to the industry and consumers  
by setting criteria for gemstone variety names**

By Hanco Zwaan, President  
CIBJO Gemmological Commission

**A**t long last, an in-person CIBJO Congress will be taking place, this time in Jaipur, India, and the members of the CIBJO Gemmological Commission are greatly looking forward to the event. The most important topic

on our agenda will be the presentation of the first edition of a gem materials list, complete with detailed definitions.

In the previous Gemmological Commission Special Report, which was released before the Virtual CIBJO Congress that took place in November 2021, it was noted that a new body was being formed, called the CIBJO Committee





*Hanco Zwaan, President of the CIBJO Gemmological Commission.*

on Varietal Names, or CVN. It was charged with compiling a list of acceptable gemstone variety names, and also with providing as precise as



*Claudio Milisenda, Vice President of the CIBJO Gemmological Commission.*

possible definitions for each of those varieties.

Although the names of mineral species are defined by the Commission on New Minerals, Nomenclature and Classification (CNMNC) of the International Mineralogical Association (IMA), the organization has never addressed the names of mineral varieties. Consequently, in the gemstone trade, the validity of certain variety names, and also the differences between variety names and trade names has become unclear.

One could say that for end-consumers the confusion is even worse, because they are confronted with many names, often new and of unclear status, and frequently without any context.

Working under the auspices of the Gemmological Commission Steering Committee, the CVN was co-chaired by Hanco Zwaan, President of the commission, and Ken Scarratt, who today is Acting President of CIBJO's Sector A, which is responsible in the World Jewellery Confederation for the work related to all gem materials.

The CVN's members included specialists from the Gemmological Commission, the Coloured Stone Commission, the Diamond Commission and also the directors from several major gemmological laboratories and organisations, among them



*Thanong Leelawatanasuk, Vice President of the CIBJO Gemmological Commission.*

were Claudio Milisenda and Thomas Lind from Germany, Thanong Leelawatanasuk and Sudarat Saeseaw from Thailand, Jean-Pierre Chalain, a French gemmologist working in Switzerland, Michael Krzemnicki from Switzerland, and Shane McClure from the United States.

The work began under the watchful and expert eye of Roland Naftule, CIBJO's long-time Vice President and President of Sector A, who sadly passed away in April 2023 and will be sorely missed.

### **Gem materials list and definitions**

As mentioned, the CVN produced and agreed upon a first version of a gem materials list and definitions, which will be presented and discussed in October at the Gemmological Commission session during the next CIBJO congress in Jaipur, India.

The document defines general terms, such as a mineral, gemstone, gemstone variety and commercial or trade name, and subsequently lists names and definitions of gemstones.

For each name, along with a short description, the status is indicated, clarifying whether it is an accepted mineral name, a gemstone variety name or a commercial name.

The list of names is in alphabetical order so that it will be easy to locate the meaning of an encountered or unknown term.

This first edition of the document is devised as a basis for additional work, where we will go into more detail, particularly where it comes to criteria for distinguishing between the different varieties.

It is our intention that after the document has been presented during the CIBJO Gemmological Commission, it will be referred, via Sector A, to the CIBJO Board of Directors for approval. It can then be incorporated in the CIBJO Gemmological Laboratory Blue Book.

Like the rules and definitions that are already present in the other CIBJO Blue Books, this information will hopefully help

people in the gem trade, and also end-consumers, to clarify the validity and status of a name they encounter, and to distinguish acceptable variety names from the unclear or frequently misleading alternatives.

### **Borderline issues are still pressing**

As will be apparent in the first edition of the gem materials list, especially when dealing with high value gemstones, a more precise definition of borders has become increasingly important.

Examples include the lines that separates ruby from pink sapphire, and the differences between padparadscha and pink or orange sapphire, or fancy sapphire, in relation to colour stability. So are the borderlines between aquamarine, green beryl and emerald, and standards to describe what can be considered to be jade.

Other issues include the definitions of alexandrite, in relation to other varieties of chrysoberyl, and of cobalt spinel in relation to other blue spinels.

Many of these issues still require precise definitions, and the committee will therefore



*An 11.62 carat beryl with an in-between blue-green colour, containing only traces of chromium but much higher iron content, which is the predominant cause of the colour. Where is the borderline? Would it be appropriate to still call this variety an emerald, or would "green beryl" be a better name in this case? Photo by Hanco Zwaan.*

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continue working to make progress.

During our work thus far, it became clear that it is often difficult to reach consensus. Depending on the specific distinction criteria that will be discussed, other experts will be asked for their input as well, to find the best solutions possible.

### Fei Cui and jade

Earlier this year the President of the Gemmological Commission was invited to participate in a panel discussion on Fei Cui, during the International Coloured Gemstone Association (ICA) Congress in Dubai.

At the event, Dr. Edward Liu, chairman of the Gemmological Association of Hong Kong (GAHK) and Mr. Kent Wong, Managing Director of the Chow Tai Fook Jewellery Group and Chairman of the Hong Kong Jewellers & Goldsmiths Association, promoted the Fei Cui nomenclature they earlier had introduced.

As they stated, Fei Cui is a granular to fibrous polycrystalline aggregate, composed solely or principally of the minerals jadeite, omphacite and kosmochlor, or any combination of these minerals.

They would like this terminology and their way of testing to become a standard, not only in Hong Kong, but also in China and other parts in the world where the trade in jade is significant.

In my presentation to the conference, I explained that, for the global harmonisation of nomenclature on jade terminology to be possible, some issues need addressing. Among these are:

- The worldwide recognition of nephrite and jadeite as jade, based on their exceptional toughness and similar appearance.
- The difference between a green omphacite variety, which is gemmologically indistinguishable from green jadeite, and

omphacite present in metamorphic rock.

- The status of Maw-sit-sit and associated kosmochlor.
- The nomenclature of materials containing jadeite, but also a significant volume of other minerals, such as jadeite and albite, jadeite and quartz.

The extent to which the presence or absence of treatments would affect the nomenclature of jade should also be looked into.

Earlier on, the CIBJO board expressed its desire and aim to create a universally accepted standard for jade. This should be done applying the body of work that has been carried out by GAHK, the National Gem Testing Centre of Beijing, China, and other experts.

### The responsibilities and restrictions of labs

During the upcoming CIBJO Congress, a discussion will be held on the responsibilities and restrictions laboratories have when issuing reports.

Different laboratories may produce different results for the same particular gemstone. This may have to do with borderline issues as described above, but there may also be different opinions on the geographic origin of a stone, or on the presence or absence of a certain treatment. Especially in cases of whether a corundum is heat-treated or not, inconsistent reporting is frequently observed.

Members of the Coloured Stone and Gemmological Commission Steering Committees, additional coloured stone traders, retailers and laboratory representatives are invited to participate. The meeting will include a non-confrontational, fact finding discussion, to understand all the issues and possibly make recommendations.



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