

# Gems & Jewellery

Autumn 2019 / Volume 28 / No. 3

MINING FOR  
OPALS IN  
QUEENSLAND

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UPDATING  
THE 4Cs

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AL THANI  
COLLECTION  
AT AUCTION

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THE SIREN  
OF SERENDIP



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# Gems & Jewellery

AUTUMN 2019

## AN OUTBACK ADVENTURE

Gem-A collection curator, Barbara Kolator FGA DGA EG, describes a recent trip to Queensland, where she visited mines, sifted for sapphires and met the locals on the holiday of a lifetime.



22



## MAKING HISTORY

Jack Ogden FGA considers some of the most decadent Indian and Mughal treasures from the famous Al Thani Collection, which were auctioned by Christie's in June.

## THE SIREN'S CALL

Rui Galopim de Carvalho FGA DGA shares the story behind the exceptionally large Siren of Serendip sapphire and describes the process of setting it into a white gold and diamond necklace.



### COVER PICTURE

The Siren of Serendip — a modified cushion-shaped deep blue sapphire weighing 422.66 carats. The gem was cut from a 2,670 carat rough found in Sri Lanka, reportedly in the early 20th century. Image courtesy of the Houston Museum of Natural Science.

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Contributors	4	Gemstone Carving: Moonflower	26
CEO Comment	5	Meet Jochen Leën	30
Gem-A News	6	Jade in the Mughal Court	32
The Big Picture: Mining in Cambodia	8	Retail Focus: The Ivory Act	38
Las Vegas Trend Report	10	Gem-A Instruments Special Offer	39
Gem-A Voices	15	John Benjamin on Turquoise	40
Gem-A Conference Preview	16	Fine Jewellery by Sarah Ho	42
Gem Empathy Competition	19	Gem-A Photographer of the Year	44
Redefining the 4Cs of Diamonds	20	Last Impression: Las Vegas	46



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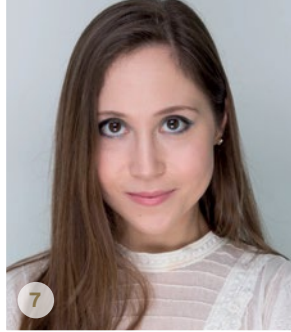
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# Gems&Jewellery

## Autumn 2019 featured contributors

### 1. OLGA GONZALEZ

Olga González FGA DGA is the CEO and founder of Pietra PR and has over 10 years' experience in the field of jewellery communications. She currently serves as president of PRSA-NY and is the networking director for the Women's Jewelry Association's New York Metro Chapter Board.

### 2. RENÉE NEWMAN

Renée Newman BA MA GG is a gemmologist, lecturer and author of 13 gem and jewellery books including the *Diamond Handbook: How to Identify & Evaluate Diamonds*. She wrote her first book, the *Diamond Ring Buying Guide*, in 1989 while working at Josam Diamond Trading Corporation. A new 8th edition will be available next February. For more information, see [ReneeNewman.com](http://ReneeNewman.com).

### 3. JACK OGDEN

Dr Jack Ogden is a historian whose research has focused on the history of gems and jewellery. His most recent book is *Diamonds; an early history of the king of gems* (Yale University Press, 2018). He was awarded the Gem-A

Gemmology Diploma with distinction in 1971 and Gem-A life membership in 2014. He is a fellow of the Society of Antiquaries, current president of the Society of Jewellery Historians and Visiting Professor in Ancient Jewellery Materials and Technology at the School of Jewellery, Birmingham City University. He was CEO of Gem-A 2004-12 and secretary general of CIBJO 1995 – 2000.

### 4. SANNI FALKENBERG

Sanni Falkenberg is an award-winning lapidary artist specialising in stone carving. Sanni graduated from UCA Rochester in 2012 with a BA (Hons) in silversmithing, goldsmithing and jewellery design and in 2019 her Moonflower vase won gold at the Goldsmiths' Craft & Design Council's annual awards. Originally from Finland, Sanni now runs her lapidary business from her studio in Brighton.

### 5. JOHN BENJAMIN

John Benjamin FGA DGA FIRV began his career in 1972 at Cameo Corner, the celebrated Bloomsbury antique jewellers. In 1976 he joined Phillips Fine Art

Auctioneers as a cataloguer and valuer where he remained for 23 years, ultimately becoming international director of jewellery with responsibility for the sale programmes in London and Geneva. In 1999 he established his own jewellery consultancy John C. Benjamin Limited acting as an independent consultant for a private and corporate client network.

### 6. RUI GALOPIM DE CARVALHO

Rui Galopim de Carvalho FGA DGA is editor of Portugal Gemas, associate editor of The Journal of Gemmology, Portuguese delegate at CIBJO and consultant to the Portuguese National Assay Office. He is also a lecturer on the history of gem materials in Portuguese jewellery.

### 7. CHRISTA VAN EERDE

Christa's passion for gemstones was instilled from a young age by her father, Albert, whose fondness for rocks and minerals led to her being named Christa Lynn, which combined makes 'crystalline'. She is a regular contributor to *Gems&Jewellery* and has also had work published in *Rock&Gem* magazine and on *The Jewellery Editor*.



# Straight from the heart

Opinion and comment from CEO, Alan Hart FGA DGA

This year has flown by, and we are already on our third issue of *Gems&Jewellery* for 2019! Before you start turning the page to discover this issue's features (and there are some fantastic reads coming your way), I would like to take this opportunity to mention our biggest event of the year: the Gem-A Conference 2019. This year's Conference takes place from November 2-3, with additional workshops and field trips planned for the following two days. The Gem-A Conference Workshops, hosted at Gem-A HQ on November 4, are sure to be popular, especially now that we have announced Laurent Cartier, Rui Galopim de Carvalho, Pat Daly and Richard Drucker as workshop presenters who will focus on Chinese cultured pearls, coral, visual optics and coloured gemstones respectively. Make sure to book your place via the Gem-A Conference Eventbrite page before the spaces sell out.

If you would like a little preview of this year's Conference, turn to page 16, where the *Gems&Jewellery* team have presented three of this year's speakers

with some early questions about their 'specialist subjects'.

The summer is one of the quietest times at Gem-A HQ, largely because we are awaiting a fresh group of eager students ready to delve into the wonderful world of gemmology in September. However, this has some benefits. We are pleased to be doing some much-needed improvements and refurbishments to our Hatton Garden-based building, which has been in need of sprucing for some time. The Gem-A building is full of character, which is something we certainly don't want to lose. Instead, we are focused on fixing some aches and pains and giving all of our classrooms a refresh. We hope future visitors and our forthcoming students will appreciate the changes.

September is always a busy month for Gem-A because we attend two important trade events, International Jewellery London and the Hong Kong Jewellery & Gem Fair. Turn to page 19 to find out more about this year's Gem Empathy competition, hosted in collaboration with International Jewellery London, which gives one lucky attendee the chance

to win a 12.9 carat coral cabochon for a bespoke jewellery piece. This sustainably sourced precious coral was supplied by Italian company, Enzo Liverino 1894, who have



September is always a busy month for Gem-A because we attend two important trade events...

previously featured in the pages of this magazine (in a very informative article correcting many misconceptions about precious coral by Rui Galopim de Carvalho in the Spring 2019 edition). We can't wait to see all of the inspiring entries!

So what else can you expect from this issue? Turn to page 22 to find out more about the recent Christie's *Maharajas & Mughal Magnificence* sale, which centred on 400 pieces of the exceptional Al Thani Collection of treasures. There are also features on fossicking for opals and sapphires in Australia's Outback and a conversation-starting piece on the 4Cs and whether this is outdated for explaining diamonds to consumers. Turn to page 20, where Renée Newman explains why she advocates a '6Cs and 2Ts' of diamonds system.

I hope you enjoy this issue and, as always, if you have a fantastic story idea or would like to write your own piece for *Gems&Jewellery*, please drop our editorial team an email on [editor@gem-a.com](mailto:editor@gem-a.com).

Best wishes

Alan Hart FGA DGA

Alan Hart



Last year's Gem-A Conference was a great place for networking.



The busy Gem-A booth at the Hong Kong Jewellery & Gem Fair 2018.



Gem-A HQ in Hatton Garden had a little lift this summer.

# Gem-A News

A round-up of the latest news from Gem-A

## GEM-A INSTRUMENTS IS NOW ONLINE!

Discover the new Gem-A Instruments website to browse our range of instruments and books for the amateur and professional gemmologist.

The website is designed to offer a user-friendly experience with full product details, high-resolution images and shortcut links to recommended and similar items.

This is all available at the click of a button from the homepage, where instruments are clearly organised into product type, including Microscopes & Accessories, Light Sources & Torches and Loupes & Magnification.

Additional features include a FAQs page, a news and offers section and a location map so you can easily find us should you wish to visit our Hatton Garden-based shop in London.



You can access the website now using this link: [shop.gem-a.com](http://shop.gem-a.com). The website will soon become transactional, allowing you to make purchases online.

In the meantime, if you would like to place an order, or need further information and advice, please call Gem-A Instruments on **0207 404 3334** or email [instruments@gem-a.com](mailto:instruments@gem-a.com). ■



Frøya Mathers



Priya Amrit

## GEM-A'S MARKETING TEAM WELCOMES SOME NEW ADDITIONS!

We are delighted to welcome two new members of staff to our London HQ. Frøya Mathers has a background in co-ordinating marketing and events in the not-for-profit sector. She joins the Gem-A marketing team as events marketing manager. Having previously worked in our education department, we are delighted that Priya Amrit will also be moving to our marketing team to take on the role of our new membership secretary.

## A WARM WELCOME

The annual Gem-A Summer Open Evening took place on July 16 and saw aspiring gemmologists visit Gem-A HQ in London to meet our team, find out more about our courses and even try some hands-on gemmology. Attendees got the chance to visit our famed gemmological library (one of the largest in Europe), examine our gemstone and mineral collection and learn how to use some key gemmological instruments. More highlights from the evening included presentations from Gem-A tutors. Pat Daly FGA EG gave attendees a tour of our laboratory, while Charlie Bexfield FGA told us why the 10× loupe is a gemmologist's best friend and Matthew Handley DGA deliberated whether diamonds really are forever. Gem-A staff thoroughly enjoyed speaking to visitors and are now looking forward to welcoming some back for upcoming workshops and courses.





## GEM-A AROUND THE WORLD

## GEM-A USA TO SPONSOR ASA CONFERENCE

Gem-A USA is pleased to be sponsoring the Advanced Business Valuation and International Appraisers Conference of the American Society of Appraisers (ASA), due to be held in New York City from August 25-27. The event has been completely overhauled to offer a “fresh, innovative and totally disruptive” experience, where valuers can learn and make useful connections with their peers.

The Conference’s jam-packed series of talks covers

everything from the works of Fabergé, legal advice and marketing challenges, to the skills required of expert witnesses in a court of law. Gem-A USA was established earlier this year to offer Gem-A courses to budding American gemmologists. JTV in Knoxville, Tennessee, was named the first Gem-A USA Accredited Teaching Centre (ATC) in spring 2019. To find out more, speak to our team on [education@gem-a.com](mailto:education@gem-a.com).



## GEM-A WELCOMES NEW ATC IN CHINA

Gem-A education continues to expand its presence in China with a new ATC. Guangdong Gems and Jade Exchange can be found in the city of Panyu in Guangdong Province and will offer the Gem-A Gemmology Foundation and Gem-A Gemmology Diploma courses in Simplified Chinese. If you want to find out more about Gem-A’s global footprint, visit [gem-a.com/education/study-options/teaching-centres](http://gem-a.com/education/study-options/teaching-centres).



Gem-A CEO Alan Hart and Gem-A Graduates at the Hong Kong Jewellery & Gem Fair 2018.

## SEE YOU IN HONG KONG!

Gem-A will be at the Hong Kong Jewellery & Gem Fair at the Hong Kong Convention Centre (HKCEC) from September 18-22. We invite you to join us at our booth 3M204 — although our booth number is different for 2019, our location remains the same. Challenge your gemmology knowledge with a gem competition, learn about identification of gemstones and find

out how you can become an FGA Member. We look forward to seeing you there. ■



*The Hong Kong Jewellery & Gem Fair is a great opportunity to meet Gem-A ATCs, such as the Chuang-En Gemology Consultant Institute (pictured).*

## TACKLE MOUNTED GEMS WITH PAT DALY FGA EG

The annual Institute of Registered Valuers (IRV) Conference will take place at Loughborough University from September 14-16 and representatives from Gem-A will be there to take part. Gem-A senior gemmologist and experienced registered valuer, Pat Daly FGA EG, will lead a workshop on tackling gemstones in mounted goods and tricky settings. This hands-on workshop will allow attendees to learn from practical, real-life examples and enhance their skills. Elsewhere, the Gem-A Instruments team will be available throughout the Conference exhibiting a range of instruments and publications fit for the working valuer. ■

## SAVE THE DATE!

The Gem-A Graduation and Presentation of Awards will take place at The Royal Institution of Great Britain on November 4.



*Graduates at the Gem-A Graduation and Presentation of Awards 2018.*





**Reflecting on a trip to Cambodia back in 2012, Gagan Choudhary FGA shares the story behind this striking image and describes his impression of seeing local people working in small gem deposits.**

In December 2012, I had an opportunity to visit the gem mining areas of Pailin Province in Cambodia, an area mainly known for producing basalt-type sapphires, spinels, garnets, feldspars and zircons. Since secondary or alluvial deposits are most prevalent in this area, spotting small-scale miners or individual families in small groups digging out the gravel, mostly along dried riverbeds or streams, is not unusual.

To understand the mining process in this area we were following a stream, and witnessed many small groups of two or three people involved in extracting gems from the gravel. However, this particular scene instantly caught my attention. A small family was looking for gems in a stream of water — the man digging up the gem-bearing gravel from the brink, the woman washing the gravel in



# Panning for Sapphires in Pailin Province, Cambodia

Photo credit: Gagan Choudhary FGA

the flowing water using a basket-like metal sieve, while the children watched to learn the nuances of gem picking from their mother. All of this was happening under the bright sun, blazing at temperatures close to 40°C on the ground. The flowing cold water underneath was helping to keep the family cool. While I only observed this for a few hours, it is likely that this is a routine, day-long activity for the

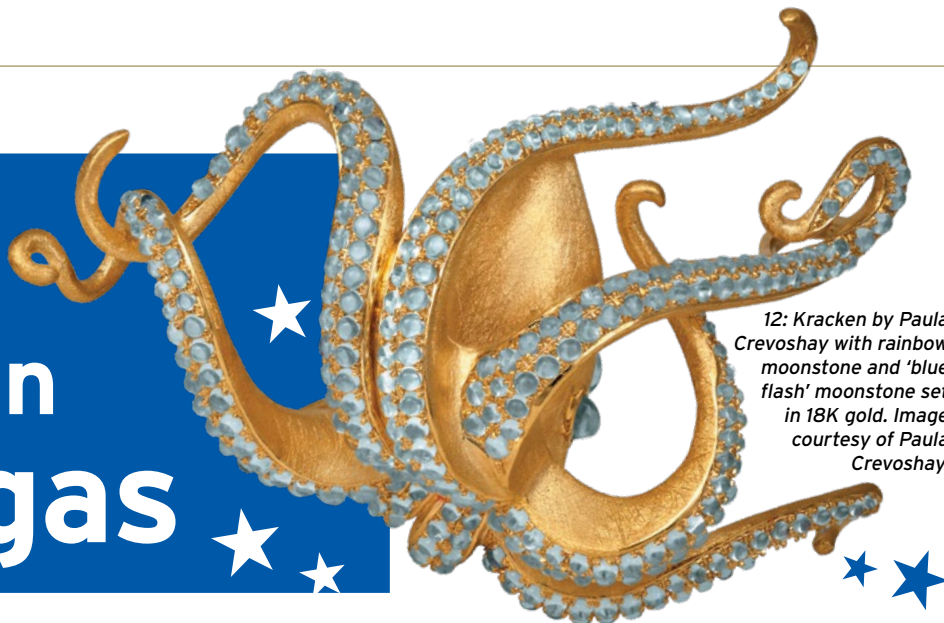
miners. Their lives are likely tough and challenging — physically as well as financially.

*Gagan Choudhary FGA is the deputy director at the Gem Testing Laboratory, Jaipur, where he is in charge of certification and research activities. Choudhary has a master's diploma in gem identification from Gem Testing Laboratory, Jaipur; a*

*Gem-A Gemmology Diploma; and has successfully completed the Scientific Gemmology Course from SSEF, Basel. The author of Understanding Rough Gemstones and Gems & Rocks (in Hindi), Mr. Choudhary is also the editor of gem-passion.com, where he has shared numerous reports on interesting gem materials and other gem-related articles. ■*



# Making Moves in Las Vegas



12: Kracken by Paula Crevoshay with rainbow moonstone and 'blue flash' moonstone set in 18K gold. Image courtesy of Paula Crevoshay.

Olga Gonzalez FGA DGA explores the biggest trends from the recent trade events in Las Vegas, including Couture, JCK and AGTA GemFair.

The highly anticipated Las Vegas jewellery shows have come and gone, and people are still buzzing about the changes.

Vendors swapped locations, new layouts were created, and the products were incredible. The Couture show remained steady with a consistent buzz and lots of buying. They introduced the WTF?! Award, celebrating creative pitfalls with humour, and many danced the night away at the #ThrowbackThursday 80s' Dance Party.

JCK made its anticipated move back to the renovated Venetian hotel, with an entirely new layout incorporating the new Global Gemstone Pavilion, as well

as the Lab Grown Diamonds section, reflecting the industry's changing landscape. Three shows, the Las Vegas Antique Jewelry & Watch Show, AGTA GemFair Las Vegas and Premier (known as 'The Collective') shared one large room at the Las Vegas Convention Center, which was airy and inviting. Retailers came to shop and left fulfilled. Here is what I observed stores and designers were on the hunt for...

## EXCEPTIONAL AND UNIQUE LOOSE GEMSTONES

Today, custom is king, and retailers are looking to have some spectacular gemstones in stock, just in case customers want to create something special. A. Jain International had a stunning 5.70 carat cat's eye alexandrite at the AGTA GemFair, while Intercolor USA had a vibrant selection at JCK, including a 7.19 carat lemon yellow oval

sapphire and a 9.85 carat cushion pink sapphire, perfect for an engagement ring center stone (1 & 2). Others, like AGTA member Jeffrey Bilgore, offered unique carvings in Mexican fire opal (3). For retailers serving up custom in-house, Vegas provides an opportunity to stock up with incredible loose stone options.

## EMBRACE THE ROUGH

Before there are cut gemstones, there are crystal formations. At Couture, Loren Teetelli, founder of Loren Nicole explains: "I always work with ancient styles of gemstone cutting, favoring cabochons, carving and natural finishes because I personally prefer gems that show their inclusions and individual characters, but it also suits the style of our collection. I found this year that many people were drawn towards the rougher pieces, like the natural surface lapis beads and matte finish rock crystal (4)."

Nearby, Barbara Heinrich also embraced the au natural look with her stunning black tourmaline slice necklace and lapis



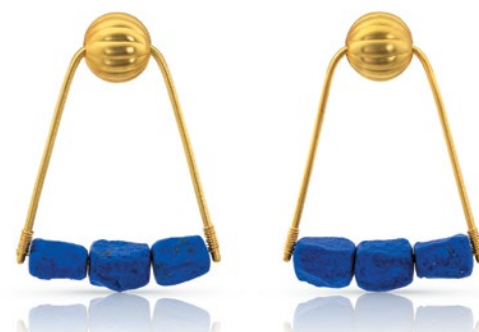
1: A lemon-yellow oval-shaped sapphire of 7.19 carats. Image courtesy of Intercolor USA.



2: A cushion-cut pink sapphire of 9.85 carats. Image courtesy of Intercolor USA.



3: Carved Mexican fire opal pin/pendant by Jeffrey Bilgore, featuring five carved Mexican fire opals (18.74 carats), demantoids, tsavorite, a pear-shaped yellow diamond and fancy yellow diamonds set in platinum. Image courtesy of Jeffrey Bilgore.



4: 21st Dynasty earrings by Loren Nicole in 22K yellow gold and lapis lazuli. Image courtesy of Loren Nicole.





5: Lapis lazuli necklace by Barbara Heinrich Studio, featuring 18K gold spacers topped with small brilliant cut diamonds. Image courtesy of Barbara Heinrich Studio.

lazuuli collar (5). Heinrich says: "I love using raw uncut gemstones in my work. There is a directness, beauty and power in the rawness of this material. I believe the use of microcrystals and the use of raw gemstones is a mega trend that thrives on the juxtaposition of raw and precious materials."

### SEAFOAM STONES

If there is any trend that has been on the upswing since Harry and Meghan tied the knot, it is aquamarine. The stone has been particularly hot for consumers, with no evidence of slowing down. It has also paved the way for other seafoam blue gemstone looks. L. Courteille Créations created wow factor with its aquamarine ring inspired by Marie Antoinette collection (6). Heena Shah, creative director of Valani Atelier, says: "Aquamarines are resonating with audiences; amidst all the confusion of natural or man-made diamonds, coloured gemstones still remain the most precious and rare of all (7)."

6: Aquamarine ring by L. Courteille Créations from the Marie Antoinette collection, featuring a 35 carat aquamarine, sapphires, onyx, and diamonds, set in 18K yellow gold. Image courtesy of L. Courteille Créations.

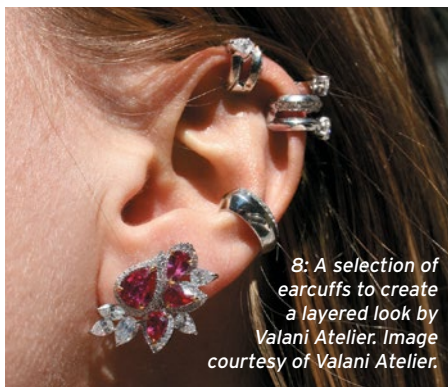


7: Aquamarine statement ring by Valani Atelier, featuring a 16.94 carat aquamarine, diamonds and 18K rose gold. Image courtesy of Valani Atelier.



### LAYERING THE EAR

Ear climbers, ear cuffs, and studs are mixing and matching with long earrings. The illusion is layered, but the look doesn't require extra piercings. Valani Atelier has made a name for itself by leading the luxury market with 18k gold ear cuffs for the red carpet, as seen from Broadway openings to the Met Gala (8).



8: A selection of earcuffs to create a layered look by Valani Atelier. Image courtesy of Valani Atelier.

In addition, Misahara Jewelry went pretty in pink with a new rose-cut tourmaline collection (9). Offered in every length, the Plima collection can be mixed and matched to create a variety of on-trend looks.



9: Plima Open earrings by Misahara Jewelry with 4.59 carats of pink tourmalines and white diamonds, set in 18K rose gold. Image courtesy of Misahara Jewelry.

### BORN TO BE WILD

Last, but certainly not least, this year designers went back to the wild, incorporating insects, endangered species, ocean-dwelling friends and plenty of life into their designs. Sinork Agdere, the founder and designer of Lord Jewelry says: "When I work with enamel, I am reminded that life is colorful and joyful, especially because I get a chance to interpret what I observe in nature in my wildlife-inspired jewellery." His horse ring stopped visitors in their tracks, with the creatures galloping around the centre stone. Additionally, Lord Jewelry's grasshopper and butterfly rings luminesced with their enamel accents, perfectly capturing a sense of *joie de vivre* (10 & 11). Known for her use of color, jewellery designer Paula Crevoshay created a menagerie of jewel-tastic creatures, including birds and even the mythical 'kraken' (12).



10: Grasshopper ring by Lord Jewelry in 18K yellow gold with diamonds, emerald and plique-à-jour enameling. Image courtesy of Lord Jewelry.



11: Butterfly ring by Lord Jewelry in 18K yellow gold with diamonds and multi-colour plique-à-jour enameling. Image courtesy of Lord Jewelry.

Year after year, Las Vegas proves to be a staple on the industry calendar. Designers, manufacturers, retailers, associations and editors gather to move the needle forward and shine on. With many new initiatives, 2019 marked a turning point for how the Las Vegas shows are conceptualised and executed. May the tide of change usher in a new generation of enthusiasts. I know I am already looking forward to Vegas 2020. ■



# AN OUTBACK ADVENTURE

*The vast expanse of  
Australia's Outback.*

**If the welcoming people, spirit of adventure, billy tea and steak dinners don't inspire a love of the great Australian Outback, then perhaps the sapphires and opals will! Gem-A collection curator, Barbara Kolator FGA DGA EG, describes a recent trip to Queensland, where she visited mines, sifted for sapphires and met the locals on the holiday of a lifetime.**

I would like to share with you some of my recent experiences in Australia. The trip started with a visit to the annual Gemboree in Rockhampton, Queensland, and finished with an absolutely amazing tour of the Australian Outback, complete with damper, billy tea, plenty of wine and steak as well as some incredible sapphires and breath-taking opals. On the way we met some truly wonderful and inspirational people.

At first sight the Gemboree appears to be a normal rock, gem and bead show, but it was nothing like that. I have never seen quite so many sapphires under one roof, in all sorts of colours, but mainly the famous Australian parti-coloured ones: green-blue and yellow (1). They came in all shapes, sizes and prices. The second difference was the stallholders: most of them were miners selling what they had mined. The focus seemed to be on having a 'yarn' and if you wanted to buy all the better! Everyone wanted to chat and invite you to see their mine.

The Gemboree was on for four days, but I only spent two days there. Although this was enough for buying, there was so much more to do, including trips, talks, demonstrations and workshops. As part

of the Gemboree, the Gemmological Association of Australia (GAA) organised a two-day symposium, which covered many relevant and interesting topics. My highlights included a talk by Grant Hamid on corundum — bringing the audience up-to-date with current sources, treatments and how to spot them. There was also Jenni Brammall from the Australian Opal Centre at Lightning Ridge, who described her work in promoting opals and opal

carving among other topics.

The main purpose of my trip, however, was a 'Rock Tour' of the Gemfields of Queensland and the opal fields of western Queensland. We set off for Mount Hay, which is a site where thundereggs are found in rhyolite (2). These form when silica-rich lava traps small particles or gas bubbles. If minerals crystallise around a gas bubble, they form a spheruloid — a star shaped cavity.



1: A fantastic selection of sapphires on display at the Gemboree show.





2: Thundereggs, spheruloid and spherulite.

As the lava cools, cracks develop and silica rich fluid flows in and crystallises in the cavity, leaving deposits of quartz, agate, chalcedony, amethyst, rock crystal or jasper. Where minerals crystallise around a nucleus, they form a radial growth known as a spherulite. Both are found at Mount Hay.

This was our first experience of fossicking. For \$25 you get a bucket, pick and scraping brush and off you go to the fossicking area and scrape away at some broken earth. After a short time, it becomes obvious what to look for — egg shapes. These are dunked in the water and the dirt scrubbed off. Some have growths and nodules on the outside so look as though they might be promising but you won't know until they are sliced open. This fossicking is done either on your knees or bending over and certainly gives a new appreciation for the work of miners! When we had collected enough rocks, we took them to be cut open to see if there were any exciting things inside. I had one with nodules and one filled cavity, which will certainly look better after a polish. This was a good introduction to what it is really like to scrabble in the dirt and try to find treasure.

From Mount Hay we continued to Rubyvale, which is at the centre of the Gemfields locality (3). This was a most interesting and friendly little town with many nationalities and a strong community feel. On the way to Rubyvale we stopped at a town called Sapphire to visit the Sapphire Trading Post. Here you can buy fossicking permits, equipment, dry goods, souvenirs, hamburgers, petrol and gemstones.

At Rubyvale we visited several mines, most of these easily accessible to tourists.

We bought buckets of 'wash' to search for our own sapphires. Some of the mines take visitors out to their own fossicking sites and show you how to follow the wash (sapphire layer) and dig it out. The wet weather meant this didn't happen, but we had several opportunities to sort our wash using different methods. My favourite was the 'Willoughby' where you shake the basket in water using a spring-loaded handle, rather than swirling the stones in a basket by hand (4). Either way, it is hard work and the sapphires, when you do find them, are small and hard to spot.

The most striking thing at all the mines was the hospitality and friendliness. Everyone wants to show you around. You meet someone, stop for a yarn and they invite you out to their mine to visit.

The mine camps are something else. People live on them for several months, but as they are on mining claims, they are not permanent residences. Everything is cobbled, power is drawn from the sun, and diesel is used for machinery such as pulsators and trommels for sorting the dirt (5). Some mines are underground, but they are not very deep, around 10m. Others are open cut mines. We visited Rob and Cathy at their claim (6). After showing us around, feeding us with damper (a traditional Australian soda bread) and homemade preserves they let us loose sorting the wash. Alas, no sapphires, but we went home after →



3: A mining camp in the Gemfields of Queensland.



4: Willoughbies all set up for washing the gravel.



5: A trommel for sorting gravel.



6: Rob's open pit mine.





7: An opal mine in action.



8: An opal slab cutter.

**We were taken to a wonderful boulder opal mine, where we were once again welcomed with morning tea, homemade pikelets...**

seeing their workshop (solar powered) laden down with vegetables and salads from their garden.

Rubyvale also has a beautiful shop the Rubyvale Gem Gallery, which has just won an award as one of Queensland's most visited attractions. Everything has been mined in the family's own mine and cut and set by them so that provenance can be guaranteed. The stones were beautifully and precisely cut and set in very attractive jewellery. After all the delights of Rubyvale, which included the pub, an observatory at our hotel, apple strudel, a market, a wildlife reserve and the obligatory wallabies, we were ready

to move on to Winton and the opal fields.

Winton's claim to fame is that *Waltzing Matilda* was first performed there and there is even a Waltzing Matilda Centre in town. Apart from that it is an opal town with several opal shops and galleries, a museum and an outdoor cinema, as well as numerous pubs and hotels all serving good food. We were taken to a wonderful boulder opal mine, where we were once again welcomed with morning tea (an institution), homemade pikelets, lemon curd, cakes, biscuits and jams. This mine camp was very luxurious with running water and all mod-cons. Everything was solar powered. The family grow their own

vegetables as town is several hours drive and the produce very expensive.

We went down to the large open cut mine. Boulder opal is formed within sandstone and ironstone layers in veins, vugs and cavities, in what was once an inland sea. Boulder opal is only found in Queensland and is reputed to be harder and more resilient than other varieties. It occurs in several layers within a deposit, with each layer being different from the one above.

The overburden is removed with bulldozers until a whitish opal containing layer is exposed (7). The rocks are removed and then cut into slabs using a large diamond saw and trimmed until the opal is exposed (8). This is polished with increasingly fine grits of sandpaper and finally polished with a paste of cerium or tin oxide in water.

We were invited to look for some pieces ourselves and found a few nice ones that just fitted into our already-heavy hand luggage.

The best time to visit this area is during July and August when there are gem festivals both in Winton and the Gemfields area. The weather is also cooler, and the flies are mercifully gone. The whole area is well-equipped for tourism, with enough accommodation (often in caravan parks), mostly accessible sites, reasonable roads and even tours for those without four-wheel drive. The people are welcoming, and I found them quite inspirational with their 'can do' attitude and ability to make things work. So, go and see that wonderful land with its wealth of gems and nature. ■



Washed sapphires, quartz and zircons fossicked by the author.

All images courtesy of the author.





## "Imitation tortoiseshell is confused with the natural material."

Ahead of a her biogenics workshop day at Gem-A HQ on October 4, Gem-A president Maggie Campbell Pedersen FGA ABIPP discusses misunderstandings in relation to identifying genuine tortoiseshell.

**T**ortoiseshell is one of the easier organic gem materials to identify, yet many people still find it confusing.

A brooch sold recently on eBay was truly baffling. The seller had described it as *'faux tortoiseshell, section highlighted with white to create the effect of a pool at night'*. It was clear from the photos that the material was black Antipatharian coral, the white highlights being the concentric rings in the growth structure of the coral. The seller probably had no idea what he was selling, so made a wild and somewhat fanciful guess.

The sale of 'faux tortoiseshell' on eBay seems abundant. I have frequently seen genuine tortoiseshell advertised as imitation, in spite of eBay's regulations which state that *'Items made, in whole or in part, from any part of sea turtles, regardless of age of the item'* are not permitted for sale.

eBay officially has a total ban in order to play safe, though antiques dealers and auctioneers can still legally sell tortoiseshell items that pre-date 1947 and that have been substantially altered from their original form before that date. An example would be an early nineteenth century dressing table set with tortoiseshell backs mounted in hallmarked silver. However, at a land-based auction they would not fetch the high prices that can be reached online, so eBay's rules can

be flouted by the use of the word 'faux'.

On some occasions imitation tortoiseshell is confused with the natural material. Such was the case a few weeks ago when a candlestick came up for sale as part of a lot at an English auction house. As I was keen to find one to photograph, and relying on the catalogue description and a rather poor photograph, I was happy when I was successful with my low commission bid. Happiness turned to disappointment upon receipt of the parcel when I saw that the candlestick was made up of two different plastics, neither of which should have been confused with tortoiseshell although a quick glance might be misleading. The shaft is a poor imitation, while the two discs – probably cellulose acetate – are more convincing, though examination with a 10× lens showed clear indications of plastic, and the lack of the tiny, fuzzy blobs of melanin which penetrate real tortoiseshell, and which give the dark areas their brown colour. Having been notified of the mistake, the auctioneer immediately offered an apology and a refund.

In times past celluloid (cellulose nitrate), was the most popular of the tortoiseshell imitations, but as with many of the early plastics it can suddenly degrade for no apparent reason. Once started, the process cannot be stopped and the item simply

crumbles away. Another drawback with celluloid is that it is highly combustible. It is therefore perhaps surprising that celluloid is still used as a tortoiseshell imitation today, along with cellulose acetate, casein, and some polyester and acrylic. Due in part to its production method, celluloid remains one of the most convincing of the imitations.

Modern uses of tortoiseshell imitations are for such items as spectacle frames and hair ornaments, and in the repair and manufacture of musical stringed instruments – all of which were traditionally made from tortoiseshell. ■

Examination  
with a 10x lens  
showed clear  
indications  
of plastic...

Candlestick made  
of tortoiseshell  
simulant,  
but sold at  
auction as real  
tortoiseshell.



Image by Maggie Campbell Pedersen.



## Winning Research

Gems&Jewellery contributor and photographer,

E. Billie Hughes FGA, has been awarded the Accredited Gemologists

Association's (AGA) 2019 Gemological Research Grant to study ruby and sapphire origin and treatments. AGA president Stuart Robertson commented: "The importance of this study cannot be overstated. Billie has designed an experiment-intensive project that clearly has the potential to vastly expand the industry's understanding of

treatments and origin determinations, especially for corundum from recently discovered sources." Hughes will focus on the extent of alteration possible in corundum through heating, especially at low temperatures. Gem-A looks forward to sharing more information about this fascinating area of research in the coming months. ■

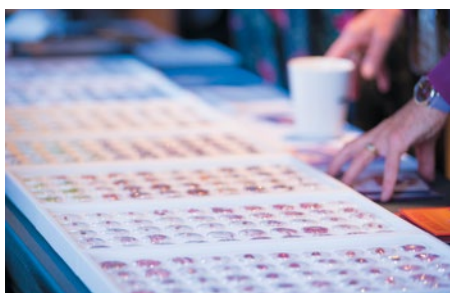


# Talks on the Thames

The Gem-A Conference is back on the banks of the River Thames for 2019 with a fantastic array of speakers, workshops, museum visits and networking opportunities. Here's an early preview of what to expect...

**A**nother year has flown by already, which means the Gem-A Conference 2019 is just a few months away. Make sure the weekend of November 2-3 is in your diary to see a great line-up of speakers who will discuss topics ranging from diamond divers in Sierra Leone to the gemstones of Greenland. Plus, you won't want to miss the annual Gem-A Conference dinner, which this year will be taking place at the illustrious House of Commons.

To give you a taste of what's to come, *Gems&Jewellery* caught-up with three confirmed Gem-A Conference speakers to find out what their talks will entail and what attendees can hope to learn.



Wide-ranging display of gems at Conference.



*Barbara L. Dutrow, a professor of geology at Louisiana State University, will discuss the "many facets of tourmaline" in her talk at the Gem-A Conference 2019. Here she explains a lifelong love of all things tourmaline...*

## What is it about tourmaline that captured your interest?

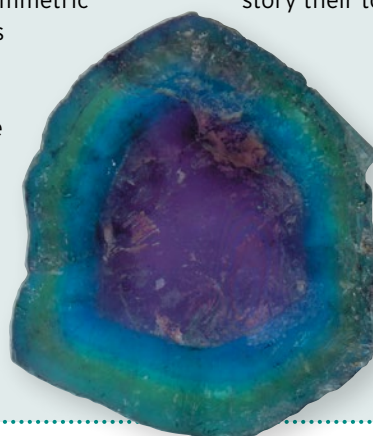
Tourmaline is a fascinating mineral, in part because of its complex chemistry and crystal structure. Initially I was intrigued by the multitude of colours in tourmaline and by its asymmetric crystal form. These features are only the observable manifestations of the rich information that tourmaline can hold. As we learn more about the mineral, more information is revealed about the Earth. Each tourmaline contains a wealth of information on its geologic history and formation.

## What are you looking forward to about the Gem-A Conference?

I'm looking forward to meeting new people, gemmologists and scientists and learning what others are discovering about gemstones. Gem-A has a long history of excellent conferences and I'm looking forward to participating.

## What do you hope Gem-A Conference attendees will take away from your talk?

I would like attendees to walk away knowing that each gemstone has a story to tell; not only are gems exquisitely beautiful, but each gem embeds a snapshot of geologic history. To me, that is extremely exciting; to know that your gem has a record of conditions within the earth in which it formed, and that it has retained this information. Gemstones are geologic capsules of information — and tourmaline is analogous to a geologic DVD! I hope that attendees will be excited to learn and to know what story their tourmalines tell.



*Optical scan of a zoned cross section of Paraiba tourmaline from the original mine at Sao Jose de Batalha. Image courtesy of Professor Barbara Dutrow.*



Anette Juul-Nielsen.



Anette Juul-Nielsen is a senior geologist and special consultant to the Government of Greenland in its Ministry of Mineral Resources and Labour. Her talk will cover the gemstones of Greenland.

### What is your background in gemmology?

I have a master's degree in geology but an increasing focus on gemstone

exploration in Greenland in the mid-2000s led me to specialise in gemmology. Therefore, I became a GIA Coloured Stones graduate. Rough coloured gemstones are my main area of gemmological expertise.

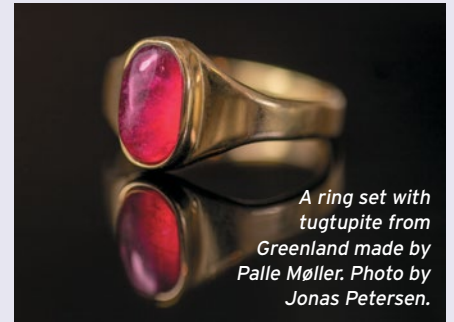
### What makes Greenland special for gems and minerals?

Greenland has untapped potential and is unique for two key reasons. Firstly, Greenland is immensely underexplored when it comes to gemstones. Second, there are so many different geological environments and gemstones in Greenland, we have only just started scratching the surface.

### How did you start working with the Government of Greenland?

I moved to Greenland in 2005 and the

week after I arrived, I got a job at the Government of Greenland working with mineral resources. My primary areas of responsibility are gemstones, small-scale mining, geological mapping and policy advice. I provide geological and gemmological advice and information to the Greenland authorities, small-scale miners and the public, take part in cooperative research projects and investigate and promote the gemstone potential of Greenland.



A ring set with tugtupite from Greenland made by Palle Møller. Photo by Jonas Petersen.

Dr. Laurent E. Cartier FGA, project manager at the Swiss Gemmological Institute SSEF in Basel, Switzerland, will shine a spotlight on the fascinating underwater world of diamond diving at the Gem-A Conference 2019.

### What can you tell us about your Gem-A Conference 2019 talk?

I will be speaking about miners who dive artisanally for diamonds in Sierra Leone, as it is quite a unique way of recovering diamonds. Through this I want to discuss a history of mining in Sierra Leone, exploration and mining techniques, the types of diamonds that are found and what 'ethics' could mean to such miners and our industry.

### What are the challenges of mining for diamonds in Sierra Leone?

The issues are complex and Sierra Leone has a challenging history. As ethics are a hot topic, I went back to



Sierra Leone earlier this year to delve deeper into these issues and ultimately be able to share the realities and stories of these miners. The voices of these miners are not heard enough in our industry.

### What have been some of your gemmology highlights to date?

I have been very fortunate to

visit many diamond, gem and pearl producing regions worldwide. I've been truly humbled by the passion for gems and the generosity of people in places such as Mogok, Bogota, Jaipur, Doha, Fiji, French Polynesia, Borneo, Australia and Madagascar. It has fuelled my own passion to research gems not just for their physical or chemical properties, but also to look at the history, culture and sustainability of gems too.



Laurent Cartier (centre) with divers in Sierra Leone. Photo by Justin Badenhorst.

The Gem-A Conference 2019 will take place at etc.venues County Hall, London, located on the Southbank next to the London Eye. The Gem-A Conference dinner will be hosted at the House of Commons in Westminster, a short walk

from the Conference venue. Tickets for both the Gem-A Conference and the House of Commons dinner can be purchased via Eventbrite: [gem-a-conference.eventbrite.co.uk](https://gem-a-conference.eventbrite.co.uk)

Further details about the Gem-A

Conference 2019 will be revealed over the coming weeks. Stay tuned to [gem-a.com/event/conference](https://gem-a.com/event/conference) for the latest information.

Please contact [events@gem-a.com](mailto:events@gem-a.com) to find out about Gem-A Conference 2019 sponsorship packages. ■



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Gem-A headquarters

**Qualification:**  
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**Entry Requirements:**  
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**Assessment:**  
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One practical paper

**Examination Fee:**  
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**2019 Exam Dates:**  
8 October 2019

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▲  
The prize stone from 2018's Gem Empathy Award, an 18.28 carat Bolivian ametrine sourced from gem cutter, John Dyer.



Gem Empathy Award winner Ariel Tivon, of Tivon Fine Jewellery, is presented with his prize at IJL 2018 alongside Gem-A CEO Alan Hart.



▲  
A stunning 10.46 carat fancy-cut heliodor was the inspiration for Gem Empathy 2016.

# INSPIRING DESIGNS

◀ The white lengthwise interior that is an identifying feature of *Pleurocorallium elatius*.

Gem-A is delighted to announce the return of the Gem Empathy Award for 2019, which gives one lucky International Jewellery London exhibitor or visitor the chance to win a special gem for a bespoke design.

For years, the Gem-A Gem Empathy Award has encouraged International Jewellery London (IJL) exhibitors to put coloured gemstones at the heart of their designs. The annual competition challenges exhibitors to hand-draw or CAD design a unique jewellery creation that accommodates a specific gemstone. The winning designer or brand is then presented with this gemstone at IJL, allowing them to bring the imagined piece to life.

In a change from previous years, the Gem-A Gem Empathy competition is open for entries from both IJL 2019 exhibitors and visitors. This means a little bit more competition, but also a vast array of new design voices who can impress our judging panel with their talent, ideas and creativity. Of course, what everyone wants to know is, what is this year's gemstone prize?

We are pleased to announce that the Gem Empathy Award 2019 centres on a 12.9 carat precious coral cabochon, sourced from sustainable coral supplier, Enzo Liverino 1894. Coral has a hardness of just 3-4 on the Mohs scale, so designers will need to take this into account when developing their ideas. Its dimensions are L: 22.8mm, W: 10.09mm, H: 6.9mm.

## WHY CORAL?

This year's Pantone Color of the Year is coral, which inspired the Gem-A team to source this lovely cabochon. With pollution, climate change, trawling and overfishing leading to vast levels of coral bleaching, stock depletion and damage to sea life in recent years, it is more important than ever to advocate for sustainable sourcing of precious corals, which live in a different ecosystem than endangered reef corals. This is just one of the reasons why Gem-A turned to Enzo Liverino 1894 — a long-established family business based in Torre del Greco, Italy.

The breed of coral chosen for this year's Gem Empathy competition is known as *Pleurocorallium elatius* (Ridley, 1882), a species of precious coral within the Corallidae family that originates from Japan and Taiwan. It tends to grow in depths of 150-350 metres. This variety typically appears in bright red, salmon, orange and flesh-coloured tones, and can be uniquely identified by its white lengthwise interior, usually visible at the base of the cabochon.

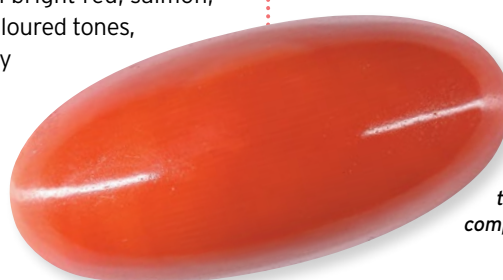
## HOW TO ENTER

IJL exhibitors and registered visitors should send their design (hand drawn or CAD image) along with an accompanying paragraph describing the materials used and the inspiration behind the piece to [events@gem-a.com](mailto:events@gem-a.com) before 12 August 2019.

A judging panel will assess all entries based on three key factors: the relationship between the coral cabochon and the design, the practicality of the design and its style and aesthetic beauty.

The winner will be announced at IJL on Sunday September 1, 2019.

To register for IJL 2019, please visit [jewellerylondon.com](http://jewellerylondon.com). The winning designer or brand will feature in the pages of this magazine along with some of the fantastic shortlisted entries, so watch this space! ■



The 12.9 carat precious coral cabochon that will inspire designers in this year's Gem Empathy competition, in collaboration with IJL 2019.

# REDEFINING THE 4Cs

**Are the 4Cs still fit for purpose as a way of selling diamonds in 2019? Renée Newman shares her thoughts with *Gems&Jewellery* and considers whether our sector needs a '6Cs and 2Ts' system to give customers the most accurate information.**

**T**he concept of the 4Cs – colour, clarity, cut and carat weight – was first introduced by the Gemological Institute of America (GIA) in the 1950s. This was a time when an understanding of diamond treatments was minimal, and gem-quality laboratory-grown diamonds were something out of a science fiction novel. This was also a time when cloudy, included and dark colour diamonds were consigned to industry, long before marketing campaigns transformed less desirable colours, such as brown, into 'cinnamon', 'cognac' and 'chocolate' diamonds.

When gemmologist and author Renée Newman issued the third edition of her *Diamond Handbook* in 2018, she addressed some of these problems head-on. In it, she distinguishes between a stone's lack of inclusions – or its clarity – and its transparency, or the way in which light passes through it. She also suggests a diamond's cut, traditionally considered one of the 4Cs, should be separated into two: cut (shape) and cut quality.

Here, we ask Newman some questions about her stance on the 4Cs and find out why she believes a sixth C – 'creator' – is in order...

## **Do you believe the 4Cs are unfit for purpose or simply outdated and in need of modernisation?**

I wouldn't call the 4Cs unfit, in fact I think the 4Cs charts being used to sell diamonds are helpful. I just think that because of changes in the diamond industry, the 4Cs is now an inadequate system for explaining diamond pricing. It would be more helpful to also list four other price factors:

- **Cut quality** (proportions, finish and light performance)
- **Creator** (man or nature)
- **Treatment Status** (untreated or treated and the type of treatment)
- **Transparency** (degree to which a stone is clear, hazy or cloudy)

Even though I have a chapter on detecting synthetic diamonds in the latest edition of my *Diamond Handbook*, I neglected to include 'creator' in the list of diamond price factors. However, because of the proliferation of lab-grown diamonds, I will be adding 'creator' to the price factor list in the upcoming 8th edition of my *Diamond Ring Buying Guide*.

## **What are your thoughts on diamond transparency and why do you suggest it should be considered one of the 'Ts' of diamonds?**

Transparency is the least understood value factor. When the GIA developed the 4Cs in the 1950s, cloudy diamonds were not set in jewellery because they were considered industrial grade. It wasn't until around the 1980s that milky diamonds started to appear in low-end jewelry. Most dealers didn't think it was worth spending money on diamond grading reports for what they considered to be poor quality diamonds, so hardly any of them were sent to gem laboratories.

Now that people are buying diamonds on the Internet without looking at them first, dealers are submitting hazy and cloudy diamonds with few or no inclusions to labs for grading and sometimes getting SI grades for certain cloudy diamonds and VS grades for hazy or slightly cloudy diamonds.

Some people mistakenly believe that you can determine a diamond's transparency by its degree of fluorescence and that diamonds with a medium to strong fluorescence will look milky or oily. Highly fluorescent



# THE 6Cs & 2Ts OF DIAMONDS

- C** - Colour
- C** - Clarity
- C** - Carat Weight
- C** - Cut Style and Shape
- C** - Cut Quality
- C** - Creator
- T** - Treatment Status
- T** - Transparency

**There is a big difference between cut and cut quality. Do you think this needs to be emphasised more in the existing 4Cs model, and how can this be done?**

I think the differences between cutting style and cut quality can be emphasised more by listing 'cut quality' and 'cutting style and shape' as separate price factors instead of combining them into the single factor 'cut'. Rapaport has separate price lists for round brilliant cut diamonds and pear shapes. The current Rapaport pear shape price list notes that there is a strong demand for ovals, a good demand for pears and cushions, a relatively weak demand for princesses, Asschers and radiants and a weak demand for marquises and hearts. It also notes that poorly cut fancies are illiquid and hard to sell even at very deep discounts.

**As lab grown diamonds become more prominent, do you think they should be graded along the**

**same lines as natural diamonds? Or should diamonds that come off a production line, so to speak, be granted a new system that is separate to natural?**

It doesn't matter to me whether or not lab-grown diamonds are graded along the same lines as natural diamonds. What matters to me is that consumers understand the differences between natural and laboratory-grown diamonds. They should also be aware that the price difference between them is growing as the production of lab-grown diamonds increases. Some sellers are identifying their lab-grown diamonds as simply diamonds even though they are always required to qualify the word 'diamond' with a term such as 'lab-grown' or 'lab-created'. That's one reason I will be adding 'creator' as a sixth C in the future editions of my diamond books. If consumers are aware that the creator can be a significant price factor, they will be less likely to be misled into thinking they are buying a natural diamond when in fact it is man-made. ■

diamonds can be transparent. On the other hand, a diamond with a cloudy or hazy appearance can be non-fluorescent. Garry Holloway, an Australian diamond dealer, has seen examples of such diamonds with lab reports stating they had a VS or SI clarity grade.

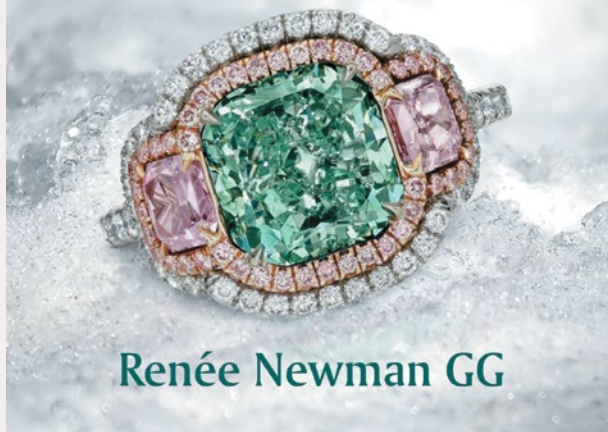
How then can an Internet diamond buyer determine if a diamond has good transparency when it isn't indicated on diamond grading reports? First of all, deal with a reliable seller. If your goal is to buy a diamond with good transparency, specify that on your order. Ask for an image file of the grading report and look at the comments section. There could be a transparency problem if the lab document states "cloud" or "graining" and no cloud or graining is shown on the diamond clarity diagram, or if the report states "the clarity grade is based on clouds that are not shown".

...the 4Cs is now an inadequate system for explaining diamond pricing.

## DIAMOND HANDBOOK

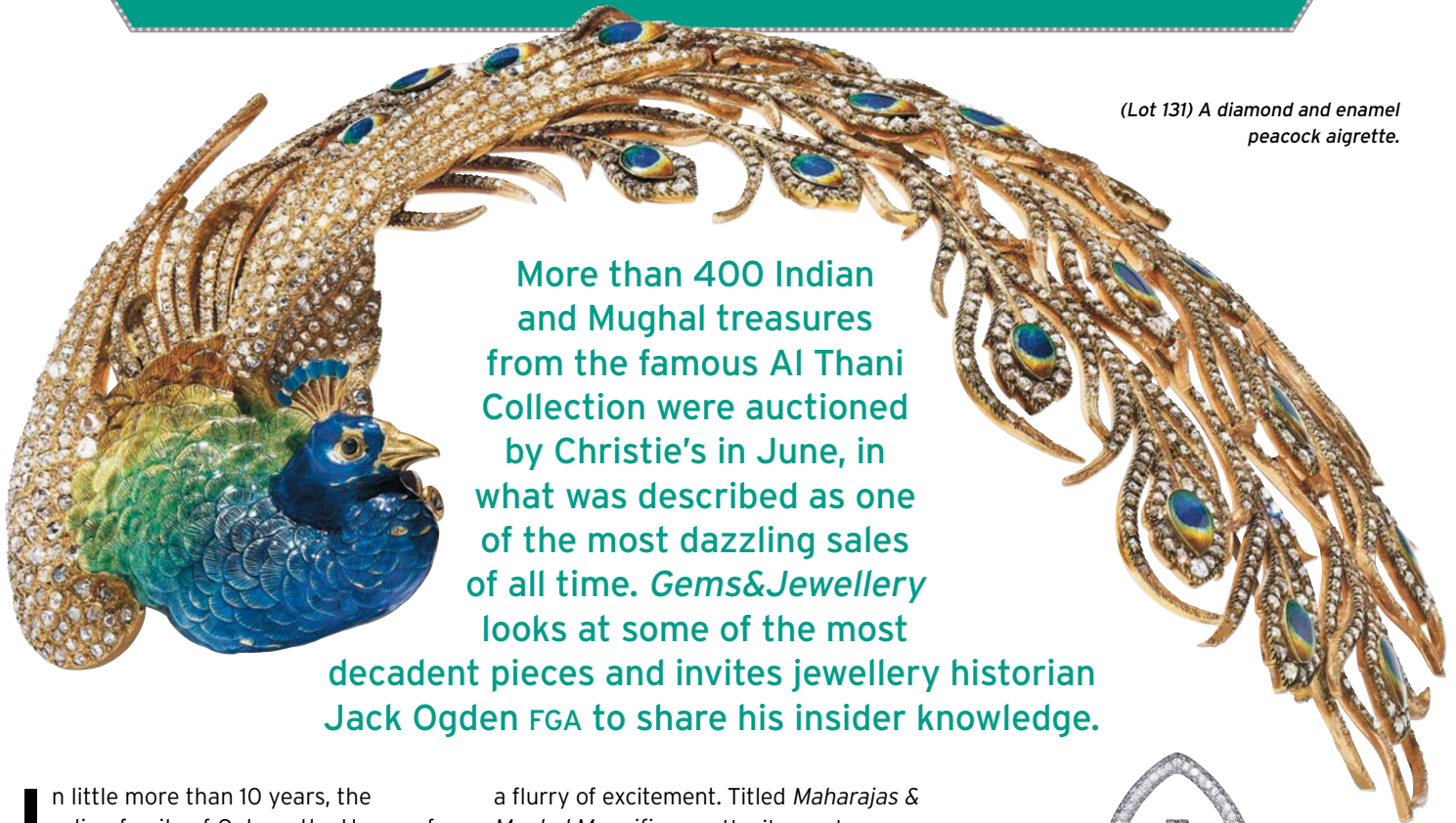
*How to Identify & Evaluate Diamonds*

Revised and updated 3<sup>rd</sup> Edition



*Diamond Handbook: How to Identify & Evaluate Diamonds (third edition) by Renée Newman, published by International Jewelry Publications, is available now.*

# MAKING HISTORY



(Lot 131) A diamond and enamel peacock aigrette.

More than 400 Indian and Mughal treasures from the famous Al Thani Collection were auctioned by Christie's in June, in what was described as one of the most dazzling sales of all time. *Gems&Jewellery* looks at some of the most decadent pieces and invites jewellery historian Jack Ogden FGA to share his insider knowledge.

In little more than 10 years, the ruling family of Qatar – the House of Thani – has amassed one of the most elaborate, exceptional and valuable treasure troves of precious objects in the world, The Al Thani Collection.

This astounding collection is estimated to consist of around 6,300 pieces spanning the ancient world to the present day. The Collection is said to celebrate history and creativity through a mind-blowing array of antiquities, jewels, paintings, manuscripts and historic works of art that are as diverse as they are beautiful. Although the full extent of the collection is not known, many pieces have been exhibited on the international stage. The *Bejewelled Treasures* exhibition at London's Victoria & Albert Museum in 2015, for example, highlighted 100 pieces of Indian jewellery from The Al Thani Collection and was hugely successful. Similar exhibitions of Indian jewellery have taken place in St. Petersburg, San Francisco, Beijing, Paris and New York.

Thanks to its global reputation, the news that 400 pieces of The Al Thani Collection were to be auctioned by Christie's New York in June 2019 caused

a flurry of excitement. Titled *Maharajas & Mughal Magnificence*, the items chosen for the sale represented a narrow subset of pieces from the encyclopaedic Al Thani Collection, including jewellery, loose gems, swords, daggers, turban ornaments, brooches, watches and miniature



(Lot 356) An Art Deco carved emerald, sapphire, diamond and pearl aigrette, designed by Paul Iribe and crafted by Robert Linzeler.



(Lot 40) A Carved emerald with interchangeable mounting, Cartier.



paintings spanning 500 years of India's emperors, maharajas and nawabs.

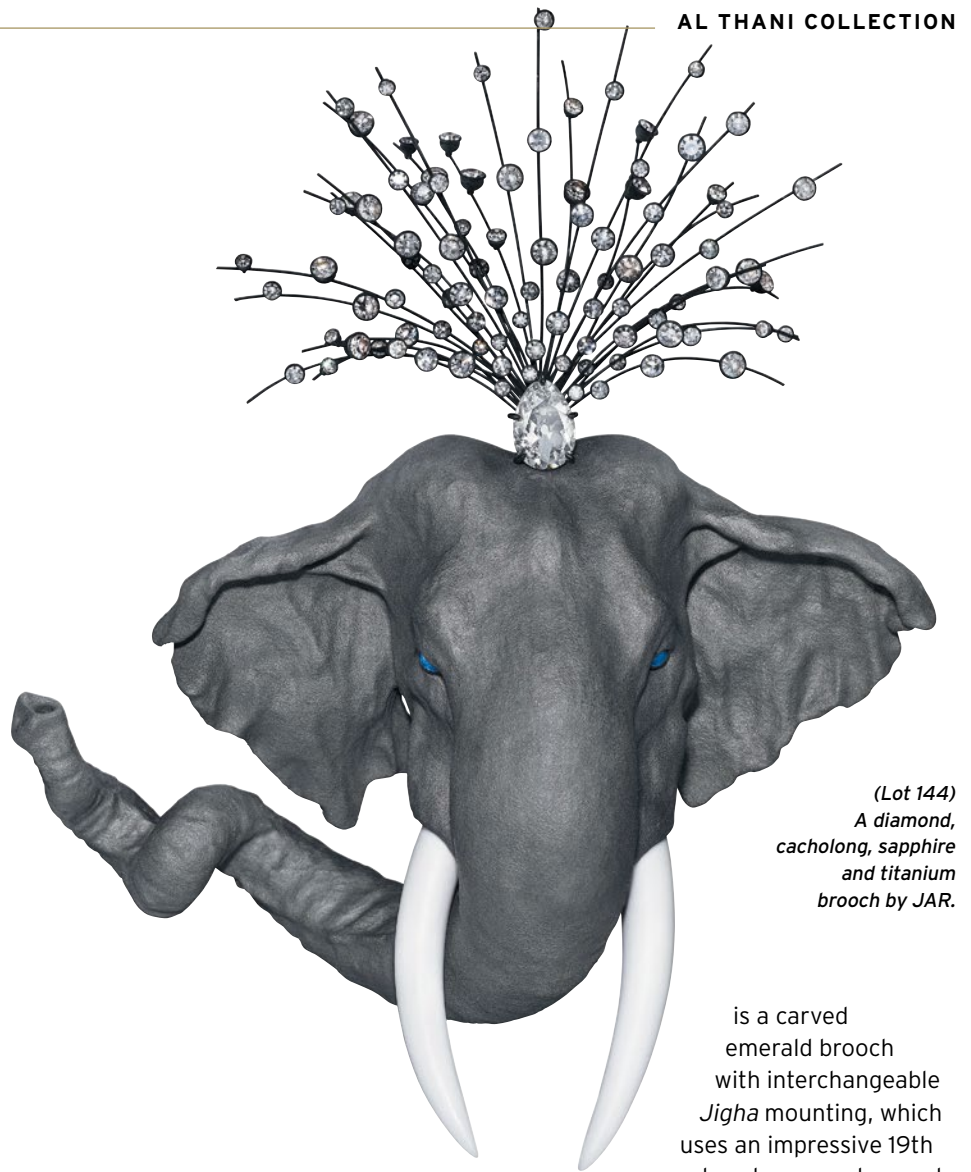
For many, this was indeed the sale of the century: a "landmark auction" only rivalled by the sale of the late actress Elizabeth Taylor's jewels in December 2011.

## MAHARAJAS & MUGHAL MAGNIFICENCE

When it was finally unveiled, the Christie's *Maharajas & Mughal Magnificence* sale was a sight to behold. The origins of the 400-piece collection can be traced to 17th century Mughal India, under the most important dynasty that ruled the country, famous for its emeralds, diamonds, sapphires, rubies and weapons. Precious objects then provide touchpoints for more than 500 years of Indian history, arriving in the age of India's fabulously bejewelled 19th and 20th century Maharajas, who often commissioned pieces from leading European houses. What made the items chosen for the sale even more impressive was their royal provenance, having previously been owned or commissioned by the likes of Shah Jahan, Tipu Sultan, Maharaja of Kapurthala, Maharaja of Patiala and the Maharana of Udaipur.

Alongside the many historic pieces offered by Christie's were some important 20th century creations by Bulgari, Cartier, Janesich, Lacloche, Linzeler, Mauboussin, and Mellerio. Highlights included the Patiala Ruby Choker, created by Cartier in 1931, which superbly reflects the fusion of Indian heritage and western design (Lot 272, sold for \$975,000).

This choker was commissioned by Maharaja Bhupinder Singh of Patiala, one of Cartier's most important Indian clients of the 1920s and 1930s. He often travelled to Paris with trunks of diamonds and gemstones from his treasury for Cartier's workshops. Another significant example by Cartier



(Lot 144)  
A diamond,  
cacholong, sapphire  
and titanium  
brooch by JAR.

is a carved emerald brooch with interchangeable *Jigha* mounting, which uses an impressive 19th century hexagonal carved emerald of 380.98 carats (Lot 40, sold for \$735,000).

*Gems&Jewellery* was particularly enamoured with an enamel and diamond Peacock Aigrette by Mellerio dits Meller, purchased by the Maharaja Jagatjit Singh of Kapurthala in 1905 during one of his trips to Paris (Lot 131, sold for \$735,000). A diamond, cacholong, sapphire and titanium brooch in the shape of an elephant's head, incorporating a Belle Époque style diamond aigrette, designed by JAR in 2013, is also incredibly impressive (Lot 144, sold for \$93,750). →

This astounding collection is estimated to consist of around 6,300 pieces spanning the ancient world to the present day.



(Lot 272) The Patiala ruby choker.

(Lot 282) Imperial spinel necklace.

## MORE TO COME

What was the purpose of the sale? According to those in-the-know, the proceeds from this small percentage of The Al Thani collection will support the development of The Al Thani Collection museum at the Hôtel de la Marine in

Paris, while also funding The Al Thani Collection Foundation, which supports exhibitions, publications and sponsors various museum projects across the globe. The Al Thani Collection museum space at the Hôtel de la Marine is expected to open its doors in spring 2020, providing a long-term, 400m<sup>2</sup> gallery for works of art, jewellery, furniture and precious objects drawn from across the entire collection.

It has also been noted that the Indian jewels and jewelled objects chosen for the Christie's auction had already been displayed internationally. It is thought that these items have been sold to make way for pieces without such international recognition. Although some Indian and Mughal pieces remain in The Al Thani Collection, the museum will highlight works of art representative of many global cultures and time periods. ■

(Lot 277) Belle Époque devant-de-corsage.

## THE RESULTS

The *Maharajas & Mughal Magnificence* auction took place in New York on June 19 and secured a staggering \$109, 271, 875 — the highest total for any auction of Indian art and jewelled objects, and the second highest auction total for a private jewellery collection. Registered bidders hailed from 45 countries across five continents, with “notable institutional bidding,” according to Christie's. The sale, which lasted a marathon 12 hours, set three world auction records for Indian works of art and saw 29 lots secure over \$1 million each.

The top lot of the sale was a Belle Époque Devant-de-Corsage created by Cartier in 1912 (Lot 277), which sold for \$10,603,500 to a private collector in the room. To give you a sense of its scale, the piece contains a number of sizeable diamonds of 34.08, 23.55, 6.51 and 3.54 carats. Additional top lots included The Mirror of Paradise, a 52.58 carat, D Color diamond, which achieved \$6,517,500 (Lot 229); the Shah Jahan Dagger which sold for \$3,375,000, establishing the record

price for an Indian jade object and record for a piece with Shah Jahan provenance (Lot 387); an Antique imperial spinel, pearl and emerald necklace, which realised \$3,015,000 (Lot 282); and a Golconda diamond rivière necklace, from the collection of the Nizams of Hyderabad, which sold for \$2,415,000 (Lot 22).

Although the pieces themselves and the results they achieved are

impressive, it is also interesting how the auction has benefitted Christie's. The auction house welcomed 50,000 visitors to global pre-auction showings in London, Shanghai, Geneva and Hong Kong, as well as 2.6 million unique visitors to its website from the time The Al Thani Collection sale was announced. A series of 41 videos of auction highlights also secured 3.6 million online views, highlighting the appetite for a glimpse at The Al Thani Collection. Fortunately, when the The Al Thani Collection Foundation museum opens in Paris in 2020, we can all step into this cave of wonders and see for ourselves.



(Lot 229) The Mirror of Paradise diamond.

(Lot 387) The Shah Jahan dagger.



# THE INSIDER'S VIEW

Jewellery historian Jack Ogden FGA contributed to the book, *Beyond Extravagance: A Royal Collection of Gems and Jewels* (2013), which focused on The Al Thani Collection. Here, he offers his insider's view on the fascinating jewels in the Collection.

**T**he Mughals were the rulers of a large part of India from the early 1500s. After a couple of centuries their power started to decline, and the last Mughal emperor was deposed in 1857 with the establishment of the British Raj.

The Mughal period is well-known for its art and architecture, the Taj Mahal, for example, and for its spectacular jewelled ornaments. The latter form one of the collections of Sheikh Hamad bin Abdullah Al Thani, a part of which was sold at auction by Christie's in New York on 19 June.

Over the last few years I have had the opportunity to examine most of his Mughal gems and jewelled objects, to see what they reveal about the gem trade in Mughal India, and to undertake new historical research into the history of some of the spectacular diamonds in the collection. This work was for a chapter and some of the catalogue entries in the catalogue of the Al Thani Mughal Collection – *Beyond Extravagance* – first published in 2013 (by Assouline, New York).

The *Maharajas & Mughal Magnificence* auction held in New York featured just a part of the Al Thani Mughal Collection. In fact, the wider collection



1: The Idol's Eye diamond. 70.2 carats, antique triangular modified brilliant, graded (GIA) as light blue and of VVS2 clarity.

includes a remarkable selection of diamonds and coloured gems. Major diamonds include the 28 carat (originally 32 carat) pink Agra, the 70 carat blue 'Idol's Eye' and the 17 carat Arcot II. The latter is among the pieces sold at the auction (Lot 98, sold for \$3,375,000).

My favourite diamond in the Al Thani collection is the pale blue Idol's Eye (1). It is not its size (70-odd carats) that appeals, but because it is still in an older form that has some character. It was probably cut in the 18th or very early 19th century. Side-by-side with these important diamonds, the collection contains Mughal jewellery set with a large number of the little flat diamonds long-referred to as 'lasks' by European traders (2). The little 'lasks', simply cut and polished from cleavage plates, are almost invariably set over a foil. Modern diamond cuts are judged on light return, but few can beat a good, foiled lask here — as the reflection of my (old) camera shows (3).

There are several other varieties of coloured gems in the jewellery of The Al Thani Collection, but predominantly rubies and emeralds. Sapphires, despite (or perhaps because of) the abundant supply in neighbouring Sri Lanka

are noticeably scarce — they were considered inauspicious. The emeralds appear to be mainly Colombian, the rubies Burmese. The emeralds are in a variety of forms, mostly rounded and some table-cuts. The rubies in Mughal jewellery and jewelled objects are nearly all simple rounded stones (4). This is of interest from the lapidary point of view. Until sometime in the 1800s, only alluvial rubies were being retrieved in Burma and these were little rounded pebbles that, according to several early observers, had such good water-worn polish that they could be set as they were with, perhaps, just some superficial final polishing.

All in all, working on The Al Thani Collection has been, and continues to be, a wonderful experience and a highly educational opportunity. Gemmology is one of the skills essential for jewellery historians. The greater the breadth of knowledge, the more that can be gleaned from historical gems and jewellery. The more we research, the more we realise what we don't know and determine to try to find out. Identifying a gem is just the beginning, one step on an enthralling and never-ending trail of discovery.



2: Flat diamond 'lasks' set in the traditional kundan Mughal manner. Detail of an armband, Hyderabad, 1775-1825.



3: The sharp reflection from this diamond shows the effectiveness of the foiled back to its setting. Detail of a bracelet, Benares 1800-1825.



4: Rounded rubies set in the gold hilt of a dagger. North Indian, 1620-1640.

Photos 1-4 © Jack Ogden.

# Making a Moonflower

Ever wondered what it takes to craft a vase from a gemstone? *Gems&Jewellery* spoke to Sanni Falkenberg, a lapidary artist based in Brighton, whose carved agate vase won gold at the Goldsmiths' Craft & Design Council Awards 2019. Here, Sanni talks us through her inspiration and the step-by-step process which resulted in this stunning piece.

I had this lump of agate for about three years, but for a long time I wasn't sure what was inside it. One day after looking at the rock I suddenly saw it — it would be the first one of my Moonflower collection! It had to be a vessel, but I knew this would be a challenging one to carve.

My inspiration is always a combination of celestial phenomena and the raw material itself. I love the name 'Moonflower', which



*The gold award winning Moonflower vase.*





*The starting point: the original agate rough. I had been looking at this stone for years and had a variety of ideas for it but nothing really felt right until I got the inspiration for the Moonflower. I love the subtle bands and translucency of this material, and I knew that they must be enhanced in the finished piece.*

is actually a cactus that blooms once a year for one night only. I find this fascinating. In my dreams I envision the full moon in bloom, these celestial flowers blooming on the rocky surface of the cratered moon, once a year, just for one night.

I am also inspired by the translucency of the agate and its subtle white bands; my focus is always on how to enhance the natural beauty of the rock, how to bring it to life, and enable it to tell a story. I left the glimmering drusy crystals on the side, to contrast with the softness and smoothness of the carving.

I consider myself lucky to work with such incredible materials that were created by nature up to hundreds of millions of years ago. The exact age of an agate is difficult to tell due to its formation, and it is still not fully understood how agates are formed. I love the the mystery of this often underappreciated rock.

Some of the reasons why I like working with agates are, of course, their beauty, but also their hardness and reliable nature. I can stretch my skills to the maximum with this stone as I know there are no impurities in the material,

**My inspiration is always a combination of celestial phenomena and the raw material itself.**

and due to its hardness I can let my creativity run loose without worrying too much about what is achievable and what is not.

This particular agate for my first Moonflower is from Brazil. Agates from Brazil are often pale in colour with subtle bands or they can be heavily banded, which makes a fabulous material for carving. I am currently working on a collection of Moonflowers which are all made of different kinds of agates, except from a few rock crystals that have slipped into the collection.

The first step was grinding the rock into the shape that I saw in my



*The first step of grinding: I started the project with a rough wheel to get the initial shape of the Moonflower out. A lot of material still needs to be grinded off, but the resemblance of the shape is there.*

head. The first grinding is very rough and involves cutting out most of the excess rock to get closer to the ideal form.

Once the shape was clearer, the most difficult part of the work began: the hollowing. First, I drilled a lot of holes to remove the inner stone as fast as possible. The hollowing process is basically just drilling, then carving, then drilling again to get a little bit deeper into the stone, and then more carving, before repeating the process. When I couldn't get deep enough into the rock with my carver without damaging it, I bought a second hand



*Hollowing: I only have a small core drill, the largest drill bit is 8mm in diameter, so I drilled a lot of small holes to speed up the hollowing. Once the holes have been drilled, the carving is a lot quicker as this helps to remove the material faster.*

die grinder and converted it for stone carving. The die grinder is powerful enough to cut into the agate, and it enabled me to carve deeper into the stone and have more control over it.

After I had hollowed the stone I could finish the outside of the Moonflower and all of its details. I usually use a marker pen to make sure I get the details right. →



*Carving: Getting deeper into the stone with a die grinder. The rock is still very rough, but it is getting closer to its final shape.*



*Working on the lines: I marked all the lumps and bumps with a permanent marker to outline which areas to focus on when carving and smoothing the surface.*

The whole process  
from start to finish  
took me 77 hours.

The next stage after carving out the details is sanding and smoothing. For a piece like Moonflower, I would first use a power tool to smooth out the roughest skin. I have found that manual sanding sticks work extremely well for this type of job too, and once I have finished the sanding with a carver or Dremel, I move on to the sticks. The sticks are perfect for working with organic, flowing shapes. This is a very time-consuming stage, particularly when sanding and smoothing the inside of the agate, as it must be done completely by hand.

The lovely matte finish was created by sand blasting, and I added a highlight detail by polishing the edge to achieve mirror polish. I love the matte finish as it is so tactile and it creates the illusion of being soft.

The whole process from start to finish took me 77 hours. Sometimes I would leave the Moonflower on its own for a couple of months before I could carry on working with it. I was extremely happy to win the gold award at the Goldsmiths' Craft & Design Council Awards in the lapidary specialism. After working so diligently and almost obsessively on this piece, it was amazing to be recognised by the industry that is one of my greatest passions. ■

*Sanding: Manually sanding the Moonflower to achieve a beautiful, smooth finish. This is a very time consuming stage and takes a lot longer than the actual carving, but this technique works perfectly on organic shapes, giving me full control to achieve my desired shape and finish.*







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Sirius Star Octagon Diamond  
(c) Michiel (Mike) Botha, Master Diamond Cutter

# FOR THE LOVE OF GEMS

Jewellery designer, rare gem collector and Beyond Jewellery founder, Jochen Leën, has forged a colourful and multi-faceted career surrounded by exceptional stones. *Gems&Jewellery* finds out more about the Belgium-based artisan.

Being a first-generation jeweller in a country as steeped in diamond heritage as Belgium is no mean feat, and yet Jochen Leën has made it work with aplomb. During his school years he would spend weekends and summer holidays with his friends' parents who worked in the trade, assisting in their jewellery shops. He went on to study jewellery design and goldsmithing in Antwerp, before securing a job with a school friend's father who owned four jewellery shops in Ghent, Belgium.

By 2008, Leën had developed his jewellery design instincts to such an extent that he was ready to go it alone. "Of course, in the beginning it was not easy," he says. "Without any customers or a shop, I was working from my

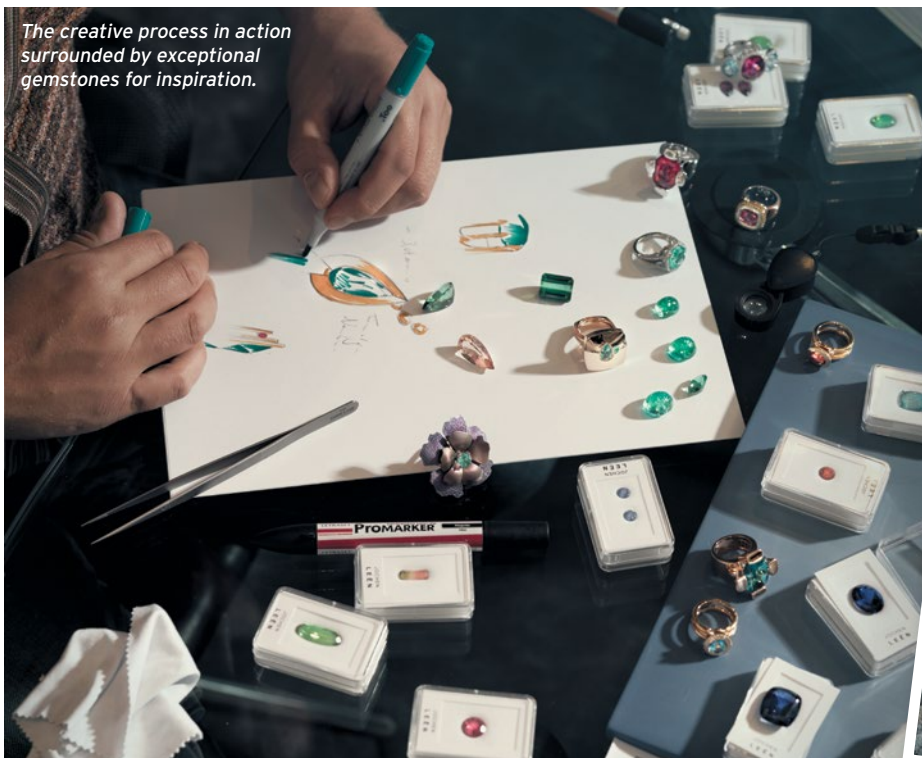
parents' house without any stock. Slowly I started selling and repairing jewellery for friends. I had always loved perfect colour gemstones and decided to set up my brand with and around the world of coloured stones."

In 2010 Leën secured a small office in the Relais & Chateaux Hotel in Lanaken, Belgium, and began showcasing his jewellery in-and-around the hotel. The next step came in 2016, when he opened the doors on a renovated apartment in Antwerp's diamond district. The space serves as a gallery for collectors of gemstones, jewellery and objets d'art, as well as a meeting point for creative individuals to collaborate on mutual projects. Leën says of the Antwerp apartment: "It is a unique architectural concept functioning as a 'think tank' space.

The gallery combines sculptures, pictures, paintings, minerals and books... in general all things I like being surrounded by and things that inspire me!"

Leën is unafraid to collaborate with his gemstone-loving peers across the globe. While jewellery making can be considered a solitary pursuit, gallery spaces and exhibitions tend to bring people together and encourage conversation. "Collaborations and meetings among artists, collectors and enthusiasts are the fuel for inspiration and creativity," Leën remarks. "The only danger it brings is that too many people are willing to collaborate and want to have a meeting or start a project... you still have to watch over your existing customers and business." One venture that Leën couldn't resist, however, was the chance to establish a 'joint venture' with Rudiger Pohl and Alison Magovern. Their international, collaborative platform began when the trio met in Miami and began sharing their obsessions with

*The creative process in action surrounded by exceptional gemstones for inspiration.*



*A Paraiba tourmaline necklace by Jochen Leën Beyond Jewellery.*





Jochen Leën is passionate about the artistry of gemstones.

...having dinosaurs in the mix with rare gemstones and creating art and jewellery around it. You must admit, it's quite epic and daring!"

gems, fossils, minerals, art and everything in between. Leën admits there is a "constructive flow" to their partnership, based "mainly on mutual feelings without too much thinking".

Together, they are "building an international, private service for lovers of quality and collectors of gemstones and jewellery," and included in this is the Granada Gallery — a gallery concept that originated in Tucson, Arizona, in 2013. Together, they will continue to grow the Granada Gallery and its series of international exhibitions and events, welcoming guest designers across jewellery, sculpture and gem carving, and collaborating with museums, gemmologists and palaeontologists. "The Granada Gallery is one of the

most amazing platforms of natural art, which we bring to a contemporary environment and combine with our jewellery brand," Leën says. "Not only do we sell fossils, dinosaurs, gemstones and jewellery, but also the Granada Gallery has a deeper interest in mining, science and excavation."

Looking ahead, Leën has ambitions to work with the gallery's founders to develop what he describes as an "art support group," pulling in experts, artisans and ideas from across the globe. He says: "One of the aims of the Granada Gallery is to create a natural art platform for designers, who we can support using our resources. Another aim is education and science. In Antwerp, we can invite small groups [to the Jochen Leën gallery space] and educate them about certifying gemstones, for example." In this sense then, the Granada Gallery could establish itself as an ever-moving epicentre of gemstones, fossils, education and ideas, with a year-round schedule of events.

"I enjoy deeply overthinking the whole concept and working on the future, dreaming about making [the Granada Gallery] a worldwide platform of natural resources in the mix with a high-end jewellery brand bringing niche collectible jewellery with fine gemstones," Leën says. "It is actually, when I reflect on it, one of the best joint ventures. I am a dreamer, but this I didn't even dream about because the whole concept is so adventurous and

unreal... like having dinosaurs in the mix with rare gemstones and creating art and jewellery around it. You must admit, it's quite epic and daring!"

A little bit of daring is no bad thing when it comes to putting a new spin on precious and collectible objects. By creating his own fine jewellery and collaborating with others in the sector, Jochen Leën and the Granada Gallery are sure to make another exciting appearance at the Tucson gem shows in 2020. ■

All images courtesy of Jochen Leën.



An example of some of the incredible fossils that Leën hopes to spotlight on the global stage.

# The Importance of Jade in the Mughal Court



3: Wine cup of Shah Jahan (1657), carved from white nephrite jade. Image: © Victoria and Albert Museum, London.

Gem-A graduate Taffeta Schneider FGA DGA shares an abridged version of her fascinating Gemmology Diploma project on the cultural and symbolic significance of jade to Mughal emperors.



Few materials throughout history have inspired such reverence or have been bestowed with importance equal to that of jade. Jade comprises two distinct minerals; nephrite and jadeite, both of which have played a central role in various cultures across the world. While jade is most commonly associated with China, it also holds a unique cultural position for another Asian civilisation, the Mughal Empire. Although the use of jade in the Mughal court is a comparatively late development in the history of the material, it nevertheless played a crucial role in fashioning notions of cultural identity within this empire.

### MUGHAL JADE

The Mughal Empire was an imperial power in the Indian subcontinent from approximately 1526-1757. At its height, the empire extended over nearly the entire Indian subcontinent and large swathes of Afghanistan. The empire was founded in 1526 by Babur, a descendent of both Genghis Khan and Timur (also known as Tamerlane). It was Babur's descendants, the subsequent Mughal emperors, who used jade as an aid to 'legitimise their rule' (M. Spink and R. Skelton, 2013).

Jade (or yashm) was highly regarded by the Mughals' ancestors, the Timurids, and had been used extensively for everyday objects such as vessels and the hilts of weapons. The most renowned example of the material's use during Timurid rule is the great jade tombstone

that was placed before the grave of Timur in his mausoleum, the Gur-e-Amir, in Samarkand. The engraved inscription recounts the ancestry of Timur and details the acquisition of the stone by Timur's grandson, Ulugh Beg.

The Mughals were aware of their lineage and were keen to utilise their Timurid ancestry to validate their authority. The Mughal emperors' extensive use of jade became a way in which they sought to emulate their forebears. It harkened back to the old, and through that, legitimised the new. The great Mughal emperor, Jahangir (reign from 1605-27) was a 'passionate collector' (R. Skelton, 1991) of the jade objects that had once belonged to his ancestors. Moreover, he deliberately imitated the Timurid practise of inscribing his name onto these acquired pieces. In his memoirs, Jahangir recounts that upon being presented with a jade jug that bore the name of Ulugh Beg, he ordered the addition of both his and his father's name. In doing so, he drew a direct line of connection from the early Timurid rulers to new Mughal emperors.

**The Mughal emperors' extensive use of jade became a way in which they sought to emulate their forebears.**

Figure (1) details a further example of the Mughals' attempt to depict themselves as a continuation of the Timurids rather than a new conquering power. The white nephrite jug was carved during the Timurid Empire and bears the name and titles of Ulugh Beg. When this piece was later acquired by Jahangir and his son Shah Jahan (reign from 1628-57), both emperors recorded their ownership of the jug by having their names and titles inscribed beneath those of Ulugh Beg.

In addition to collecting the jade objects that had once belonged to their ancestors, the Mughal emperors commissioned many of their own pieces. These were usually in the form of 'exquisite drinking and dining vessels, weapon hilts and various other luxury items' (S. Markel, 1992).



2: Dagger of Emperor Aurangzeb with a light green nephrite jade hilt and steel blade inlaid with gold. Mughal Empire, circa 1660-61. Image courtesy of LACMA, lacma.org.



1: White Jade (Nephrite) Jar dating from the Timurid Period (1417-49). © Calouste Gulbenkian Foundation, Lisbon. Calouste Gulbenkian Museum – Founder's Collection. Photo: Carlos Azevedo.

At first these objects imitated the forms of the earlier Timurid wares. Indeed, it has been noted that the jade vessels commissioned during the reign of the Mughal Emperor Akbar (reign from 1556-1605), displayed 'thick vessel walls, [a] stout form [and] heavy features' (Markel, 1992) — elements that were clearly derived from earlier Timurid pieces. However, under subsequent emperors, the Mughals began to develop their own distinctive style; a style that was influenced not only by the art of their ancestors but

4: Lidded Bowl and Tray carved from nephrite jade, Chinese, 18th century. Image: © Victoria and Albert Museum, London.



...brightness and clarity [of jadeite] contrasts sharply with the soapy, almost aged-looking hues of most pieces of nephrite...

also by the art of their empire. During the reign of Jahangir, a more organic visual vocabulary developed; floral and vegetal designs were frequently incorporated into the jade carvings. This organic imagery was developed further by the artisans serving under Shah Jahan, who increased the number of motifs derived from the natural world. This is particularly noticeable in the designs for dagger and sword hilts, which were often fashioned in the form of animal heads (2). Furthermore, the jade pieces began to exhibit a more delicate appearance; the heavy and utilitarian line of the Timurids that had dominated the early Mughal carvings was replaced by a more 'refined and sensuous' outline (Skelton, 1969).

Jade's importance for the Mughals took on another form with its use in the decoration of Mughal weapons. Again, this is a possible reference to their

ancestors as the Timurids held jade in great esteem owing to its supposed 'talismanic qualities' (Markel, 1990). This belief was likely to have been inherited from the Timurids' Turkish ancestors, who believed that the ownership of this material would result in triumph against their adversaries. As such, it was used in the decoration of swords, belts and the saddles of horses. Similarly, the Mughal emperors frequently employed jade to adorn the hilts of their swords and daggers. It is unclear whether the Mughals held similar beliefs regarding the material's ability to convey supernatural properties but, at the very least, it is clear they wished to copy the style of their Timurid forebears by including jade in their weaponry.

Despite the empire's ultimate decline in the eighteenth century, and with it the art of jade carving, the jade artworks of

the Mughal court have had a lasting impact. These jade artefacts are perhaps most important for illustrating the synthesis of cultures that typified the Mughal rule. The Mughal use of jade reveals both the Mughal attitude to the past and their attitudes in their present day. Although the emperors were descended from foreign invaders, they were notable for their tolerance of the numerous cultures and religions of the people over whom they ruled. Not only did they use jade to harken back to adopted ancestors, they also used it to reflect the contemporary cultural melting-pot that they reigned over. The Mughal emperors employed artisans from many countries and were keen to learn from and be influenced by the artworks of foreign cultures. This cohesive approach is clearly illustrated through the various stylistic elements of the Shah Jahan Cup (3). Although the lotus petals that surround the base have precedent in traditional Indian decorative arts, the acanthus leaves are undoubtedly European in origin. Furthermore, it is clear that the 'gourd-like lobes' (Skelton, 1991) of the cup stem from Chinese jades.

### IDENTIFYING FEATURES

To this day, there exists much confusion between original Mughal jades and the later Chinese imitations that were produced under the Qing emperor, Qianlong (reign from 1735-96) and his successors. Nevertheless, it may be possible to distinguish between the two as Mughal jades are 'rather consistent in design [and often lack] certain features that appear in Chinese examples' (Skelton, 1991). For instance, it has been noted that although both Chinese and Mughal jades may exhibit similar forms, the latter never feature shapes derived from archaic Chinese ritual artefacts. Additionally, Mughal vessels are highly unlikely to possess feet and if the piece includes handles, these will never feature loose rings. This is exemplified in figures 4 and 5; the jade bowl of Chinese origin (4) exhibits handles with loose rings, whereas this feature is notably absent in the Mughal jade bowl (5). Furthermore, if floral imagery has been incorporated into the design of the object, it is relevant to consider the species. Mughal jades are likely to



feature lotus petals, whereas Chinese pieces may incorporate chrysanthemum details. Although the above features can provide a useful indication, they are rather simplistic and should be used with a degree of caution.

Owing to the considerable value placed on jade, it is unsurprising that it has become one of the most frequently simulated gemstones. Consequently, it is necessary to be able to recognise the characteristics of the natural, untreated material and differentiate it from its various simulants. A visual examination of the material will often provide a good indication of its nature; this is owing to the unique composition of nephrite. Nephrite, a member of the amphibole mineral group, consists of both tremolite and actinolite. This results in a distinctive, interlocking, fibrous texture and it is this that makes nephrite slightly tougher and more resistant to breakage than jadeite (J. Walker, 1991). Jadeite, a member of the pyroxene group, has an interlocking, granular structure. These different effects are best viewed using a microscope and indeed, it has been noted that under magnification, jadeite's crystals 'appear as separate entities' (Walker, 1991) despite the fact that they are intergrown. However, the crystals that make up nephrite 'take on rope-like, fibrous appearance [that] seem to be inextricably woven together' (Walker, 1991). These 'tightly bound' (Walker, 1991) structures are unique to jade and serve

to differentiate both nephrite and jadeite from each other and from their simulants.

A further observational feature that is influenced by the unique compositions of nephrite and jadeite and one which serves to aid in their identification is the way in which the materials fracture. Owing to their polycrystalline nature, the materials exhibit a distinctive fracture surface. Nephrite typically shows a splintery fracture with a surface that resembles a 'broken piece of wood' (Walker, 1991). Alternatively, jadeite (also a polycrystalline material) typically shows a fracture with a granular surface that has been described as 'sugary marble' (Wills, 1964). The appearance of these fractures differs from the types that are likely to be seen in common simulants of jade. These materials would typically exhibit a conchoidal or smooth fracture.

The surface appearance of the material is another relevant feature to consider when identifying jade. Nephrite is often described as having an 'oily' (Wills, 1964) appearance, whereas jadeite usually displays a vitreous lustre. Indeed, Richard Gump noted that the 'brightness and clarity [of jadeite] contrasts sharply with the soapy, almost aged-looking hues of most pieces of nephrite' (Walker, 1991). It is interesting to note that the surface of polished jadeite will often show a slightly dimpled texture. This orange-peel effect occurs as a result of polishing the randomly orientated crystals which form jadeite.

## CONCLUSION

There are few materials that have the specific cultural connotations that jade possesses, and even fewer that have impacted the many vastly different cultures across the world. The material was undeniably of great importance to the Mughal Empire. Its usage served to legitimise and strengthen the emperors' reigns by drawing a direct parallel between their empire and that of their Timurid forebears. The Mughal emperors inscribed their names into the material to record their own history, and encouraged the creation of items in distinct and developing styles to reflect how they themselves viewed their empire as a synthesis of various cultures. Lastly, jade has been a significant aspect of the Mughal dynasty's legacy. It has provided historians with a visual reference of the cultural diversity of the empire and has also served to influence the visual arts of other cultures. In the 18th century, a Mughal bowl fashioned from jade was presented to the emperor Qianlong. The piece was engraved with the verse, 'to be eternally treasured by generations to come' (Markel, 1992). There is something prophetic in this, as Mughal jade served to fashion notions of identity during the Mughal time period, but also continues to contribute significantly to its future legacy. ■

*All references and a full bibliography are available on request.*



5: Bowl with Handles in dark green nephrite jade, from the Mughal empire, circa 1640-1650. Image courtesy of LACMA, lacma.org.

# The Siren's Call

*The Siren of Serendip set in a white gold and diamond necklace.*

At 422.66 carats, the Siren of Serendip blue sapphire is a sight to behold. Here, Rui Galopim de Carvalho FGA DGA shares the story behind this fascinating (and exceptionally large) gemstone and describes the process of setting it into a beautiful white gold and diamond necklace.

Sri Lanka, former Ceylon until 1972, was historically known as Taprobane, Jazirat Kakut, Ratna Deepa, these last two literally meaning 'Island of Gems' in Arabic and Singhalese, respectively, and also by the old Persian name Serendip.

The island is the most famous historical source of sapphire and is known for producing fine-quality blue sapphires, sometimes in very large sizes. The gem potential of Sri Lanka was mentioned in the *Mahavamsa*, the Great Chronicle of Ceylon, as early as 543 BCE. References are also known in Pliny the Elder's iconic *Natural History* in the first century CE.

Notable and sizeable blue examples from Sri Lanka include the Blue Giant of the Orient with an astonishing 486.52 carat weight, which was presented at Christie's Geneva in 2004; the Queen of Romania Sapphire at 478.68 carats, which sold at Christie's Geneva in 2003 for nearly US\$1.5 million; the Logan Sapphire at 423 carats presently in the Natural History Museum of the Smithsonian Institution in Washington DC, USA; the Blue Belle of Asia of 392.52 carats, sold for US\$17.5 million at Christie's Geneva in 2014; and the Catherine The Great sapphire weighing 331 carats, acquired by Harry Winston in 1948.

Recently, in Texas, another giant blue sapphire was unveiled at the Houston Museum of Natural Science: a modified cushion-shaped mixed-cut deep blue sapphire weighing a whopping 422.66



carats and measuring  $48.18 \times 36.98 \times 25.52$  mm. The gem was cut from a 2,670 carat rough found in Sri Lanka reportedly in the early 20th century. Such a large gem-quality blue sapphire was quite successfully kept outside the mainstream public knowledge for a long time, even from renowned sapphire experts like Richard Hughes of Lotus Gemology, who saw it for the first time in March set into a jewellery piece at the museum. Hughes noted that because this is an "exceptionally well-cut sapphire for a stone of its size, and due to the exceptional colour," it must be considered among the five best-quality giant sapphires he has ever seen.

This unique gem was dubbed 'The Siren of Serendip' by the Houston Museum in honour of both the historical Persian name of the island of Sri Lanka and its irresistibly beautiful colour, evocative of the mythical sirens. There is an exciting mystery surrounding the Hollywood-like story of this gemstone, including an intriguing phone call with an offer of a world-class gem, a trip to Sri Lanka to see it, the gemmological confirmation of its nature and origin, the negotiation, the acquisition and, finally, its transportation to the United States. Due to the fortunate and happy series of events that made it possible for the stone to end up in the museum's collection, it can be said that this is also a true case of serendipity.

## THE MAKING OF A MASTERPIECE

Master jeweller Ingo Henn, of Henn of London, a fourth generation member of a notable family of gem dealers, master goldsmiths and lapidary artists from Idar-Oberstein, Germany, received the commission to develop a jewellery design for the The Siren of Serendip in April 2018. Creating a stunning design to emphasise this unique stone was a rather challenging prospect in the face of its sheer size and weight (almost 85 grams).

An even greater challenge was the fact that the extremely high value of the stone meant it could not leave Houston. All planning and manufacturing work had to be done far away from Henn of London's workshop in England. A high-precision 3D cast of the sapphire was made to serve as a reference for the



*Ingo Henn making sure the setting is in perfection. Note the protection tape that covered the necklace for the transport and setting procedures.*

...the extremely high value of the stone meant it could not leave Houston.

manufacturing process. After months of study, many designs were shortlisted to just three, which were presented to Joel Bartsch, CEO of the Houston Museum, who had final say on the project.

In the end, an 18kt white gold and diamond necklace design was chosen, as both materials are ideal for getting the very best of a blue gemstone. Bench operations started in October 2018 and the gold structure was handmade for posterior rhodium-plating with the sapphire's claws specifically made in platinum. According to Ingo Henn, platinum would enable a safer setting procedure since it is easier to bend than white gold. In fact, the whole necklace had to be made, diamond-set, polished and rhodium plated in London. The final sapphire setting phase was therefore planned in a metal that would blend with the finished, white metallic lustre

of white gold. This is a bench jeweller's knowhow in action!

A total of 913 colourless diamonds (reportedly E colour — VVS clarity) with a total weight of 36.30 carats were selected and set on both the necklace and the mount, while the sapphire was still safely stored in Texas. After the final stages of bench work, the completed diamond-set necklace was carefully wrapped in a protective tape and taken to Houston, where the Siren of Serendip was at last set by Henn of London's master stone setter.

This "piece made for eternity," as Ingo Henn puts it, was finished in late February 2019 and unveiled at the Brown Gallery of the Houston Museum of Natural Science on March 3. With a touch of true serendipity and due to a considerable number of generous anonymous donors, this Siren of Serendip masterpiece, one of the largest gem-quality faceted blue sapphires on record, was acquired by the museum so it could be on permanent display. It can now be viewed in the Cullen Hall of Gems and Minerals at the Houston Museum of Natural Science, Texas, USA. I would wholeheartedly recommend a visit. ■

*All images courtesy of the Houston Museum of Natural Sciences. An image of the finished necklace can be found on the cover of this magazine, courtesy of the Houston Museum.*



A very rare Indian colonial silver 'Tea Vine' four-piece tea set (circa 1875). In this example, the ivory content is below 10% as it is being used as insulators from the silver handles. Image: ©Daniel Bexfield Antiques.

# The Ivory Act

What are the effects of the ivory ban on the antique silver trade? Charles Bexfield FGA offers a quick overview for retailers, traders and prospective buyers.

**T**he Ivory Act 2018, which is scheduled to become UK law at the end of this year, states that nearly all trade in elephant ivory, regardless of age, is prohibited. However, there are some exemptions to the upcoming ban. Previously the law stated that ivory items, or items containing ivory sold within the United Kingdom, had to have been made before 1st June 1947. Furthermore, they must be 'worked' (significantly altered), i.e. not a raw tusk, or resembling a tusk in any manner. The items must have been purchased already worked, and requiring no further work to create the finished product. Currently, if someone has a tusk which they purchased before 1947, this is not subject to the exemption: it would be illegal to trade it, and there will be no change to this part of the law. It was, and still will be, illegal to work or re-work elephant ivory in the UK.

So what are the exemptions to this new ivory trading ban, and how are they going to challenge the antique silver market? Items containing 10% ivory or less, which were made as an integrated part of the object prior to 1947, may still be traded. However it has not yet been made clear

whether these percentages are going to be calculated by volume or density. Furthermore, the monitoring process for trading such items is yet unclear; documentation may be required to prove the age of the ivory in some cases, which presumably will be issued by institutions.

The rarest and most important items of their type will also be exempt even if the ivory content is over 10% (or indeed made entirely of ivory). This will include items of outstanding artistic, historical or cultural significance and made prior to 1918. Such items will be subject to advice by specialists from institutions such as museums. They will then provide certification allowing these items to be traded. However, how this is going to be executed has not been yet been made clear and we do not know whether this service is going to be chargeable.

Another question worth asking is what makes an outstanding item? So far the bill states that institutions are going to be able to approve the certificates for such objects; however, they are usually not-for-profit organisations and therefore will look at the pieces differently to the trade. As we know, many museums have items that are historically interesting and/or rare but can be of little value in the trade. This could be due to damage and repair, or being in a niche area of collecting that doesn't command high prices. It then may not be worth the time and/or expense for dealers to have such items certificated for potentially little return. Are we going to lose wonderful pieces of history because of this? Another point to raise is that museums do not provide valuations on any items and are not necessarily aware of what is currently 'trending' which could also jeopardise the antique market.

Following the implementation of the ban, many antique objects containing over 10% ivory will not be allowed to be sold, including items such as canteens with ivory handles, fruit knives and corkscrews, which, in my opinion, seems a pity as they may not be considered outstanding but are still of excellent quality and of interest to collectors. Some pieces containing over 10% ivory may be altered to remove the ivory and replace it with something else, however this will greatly affect the value of these items, as they are no longer in their original condition. Furthermore, this falsifies their art-historical record.



George IV silver and ivory pocket apple corer (1827). Delightful but not particularly rare. Image: ©Daniel Bexfield Antiques.

Other exceptions include portrait miniatures; these are usually painted on thin slices of ivory, and they are going to be exempt providing they date pre-1918. Musical instruments must contain less than 20% ivory and made prior to 1975. Sales to and between museums will also be allowed, but they must be accredited by Arts Council England, the Welsh Government, the Scottish Government or the Northern Ireland Museums Council, and for museums outside the UK, the International Council of Museums.

What happens if one breaches the ban? Currently the maximum penalty will be an unlimited fine or up to five years in jail, so it is in everyone's best interest to get it right from the start. I think the entire trade is eagerly waiting to find out what is going to happen. ■



Set of nine Georgian cataract knives (circa 1820) with an ivory content of over 10%. Early examples in wonderful condition. Would they be exempt? Image: ©Daniel Bexfield Antiques.





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Offer ends 18.10.19

If you require any further information about our products or simply wish to make a purchase, please email [instruments@gem-a.com](mailto:instruments@gem-a.com) ■



## GEMSTONE CONVERSATIONS: TURQUOISE

Jewellery historian and valuer John Benjamin FGA DGA FIRV explores the fascinating history of turquoise and its use in jewellery design from the Shahs of Persia to the Art Deco design movement.



*A late Victorian cinquefoil flowerhead brooch set with heart shape turquoises and brilliant cut diamonds.*

Obsolete and largely forgotten jewellery books are a rare and desirable resource for jewellery historians since they provide a fascinating and nostalgic window into the past. Frequently revealing obscure and intriguing historical facts, they may also contain charming inaccuracies which would be considered intolerable in today's climate of technical exactitude. Invariably written by long dead academics or enthusiastic collectors, these books were published at a time when goods on the market were abundant, prices were infinitely affordable and the sophistication of the 21st century international jewellery market was as remote as science fiction.

Such a book is *Jewels of Romance and Renown* by Mary Abbott, published in 1933. The book examines the traditions and royal associations relating to a number of prominent gemstones and actually contains some very useful information indeed, particularly where rubies, sapphires, opals and jade are concerned. Chapter VIII, *Turquoise For A Royal Duchess* provides all sorts of

interesting and little-known facts about this decidedly enigmatic gem and, while it is very much written in the flowery prose of the time, it really does come up with some quite surprising anecdotal detail. In Persia, for example, turquoise is known as 'firunza' meaning victory. Historically, Persian turquoise was highly prized and extremely valuable to the extent that the Shahs of Persia maintained the rights to the turquoise mines at Kishapur (a city located in the north east region of latter-day Iran). Indeed, the finest specimens were presented to the Shah for his personal inspection — and retention if he so desired. In Persia, turquoise was regarded as "the most powerful of all amulets against the influence of the Evil Eye" and it was customary to "hang a turquoise pendant round a baby's neck to ward off ill-health and disease". Clearly this was the forerunner of the evil eye

pendants sold in tourist shops all over the Middle East today.

One of the oldest beliefs about turquoise was that it had a benign influence upon horses. Attached to the bridle it would "keep the horse from stumbling in stony places and from suffering ill effects after drinking cold water when overheated" — in other words a primitive mascot to prevent colic.

True or not, it is all about perception. The reputation that turquoise gained as a talismanic gem became so widespread that by the 17th century horses in England were sometimes saddled and bridled in turquoise-studded tack, while



*A group of Victorian pavé set turquoise jewels. Note the discolouration of one stone set in the scallop pendant.*





in New Mexico, Native Americans mounted turquoise known as duklig on their hunting bows believing that the arrows were far more likely to hit their targets.

Whatever benefit there is to be gained from turquoise as an amuletic charm, it is its abundant use in antique and later jewellery which justifies its status as one of the most popular of all semi-precious gemstones. In the Georgian era, its association with the forget-me-not flower resulted in endless sentimental gold padlocks, hearts and friendship rings (known as Fede rings) being set with turquoise, often in clusters of compatible gems such as rubies and half pearls. Versatile and striking when mounted in high carat bright yellow gold, it became extremely fashionable in the Victorian age to set turquoise in domed, pavé clusters of small, round cabochons reminiscent of Liquorice Allsorts. Gemmologists know only too well the

*A Turn of the century gold necklace set with turquoises, turquoise matrix and blister pearls designed by Archibald Knox for Liberty & Co.*



*A Georgian gold heart shape sentimental locket with turquoise forget me not centre in a vari gem-set surround spelling 'Regard'.*



**Turquoise is undoubtedly the gem most closely aligned to Arts and Crafts jewellery...**



*A gold mesh bracelet mounted with a miniature of Queen Victoria in a turquoise studded frame. Presented to The Duchess of Atholl by HM The Queen in July 1852 (Image courtesy of Blair castle, Atholl Estates).*

problem associated with many turquoises such as these: their porous nature increases their tendency of turning an ugly and undesirable dirty green colour, degrading appearance and value.

Turquoise is undoubtedly the gem most closely aligned to Arts and Crafts jewellery and was liberally used by a wide range of designer craftsmen, most notably Archibald Knox for Liberty & Co and the commercially successful firm Murrell Bennett & Co.

Jewellery from this period was frequently of naturalistic or organic design and the turquoise itself often

contained elements of native limonite known as turquoise matrix. Irregular lumps of turquoise matrix were also popular as an accompaniment to long gold guard chains, while polished cabochons were routinely set with pearls in low-grade nine carat gold pendants, bar brooches and inexpensive rings. Its use continued through the 20th century, whether as an accompaniment to diamonds in bold and distinctive Art Deco brooches or in contrasting and colourful marquetry patterns with onyx, coral and ivory in accessories such as cigarette cases and powder compacts. The Post War era saw turquoise revert to its 19th century format of clusters of small, pavé-set cabochons but this time mounted in asymmetrical, three-dimensional gold frames alongside other primary-coloured gems such as ruby, sapphire, amethyst and emerald.

Visually striking and versatile, accessible and affordable, the popularity of turquoise has rarely, if ever, diminished.



*An interesting Persian gold pendant mounted with a large flat-cut triangular turquoise plaque. This specimen was brought back from Tehran at the beginning of the 19th century and is now displayed in the Treasure Room at Blair Castle, home of the Duke of Atholl. A note is attached which reads "Very valuable and the setting should never be changed. It must be carefully preserved amongst the Duke's curiosities" (Image courtesy of Blair Castle, Atholl Estates).*



*A French Art Deco platinum line brooch set with oblong diamonds and buff-top turquoises.*

While there are certainly very good copies readily available on the market, the universal affection for genuine turquoise means this most distinctive of gems looks likely to be in demand well into the 21st century and beyond. ■

John C Benjamin FGA DGA FIRV is an independent valuer, jewellery historian and author of *Starting To Collect Antique Jewellery*. Find out more at [johnbenjamin.co.uk](http://johnbenjamin.co.uk)

Images courtesy of Charlotte Glyde at Woolley and Wallis unless otherwise stated.



In 2018, award-winning jewellery designer Sarah Ho launched The Full Circle Project, designed to bring her closer to the source of her gemstone jewellery creations. *Gems&Jewellery* contributor, Christa Lynn Van Eerde FGA DGA, finds out more.

Imagine a curious little girl happening upon her grandmother's jewels one day. She carefully takes each out of the small treasure chest, one by one, and holds them in her hands to carefully examine every element. Fast forward a few years, to when the same girl, now a confident teenager, is gifted her very own piece of jewellery to mark a significant occasion. What a moment! And one that is repeated several times with each momentous occasion in her life, each one signifying a different memory and meaning. A few more year's progress and this stylish young lady begins to study fashion, and her passion for colour and pattern and jewels leads her to her

true calling: jewellery design. The lady's name? Sarah Ho.

The Full Circle Project was launched by award-winning designer Sarah Ho in 2018. Her aims were to be involved in every single step of a jewel's journey once unearthed, to create exceptional pieces of jewellery with a rare jewel as the centerpiece and to give back to the location and community in which the stone was found.

It was Sarah's passion for gemstones and pearls that led to The Full Circle Project and, as a result, she has visited places where gems are found and met the people involved in the journey of stones, from mine to market. The gems

Sarah selects are chosen for their quality and rarity. From the rough stone discovered in watery sediment, to being shaped on the cutting room floor, and finally being set in a beautiful design, Sarah is involved every step of the way.

To bring The Full Circle Project (and the resulting Full Circle Collection) to life, Sarah worked with Gemforest and Suwaidi Pearls, two leading companies in their respective fields, to personally choose exquisite stones and an exceptional pearl from their private collections (1 & 2). The gemstones were sourced from Tanzania, Madagascar, Mozambique, Brazil, Vietnam and the pearl selection from Ras Al Kamiah in the Arabian Gulf.

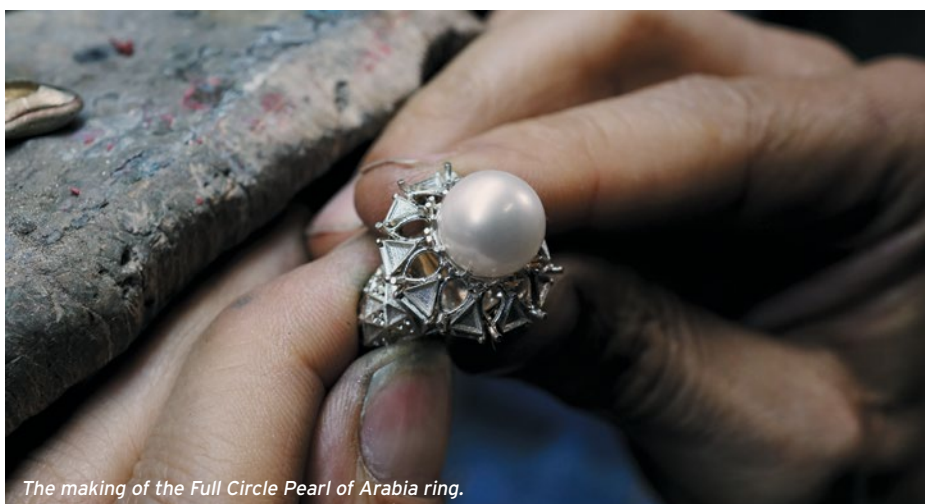


1: The Full Circle Project led designer Sarah Ho to personally select gemstones from the private collections of Gemforest.



2: Sarah visited Suwaidi Pearls in the United Arab Emirates to personally select pearls for her Full Circle jewellery collection.





*The making of the Full Circle Pearl of Arabia ring.*

Now, to support local environments and communities, The Full Circle Project will begin planting trees and aiding water clean-up projects in Madagascar and the Arabian Gulf. Sarah says: "It was wonderful to select the pearl and gemstones, to learn from Suwaidi Pearls and Gemforest about their journey from the source to my hands. The knowledge I gained has enriched my passion for these beautiful treasures, which is reflected in my designs. I am proud to launch this project with the Full Circle Collection, knowing that it will directly benefit the local communities and have a lasting impact on the environment."

The first eight creations of The Full Circle Project were unveiled in Hong Kong, where Sarah was born, in 2018 and showcase her signature design style, mixing and matching gemstones, colours, settings, stone cuts and incorporating intricate metal lacework.



**3:** Full Circle Pearl of Arabia ring crafted in 18ct white gold with mother of pearl enamel, white diamonds and Arabian pearl by Sarah Ho.

**4:** Full Circle imperial topaz earrings in 18ct rose gold with rosa and salmone plating, pink and orange conch pearls and imperial topaz by Sarah Ho.



I am proud to launch this project with the Full Circle Collection, knowing that it will directly benefit the local communities...

For example, the Full Circle Pearl of Arabia ring has a regal splendor, with an 11.6mm pearl of exquisite lustre and flawless complexion (discovered by Suwaidi Pearls founder, Abdulla Rashed Al Suwaidi in 2006), surrounded by diamonds and in-laid mother-of-pearl enamel (3). Another example is the Full Circle Imperial Topaz earrings, where conch pearls playfully lead the eye to two remarkable imperial topaz specimens, one a salmon pink and the other red (4). The red hued stone is so rare only about 0.1% of all imperial topaz found is naturally this colour. The earrings provoke a warm feeling, with their golden and pink hues resembling a sunset. This is in stark contrast to the Full Circle Paraiba earrings, which give an icy cold feel from the 4.5 carats of intense neon Paraiba-like tourmaline from Mozambique set inside cabochon aquamarines frostily framed with diamond beads (5).

Sarah's motivation for the Full Circle Collection stems from The Full Circle Project, which keeps her passion alive. She says: "Now that my jewellery has a legacy, not just in creations, but at the very beginning of the supply chain, my drive to create more beautiful masterpieces has only increased." Since its debut in Hong Kong, The Full Circle Project continues, and Sarah is wholeheartedly committed to pursuing and sharing its story in her new London Mayfair showroom. ■

All images courtesy of Sarah Ho London.



**5:** Full circle Paraiba-like tourmaline earrings in 18ct white gold with white diamond beads, white diamond baguettes, aquamarine modules and aquamarine baguettes by Sarah Ho.



*Captured in Amber:  
A frog fossilised in  
Dominican amber.  
Image by Anthony  
Shih FGA DGA.*



*2018 Winner – When viewed in short-wave  
fluorescent illumination, a piece of blue sapphire  
rough from Madagascar displays striking  
hexagonal zoning along with unusual triangular  
patterns. Image by E. Billie Hughes FGA.*

# EYE ON THE PRIZE

Gem-A's annual Photographer of the Year Competition returns with a new format and exciting prizes. Do you have what it takes to be crowned the winner? Discover how to enter here...

**W**e are thrilled to announce that the Gem-A Photographer of the Year Competition is back for 2019!

This year's Competition promises to be our biggest and best yet, with the introduction of a public vote and fantastic prizes for one overall winner and two runners up. What's more, while the Competition had traditionally only been open to Gem-A Members and students, we are now happy to accept entries from anyone with an interest in gemmology and a passion for photography.

Whether you have taken part previously or are completely new to the Competition, we welcome all entries and are looking forward to receiving a vast and varied range of photographs from across the world.

This year, the Gem-A Photographer of the Year Competition has opted to forego categories. We want to see fantastic photographs that display

your own unique interpretation of gemstones, gemmology and the wider trade. Perhaps you have witnessed a spectacular scene while gemstone mining or trading on a recent trip abroad? Maybe you have photographed a piece of jaw-dropping jewellery? Or you may want to share the hidden, intricate beauty of a particular gemstone through photomicrography? Whatever highlights an unusual or insightful facet of our sector, we want to see it!

If you need some inspiration, take a look at the awesome images across these two pages. Winners from 2018 include a photomicrograph of an old-cut diamond by David Pregun; E. Billie Hughes FGA's image of a Madagascan blue sapphire rough viewed in short-wave fluorescent illumination; and Maryam Mastery Salimi's photograph of a dealer in Iran presenting an exquisite array of fine Persian turquoise. Last year's overall winner was Richard W.

Hughes FGA's 'Going for the Green', which portrays traders in Yangmei, China scrambling to examine and bid on a quantity of jade slices from Myanmar. In 2017, Anthony Shih brought us an incredible image of a frog fossilised in amber, while 2017's overall winner from Jonathan Muyal FGA was an amazing, and almost unbelievable, photomicrograph of a Dandelion-like inclusion within a Sri Lankan sapphire.

## WHY ENTER?

- Win the chance to have your photograph featured in *Gems&Jewellery* magazine. Winners could be featured on our cover, our Last Impression or our Big Picture feature page
- You can add the accolade of being named Gem-A's Photographer of the Year to your portfolio
- Entry is free and open to all



### THE PRIZE

- The overall winner will be gifted a **£300 voucher to spend at Gem-A Instruments** and **one year's free Membership of Gem-A**
- Two runners up will win a **£50 Gem-A Instruments voucher**
- All three winning entries will see their photographs published in *Gems&Jewellery* magazine

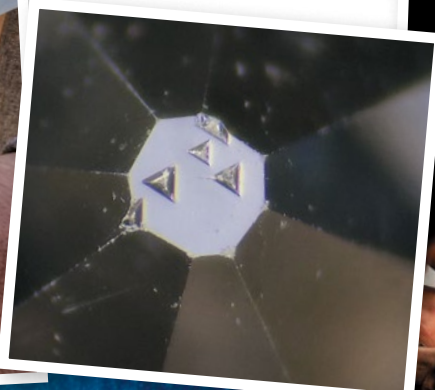
*2018 Winner – A Persian turquoise dealer presenting a variety of Persian turquoise and his finest blue turquoise, temporarily mounted as a ring. Image by Maryam Mastery Salimi.*



### COMPETITION RULES

- A maximum of three photographs may be entered per person
- Entries must be accompanied by your name and post-nominals (if applicable)
- Images must be captioned with a title and a description of no more than 150 words telling the story behind the photograph
- All photographs entered into the Competition must have been taken within the last 12 months
- The image must be your own work and not belonging to a third party
- Photographs must be high resolution, with a minimum of 300dpi and ideally a minimum of 1mb in size
- Please send files larger than 10mb via Dropbox.com or WeTransfer.com (these are free to use media transfer services)

*2018 Winner – Trignons on the culet of a faceted, old-cut diamond (photomicrography taken with a smartphone camera). Image by David Pregun.*



- By entering the Competition you accept that your image may be used in *Gems&Jewellery* magazine, on the Gem-A Blog and on Gem-A's social media channels. You will always be credited as the creator of the work

*For more information on the Competition rules please contact [editor@gem-a.com](mailto:editor@gem-a.com)*

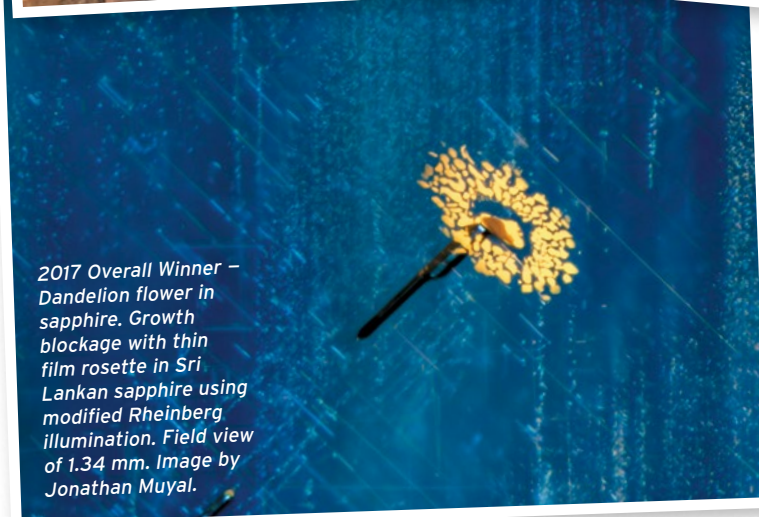
### JUDGING PROCESS

- The *Gems&Jewellery* editorial team will shortlist five entries — the final decision of one winner and two runners-up will be made via a public poll on the Gem-A Facebook page
- The image with the highest number of public votes will be awarded overall winner, and the next two most popular images will be named runners up

*2018 Overall Winner – 'Going for the Green': Traders scramble for Myanmar jade at Yangmei's night market in Guangdong Province, China. Image by Richard W. Hughes FGA.*



*2017 Overall Winner – Dandelion flower in sapphire. Growth blockage with thin film rosette in Sri Lankan sapphire using modified Rheinberg illumination. Field view of 1.34 mm. Image by Jonathan Muiyal.*



### HOW TO ENTER

**Email your entry to [editor@gem-a.com](mailto:editor@gem-a.com)**

The Competition is open now and we will be accepting entries until August 30, 2019. The winner will be announced on Gem-A's Facebook page shortly after the Competition has closed. Good luck!



## LAST IMPRESSION

There are a staggering 860 facets on this CZ cut by Victor Tuzlukov.

The Las Vegas Convention Center, the venue for AGTA GemFair.

Diamond artist Angie Crabtree at the AGTA GemFair.

# ★ ★ Viva ★ ★ Las Vegas

Gem-A USA at the AGTA GemFair.

A mural at JCK Las Vegas.

In June, Gem-A returned to Las Vegas for the first time since 2015 to exhibit at AGTA and explore JCK, two leading trade events that were split for 2019 and placed in different venues. *Gems&Jewellery* considers the highs and lows of Gem-A's time in Las Vegas...

Despite a long absence, Gem-A was excited to return to Las Vegas this year to exhibit at the AGTA GemFair (American Gem Trade Association), hosted at the Las Vegas Convention Center. In fact, it was our friends at Gem-A USA who had an exhibitor's table and the response was very encouraging — people are excited about the opening of the first Gem-A USA Accredited Teaching Centre at JTV in Nashville, Tennessee, with plenty more to follow.

The AGTA GemFair and the JCK Las Vegas trade events were traditionally hosted together, however a change of venues meant the two shows separated in 2019. This meant all exhibitors were in a new position and many were uncertain of the impact on visitor numbers. JCK had a positive atmosphere and a good seminar programme of 'JCK Talks', while AGTA had an inspiring social media

presence, supported by some 'jewellery influencers' who added their pictures and thoughts to the show's social platforms as it progressed.

Both the Gem-A and Gem-A USA teams were kept busy in Las Vegas thanks to a fantastic line-up of talks, events and workshops. The AGA (Accredited Gemologists Association) Conference featured three interesting seminars by GIA's Shane McClure, Thomas Hainschwang PhD and Dror Yehuda, who spoke on the Sherlock Holmes Detector for synthetic diamonds. Elsewhere, the Rapaport Breakfast hosted by Martin Rapaport addressed the need for the diamond industry to spend money on advertising mined diamonds and highlight the good that diamond-industry giants do globally.

JCK Las Vegas 2020 will take place at the Sands Expo from June 2-5, while the AGTA GemFair will take place at the Las Vegas Convention Centre from June 1-5. ■

## GEM-A INTERNATIONAL SCHEDULE 2019

Want to say hello to us? We will have a presence at these shows in 2019.

### IJL

London, UK, Sep 1-3

### Hong Kong Jewellery & Gem Fair

Hong Kong, Sep 18-22

The battle between 'gemology' and 'gemmology'!





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- ◆ Network with some of the leaders in the field during the Conference breaks and the Saturday evening dinner.
- ◆ Learn from speakers and fellow delegates.
- ◆ Exclusive workshops and trips including private viewings.
- ◆ Join us for dinner on the 2 November at the House of Commons, an iconic venue that forms part of the Palace of Westminster.

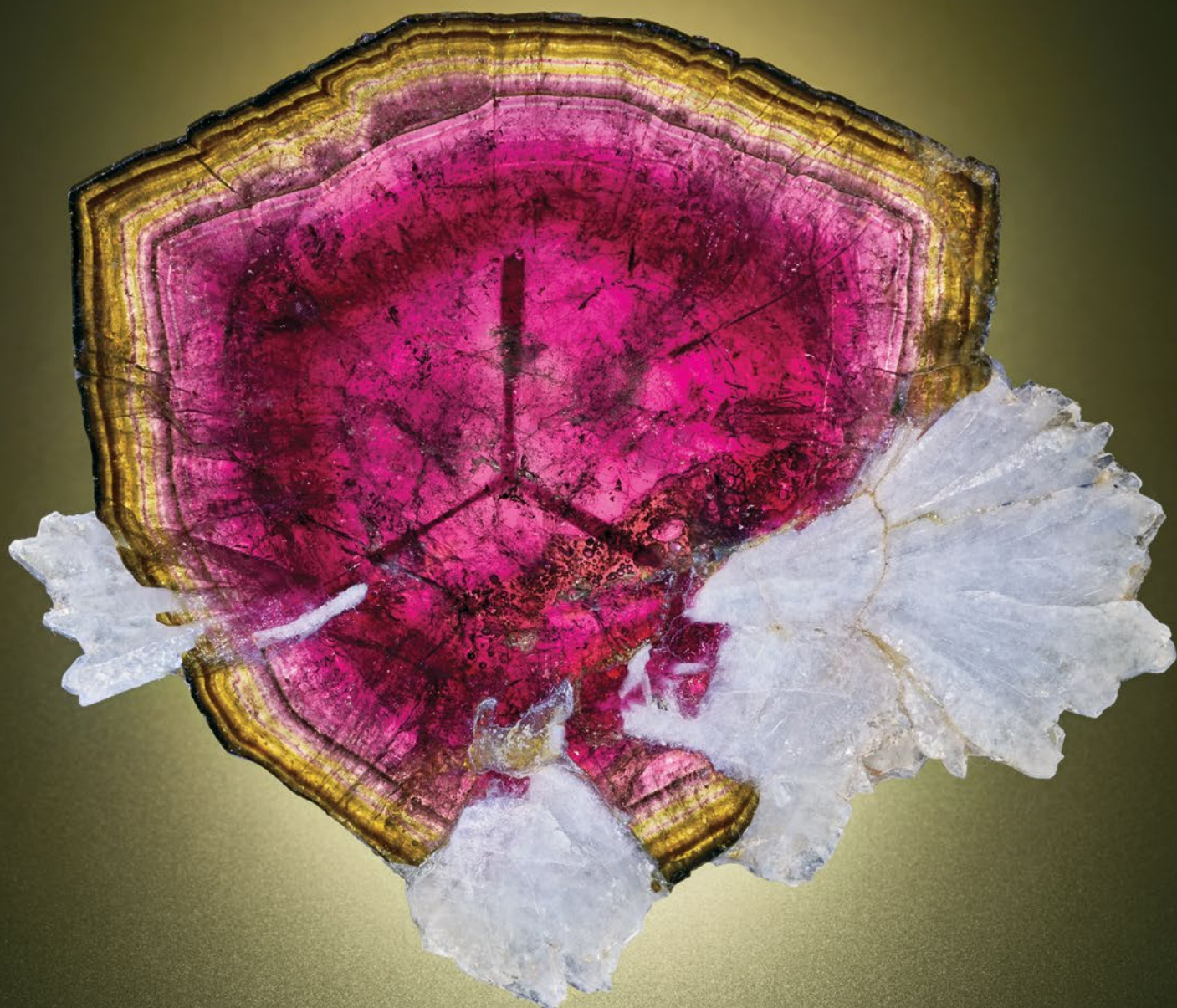
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