

Gems & Jewellery

March 2013 / Volume 22 / No. 1

Glass-filled rubies:
are they legal?

Tucson report 2013

Gems with feathers



Gem-A
THE GEMMOLOGICAL ASSOCIATION
OF GREAT BRITAIN

Mila Kunis wears Zambian emeralds from Gemfields, the world's leading producer of ethically-sourced coloured gemstones.
Beauty, set in stone. www.gemfields.co.uk +44 (0)20 7518 3400



Necklace by Fabergé

GEMFIELDS

Gems&Jewellery March 13

Contents



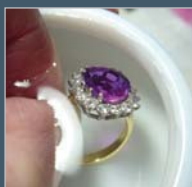
4

Gem-A News



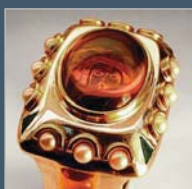
6

Gemstone News



8

Gems & Minerals



14

Craftsmanship

Around the Trade 16

Gem-A Calendar 17

Shows & Exhibitions 18

Stone Scoop 22

The pitfalls of price point gem purchasing

If you are a jewellery seller you might recognize this scenario. You are missing a certain sort of sapphire and diamond ring in your inventory, say, to sell at around £5,000. You need to fill the gap. Then the problems start. The sapphires offered to you look pretty awful or they look OK when you buy them, but then break or visibly deteriorate when set or when the jewellery is later cleaned or repaired. Do you blame your supplier? Think again... the problem might be you being out of touch with the gem market.

The prices of some types of coloured gems have increased considerably in recent years. A good-quality sapphire, ruby or emerald can now cost more than twice what it did just a year ago. The market has changed. If you insist on buying a certain size of sapphire at the same price as a couple of years ago, you'll get a poorer stone, or a more intrusively treated one.

In theory the increasing price of coloured gems is a positive feature not a curse. You might not want to push 'investment potential' with your customers, but it can't hurt if they know that prices are firmly rising. It can also help restore the aspirational value of jewellery — something sadly lacking in much of the western jewellery industry in recent years. If you are in the gem-set jewellery business you need to stay in touch with what is happening on the gem market and know the cost of replacing your stock. You may also need to adjust selling prices, otherwise you might end up selling stuff for less than it costs you to replace. There lies a downward spiral, much like the one pursued by some jewellery retailers today as they try to counter rising precious metal prices by moving into base metal and costume jewellery, ironically thereby moving into areas where there is even tougher competition, whether on the high street or online.

The thing to remember is that if you are selling gems or gem-set jewellery you are selling beauty and aspiration, a world of wonder into which you have to entice your customers. Understanding the gem market, and knowing sufficient gemmology not to leave yourself open to errors or misjudgements, is an essential part of this. If your current type of business won't allow you to raise the price levels at which you have been selling jewellery set with the main traditional gems — ruby, emerald and sapphire — remember that there is an extraordinary range of other coloured gems out there, from apatite to zoisite. Better a gorgeous garnet than a rubbishy ruby to help you develop a loyal customer base.

Jack Ogden

Cover Picture

A collection of glass-filled rubies. Photograph Jack Ogden.
(See 'Red flag: are glass-filled rubies legal?', page 12.)



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Gem-A news

Gem-A CEO James Riley gives a round-up of what's been happening at Gem-A.



Ayako Naito, Gem-A's ambassador in Japan, at Gem-A's booth at IT

Gem-A's Tokyo debut

In January Gem-A exhibited for the first time in Japan at the International Jewellery Tokyo show. A reception was held for members, graduates and students where it was good to meet up with old acquaintances and some of our more senior graduates. One of the latter was among the first in Japan to become an FGA back in 1968. Thanks must go to our ambassador Ayako Naito, our Accredited Teaching Centre the Japan Gem Society and Japan Jewelry Craft School, and Gem-A's other friends who made the show so successful. Gem-A's gemmology courses are now available online in Japan and in addition the Diamond course will be taught from September.

Conference diary date

Gem-A's international gemmological conference, held annually in November, is a yearly meeting-place for gemmologists, an opportunity to bring gem knowledge up to date and to network with each other. It is also attended by many of our students and recent graduates, many of whom will be in town to receive their diplomas and awards. This year is a special year for Gem-A education — we are celebrating 100

years of the Gemmology Diploma and 50 years of the Diamond Diploma. To mark this very special occasion, November will see a two-day conference held within the splendid surroundings of Goldsmiths' Hall, London, combined with our annual graduation and awards ceremony and a formal conference dinner. So mark the dates 2 – 3 November in your diaries. There will also be some exceptional sponsorship opportunities. Please contact Gem-A for more details.

Publication developments

Some of you may notice a few changes to *Gems & Jewellery*, not to mention that it's inside *The Jeweller!* This is part of an overall publications strategy to provide you all with more information, more quickly and in a more readable format. So, in addition to *Gems & Jewellery* being published nine times a year, *The Journal of Gemmology* is also getting a makeover, ultimately returning to four a year and back to its roots with a combination of cutting-edge scientific articles, practical gemmological tips and important information for all members. I think you will find the new look more accessible and user friendly. Look out for the new *Journal of Gemmology* in the summer.

Tucson honour for Jack Ogden

In Tucson we were delighted that our friends at Jewelry Television (JTV) honoured Jack Ogden for his work in devising and writing our GemBasics course. He was awarded the product innovation award at the specific request of the late Jerry Sisk. This new online course is now available in the UK for £495 through the National Association of Goldsmiths (NAG). Please contact the NAG education department for enrolment details at: nag@jewellers-online.org



The JTV Product Innovation Award presented to Jack Ogden for 'a unique approach to an existing product classification'.

New team member



We welcome a new member to the teaching team in Greville Street this month as Lizzie Gleave joins us. Lizzie was previously at gem

dealer A E Ward and will be familiar to many as she has been an Open Distance Learning tutor and evening class tutor for some time. She had a rude awakening to Gem-A when plunged into the Tucson show on her first day... complete with sharing a house with the team. Not to mention putting up with my driving the largest SUV ever!

Birmingham seminar success

We recently conducted two of our introductory one-day seminars with the British Jewellers' Association (BJA) in Birmingham. Special rates are available for all Gem-A, NAG and BJA members so why not send a member of your staff on one? These seminars can be provided anywhere in the UK depending on numbers and we can deliver a bespoke training course to fit your needs. For further details please contact Claire Mitchell at: claire@gem-a.com



Photo courtesy of BaseWorld

Gem-A returns to Basel

In April, for the first time in several years, Gem-A will be exhibiting at the BaselWorld jewellery show, 25 April – 2 May 2013. This is Europe's largest jewellery show with a huge array of diamonds, coloured gems and cultured pearls. Do come and visit us at stand no. N12 / Hall 3.1.

Decorators in at Greville Street

Apologies to visitors to our headquarters in Greville Street, London, this summer. We've finally clarified the renewal of our lease here and so can now embark on our planned — but long overdue — refurbishment. The work starts on 8 April and will take three months during which time we will be open for business as usual, but it might be a bit dusty!

Finance and growth

The ambitious refurbishment of our offices, which will include increased teaching facilities and the reinstatement of our library, has been made possible by four consecutive years of financial growth. Draft 2012 accounts show a record growth in income — primarily fuelled by our expanding global education. This growth has been made possible by the hard work of the team at Gem-A, by our voluntary Board and by the support and goodwill of

our members and friends worldwide. Growth has not been straightforward in this time of economic crisis, but a preparedness to seize new opportunities and to make some tough decisions over recent years has been vindicated by the results. However the main factor fuelling our growth is the recognition worldwide that with its 100 year heritage and consistent commitment to the highest standards of education, Gem-A provides the most respected gemmology courses.

I look forward to welcoming you all to our rejuvenated facilities in the summer.

James Riley, CEO

Gemstone news

Jack Ogden's latest UK and international gemstone intelligence.

The market

The year 2012 was an interesting one for the gem trade. The high end never had it so good. For example Sotheby's announced that 2012 saw its highest-ever total for its global jewellery sales — just over \$460 million. What they termed 'exceptional' gems and diamonds were major contributors, especially historic pieces or those from noted private collections. (For feedback on the market from the Tucson Gem Shows see page 18.)

Sadly there are no detailed statistics for current global gem sales although in 2009 at an International Colored Gemstone Association panel discussion it was suggested that the global retail market value of coloured gems in 2007 was around US \$10 – 15 billion. Of this corundum (rubies and sapphires) accounted for 35 per cent, tanzanite 10-15 per cent and emeralds 10-12 per cent. Based on this we might estimate current worldwide coloured gem sales at around \$15 – 20 billion. To put this in perspective, overall US sales of jewellery and watches in 2012 were just over \$70 billion — another record, and almost six per cent above 2011 sales.

In China, now the second largest consumer market for diamonds after America, total 2011 jewellery sales exceeded RMB300 billion (just over £30 billion). In comparison UK jewellery and watch sales are estimated at £4.2 billion for the UK for 2012 with minimal change from 2011. These UK figures are taken from the recently released *Mintel Report Watches and Jewellery – UK – September 2012*. Unfortunately for us this report concentrates on precious metal jewellery and watches and gems barely get a mention. However, we can note that the top 20 UK watch and jewellery retailers upped their advertising spend by an average of almost 50 per cent between 2009 and 2011, which might suggest that they are having to work harder in general to keep business flowing.

Diamond supplies

At Jewellery News Asia's *A New Era in the Diamond Industry*, an online conference held in Hong Kong last November, the growth in demand for diamonds in China was noted, but also the likelihood that supplies would remain static at least until around 2025. More demand, no increase in stones available. What might happen? Well prices might rise, of course — the basic laws of supply and demand are unlikely to be rewritten — but another possibility was suggested: an increase in use of small and what are now termed near-gem-quality diamonds which are available in large quantities. Small, poor quality diamonds — what the trade sometimes refers to as 'frozen spit'* — came to the fore in the late 1990s and now seem set for resurgence. And what about synthetic diamonds?

Will rising prices for natural diamonds and, presumably increasing availability of synthetics in coming years, lead to mass adoption? You might hear traditional retailers muttering "over my dead body", but their grandfathers were probably saying the same about cultured pearls a century ago. To view the Conference visit: <http://tinyurl.com/GandJ-DiamondConference>

Talking of cultured pearls, finer qualities have been selling well recently; for example the best quality Tahiti cultured pearls have been doing well with rising prices, but cheaper Chinese freshwater cultured pearls are still having a bad time. However, there might be a light at the end of the tunnel in the form of rising domestic demand within China itself.

Diamond grading

Imagem has launched The Gem Lab Information System (GLIS) which automates diamond grading. It includes the 'Grading Station' where proportions, colour, fluorescence and symmetry are analysed and the 'Clarity Station' where the diamond is 'immersed in a non-toxic liquid for proper imaging' and maps all inclusions. More details at: <http://tinyurl.com/GandJ-GLIS>

Gem-A has neither seen nor tested this equipment and the above does not represent any type of endorsement.

Legal butterflies

The legal case brought by heirs of Harry Rodman against Alan Bronstein (*right*) over the ownership of the Aurora collection of coloured diamonds has come to a conclusion. The collection was built up by Rodman and Bronstein and the dispute arose when, after the former's death at the age of 99, Rodman's relatives challenged Bronstein's inheritance of Rodman's half share. After what was a very expensive and lengthy trial "the court found no basis to set aside the transaction on the ground that the contract was unconscionable." In other words, the whole collection is indeed Bronstein's.

The Aurora Collection, formed during the 1980s and 1990s and divided into the 'Pyramid of Hope' and 'Butterfly of Peace' groups has been exhibited at several museums, including the Natural History Museum, London. The court case is of interest



* The earliest use of the term 'frozen spit' in print referring to poor-quality diamonds that I am aware of appeared in *JCK Magazine*, vol. 66, 4-6, 1995, p.195.

because of the widely varying valuation placed on the collection by different appraisers — \$2 million and \$14 million — raising questions as to how one-off gems can best be valued and the extent to which being part of an established and exhibited collection impacts on overall value. Some of these issues will be taken up in a future issue of *Gems & Jewellery* once we have digested the many hundreds of pages of court documents. In the meantime the court judgement can be found here: <http://tinyurl.com/GandJ-Aurora>

Old sapphire

The UK media has been reporting on the Saxon finger ring recently found by a metal detectorist in Yorkshire and now in the Yorkshire Museum, York. This ring has generated some excitement as it is probably the oldest sapphire found in the ground in the UK, although another which was once set in a ring belonging to King Edward the Confessor (died 1066) and now in the Imperial State Crown in the English Crown Jewels is of similar age and a rare example of a gem that has been in continuous secular use for more than a thousand years. However, outside of the UK, sapphires are not that rare in old jewellery. There are few securely dated sapphires predating the Roman period, but they are reasonably well known in Roman and early Byzantine jewellery. The Roman examples, from around the second century AD tend to be in little flattened forms which are naturally water-worn to rounded tabular shape. They are typically dark blue. France has been suggested as a source.

After about the fifth century AD Sri Lanka became the major source and such sapphires, typically of clear, pale blue colour, become widespread from Europe to the Far East. Both the dark early Roman sapphires and the paler Sri Lankan stones can show stars — probably the asterias mentioned by the Roman writer Pliny the Elder. A fine, large example of early star sapphires could be seen with one of the stones in an elaborate neck ornament that came up for sale at Christie's auction of Ancient Jewelry in New York on 5 December 2012. The necklace had some restoration and repair, but the two large sapphires set in it appeared to be original.

Emeralds: end of the road and under it

In his latest newsletter *Emerald News* specialist Ron Ringsrud has passed on the report from the *Zimbabwe News* that the Sandawana emerald mine in Mberengwa district, Zimbabwe, has finally shut down. There had been minimal output for some years. What had once been Zimbabwe's largest emerald mine and which was first reported by Dr Gübelin in *Gem-A's Journal of Gemmology* in 1958, was acquired by the Zimbabwe Mining Development Corporation from a British Channel Islands-based mining company in 2006

but was soon found to be of no commercial value. After closure the mining focus will be on the huge iron-ore deposits nearby. Some have blamed the emerald mine failure on "poor management and looting by the previous government". In its heyday the Sandawana mine produced some fine coloured emeralds, although typically in relatively small sizes.

To counterbalance the Sandawana news, Ringsrud noted a new emerald mine. A rich vein of emerald was uncovered during the construction of a highway in Eastern Boyaca state in Colombia. The emeralds were found during the drilling of a hole for pilings. That bit of emerald vein is now under concrete, but the owner of adjacent land, coincidentally an emerald miner, hopes to follow the veins into his property. Ringsrud described the emeralds as occurring in black shale and a faceted example "showed similarities to the Chivor mine: elongated crystal form, clean crystal and slightly bluish color".

To subscribe to *Emerald News* contact: ron@emeraldmine.com



Star sapphire set in a Byzantine gold head ornament. C. Seventh century AD. Courtesy Christies, New York.

Trends and men

At New York's 55th Annual Grammy Awards recently held in Las Vegas, it was noted that bright colours were a dominant trend — good news for gem dealers — and that there appeared to be renewed interest in men's jewellery with attendees sporting cufflinks and tie clips. Of course we have to be a little sceptical of such reports because there is such a thing as a paid-for 'placement'. According to a report in the *New York Post* (12 January 2013) it would seem that paying stars to wear jewellery at such events is the norm. Stars can be paid hundreds of thousands of dollars to agree to wear jewellery by a particular designer or from a particular retailer. According to the report some stylists dislike the trend because "it's not always in the best interest of the gown their client is wearing" — jewellers might see it the other way round.

While talking about trends, emerald sellers are happy that the Pantone Color Institute has named emerald as the 2012 'Color of the Year'. Each year Pantone selects a colour for the year based on a wide range of trending input, from right across industry and art.

Offer to treat

Pakistan's *Business Recorder* recently published an article titled 'Treated gemstones get high price in market'. This explained that "Scientists have developed several techniques to give new colours to gemstones for value addition which ultimately raise their price and they get very high price in market". It went on to say that "Much brighter colours are produced in stones by treating them with thermal, electron beam heat, gamma rays and neutron irradiations." Noting that one cut and polished treated gem of a few carats could sell for more than a whole kilo of the untreated rough, the article concluded that "To make the maximum out of our gem deposits, we need to adopt the latest value addition techniques." Nothing was mentioned about disclosure.

Read the full story at: <http://tinyurl.com/GandJ-Pakistan>

The three feathers

Grenville Millington reports on three gems displaying similar features.

Three gems came in for testing at the same time from two different customers, each with a feather inclusion.

The first feather

One stone was fairly small, only 5.2 mm round and weighing 0.57 ct. The bag had 'Zultanite' written on it, which is a trade name for a colour-change diaspore. I had not had the opportunity to test one before, so, naturally, this was the first stone to be examined. As its main feature for selling is the colour change this was the first aspect I checked. Sure enough, it was a light yellowish green in (north) daylight and changed to a light brownish pink or brownish orange under incandescent light. It also showed the

brownish hue under halogen ceiling lights and under the energy-saving bulbs to which we are all supposed to be changing (1a,b).

The refractive index (RI) was a pleasure to record because it showed a large birefringence reading over a section of the refractometer scale that rarely sees such events, namely the 1.70 to 1.74 range. The figures were 1.702 – 1.750, giving a birefringence of 0.048. Using an OPL spectroscope I could detect a vague narrow band over the blue/violet junction. The dichroscope, used in daylight, showed green, brown and greyish. The RI and spectrum results all matched reports published in the literature.

But what about the feather? There was

a single feather occupying a more or less flat plane that became more interesting under magnification (2).

The surface finish was rather poor with many polishing lines that could be called abrasions. The literature mentioned needles and one was visible in this stone but it was almost disguised because of the polishing marks. It is seen in 2 extending from the top edge of the feather towards the centre of the stone.

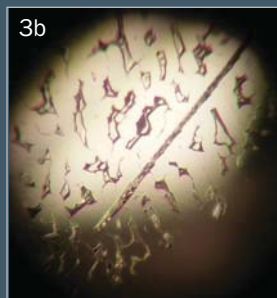
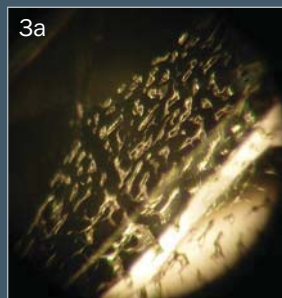
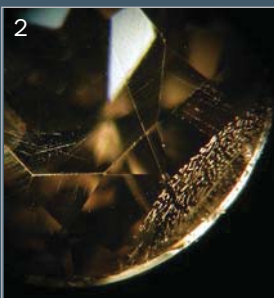
The feather showed its formation when turned more face-on and magnified, with two-phase inclusions quite unlike the formations we are used to seeing in rubies, sapphires and emeralds and their synthetic counterparts (3a,b).



1a and b. The diaspore in (a) daylight and (b) incandescent light.

2. Needle and feather in diaspore, magnification approximately 10x

3a and b. The feather in the diaspore. Magnification approximately (a) 30x and (b) 80x.



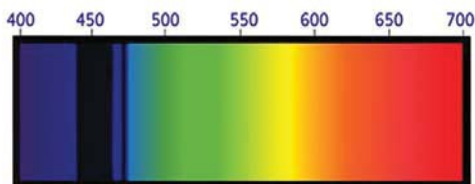
All photos in this article © Grenville Millington.

Feather number two

Although it was one particular feather or feature that showed itself to be remarkable in this next stone, its accompanying feathers were also worth a look at. The bright yellow stone (4) of 4.22 ct was loose, although surface marks around the upper girdle area, that proved to be stubborn to the polishing cloth I applied, indicated that the stone had been previously set (in a rubbed-over setting).



4. The main feather in the yellow sapphire can just be seen along the bottom edge.

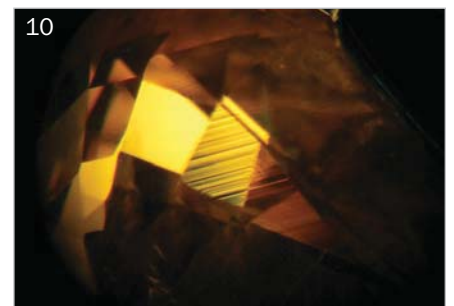
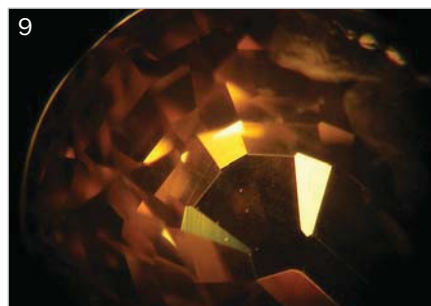
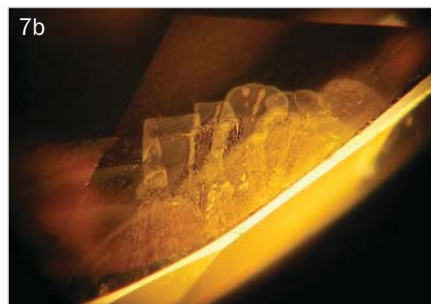
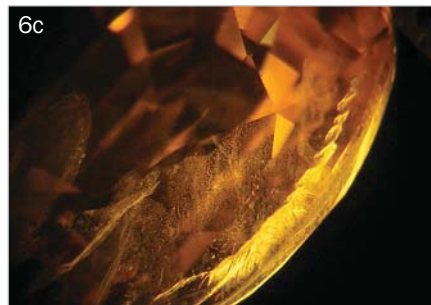
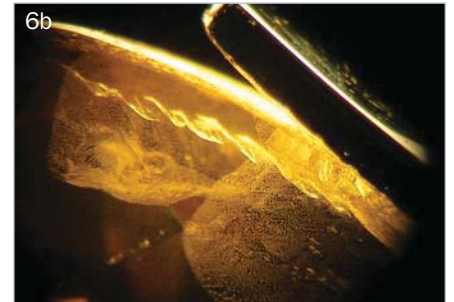
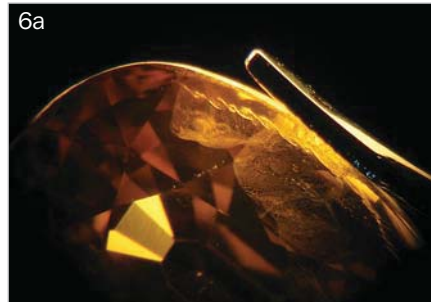


5. Spectrum of the yellow sapphire

The RI was 1.765 – 1.773 indicating corundum — yellow sapphire. The spectrum showed a dense, broad band across the 450 nm area, which, under bright conditions, resolved the 470 nm narrow band as well (5).

The particular feature we are interested in can just be made out in 4 running parallel to the girdle in the bottom of the picture. In 6a and b the feature is now across the top, seen through the crown. In 6c it can be seen to be a complex fracture.

Elsewhere in the yellow sapphire were other feathers, often displaying a folded edge (7a, b, 8).



6a, b and c. Helix-type feather in yellow sapphire. Magnified (a) 15x, (b) 30x and (c) 15x.

7a and b. Folded edges to some feathers in the yellow sapphire. Magnified 50x.

8. Folded edges to some feathers and dotted silk in the yellow sapphire. Magnified 80x.

9. Fine, dot-like silk sometimes arranged in parallel zones (visible through the table facet). Magnified 25x.

10. Graining planes seen through the pavilion. Magnified 25x.



Stones for Tender

Starts: Friday 8th March at 9am

Ends: Monday 25th March at 12pm

A timed auction of loose stones featuring diamonds, sapphires, rubies, emeralds, tanzanite, aquamarine, opal, tourmaline, kunzite, topaz, amethyst, citrine, quartz, loose beads, cabochons, organics, partly strung beads, paste and other mixed gemstones.

Timed auctions allow you to place multiple bids on any Lots during the allotted time. If you are outbid, you will be notified, enabling you to submit a higher bid. You will need to log in to the-saleroom.com to participate in this auction.

For more information, please contact Emma Mogridge on 0121 212 2131 or email emmam@fellows.co.uk.

Viewing Times

Tuesday 12th March, 10.00am–4.00pm
Wednesday 13th March, 10.00am–4.00pm
Friday 15th March, 10.00am–4.00pm
Saturday 16th March, 11.00am–4.00pm
Tuesday 19th March, 10.00am–4.00pm
Wednesday 20th March, 10.00am–4.00pm
Friday 22nd March, 10.00am–4.00pm
Saturday 23rd March, 11.00am–4.00pm



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The three feathers (cont.)

The rest of the yellow sapphire showed fine, dot-like silk throughout, that wasn't immediately noticeable (9), parts of which were arranged in vague, parallel zones, often coinciding with straight graining planes (10).

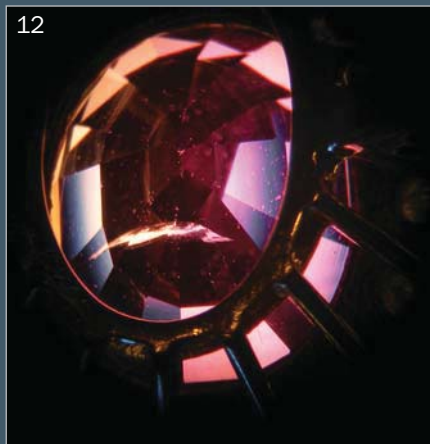
The dot-like silk, the very small round droplets in the feathers (6b, 7a) and the strange arrangement of the feathers, such as seen in 8, all point to the stone having undergone heat treatment.

The third feather

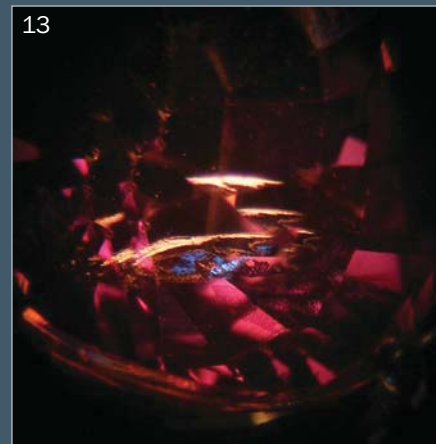
This time the feather was encountered in a mounted stone (11). The purple mixed-cut stone was 12 x 10 mm oval, surrounded by diamonds of approximately 0.06 ct each and mounted in 18 ct gold. The feather was more or less invisible from one point of view, needing to reflect light to the eye before it was (just) eye visible. Gems, such as



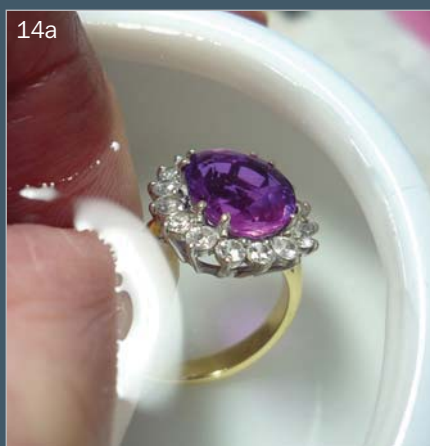
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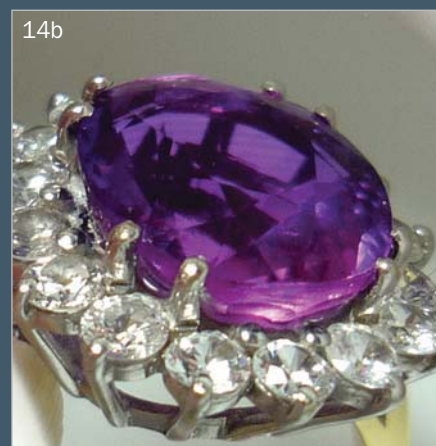
12



13



14a



14b

11. Feather on the right-hand side of the centre stone.
 12. The feather was from the pavilion surface, viewed here through the underbezel of the setting.
 13. Some unusual effects seen within the feather when viewed at a glancing angle.
 14a and b. Water immersion was enough to show the curved banding in the purple stone.

amethyst, are sought with no eye-visible inclusions, so why mount this one in a fairly expensive mount? But what if the gem was a fancy, purple sapphire? In such an instance, the buyer cannot be too fussy as gem dealers are unable to offer huge selections of such stones. The RI was 1.761–1.770. The spectrum showed a typical ruby result, but with a very strong fluorescent doublet and fine but distinct lines in the blue area. The dichroscope showed a very distinct violet and pale pink. Unfortunately, the microscope could find nothing other than the feather (12).

A change in the angle gave the view seen in 13, which also displayed diffraction colours across the feather (there is some multi-imaging due to the facets).

The feather is simply a fracture, although the glancing-angle view produced some weird effects of the light and there may well be some simple filling material in parts of the fracture that break the surface

on the pavilion. Holding the stone under water produced the desired effect when viewed almost along its length, namely, curved colour banding (14a, b).

So a positive result for synthetic corundum, of the type usually produced for imitating amethyst. The moral of this last result is: "Don't let the quality of the mount fool you into assuming that the gems are genuine."

About the author

For many years Grenville Millington ran his own gem and jewellery business, and taught gemmology and retail jewellery at the Birmingham School of Jewellery.



Red flag: are 'glass-filled rubies' legal?

Recent European legislation aims to minimize the risk of children ingesting lead from jewellery by defining what is allowed on the market. Glass-filled rubies may no longer comply. Jack Ogden investigates.

The background

Lead is a health hazard. This is hardly new; some have even attributed the demise of the Roman Empire to lead poisoning. But unlike those Romans, we now have a sense of responsibility with regards to health and safety, including the problems connected with lead.

In 2010 France presented a dossier to the European Commission demonstrating that young children can suffer neurobehavioural and neurodevelopmental effects if exposed to lead released from jewellery if it was placed in their mouths. They urged the introduction of measures to minimize such risks. After due consideration the Committee for Socio-Economic Analysis (SEAC) proposed a prohibition on lead in jewellery if the lead concentration of any individual part was equal to or greater than 0.05 per cent by weight.

The lead regulations

In September 2012 the European Commission adopted this proposal and issued an amendment to the existing legislation relating to lead*. The regulation came into force in October 2012. With certain exceptions, no jewellery component can contain lead concentrations of more than 0.05 per cent by weight. The exceptions recommended by SEAC and accepted by the European Commission were:

- Crystal glass
- Vitreous enamels
- Internal components of watch timepieces
- 'Non-synthetic or reconstructed' gems 'in which lead is present as a naturally occurring constituent'
- Second hand and antique pieces
- Pieces first placed on the market up to 12 months after the Regulation came into effect.

Ruby bluesday

How does this leave the now ubiquitous glass-filled rubies which have flooded the market over the last few years? Such rubies can look great initially and can be extraordinarily inexpensive — as low as £1 a carat — but they suffer from durability problems and can cause nasty problems in manufacture, repair or even cleaning. Huge numbers have been sold without proper disclosure even though the whole trade should now be very well aware of them and how to spot them. Blue, green and other colours of sapphire are also being glass filled. The glass that fills the crevices, in some cases holding the gems together, can have a lead content up to around 65 per cent, well above the 0.05 per cent lead limit in the EU Regulation. So it would appear that these rubies would not comply with the new Regulations.

What about the exemptions?

The two types of crystal glass from which jewellery is made and which are specifically exempted from the EU regulation do contain high lead contents, but they were exempted because no relevant data was available regarding lead release from them 'during mouthing' and because there were no suitable alternatives. One might imagine that the crystal glass industry did some effective lobbying here. The EU Commission urges review of this exemption for crystal glass as soon as further data is available and in any case this exemption is unlikely to extend to glass fillings in gems.

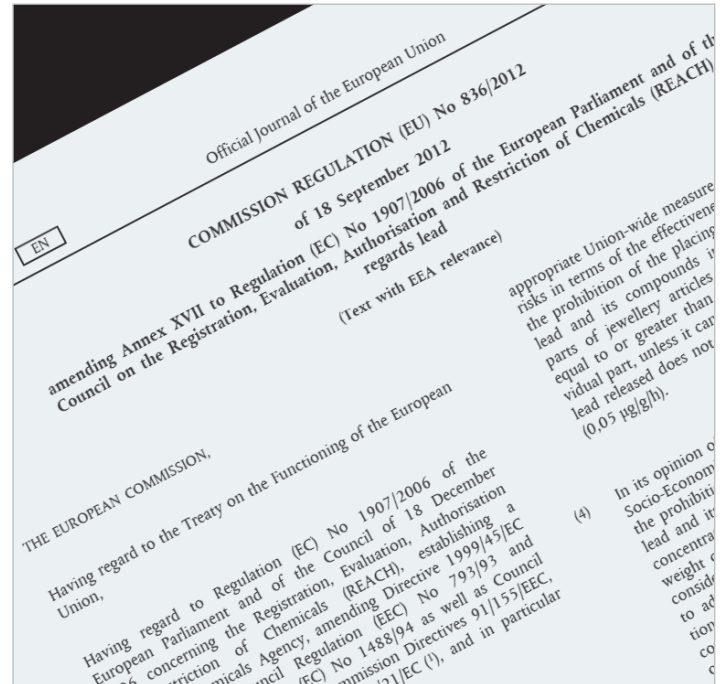
The specific exemption for gems is not relevant here because it only covers gems which naturally contain lead. There are not many gem materials that have a significant lead content — anglesite (lead sulphate) is one example and is sometimes encountered faceted.

When the EU Regulations were being drafted the UK argued that “the restriction of the use of lead-bearing vitreous jewellery enamels would devastate the practice of some of the most highly skilled and experienced enamellers and that there is no suitable alternative available”. It also pointed out that enamels could have an extremely long shelf life in enamellers’ workshops. The EU Commission took heed of this and exempted vitreous enamels from the Regulations while urging more research on lead in enamels and an eventual review of the situation. In any case, enamel producers are increasingly moving to lead-free products. It seems unlikely that one could successfully argue that the glass infill in a gem should be counted as enamel.

So, in conclusion, the European legislation now in force would appear to make it illegal to sell glass-filled rubies, although there is a year’s leeway from October 2012 for new items coming onto the market for the first time. Gem-A is continuing to investigate the situation and will report further in due course. We might expect those carrying out the treatment to look to recipes for suitable glasses without lead, but in the short term we might expect some attempts to dump existing stocks on the market. Although rubies have been the main class of gem filled with lead-based glass, other gems are also treated in this way, including the sapphires mentioned above and also some clarity enhanced diamonds.

Note

The above relates to European legislation; those in other parts of the world should consult their own gem or trade organization for advice.



* *Annex XVII to regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).*

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Craftsmanship

Holy chic: a very special man's ring

Men's jewellery is a newsworthy sector, but how do you set about designing a man's ring that includes deeply religious symbolism as well as aesthetic appeal? A ring where gems have to play a significant part? Jack Ogden tells the story behind Joanna Angelett's *Holy Kingdom Ring*.

For many centuries many of the finest jewelled ornaments from Europe were ecclesiastical — frames for icons, chalices, crucifixes and rings. The tradition of religiously inspired jewellery continues. Some six years ago Dr Peter Hollingworth, former Governor-General of Australia (2001–2003) and before that the Archbishop of Brisbane (1990–2001), approached jewellery designer Joanna Angelett with a request: "Can you design me a ring using the 12 stones mentioned in the Bible in the Book of Revelation, Chapter 21, Verses 19 to 21?" When she answered that she could, he added: "There are also 12 pearls mentioned, as the gates to the Holy City, can you include those too?"

Dr Hollingworth had chosen Angelett, an Australian designer, because of her *Golden Cross of Life* design which had been presented to Pope John Paul II in 2001 by the Apostolic Nuncio in Canberra. Shortly after her conversation with Dr Hollingworth, she relocated from Australia to London and although this move delayed work on the ring, it was not forgotten, indeed it facilitated her research. She researched every detail she could of the Book of Revelation and spent days in the British Museum in London studying their remarkable collection of papal rings dating back to the fourteenth century. As she said: "I had these wonderful items — history cast in metal — in my fingers and examined them with delight. Each had its own personality." It was not an intention to copy one, they were simply a point of departure for her inspiration, where she could "feel the melody of history".

Her ring was not to be just a ring, it had to be a manifestation of the biblical passage which painted the picture of the Holy Kingdom. On the top was to be the image of Jesus Christ, the symbolic centre of the Holy Kingdom, depicted in the ancient technique of

polychrome cloisonné enamel. The enamel motif was circular, the transparent gem covering it oval and of ametrine, a variety of quartz in two colours — amethyst purple and citrine yellow. Purple has long been associated with the church and the gold of the ametrine recalls the golden colour of the glory of God mentioned in the Biblical passage. Around the bezel are the 12 white cultured pearls that represent the gates to the Holy Kingdom and create the effect of rays of light shining forth.



The Holy Kingdom Ring by Joanna Angelett, 4.3 cm high, with ametrine 2.7 cm x 1.7 cm. Photo copyright Joanna Angelett.

It is never easy to identify gems mentioned in ancient texts and those listed in the Book of Revelation are no exception. Angelett carefully considered the options and aesthetics, and made her decision. Around the hoop on one side, jasper (red), sapphire, chalcedony, emerald, sardonyx, 'sardius' (ruby used here). On the other side: chrysolite, beryl, topaz, chrysoprase, jacinth (pink zircon) and amethyst. Jasper is mentioned twice, once as the wall to the City, the second time as one of the 12 gems in the foundations of the wall to the City. So, green jasper was used to represent the wall in the form of small triangles set on each corner of the ring, and red jasper as one of the gems around the hoop.

The ring, which has a total weight of 140.7 g, is made of 925 silver with details in 22 ct and pure gold. The golden details symbolise the reflections of the beauty shining inside the Holy Kingdom. The space inside the bezel, around the enamelled image, was plated with pure gold to comply with the passage "the street of the city was pure gold...". Because pure gold is very soft, the gold details on the exposed surface of the ring are of 22 ct gold, with the exception of lines of pure gold on each side of the hoop where the gems are set. The ring is also conceived in two parts, the lower part representing the rough road of our life, and on top the Holy Kingdom of light. The ring will also stand vertically, balancing on the base of the hoop.

The *Holy Kingdom Ring* in its finished form is certainly a striking object which combines religious imagery with the special choice of gems. Religious symbolism may be a rare request for men's jewellery today, but when it is required it adds an intriguing extra dimension to a designer's task.



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Where have all...



Harry Levy asks where have all the fine coloured gems, synthetic diamonds and conflict diamonds gone?

Buyers coming back from Tucson and other gem-producing centres all claim that it is difficult to find coloured stones of a fine quality, and when they see something, prices are extremely high.

Gem dealers here in London insist that they have had a good year in selling their better-quality single stones, but the euphoria soon vanishes when they come to replace their stocks. They all tell the same story: "I cannot buy stones for the price I sold mine".

There are several factors at play here. In recent years there has been a demand for untreated stones, mainly from the upper end jewellery stores whose perception is that somehow treated stones are not as good as untreated ones. As it stands this is not strictly true. Treatments are carried out to improve the appearance of a stone both in colour and clarity. What is true is that there are fewer untreated stones on the market, but there are many more similar looking treated stones, and as rarity is one aspect in determining the value of a stone, values of untreated stones will rise much more rapidly and steeply than treated ones.

It is hard to determine what is actually being mined these days, but there seems to be large quantities of poor-quality stones available and much of this material is treated. Invariably what is considered not worth cutting one day, becomes commercially viable as treatments improve. Furthermore, the claim is that miners are still finding good-quality stones, but they are not cutting and selling all they find. These tales come from Sri Lanka, Thailand, Colombia and Africa.

What we find here in the UK is that cutters from abroad are asking hugely increased prices with every trip they make. There was a time when people would resist such higher prices and 'wear-down' the seller until he was forced to sell before he departed. But this tactic does not work now — "I will sell it in China or Hong Kong or in the Far East". The Chinese have found themselves cash rich and are 'investing' in the best quality stones and this fact has probably been the largest factor in recent prices hikes.

Manufacturers in this country think dealers want a larger margin and cannot understand why a fine aquamarine cost them £200 per carat and now a similar stone costs over £500 per carat. Resistance not to buy is slowly eroding as they find these higher prices have become universal. So reluctance to buy treated stones

is slowly changing and I wonder at what stage synthetic stones will become more acceptable. I shudder as I write these words.

Where are all the white synthetic diamonds?

As I wrote in an earlier article, according to our international trade press, laboratories and other pundits, the market is awash with synthetic diamonds. When questioned they say it is yellow synthetics that are available, but no one seems to know where one can buy white synthetic diamonds, especially in any sort of quantities.

That they exist is now a reality. Indeed the Gemological Institute of America has recently referred to 2012 as the year in which synthetic diamonds "made a major impact in the market for gem-quality diamonds". There are stories of batches being sent to laboratories with no disclosure, and laboratories claim that they can identify them. These stones come in colours and in white. One conclusion is that producers are testing the labs as to their ability to detect; another is that stones, the smaller ones, are filtering into the market, being set in jewellery, mixed with natural diamonds and passed off as being natural. Whether the actual jewellery manufacturers, especially those in the Far East, know that they are setting synthetic stones, or are being duped by their diamond suppliers is hard to ascertain. I am talking about small brilliants of under five points produced initially by the CVD process, and their brown colour removed by subjecting them to HPHT treatment. I have no doubts that larger stones of 0.25 points and up are 'easily' detected by labs, but it's the parcels of stars or melee that may not be submitted to a lab that are the problematic ones.

The larger stones are produced by HPHT and in spite of claims that the "Chinese and Russians are producing tons of the stones" a recent chat with some Russian diamond dealers reveals that the story is not so simple. One colleague claimed that he had been to one of the plants producing diamonds, and on analysing the cost found that with the capital lay-out for the machines, the time it takes to produce a single crystal, the cost of electricity and the manpower employed, the final yield worked out as expensive as natural stones. The breakthrough on this will come when they will be able to produce polished stones of over three carats, or even two carats. To tie in with what I've written regarding coloured stones, diamond prices have remained stable with modest increases in larger and better-quality stones. I am concerned with the supply of natural rough with De Beers, BHP and Rio Tinto slowly getting out of the market, and stones selling by tender, rather than fixed by the mining companies. But so far the effect has been minimal, although when questioned, the smaller cutters are admitting to having to buy their rough in smaller quantities "wherever they can find them".

Where are all the conflict diamonds?

The conflict diamond issue is a bit confused at present. Zimbabwe and the Marengo diamonds caused much confusion in the diamond industry, with very mixed views coming out of the Kimberley Process (KP). Those, mainly in the West, claimed that some stones coming out of Zimbabwe were conflict, although not within the current definitions of the KP — they were about conflict between sovereign governments and rebels, not about human rights abuses practised by a government. Therefore, since the stones from Zimbabwe were not pre-sorted as to where they came from, all stones from Zimbabwe should be banned. This was the line advocated by the US who chaired the KP until the end of last year. This was opposed by the African countries and the Chair is now in South Africa. They claim there is no mandate to ban Zimbabwe in the present KP and they are procrastinating on changing the definition as to what is a conflict diamond. The last KP meeting was held in Zimbabwe, at Victoria Falls, and was well represented by delegates from Zimbabwe including President Mugabe.

Another problem facing the KP is the need for a permanent secretariat. In the present system this roves with the chairman which changes every six months. Many feel that to have a fixed place would give much greater efficiency and continuity to the KP. Again no agreement has been reached yet, with opposition between Africa and the rest of the diamond producers.

The World Diamond Council (WDC) has played a major role in tackling the conflict diamond issue. It was set up over 10 years ago, shortly after the KP was set up. It was a representation from the trade to work with the KP and ensure that the whole system worked efficiently. The President of the WDC, Eli Izakoff, recently announced that he will be resigning from his post in June, shortly after the WDC Congress which will be held in Israel in early May. Izakoff has been at the helm of the WDC since its inauguration, and his wise and inspired leadership over the years will leave a large gap to be filled. There are various factions within the WDC, each with its own agenda and direction for the future, and all see the WDC as playing an important role in this issue. It will be interesting to see who will be elected to follow Izakoff. As far as diamond production is concerned in Africa the situation is fairly quiet; Mali is not a producer, but there are problems in the Congo.

There are periodic reports in the media that 'another batch' of conflict diamonds has been dumped in the market, but these tend to be 'illicit diamonds' which are smuggled round the world to avoid fiscal payments and taxes. There are those who argue that these stones are used to launder money by drug suppliers and terrorists, so they effectively prolong conflict.

We will have to see how all these points are tackled in the coming year and if any sort of resolution is possible.

Gem-A Calendar

Gem Central

Gem-A headquarters, London
Monday 11 March, 18:15 to 20:00
 An evening on opal and optical phenomena gems.

Understanding practical gemmology

Gem-A headquarters, London
Friday 15 March
 A workshop focusing heavily on the practical aspects of gemmology, and covering the effective use of all the readily available instruments and testers that you are ever likely to need.

Understanding diamond simulants A one-day gem workshop

Gem-A Headquarters, London
Friday 22 March
 An important practical workshop for those working or considering working in the diamond market. You will look at the key differences between diamond

and its simulants, and how to recognise them both as loose stones, and in set or mounted jewellery.

Investigating gemstone treatments A one-day gem workshop

Gem-A Headquarters, London
Friday 19 April
 This one-day specialist workshop focuses on the common treatments currently experienced within the gemstone industry and their detection, using readily available instruments and techniques.

Gem Central

Gem-A Headquarters, London
Monday 22 April, 18:15 to 20:00
 Focusing on magnification
 Use of loupe 10x, 20x and microscope.

For further details of Gem-A events or to book go to www.gem-a.com or email events@gem-a.com

Gem-A Midlands branch

Practical Evening – Loupe and Lamp

Friday 22 March, 19:00 to 20:30
 At Birmingham University, Earth Sciences Department. Refreshments from 18:30

Michael Doel – Fluorescence

Friday 26 April, 19:00 to 20:30 pm
 At Birmingham University, Earth Sciences Department. Refreshments from 18:30
 Contact for Midlands Branch events:
 Paul Phillips at: phillips10@sky.com
 or mobile 07951 775535.

Save the date!

The Gem-A Conference 2013
Goldsmiths' Hall, London
 Saturday 2 and Sunday 3
 November 2013

Shows and Exhibitions

Tucson – the pulse of the industry

Jack Ogden reports on the news, developments and, of course, some of the gems that caught his eye at last month's show in Arizona.

The Tucson Show is actually a rambling assemblage of several dozen shows that range over the already sprawling city of Tucson, Arizona. From the *crème de la crème* of fine coloured gems to dyed quartz, healing crystals and buffalo skulls, Tucson has it all. Add in consecutive evenings of social events, from the American Gem Trade Association (AGTA) Gala Dinner and Spectrum Awards to music jam sessions — plus numerous seminars and conferences — and the net result is what aficionados simply call 'Tucson'.

It's an annual pilgrimage for dedicated gem dealers and gemmologists, and a necessary occasional visit for anyone else dealing in gems or gem-set jewellery. As one UK gem dealer commented, coming to Tucson is a bit like attending a huge family wedding — everyone you know is there. Gem-A, of course, had a booth in the main entrance hall of the AGTA Show in the Tucson Convention Center.

Quality and origin

Tucson is also the pulse of the industry. So how did it measure up this year, and what is the diagnosis for the gem market? Those dealing in high-end coloured gems — and there were many superb examples on display — generally reported good sales with some saying it was their best year ever. The magic words are quality and origin. For example, Palagems showed me a 6.29 ct demantoid garnet, a pretty enough green gem and its size and Russian provenance permitted a price of \$16,000 a carat (1). Bruce Bridges of Bridges Tsavorite was kind enough to show me a 21.56 ct tsavorite garnet from the



1. A 6.29 ct Russian demantoid garnet.
Courtesy of Palagems.

Merelani hills in Tanzania which had a vivid almost bluey-green colour. This fluoresced bright red under longwave UV light or with a blue laser (2).

Are garnets the next big thing? There are myriad varieties in many colours and with good brilliance and hardness. Maybe it is time for the so-called commoner varieties — pyrope, almandine and so on — to see



2. A 21.56 ct tsavorite garnet from Tanzania.
Courtesy of Bridges Tsavorite.

a resurgence of interest. Among the many garnet varieties I saw in Tucson were some very pretty golden andradite garnets from the San Carlos Apache Indian reservation which is in Arizona just some 80 odd miles north-east of Tucson (3). These were being offered by ColGem of Ramat Gan, Israel, a perfect demonstration of the global nature of the gem trade.

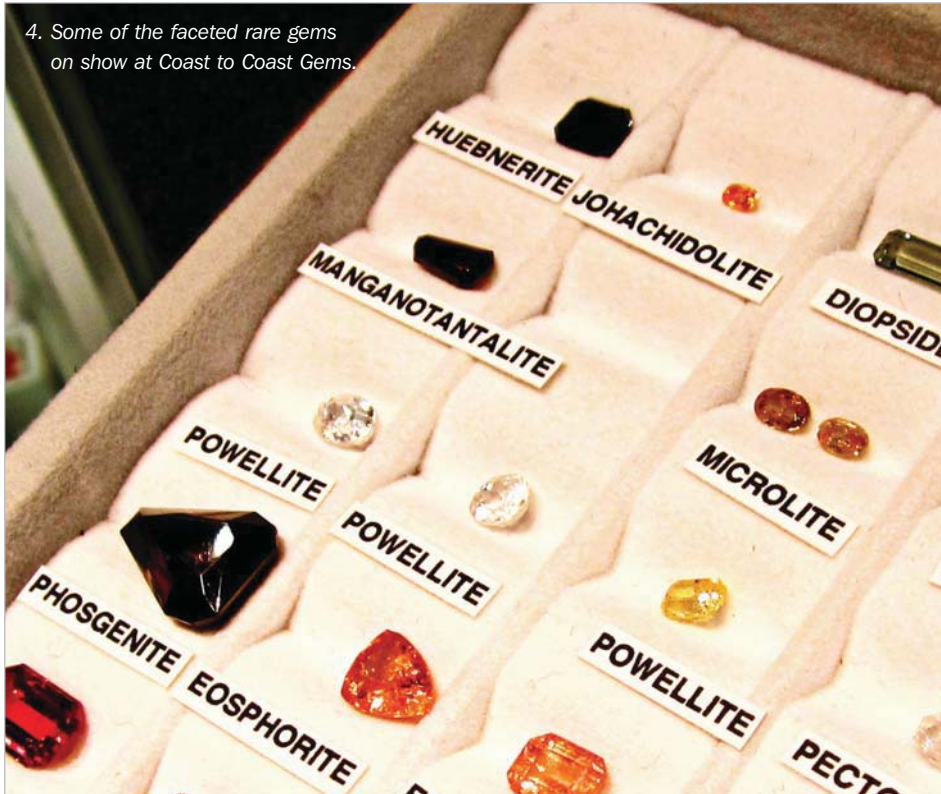


3. Andradite garnets from the San Carlos Apache Indian reservation. Courtesy of ColGems.

The lure of the unfamiliar

Rare gems, rather than more common gems in rare qualities or sizes, are another lure at Tucson. Coast to Coast gems are specialists here and among their extensive treasure trove of rarities and oddities (4) I noted many things with which I was unfamiliar, including faceted examples of vlasovite, nifontovite and childrenite. Of course at Tucson there are always the weird, wonderful and unusual to see. Palagems had Yemeni opal — an attractive blue gem material somewhat reminiscent of the best blue chalcedony

Shows and Exhibitions



4. Some of the faceted rare gems on show at Coast to Coast Gems.



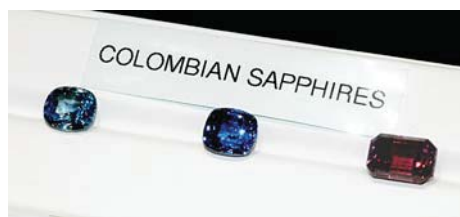
7. Glass-filled sapphires. Courtesy of Colombin Stone Co.

in colour, though slightly more opaque. Also at Palagem were some large faceted pieces of Burmese amber, the two shown here weighing 20.72 and 17.51 ct (5).



5. Faceted Burmese amber, 20.72 and 17.51 carats. Courtesy of Palagem.

There were also familiar gems from less familiar sources, such as the sapphires from Colombia being shown by high-end gem dealer Evan Caplan of Los Angeles. These included sapphires of a good blue colour (and, like blue sapphires from a handful of places, showing slight fluorescence with longwave UV), a pale greenish blue and a purplish-brown (6). Apparently these come from an area of Colombia where gem dealers are best advised not to stray. It is in the heart of drug country and obtaining the sapphires involves some stealthy dealings with local villagers.



6. Sapphires from Colombia. Courtesy of Evan Caplan.

Easier to obtain were treated blue sapphires. There has been some talk recently on Gem-A's GemTalk and elsewhere of glass-filled blue sapphires, treated in a similar way to the ubiquitous rubies but slightly harder to spot; however these were hard to find in Tucson. Colombin Stone Co. Ltd of Bangkok had some (7), but at \$25-\$40 a carat they seemed expensive and one suspects that the main buyers were gem labs and gemmological schools looking for samples rather than jewellers.

On the other hand another form of treated sapphire was available in quantity. These are diffused or stained in some way, but we could not spot any of the tell-tale signs of glass. However, the blue coloration can clearly be seen following fissures. At \$2-\$10 they were inexpensive but attractive and no doubt they will soon start to turn up unannounced and undisclosed in jewellery. Just how they will survive heat, cleaning or just time will become apparent in due course, but we do advise jewellers to be vigilant otherwise they might be fooled, embarrassed or both.

Talking of dyed stones, dyeing was very evident in the peripheral shows in Tucson; endless dyed geodes and crackled and dyed quartz crystals (8). Many looked garish, some looked vaguely appealing, but do check stability of the dyes. After handling some dyed geodes my hands looked like a toddler's after a finger-painting session.



8. Crackled and dyed quartz crystal.

rock, gem & bead shows 2013

23rd/24th	March	Brighton Racecourse, Brighton	(Rock, Gem 'n' Bead)
13th/14th	April	Newton Abbot Racecourse, Newton Abbot, Devon	(Rock'n'Gem)
20th/21st	April	Newark Showground, Winthorpe, Newark, Notts	(Rock, Gem 'n' Bead)
11th/12th	May	Newmarket Racecourse, Newmarket,	(Rock, Gem 'n' Bead)

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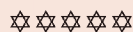
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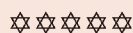
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Tucson – the pulse of the industry (cont.)

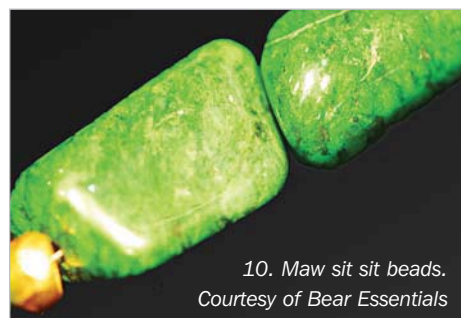


9. 'Galactic Jade' (omphacite) donated to Gem-A by Helen Serras-Herman.

Taking the test

At the Gemological Industry & Laboratory Conference meeting in Tucson the current status of the Hong Kong testing standards for omphacite and kosmoclор were presented. In short, the Chinese term *fei cui*, previously applied to jadeite has been extended to cover two other closely related pyroxene rocks — omphacite and kosmoclор — that are often found intimately associated with jadeite. Gem-A has been helping with the drafting of these testing standards which are being drawn up by the Hong Kong Gemmological Association (our sister organization) and the Hong Kong Council for Testing and Certification. So, when jewellery designer and gem carver Helen Serras-Herman showing in the AGTA Show in Tucson kindly donated a piece of black 'Galactic Jade' from Guatemala to Gem-A we were keen to find out what it actually was (9).

Luckily Wolf Kuehn FGA, of the Canadian Institute of Gemmology was at a neighbouring booth to us and offered to test the stone on his compact GL Gem Raman TEC PL532 unit. The Raman spectrum showed a match for omphacite. The 'Galactic Jade' — indeed under the Hong Kong nomenclature it can be called 'jade' — is a fine grained black material with some veining and with cubic



10. Maw sit sit beads. Courtesy of Bear Essentials

golden pyrite inclusions. While on the subject of jade, Cara Williams of Bear Essentials had a necklace of maw sit sit beads (10), an ornamental gem material composed of a mixture of mainly kosmoclор with jadeite and some other related minerals — hence presumably now coming under the umbrella of *fei cui*. It is found only in Burma and was brought to the attention of gemmologists by Dr Edward Gübelin in articles in Gem-A's *Journal of Gemmology* in the mid-1960s.

There were two gem displays of note at the AGTA Show in the Convention Center. One was the now annual display of gems from the Smithsonian Institution, Washington. This included some extraordinary gems, such as a Tanzanian scapolite of almost 70 ct (11). Another Smithsonian treasure on show was the so-called Spanish Inquisition Necklace (12). This necklace, combining old Mughal Indian emeralds and diamonds with some 20th century components, passed through the hands of Harry Winston who, for now unknown reasons, gave it the name the Spanish Inquisition Necklace.



11. Tanzanian scapolite of almost 70 ct. Courtesy of the Smithsonian Institution.

The Mughal components, which probably date back to the 1600s, are the Colombian emeralds and some of the diamonds, including the little faceted diamond taveez pendants — the oldest faceted diamonds in the Smithsonian Collections. The other collection of exceptional gems on show at the AGTA Show in Tucson was the 'Somewhere in the Rainbow' collection, described as "An actively growing, world-class private gem and jewellery collection, with emphasis of fine and rare coloured gemstones and jewellery from contemporary artisans." We will have a focus on this collection in a later edition of *Gems & Jewellery*, but for now we must express our thanks to curator Shelly Sergent for allowing us to examine many of the gems



12. The 'Spanish Inquisition Necklace'. Courtesy of the Smithsonian Institution.

on show and taking time to talk to us about them and the collection as a whole.

Mention of the exceptional gems on show at the Smithsonian and Rainbow displays brings us back to quality. The finest quality gems seem to be selling well at Tucson and dealers talked about how good business was. For the more usual gems in more usual sizes and qualities, business was less dynamic — as the business media have reported, the rich seem to be leading the escape from recession. Perhaps not surprisingly, the ethical and environmental aspects of the gem market seem slightly on a back burner, with gem merchants and jewellers dealing with the more commercial categories of goods more concerned now about doing enough business at sufficient margins to stay in the game, than such things as child labour or river pollution back down the supply chain. This may be an unfortunate side effect of the continuing global economic crisis, but it is probably temporary as the move to better 'ethics' is a trend seen right across many categories of market.

However, we might question whether we in the Western jewellery trade are accurate in simply blaming a global economic crisis for lower than expected business in the mid-range. The European and US gem and jewellery trade may pray that it is an economic crisis because economic crises come to an end. More worrying is the possibility of a global economic realignment coupled with a significant change in Western consumer priorities. The best way for the trade to counter this is to make consumers aware of the extraordinary beauty and wonder of gems — and what better place to gather ammunition than a visit to Tucson.

More from Tucson in our next issue!

Stone Scoop



Diamond Centenary

As 2013 is now well underway, Jack Ogden looks at what was happening in the diamond world a hundred years ago. The following is distilled from various British newspapers from 1913.

Sheba, USA

The growth of the diamond industry in South Africa in the second half of the nineteenth century came at just the right time — there was a whole new and voracious market to supply, namely the new mega-rich of America. Tales of extreme diamond consumption in the USA seemed to enthral UK readers. One example reported in 1913 concerned “Mrs Anthony, of Indiana, who has been compared with Queen Sheba owing to her lavish display of diamonds and who in New York recently wore shoes studded with diamonds, now wears a diamond armband four inches wide and four inches long. The armband, the metal of which is platinum, is connected by a rope of large diamonds with a heavy dinner ring on her third finger, which is set with a dozen stones. The armband is worn just below the elbow. Mrs Anthony also wears a pair of diamond earrings each set with three diamonds, a brooch nearly as large as the armband, and fifteen diamond rings” (*The Evening Telegraph* 15 January).

Stocking trade

An extraordinary display from Mrs Anthony, but not unique — Mrs Clara Stocker, California’s ‘Diamond Queen’, our eager British readers were told, “caused a sensation by attending a performance of grand opera at Los Angeles wearing gems valued at £75,000”. Her outfit apparently included a satin skirt that was slit up one side to reveal diamonds on her stockings (*Liverpool Echo* 8 March). To put it in perspective in 1913 a one carat cut and polished diamond of top quality was worth £12 (*Dundee Courier* 14 January) and on that basis £75,000 would be the equivalent of about £30 million in modern terms.

Something fishy

Back in the UK such lavish display was rare although we are told that ‘The girls who tell you that diamonds are vulgar are those that have none’ (*Derby Daily Telegraph* 16th October). Stories of diamonds in the UK tended to have a more homely air. Such as the report that a Mrs Burcham of Norwich had discovered a diamond in a bloater (a smoked herring) she was preparing for breakfast. ‘The diamond is about the size of a pea, and a jeweller has certified that it is genuine’ (*Derby Daily Telegraph*



27 November). The need to certify it genuine is a reminder that gems, then as now, were imitated. The *Exeter and Plymouth Gazette* helpfully explained to its readers how to test a diamond. After mentioning that a sapphire will scratch an imitation but not a real diamond, it continued: ‘If you put a small drop of water on the upper face of a brilliant and touch it with the point of a pencil, the drop will keep its rounded form. But the stone will remain clean and dry. In the case of an imitation, the drop immediately spreads out. Plunge a diamond into water, and it will be plainly visible, and will glitter through the liquid, but an imitation stone is almost invisible. If you look through a diamond —

as through a bit of glass — at a black dot on a sheet of white paper, you will see one point clearly. If you see several points, or a blur of black it is an imitation. The white sapphire, the white topaz and rock crystal are often sold as diamonds, but imitations are more commonly of glass” (*Exeter and Plymouth Gazette* 30 December).

Diamond dabbling

At least back then synthetic diamonds were not a problem. Or were they? A brief obituary for Lord Stafford who had died aged 79 tells us that he “dabbled in chemistry, and in his private laboratory at Costessey Park had experimented in the manufacture of artificial diamonds. He claimed that he could make them — but that the artificial stones cost more than real ones” (*The Evening Telegraph* 13 June).

Trouble at mine

Other events in the diamond world in 1913 have rather a modern ring to them. In Cape Town that year a Committee of the Union Senate recommended that diamond cutting should be established in South Africa — they’d call it beneficiation today. To help make this effective in helping to retain more money in the country they suggested a 10 per cent tax on the export of rough diamonds (*Exeter and Plymouth Gazette* 24 June). And there was always the spectre of unrest at the diamond mines. Several British newspapers reported how South African police opened fire on rioters at the Premier diamond mine.

Which brings us back to South Africa where we started this column, so enough for now. We’ll look at coloured stones in 1913 in our next issue.

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