

Gems & Jewellery

July 2013 / Volume 22 / No. 5

Gem-A's new home
An emerald rainbow
The lottery that wasn't



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OF GREAT BRITAIN

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Collecting Sales

There seems to be a division in some people's minds between 'commercial' gems and 'collectors' gems. If there really is such a distinction then, to use an gem-industry in-joke, it might depend on whether you are buying or selling. Or, to use another well-worn expression, it may depend on what you mean by 'collecting'. The wonderful gemstones in the famous American-based 'Somewhere in the Rainbow' collection (come to the Gem-A Conference this year to learn more) and the fabulous gems and jewellery exhibited at the recent Masterpiece Exhibition in London (see page 7) are perhaps what many people think of when collectors' gems are mentioned. There are also the collectors, many of them Gem-A Members and graduates, who collect fine or unusual examples of gems, rough or cut, at more affordable prices. If you know what you are doing, rare and interesting is not necessarily synonymous with expensive. However, most would probably not associate the average gems set in the average jewellery in the average high street jewellery shop with 'collecting'. But perhaps jewellers need to rethink?

A few days ago Gem-A representatives, including CEO James Riley and I, took part in the 2013 Gem Lovers' Conference held by Jewelry Television (JTV) in Knoxville, USA. This event attracts a large number of JTV customers, the vast majority of whom consider themselves collectors — whether they have spent a few hundred dollars with JTV or a few hundred thousand (and yes there are some of those). They collect gems and gem-set jewellery, either to wear or just to admire and show off. Talking to these buyers made it evident that they shared passion, pride and interest in their purchases. If you sell gems or gem-set jewellery anywhere — it doesn't matter if it is at Masterpiece, in the high street, on the internet, in a gem show or from your office — you can join the collectors' market. If you have knowledge of, and enthusiasm for, gems, your customers can become in their minds — and in yours — collectors. In a sense you can start collecting collectors. That is why a good familiarity with gemstones is one of the best ways to ensure success in the jewellery market today. Gem-A education, from one-day workshops to full courses, has a very practical value.

Jack Ogden

Cover Picture

Gem-A's new headquarters at 21 Ely Place, London. Photo by Jack Ogden.



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Gem-A's new London headquarters

Gem-A's new home is a beautiful eighteenth-century house in a gated private street in London — a building with a long and unique history. Jack Ogden looks at some of this history, from monks to medical education to music box repair, and discovers that it really isn't part of London at all.

Ely Place takes its name from the city of Ely near Cambridge whose prominent history began some 1,340 years ago when an abbey was established there. A couple of centuries later, Ely Palace was established as the London residence for the Bishop of Ely and thus it remained until the 1770s when the land was sold and the cul-de-sac Ely Place built on the site — a gated street bordered by 22 'genteel residences' one of which,

number twenty-one, is now owned by Gem-A. It is an historic place. Ely Palace, also known as Ely House, was the location for Act 2, Scene 1, of Shakespeare's *Richard II* where a dying John of Gaunt made his famous 'this scepter'd isle' speech. Elizabeth I ordered the Bishop of Ely to lease Ely Palace Garden to Sir Christopher Hatton, henceforth known as Hatton Garden — now London's jewellery street.

The links with Cambridgeshire are still strong. Indeed, Ely Place is not officially part of London; technically it is part of Cambridgeshire. It has its own elected governing body — the Commissioners of Ely Place. According to journalist Vitali Vitaliev in an article in *The Daily Telegraph* in 2003, there are now only four other such enclaves surviving in Europe: the Campione d'Italia (an Italian town in Switzerland), Llívia



(a Catalan town in the French Pyrenees), Busingen (a German village in Switzerland) and Baarle-Nassau/Baarle-Hertog, (a Dutch/Belgian municipality). One of the resulting quirks is that, in theory anyway, Ely Place cannot be entered by the Metropolitan Police unless they are invited in by the Commissioners. The gates across the entrance of Ely Place are not simply to keep police out — they served a practical purpose in the past to keep out ‘beggars, collectors of old clothes, and other objectionable people’. According to one report they were closed ‘during the days of cattle markets in Smithfield [just down the road], and on occasions of public executions at Newgate [four hundred metres away]’.

Number 21 Ely Place was already more than a hundred years old when the last public execution was held at Newgate. By then it had already seen a variety of occupants including one involved, like Gem-A, in education. In the 1820s Dr Francis Hopkins Ramadge, a Fellow of the Royal College of Physicians and a specialist in respiratory and other diseases, lived at number 21 and regularly gave ‘A Summer Course of Lectures and Examinations on the Principles and Practice of Physic, Materia Medica, and General and Pharmaceutic Chemistry’ in the building.

Dr Ramage had an expertise in respiratory diseases in common with Sir James Walton, surgeon and past president of Gem-A after whom The James Walton library at Gem-A is named.

In 1880 the freeholds of several properties in Ely Place, including number 21, were placed on the market with vacant possession given on completion of sale due to ‘the ground leases being about to expire’. This might indicate that the buildings originally had 99-year leases. Since then occupants have ranged through early hi-tech, games and fine porcelain. Nicole Freres Ltd ‘Internationally renowned as music box manufacturers, dealers and repairers’ were based at 21 Ely Place in the early 1900s and were at the cutting edge of technology back then. They sold ‘cylinder boxes’, ‘polyphons’, ‘zonophones’ and ‘disc records’ and established a recording company, one of whose aims was to record Indian native music. At the beginning of the 1920s the building was occupied by Bliss Sports and Games Manufacturers Ltd who invented and patented such long-forgotten games as ‘Flinks’ and ‘Ringflinks’ before going bankrupt in 1922. The building then became the London showrooms for the Royal Crown Derby Porcelain Company Ltd until its agent, Mr A.H. Folker, retired in 1927.

Interestingly, for a few years Gem-A (along with the National Association of Goldsmiths) occupied Audrey House exactly opposite our new home in Ely Place. The front of our new home shows signs of repair to the World War II bomb damage that finally forced us out of Audrey House and into a temporary home.

More recently the building has been occupied by a varied range of professions, from solicitors to finance. The latter include Tiuta PLC, whose mission to deliver ‘short-term finance to a broad range of clients seeking rapid solutions to their financial needs’ proved more short term than envisaged when it called in the administrators in September 2012. The resulting placing of 21 Ely Place on the market came at the perfect time for Gem-A. Our new home is an ideal headquarters and campus, and a good investment for the future. When the freehold of 21 Ely Place was placed on the market in 1880, the property was described as “exceptionally sound and lucrative for investment, especially for Trustees”. We can echo those words today.

We will hold an opening party for our new building towards the end of the summer. Further details to be announced in the near future.

Gem-A Calendar

Gem Central and Career Service evenings

Gem-A regrets that Gem Central and Career Service evenings have been cancelled until the autumn, with the first planned for 9 September. We apologize for any inconvenience caused, but this is due to our sudden move to our new headquarters at Ely Place. We look forward to inviting you to events in our new home and will announce dates as soon as possible. For further information please contact: events@gem-a.com

The Gem-A Conference 2013

2 and 3 November,
Goldsmiths' Hall, London

A two-day conference to celebrate the 100th anniversary of the first Gemmology Diploma to be awarded and the 50th anniversary of the Diamond Diploma.

Confirmed speakers include John Bradshaw, David Callaghan, Dr John Emmett, Arthur Groom, Brian Jackson, Dr Jack Ogden and Gary Roskin.

See pages 18 and 19 for further details or go to: www.gem-a.com/news--events/gem-a-conference-2013.aspx

Show Dates

Gem-A will be exhibiting at the following shows:

IJL London

1 – 4 September 2013, Stand J94
Gem-A is proud to be a sponsor of IJL

Hong Kong Jewellery and Gem Fair

13 – 17 September 2013
CEC Booth 3M046

Gemworld Munich

25 – 27 October 2013

Gem news

Jack Ogden reports on two recent gem events.

Gemmology in Holland

The Netherlands Gemmological Laboratory and the Dutch Gemmological Guild hosted the 5th European Gemmological Symposium, 15–16 June. The conference coincided with the 14th Dutch Gemmological Guild symposium and was held at the Naturalis Biodiversity Center, Leiden. The presentations ranged over a wide variety of topics and included Stefanos Karamelas (Switzerland) with an 'Overview of pearl testing: classic methods and new developments', Thomas Hainschwang (Liechtenstein) on 'Natural green diamonds', Emmanuel Fritsch (France) on 'Ordinary and extraordinary shapes of diamond crystals', Maggie Campbell Pedersen (United Kingdom) on 'Amber: real, fake and coloured', Ulrich Henn (Germany) on 'Colour and colour modification of non-transparent quartz', Benjamin Rondeau (France) on 'Gemmology and geology of opal deposits — comparison Australian and Ethiopian deposits' and Kenneth Scarratt (Thailand) on 'Useful corundum (ruby, sapphire) data sets from deposit specific samples'.

In his talk Ken Scarratt, director of the GIA Gem Lab in Thailand, made an observation that applied equally to all the presentations and which should be heeded by all gemmologists and gemmology students — and which meshes perfectly with Gem-A's own teaching philosophy. He recounted the changes in laboratory gemmology over the last generation, in his own case from the damp basement of the London Chamber of Commerce Laboratory that was later fused with Gem-A, to the advanced resources available today in GIA labs. What has remained constant, he said, was the need for gemmologists to have expert observational skills; people with the experience to look at a stone and have a gut feeling about what it is. Such people require intelligence, experience and a constantly enquiring mind.

The day preceding the conference was taken up by a visit to Amsterdam. This incorporated a canal trip by boat and the beer-drinkers' heaven, 'the Heineken Experience', but began with a tour of Gassan Diamonds whose staff explained the history of diamond cutting in Amsterdam and then oversaw a long hands-on session in which delegates were able to examine both rough and cut diamonds in a wide range of sizes. Shown here is a large (29.91 ct) diamond of essentially octagonal form.



A 29.91 ct rough diamond, one of many stones, cut and rough, seen during the visit to Gassan Diamonds. Photo Jack Ogden.

Coloured stones in China

The International Colored Stone Association (ICA) held its 15th Congress in Changsha, Hunan, China, 12–16 May. As its title 'Sourcing countries and China market' indicated, the Congress focussed on the interaction between the countries producing gems, and the rapidly expanding Chinese market. There were delegations from many countries, including a strong presence by Sri Lanka whose delegates Amitha Gamage and AHM Imtizam delivered a presentation on the 'Current gem and jewellery industry in Sri Lanka'. The Tanzanian delegate, Benjamin J. Mchwampaka, gave a timely presentation on 'The development of gemstone industry in Tanzania with focus on legal framework, control and trading

environment'. There were also presentations by delegates from Brazil, China, Colombia, Hong Kong, Switzerland, Thailand and USA. As is usual for all conferences, the networking and discussions apart from the official presentations are a major reason to attend. The social events arranged around the Congress provided ample opportunity for such interaction — China's current import tax on gems and how it might be reduced being a frequent topic. PDFs of all the presentations can be found at <http://tinyurl.com/ICA-Changsha-Presentations>

Unfortunately due to the numerous industry-related events around the world in May, Gem-A did not have an official delegate at the Changsha meeting, but members and colleagues of Gem-A were present.

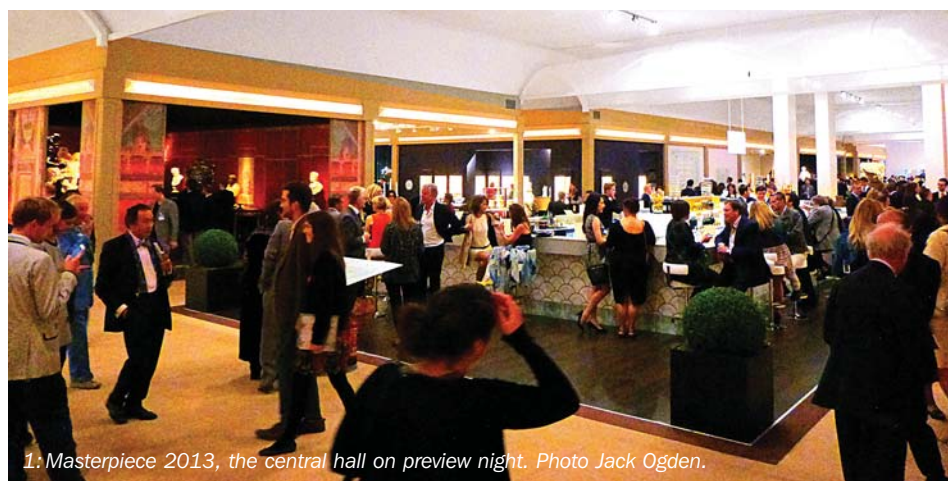
The Congress was timed to precede the China (Changsha) Mineral and Gem Show that was held from 16–20 May. There were 1,200 exhibitors, 600 showing mineral specimens including some extraordinary examples. Among the massive and the extremely rare was a huge, laden buffet table, but the food, on closer examination, was revealed to be carefully chosen and arranged mineral specimens. In addition to the mineral exhibitors, there were 450 exhibitors of gemstones and fine jewellery, and an ICA pavilion of 150 ICA members exhibiting coloured gemstones.



Good enough to eat. Minerals cleverly displayed as a buffet at the Changsha Mineral and Gem Show. Photo Sara Abey.

Trade in Chelsea – the fourth year of Masterpiece

In June for the last four years, Chelsea, London, is temporary home to the Masterpiece exhibition, an art and antique show at which dealers from around the world exhibit the best of the best. Jack Ogden reports on the jewellery to be seen.



1: Masterpiece 2013, the central hall on preview night. Photo Jack Ogden.

The Masterpiece exhibition held in the magnificent grounds of the Royal Hospital, Chelsea, London (26 June–3 July 2013) was its fourth year (1). It was larger than ever, a splendid mix of fine art and antiques, from Maseratis to Picassos to ancient Egyptian sculpture. And, among all this, the *crème de la crème* of jewellery. And the jewellery seemed to be doing well. This is not just my bias, *The Economist* blog, reporting on the show, noted “a growing interest in jewels and gems: jewellery of all periods is fashionable and the global market is hot”.

Of jewellery and gems there was a mouth-watering array, from a superb and very rare pair of gold clothing hair pins (fifth century BC — Cahn International, Basel) to perhaps the finest pair of Castellani ‘Archaeological Revival’ earrings I have ever seen (c. 1860 — S. J. Phillips, London) as well as jewellery by the top houses and designers of the twentieth century. And gems, fine gems.

The increasing prominence of natural pearls on the market (as evidenced at this year’s Basel show for example — see last month’s *Gems&Jewellery*) was reflected at Masterpiece. London-based Symbolic &

Chase displayed a magnificent 64.5 ct drop-shaped pearl (2). They had purchased this pearl at a Christie’s auction in 2004 and then named it the ‘Pearl of Kuwait’. David Warren, international director of jewellery at Christie’s, has previously commented that at the time of the sale he had a hunch that there must have been an illustrious and probably royal history to this pearl, but was then unable to ascertain a provenance. However, after detailed research, including going through sixteenth-century Spanish archives, Symbolic & Chase has plausibly suggested that this may be the pearl that once belonged to Mary Tudor (1498–1533) and which is shown in portraits of her. The same pearl also graced the neck of Queen Isabella of Portugal and King Philip of Spain’s sister Juana of Austria (1535–1573).

Other pearls with a royal pedigree include those on the ‘Marie-Antoinette necklace’ exhibited by Wartski of London (3). In its present state the necklace is nineteenth century, but the 21 natural pearls that define it were once owned by Marie-Antoinette. They were taken out of France for safe-keeping during the revolution by the wife of the British ambassador, and remained in the family after Marie-Antoinette was beheaded.

2: A 64.5 ct drop pearl, believed to have been worn by Mary Queen of Scots. The rose-diamond-set cap is nineteenth century. Photo courtesy of Symbolic & Chase, London.



3: The ‘Marie-Antoinette necklace’ exhibited by Wartski of London. Photo Jack Ogden, used by courtesy of Wartski.



4: The ‘Marie-Antoinette brooch’ by Theo Fennell PLC. Photo courtesy of Theo Fennell.



News and Reviews

The same ill-fated queen also featured in a unique brooch by another exhibitor, Theo Fennell. His 'Marie Antoinette brooch' — with the Queen's skull complete with broken pearl necklace — is part of his series of brooches titled 'Sic Transit Gloria Mundi' or 'How fleeting are earthly glories' (4). Probably not a motto with which the exhibitors at Masterpiece sympathize.



5: An aquamarine and gold seal by Fabergé, formerly in the collection of King Farouk of Egypt. Photo Jack Ogden, used by courtesy of Wartski.

Going back to Wartski, we can report a rather understated but gem-related example of the Fabergé for which it is famous — a seal made from a single aquamarine crystal, the top surmounted by a coiled gold snake with its head set with a ruby (5). The cypher on the base of the seal has not been identified, but the object itself was from King Farouk's personal Fabergé collection that was housed at Koubbeh Palace, Cairo. Also with aquamarine — and green tourmaline — was a beautiful Art Nouveau brooch

exhibited by Hancocks of London. It is by Georges Fouquet, Paris circa 1901, set in 18ct yellow gold with diamond detailing (6).

Other jewellery on show with a gem focus included a platinum brooch by René



6: Art Nouveau brooch with aquamarines and green tourmaline, by Georges Fouquet, Paris circa 1901. Photo courtesy of Hancocks of London.



7: A platinum and jadeite brooch by René Boivin, Paris c. 1935. Photo Jack Ogden, used courtesy of Symbolic & Chase.

Boivin with terminals from which hung interconnecting jade links — the links carved from a single piece of jadeite (7). This piece, exhibited by Symbolic & Chase, dates to around 1935 and bears French assay marks. The jadeite links were presumably Chinese in origin, reused by Boivin much as Cartier and other French 'houses' incorporated oriental and other components in their



8: Chinese gold and ruby pin of the Ming period (sixteenth century). Photo courtesy Susan Ollemans.

jewellery. Actual old Chinese jewellery, along with ornaments from India and South East Asia, were exhibited by specialist dealer Susan Ollemans (London). Shown here is a sixteenth-century Chinese Ming period gold pin with rubies (8).

New York's A La Vieille Russie Inc. had its usual fine range of Fabergé and other important jewellery and objets d'art, including Russian pieces, such as a large (4.5 inches high) seventeenth-century gold pendant reliquary cross set with large emeralds probably of Colombian origin.

Of similar date, similar materials, but of different origin was a Spanish parure exhibited by Michele Beiny of New York. This consisted of a large 'stomacher' or corsage jewel (7 inches high) and a pair of earrings (9). The reverses had a floral design in black, pink and white enamel.

The presence of mid and later twentieth-century jewellery reflected the increasing collector interest in this area. The Verdura Jewellery Company was established in New York in 1939 (in London it exhibits with Harry Fane). Among the pieces on display at the Verdura booth were a pair of Maltese cuff bracelets, first designed for Coco Chanel in the 1930s (10). The contrasting black and white hoops are of black jade and mammoth ivory. Another celebrated jeweller is David Webb of New York and Beverley Hills whose very distinctive style has attracted avid collectors. The bracelet shown here is a good example of his work and also of the use of organic gem materials, albeit ones that might raise some eyebrows in certain circles today. This 'Double Chimera Bracelet', a piece with distinctly eastern antecedents, is of carved coral, with carved ivory and black enamel set in 18ct yellow gold and platinum (11).

As would be expected, jewellery in organic materials was in evidence with exhibitors showing ethnography. A splendid



9: Gold, emerald and diamond parure, Spanish, seventeenth century. Photo courtesy of Michele Beiny.



10: Pair of Maltese cuff bracelets by Verdura, black jade and mammoth ivory. Photo courtesy of Verdura.

example was a Fijian chief's split whale tooth necklace — what is called a *wasekaseka* — dating from the mid nineteenth-century (12). This was to be seen at Finch and Co. of London, a dealer specializing in ethnography, European works of art, natural history and antiquities.



11: 'Double Chimera Bracelet' in carved coral, ivory and black enamel, by David Webb. Photo courtesy of David Webb.

Dealers tend to specialise in types of object, periods, or geographic origins — or a combination of these. Les Enluminures, of New York, Chicago and Paris, as well as dealing with medieval manuscripts, specialises in ancient and historic rings. Early rings are, and long have been, a significant area of collecting. The examples shown at Masterpiece by Les Enluminures included rings from Roman to Renaissance (13),



12: A Fijian chief's split whale tooth necklace, nineteenth century. Photo Jack Ogden, used courtesy of Finch and Co.

plus a large display of seventeenth- to eighteenth-century posy rings.

The visitors to the exhibition — there were reportedly 6,000 present on the preview day alone — fall into several categories. There are the serious (and wealthy) collectors out to buy, those out to look, learn and marvel, and those who just want to be seen to be there. And of course there are dealers who are not exhibiting but who want to observe what their competition has, get a sense of what is selling and, sometimes, buy. As with all art and antique shows, there can be good dealer-to-dealer business too. The proof of the pudding with any exhibition, of course, is whether the exhibitors sell enough, or make enough good long-term contacts, to make it all worth their while.

It is a long show (26 June to 3 July), and I was there on only the preview day and the second day, but some exhibitors already had smiles on their faces and the general impression was that business was being done, and probably more business than last year. For exhibitors the point of such a show is to tempt new collectors and cross-over collectors — the latter meaning a collector of, say, seventeenth-century paintings, who

falls in love with a Roman marble statue on display and enters a whole new phase of collecting. There were buyers of many nationalities present, but we can note that some dealers reported heightened activity among Chinese buyers. Business has to be done. It is an expensive show in which to take part. One New York exhibitor told me that, by the time you added up booth costs, hotels, transport, insurance and so on, taking part in the show cost him in excess of \$250,000 dollars.



13: A selection of Renaissance rings. Photo: Jack Ogden, used courtesy of Les Enluminures.

The international congress season



Harry Levy FGA reports on recent meetings of international organizations — the World Diamond Council (WDC) and World Jewellery Confederation (CIBJO) meetings in Tel-Aviv in May, and the World Federation of Diamond Bourses (WFDB) and International Diamond Manufacturers Association (IDMA) meetings in Istanbul in June.

CIBJO

In May 2013 CIBJO held its annual congress in Tel-Aviv, Israel. For some years there had been resistance to go to Israel, mainly by the mid-Europeans, perhaps for security reasons or perhaps for political ones. However most did come to Tel-Aviv and it turned out to be a wonderful congress.

One of the main items completed was the harmonization within the *Blue Book*. There are three sections in this book: the *Diamond Book*, the *Gemstone Book* and

the *Pearl Book*. I am not sure why this was a necessary exercise; it took several years to complete and much effort by those who undertook the task. The aim was to ensure that definitions had the same paragraph number in all the three books and that the definitions looked the same in all three of them. If one looks up heating in the *Gemstone Book*, is it that important that heating will be found under the same number in the *Diamond Book*? Further definitions and processes do not appear in all three

books, and even if they do they could differ between the books.

In order to complete such work it was found that there was not sufficient time allowed during the congress, so the CIBJO organizers used a couple of days before the official congress opening to have 'pre-congress Steering Committee meetings' for the different commissions. This is unfair as many delegates were unaware of these pre-congress meetings, they added two extra hotel nights to one's expenses and some commissions simply did not need the extra time. However, the harmonization task was completed and we all look forward to seeing the new edited *Blue Book*.

The CIBJO Diamond Commission meeting was uneventful. There was some talk on synthetics and their detection and the detection of treatments. The most difficult one is to identify colour change of tinted diamonds to white using the High Pressure High Temperature (HPHT) process.

While the WFDB and CIBJO will both continue to maintain full independence, they aim to coordinate positions in the areas of gemmological standards and nomenclature; standards and methods of disclosing of treated, enhanced, synthetic and simulated diamonds and gemstones; and Corporate Social Responsibility, good governance and sustainability, including the Kimberley Process.
CIBJO and WFDB Press Release



Rough times ahead with diamonds? The future of the Kimberley Process was on the agenda at several meetings. Photo Jack Ogden

Pearls at CIBJO

There have been many changes with pearls, with improvements in the production of cultured pearls. Traditionally we have had pearls (natural ones) and cultured pearls both sea water and fresh water ones. I will not include imitation pearls. The producers of the large South Sea and Pacific pearls have often omitted to classify their pearls as cultured. They are trying to justify their position by calling traditional natural pearls, previously known as 'pearls' to 'natural or real pearls' and drop the term 'cultured' for all the farmed ones. They claim that the majority of all pearls sold are cultured, the consumers knows this and ask for 'pearls' knowing they are getting cultured ones; should they want natural pearls they will ask for 'natural pearls'. This position has not been accepted yet, but we shall have to see what will happen now.

During our meetings in Istanbul we consolidated our position as the world's leading diamond organization, representing the full value chain from mine to finger.

Ernie Blom, WFDB President

Metals at CIBJO

The Metals Commission had a good meeting. It is surprising that the metals used in our industry have been neglected for so many years, as they are such an integral part. There is much to be done still to get universal approval for many things, for example the nickel content in gold, as it can cause allergic reactions. Further there are many moves to clean the production of gold, to improve the conditions for miners and minimise environmental pollution.

Ethical issues are gaining prominence with most of the sectors and commissions in CIBJO.

Perhaps a highlight of the congress was something outside the meetings. This was a meeting at the Ramat Gan diamond complex, where delegates were entertained by the Israel Diamond Exchange (Bourse). After some speeches delegates were permitted to wander around the trading floor.



From left: Ernest Blom, president of the World Federation of Diamond Bourses, Eli Izhakoff, former president of the World Diamond Council and Gaetano Cavalieri, president of CIBJO. Photo courtesy WFDB/CIBJO.

This is most unusual as all bourses round the world will not permit non-members on to their trading floors.

World Diamond Council

The CIBJO congress was preceded by the World Diamond Council meeting. This again was well attended with many prominent personalities in the diamond industry, especially those involved with conflict diamonds and the Kimberley Process (KP). The meeting came at the end of an era as the president, Eli Izhakoff, announced his stepping-down from the WDC. Eli has had a profound influence in the diamond world; he was president of the New York Diamond Dealers Club (Bourse), president of the WFDB, and finally president of the WDC. In fact he was one of the instigators of

the formation of the WDC and, with his knowledge, diplomacy, personal friendship with the leading diamond people and ministers, and his eloquence and charm, has ably led the trade component within the KP. He is being succeeded by Avi Paz, the immediate past president of the WFDB. We wish them both success.

Diamond issues

The KP continues to evolve, since the problems with the Zimbabwean diamonds. A new definition for conflict diamonds is needed to bring in human abuses and rights, and there is a bifurcation between the African producers and other producers.

The WFDB and IDMA presidents' meeting was held in Istanbul in mid-June. This was during the recent demonstrations in Turkey, but the meetings had been

Cultured and imitation pearls must always be preceded by the respective qualifiers 'cultured' and 'imitation'. However, it is recommended that, to avoid any confusion, even natural pearls should be labelled with the qualifier 'natural' included.

From the CIBJO Pearl Special Report issued just prior to the CIBJO Congress

Around the Trade

The diamond industry, already one of the most regulated industries in the world, has been subjected to taxation regimes from mine to market. Diamonds are mined in specific regions but sold internationally and as such become victims of many and multiple tax systems around the globe.

IDMA website in announcing that tax and its impact on the diamond industry would be the theme of the presidents' meetings in Istanbul.

arranged last year. Eventually it was decided not to cancel the meetings as they were held in a beautiful new hotel on the Bosphorus, several kilometres away from the trouble spots such as Taksim Square. The few who did cancel at the last minute were the mainly American members of IDMA and their meeting was cancelled; those few that did turn up from this group attended the WFDB meetings.

Both these organizations hold a meeting of presidents one year where much policy is debated, and there is a full congress the

following year which is much more social and usually endorses the decisions made by the presidents.

In Istanbul there were full discussions on many current diamond problems, including synthetics and treatments. To this end the WFDB set up a new Technical Committee to monitor the new innovations and work more closely with laboratories. There was a long discussion and presentation on the financial position within the trade, with many traditional bankers trying to get themselves out of lending money to the diamond sector.

A most important development was the signing of an agreement between CIBJO (represented by Dr Gaetano Cavalieri) and the WFDB to positively influence the developments in the international diamond and jewellery sectors. There would be full

agreement between the CIBJO *Diamond Book* and the IDC *Diamond Book* used by the WFDB. There would be standardization on disclosure for treatments and synthetics.

There were mutual thanks between those delegates who came to Istanbul (we saw none of the demonstrations) and the organizers in Istanbul who gave us a most pleasant and enjoyable meeting.

Harry Levy honoured

At the Gala Dinner held during the CIBJO Congress in Tel Aviv, Harry Levy was one of five CIBJO officers honoured for their work on behalf of the confederation and the global diamond and gemstone industries.

Gem-A Shop

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A new kyanite

Cara Williams FGA reports on a fine quality, faceted, bluish-green kyanite.

Until a somewhat recent discovery in Nepal, facet-grade kyanite was rare. Fibrous, translucent kyanite from various sources was well-known in the mineral world but barely registered among gemmologists. The Nepalese kyanite, with its beautiful, rich sapphire appearance, was an instant hit when it was first found around 2001. Always requiring a double take, the colour is due to an iron-titanium charge transfer — the same charge that causes the blue colour of sapphire. In beads, blue and green kyanite colours are commonly seen, with the green being a softer mossy-to-celadon shade due to the presence of vanadium, but shades occasionally blend toward the teal tones.

Around 2011, orange kyanite was found in Tanzania, with a vibrant orange colour which is due primarily to manganese. So, why all the talk of chromophores? Many gem varieties are distinguished by their colour, their origin, phenomena or chromophores — the elements within a gem that cause its colour. For example, ruby's chromium is what makes it other than sapphire, and when copper is present in tourmaline, it becomes legendary. So we at Stone Group Laboratories were pleasantly surprised when a new kyanite came through the lab with a distinctly different chromophore. Neither blue nor green, the colour was right in between and reminiscent of the colour seen in many bluish-green alexandrites when viewed under daylight conditions.

Reportedly from Nepal, the samples we observed were nearly eye-clean and devoid of the colour zoning that is so pronounced in most blue kyanite. Small crystalline inclusions were visible in some samples, with small clusters of pinpoint inclusions seen in others. RI was 1.715–1.730. They all appeared a strong red under the Chelsea colour filter and fluoresced only moderately red under long wave ultraviolet. Pronounced dichroism was teal and grey. Whatever the chromophore was, it was possibly the cause of flooding (the equivalent of the machine being like a person having a bright light shone in their eyes at night) observed in our initial Raman analysis, which yielded negative results, but the FTIR spectroscopy revealed a match for kyanite in a critical region of the spectrum.

The X-ray fluorescence proved more helpful and revealed a high chromium content along with some vanadium and minor amounts of iron, which possibly explains why the fluorescence is a bit weak.

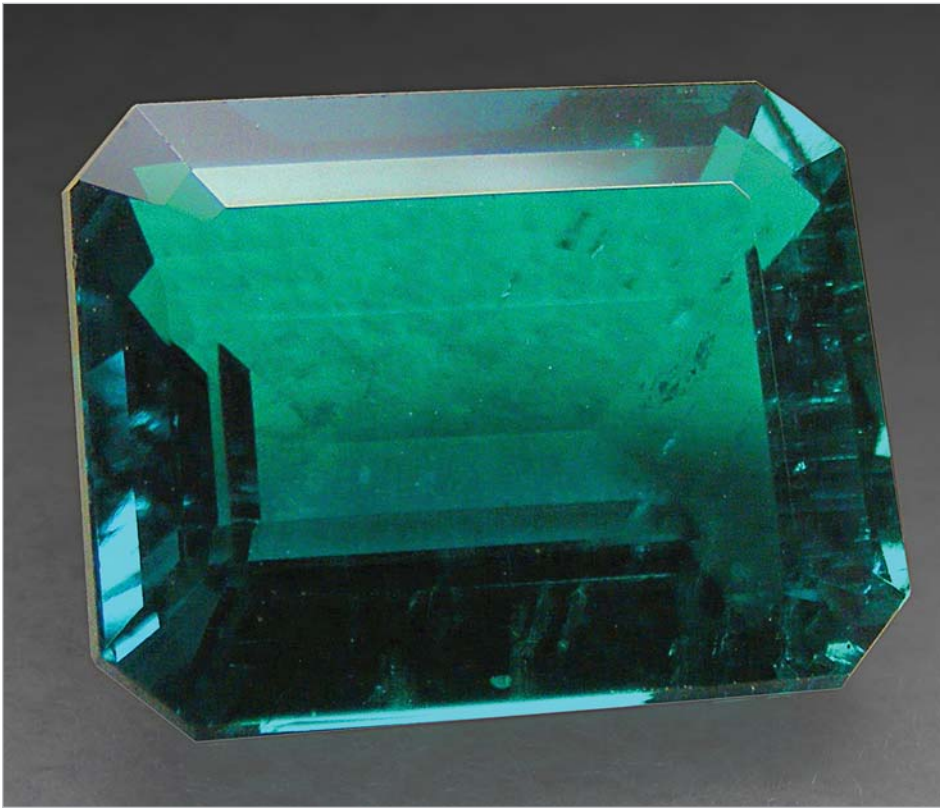


With so much chromium and vanadium present, we then looked for possible colour change effects, but the colour remained teal under all lighting conditions. Green kyanite with up to 1.8 wt% Cr_2O_3 was reported from Siberia as long ago as 1936, and Cr-bearing kyanite is also found in Australia and New Zealand, but, as far as we know, this is the only commercial source of gem-grade teal-coloured kyanite coloured by chromium and vanadium.

While still popular with lovers of unusual gems, the lower hardness of kyanite has made it more of a collector's item in spite of its attractive colours. Its resemblance to other gems has occasionally caused problems at the bench. Blue kyanite does not have sapphire's hardness; orange kyanite may look like spessartine garnet, but is certainly not as tough and teal kyanite may resemble alexandrite, but requires much gentler handling. While kyanite continues to masquerade as other gems, gemmologists and valuers will want to test carefully to distinguish these from spinel or chrysoberyl.

A rainbow... like unto an emerald

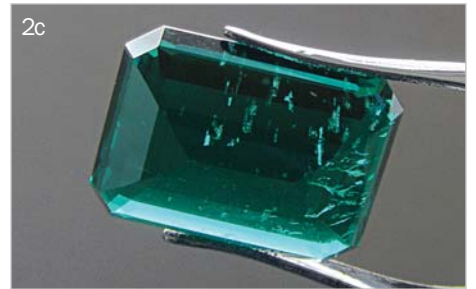
Grenville Millington FGA describes his encounter with an 'emerald' that showed striking interference colours.



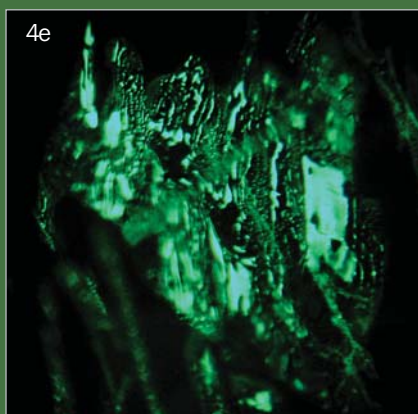
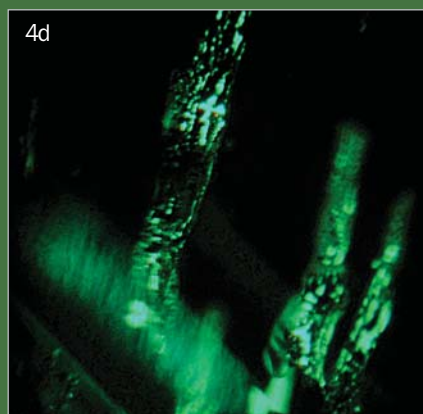
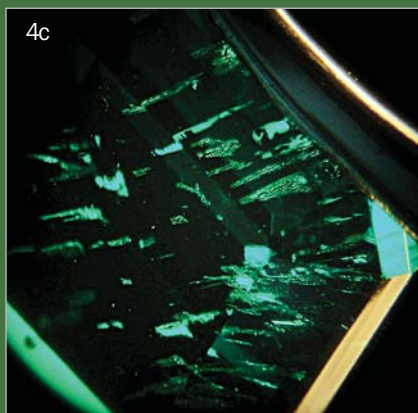
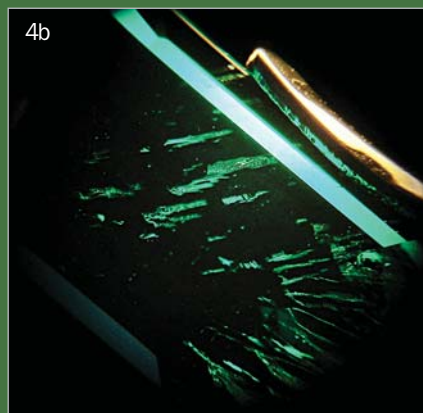
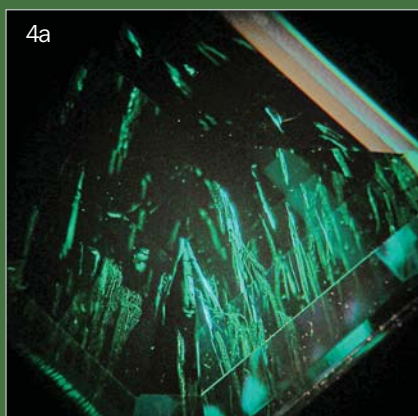
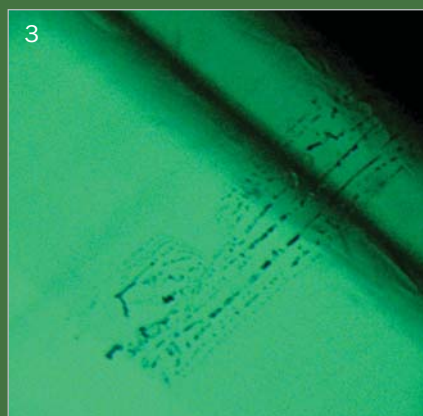
1. Large green stone, 7.60 ct (the camera could not capture the full vividness of the green).

In the *Book of Revelation*, 4:3, there is a puzzling reference to a rainbow being 'in sight like unto an emerald', and it was this quote that I thought of when examining what appeared to be an emerald. The stone was an intense, slightly darkish emerald green, measuring over 13 x 10 mm and weighing 7.60 ct. If indeed it was a natural emerald then its value would be exceptional! The chances were high, therefore, that it would be a synthetic emerald or glass. Inclusions were visible to the eye (1).

On closer examination, and by varying the lighting angles, the inclusions could be seen to be long, more or less parallel to each other and at right angles to the table (2a,b,c and d). Under the microscope they appeared to be basically long, dart-shaped fractures with varying degrees of healing, displaying very small liquid droplets to larger films. Also the fractures had undulations or slight twists, which meant it was impossible to focus with the microscope on much more than a small section. One of the healing



2. a,b,c,d The inclusions from various angles.



3. Fine droplets seen in one of the fractures. Magnified 70x.

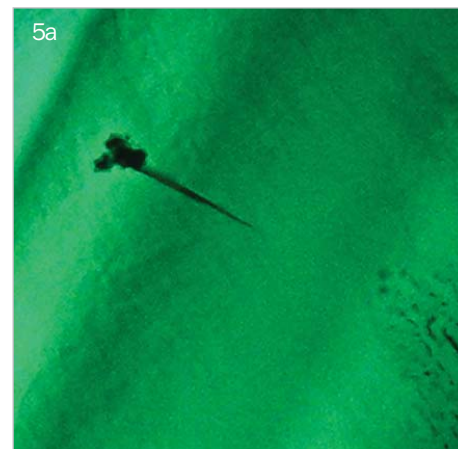
4. Fractures with fine droplets and/or broad films. Magnified 10x (a,b,c) and 40x (d,e).

fractures that allowed better visibility is seen in **3**. Other views of the fractures are shown (**4a,b,c,d** and **e**).

A breadcrumb-like, off-white inclusion headed a fine dart, and this comprised a recognizable 'nail-head spicule' (**5a** and **b**).

This was big enough to see with the 10x lens. Oddly, the direction of the spicule was about 45° to the general direction of the fractures.

In more glancing light conditions, allowing shadowing, tell-tale growth effects made themselves easily visible, producing a ripple



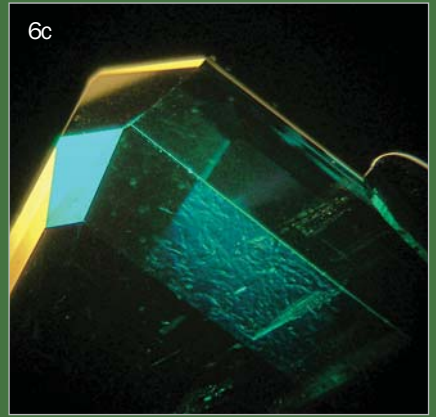
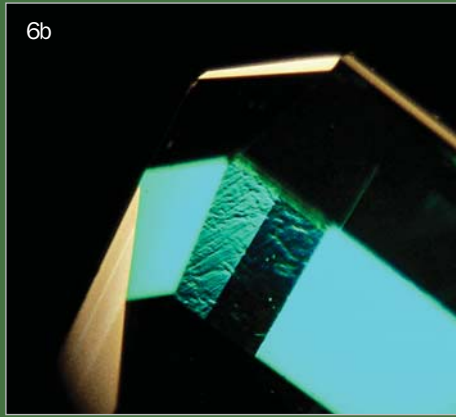
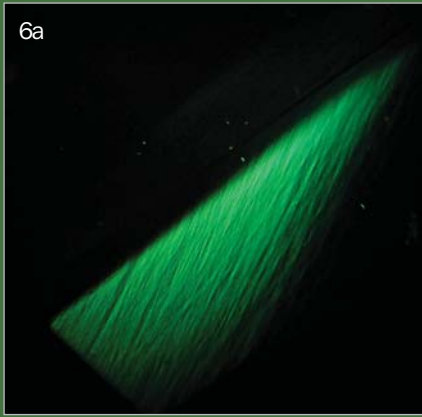
5 a,b. Nail-head spicule under different lighting. Magnified 45x.

or heat-haze effect along one direction or a crumpled tissue-paper effect along another (**6a,b** and **c**), signifying a synthetic, hydrothermal product.

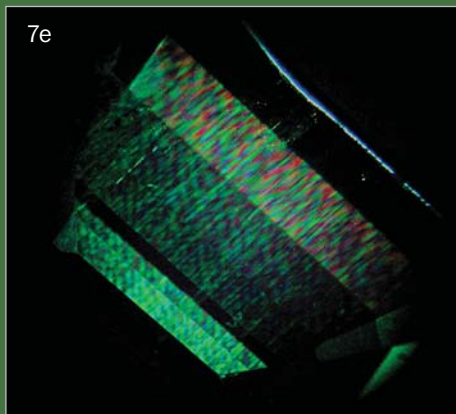
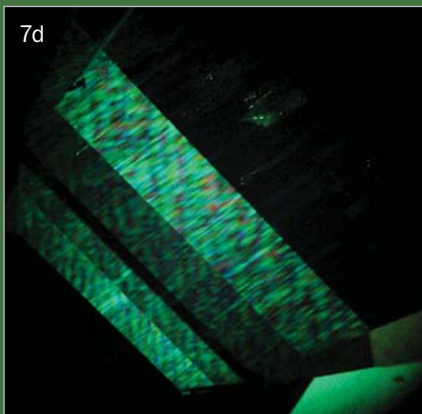
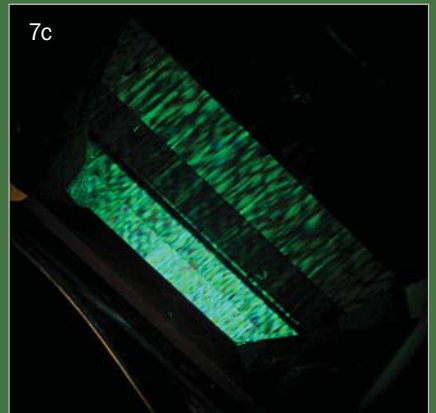
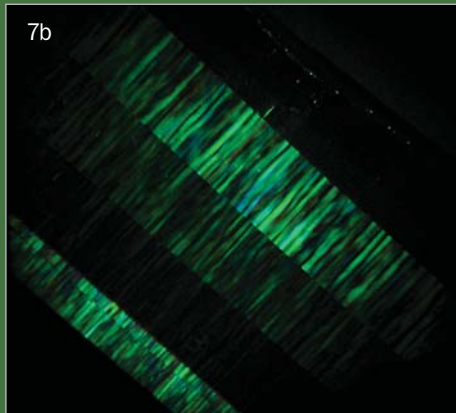
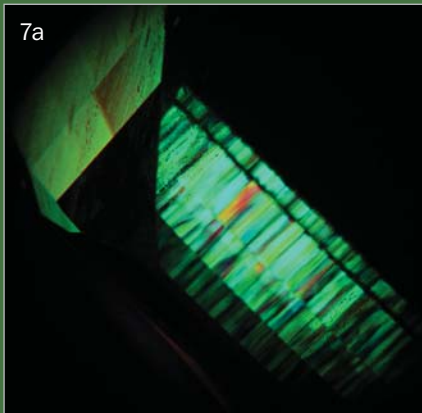
However, the most spectacular effects were seen when the stone was placed under a polariscope (**7a,b,c,d** and **e**) and it was this phenomenon that prompted the comparison with a rainbow. The view in which the strong, parallel colour blocks were seen turned out to be the direction of the optic axis (**8a** and **b**) and the more textile weave-like colour effects were visible in the same direction that showed the crumpled growth effects.

All of the above, observed before using the refractometer, gave the impression of the stone being a synthetic emerald of the hydrothermal process. New gemmologists

Hands-on Gemmology



6. Growth structures depicting hydrothermal manufacture. Magnified 30x (a) and 10x (b,c).



7a,b,c,d. Under the polariscope brightly coloured patches changed their pattern depending upon the orientation. Magnified 10x to 15x.

should always try to form an opinion or at least a shortlist of possibilities before reaching for the main gem testing instruments so as to build up their powers of observation. So, now it was confirmation time and the

results of normal testing were as follows.

The refractive indices were 1.572–1.580. These readings were taken very carefully and more than once because the birefringence was higher than expected at

0.008. The spectroscope showed very distinct chromium lines in the red with a well-defined doublet, and a line at 475 nm in the blue when the stone was tested in a direction close to the optic axis. Under the

Chelsea colour filter the reaction was bright, full red and the stone was inert under long- and short-wave ultraviolet light.

All the test results were in line with the visual-only identification of synthetic emerald. The type is similar to the old Biron hydrothermally-produced crystals of around 25 years ago, with the exception of the slightly higher birefringence. With that product, the addition of vanadium explained the intensity of the green and the failure to fluoresce under ultraviolet light. Also different with this stone was the array of parallel, long dart-like fractures, so it may have come from another manufacturer. Was this grown crystal cooled too quickly or perhaps they were induced on purpose to make the imitation more emerald-like?

In the testing, the strong and varied colours shown under the polariscope were the most arresting, so if we can imagine John, the writer of *Revelations*, with a polariscope and a synthetic emerald then we might be closer to understanding what was meant by describing light as a rainbow, like unto an emerald!



8a,b. The coloured blocks showed the direction of the optic axis.

All photos in this article copyright Grenville Millington.

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

Editor's note

The *Book of Revelations* is the most mysterious and enigmatic book in the Christian New Testament, but for all his foresight and prophecies, John probably didn't imagine the use of a polariscope. So what did he mean? The King James' translation essentially says that around the throne of God there was a rainbow that looked like an emerald (*Revelations*, 4:3). We can't brush this aside as one of the King James' version's rather creative approaches to translating gemstone names. All the translations into English, and the early Greek, Latin and Aramaic texts, use the word *emerald* or its ancient equivalent.

There is some debate as to whether John originally wrote *Revelations* in Greek or Aramaic, but the local Greek written in Palestine seems most likely, although perhaps not the writer's first language. Is there a clue there? The Greek *smaragdus* (emerald) and its Latin equivalent,

ultimately derive via Babylonian and other languages from the Sanscrit *marakata* which is still used in India for emerald.

However, emerald was unknown in the Eastern Mediterranean and near Eastern world before about 300 BC, so perhaps it earlier applied to one or more other green stones. Malachite is a possibility — malachite certainly sometimes seems to have been considered as one type of 'smaragdus' in classical times — and we might even suggest there is a link in the names *marakata* and *malachite* (mix-ups between l and r are common in language history). The word used in the earliest Jewish versions of the *Book of Revelations* is *bareket*, which although normally applied to emerald, literally means 'flashing stone' and can be compared with the Arabic *buraq* meaning 'lightning'. Is it not possible that John consciously or otherwise used *smaragdus* to mean the equivalent of the Hebrew *bareket* in the flashing stone sense — in other words the Throne of God was

surrounded by a rainbow like a flashing stone? It would make more sense.

We can add a gemmological angle to this rather linguistic excursus. A Greek and Latin word for rainbow was *iris*. There was also a gem called *iris*. Pliny, our usual source for Roman gem information, is a bit unsure about this gem. He says that it was found on an island in the Red Sea — which might equate it with peridot — but adds that it has hexagonal faces and resembles rock crystal. Most interestingly for us, he explains that the gem was called *iris* as it could act like a prism in refracting light and thus produce the colours of the rainbow. He says that "When struck by the rays of the sun in a covered spot, it [*iris*] projects upon the nearest walls the form and diversified colours of the rainbow." We might not know what John meant when he compared his gem with a rainbow, but it does look as if Pliny was the first European to talk about a gem splitting light and producing a spectrum.



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The colours of corundum: A search for the soul of a padparadscha
- ◎ **Dr Emmanuel Fritsch GG**
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 Luminescence in gemmology from basic UV to photoluminescence in HPHT treated diamonds
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Emerald clarity enhancement
- ◎ **Brian Jackson FGA DGA**
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- ◎ **Dr Jack Ogden FGA**
Treasure, traders and trickery: The Cheapside gems in context
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Private viewings will be held at London museums, including the Cheapside Hoard collection at the Museum of London, the forthcoming Pearls exhibition at the V&A, and at the Natural History Museum. There will also be a private viewing of the Crown Jewels at the Tower of London.

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Silver, jewels and the lottery that wasn't...

London's jewellers and goldsmiths of the 1700s are not so well-known to most today, but they produced some extraordinary objects and include some characters with interesting professional side-lines, from political conspiracy to piracy. Jack Ogden looks at one goldsmith, a possible political conspirator who found a cunning way to dispose of unsold pieces, and a contemporary who played a part in the same story while dabbling in piracy.

The finest set of jewels ever made

In February 1736 the *London Evening Post* reported on what it described as 'the finest Set of Jewels... that was ever made'. The jewels, which included 'a fine Diamond Stomacher, set on black Velvet, the Jewels thereon forme'd in the Shape of Butterflies, Serpents, and other Creatures... a Diamond Necklace, Ear-Rings, Solitaire, all exceeding large and noble, Diamonds for the Hair, Girdle Buckle, Shoe-Buckles, &c, the whole executed in an elegant Taste, and valu'd at above 20,000L' (*London Evening Post*, 7 February 1736). This fine collection had been made for the wife of the Duke of Lorraine. A few weeks earlier Stanisław Leszczyński had abdicated the throne of Poland and had received in compensation the Duchy of Lorraine. His wife, the countess, was Catherine Opaliska. Contemporary portraits of Catherine don't show much in the way of diamond jewellery, unlike those of her daughter Marie, who married Louis XV of France.

The largest piece of silver

The provider of this sumptuous set of jewellery was London jeweller and banker Henry Jernegan. He liked the large and sumptuous. He is best known for a truly vast silver wine cistern — some 7,000

ounces of silver — which was made for him by Henry Kandler as a special order for a client who then decided it was too elaborate and no longer wanted it. The story of this remarkable piece of silver has been told before* but we can now mention some additional details.

Landed with the huge silver cistern and unable to sell it by conventional means, Jernegan resorted to a very cunning ploy. What about a lottery for it? As we have seen in these pages with the story of the Pigot diamond (*Gems & Jewellery*, April and July 2009) a lottery required government



Henry Jernegan's silver wine cistern disposed of by lottery. The photo shows a full-size electrotype copy made by Elkington and Company, Birmingham, and now in the Victoria and Albert Museum, London. The original, which weighs some 7,000 oz, is the State Hermitage Museum, St Petersburg. Photo copyright Victoria and Albert Museum, London.

approval. In early 1735 Jernegan approached Parliament with a petition to allow him to hold a lottery, but after various approaches, he was told that he could not hold a draw for his object. However, at this same period, an official lottery was being planned by the government to raise money to build the new London Bridge. This gave Jernegan an idea...

A catalogue of jewels

In 1737 a slim catalogue appeared bearing the words 'For sale A large and elegant Variety of Gold and Silver Plate, Jewels, Medals, and other Rich and Valuable Curiosities, by Henry Jernegan, banker, among which is the fine great silver cistern...' The only surviving copy of this catalogue that I am aware of was recently acquired by the British Library. It wasn't exactly a sale, but before we explore exactly how these objects were to be 'sold', let's look at the gems and jewellery jewels listed in it. There are many diamonds in various types of setting and combinations, including 'A Brilliant diamond Ring, one fine Stone', 'A brilliant diamond ring, set with four Brilliants', 'A brilliant diamond Ring set in a True Lover's knot' and 'A pair of very fine oriental ruby Ear-rings and Knots, set round with Brilliants' There are a limited selection of coloured gems — rubies being most common — but others include 'An emerald and diamond cross' and 'A fine large Aqua-Marine'. The actual numbers of coloured gems were rubies (19), emeralds (two), sapphires (two), aquamarine (one), garnet (two), plus pearls (one single, a pair of pearl-set bracelets, three pearls set in a box and a two-row necklace). There was also one 'crystal' and a 'Green Agot' set in a box. The relative quantity of rubies and sapphires are par for the period and a reminder that sapphires are not that common in European jewellery until the later 1800s.

A piggyback raffle

Jernegan's very cunning ruse was to dispose of all these items by means of a sort of parasitic lottery, for which he, and agents, sold tickets at 10 shillings each. He wasn't

allowed to hold a draw, so he didn't. He piggybacked on the official London Bridge lottery. Every lottery ticket drawn in that official lottery that did not win a prize, won a prize from Jernegan. The mechanics of this non-lottery by Jernegan is explained in his catalogue: 'This Sale reverses the Division in the Bridge-Lottery, that is to say, Every Person who is so unfortunate as to have a Blank in the Lottery, will, for Ten Shillings only, be intitled [sic] to a Claim of Advantage in this sale.' This meant he had to supply thousands of prizes, but most were silver medallions. Despite attempts by some authorities to stop his 'sale', it went ahead because technically speaking as there was not a separate 'draw' for his pieces, he hadn't done anything wrong.

Landed with the huge silver cistern and unable to sell it by conventional means, Jernegan resorted to a very cunning ploy. What about a lottery for it?

The winner of the huge silver cistern was a Major (different newspapers provide different ranks) Battine. Despite being thrilled by his win — and buying beer for neighbours to celebrate — he had little use for the huge silver cistern, and eventually it was sold to the Russian Empress in July 1741. Another London banking and goldsmithing firm acted as agents for the Russians — Messrs Belchier and Ironside — and it was transported to their offices in Lombard Street, London. After some hesitation about sending it, because of 'fear it should fall into the Hands of the Enemy' and a seemingly groundless rumour

after it had been shipped that the vessel it was on had been 'captured by the Swedes and taken to Stockholm', the huge cistern arrived safely in Russia and can be seen today in the State Hermitage Museum in St Petersburg.

Legal piracy

William Belchier, the Belchier in 'Belchier and Ironside', was no stranger to seizure at sea. As well as describing himself as a banker and goldsmith, he was one owner of the so-called 'Royal Family Privateers', a group of four ships named after the royal family and which preyed on and seized enemy shipping — in essence legal (depending on the side you were one) piracy. The officers and crew were paid a percentage of the value of goods seized. Belchier made a good income from this business in the 1740s, despite later disputes and legal cases about fair division of spoils and his eventual bankruptcy. Belchier was also the subject of a famous satirical drawing about corrupt bankers.

In comparison with William Belchier's piracy, Henry Jernegan may seem a smart but less adventurous character. However, even Jernegan might have led a double life. We know Henry Jernegan was a Catholic. Papers in the National Archives reveal that he was suspected of helping to finance the cause of the Jacobite political movement in Great Britain and Ireland to restore the Roman Catholic King James II to the throne.

So within the span of a few years we have the finest jewels, the largest piece of silver, a tale that wanders from London Bridge to St Petersburg, plus piracy and treason thrown in for good measure. The world of gem and jewellery history is seldom dull!

The above, part on-going research by the writer, formed the basis of part of a lecture on the disposal of luxury goods by lottery given by the writer in New York in 2012.

* Peter Cameron, 'Henry Jernegan, the Kanders and the client who changed his mind', *The Silver Society Journal*, Autumn 1996.

Stone Scoop



Diamonds: the good, the bad and the ingested

Liking diamonds is nothing new, nor is diamond imitation or diamond theft. Jack Ogden FGA looks at some old examples.

The diamond is fairer than light itself

The recent marketeers of diamonds were by no means the first or most effusive in eulogizing this precious gem. I think the prize should go to Edward McDermott for what he says in his book *The popular guide to the International exhibition of 1862*:

“There is none so low or so poor as to be unable to find pleasure in the admiration of the splendour of these gems. In the domain of intellect, where surely the gewgaws of ornament should be lightly esteemed, diamonds are prized. In an artistic point of view, the diamond is one of the most beautiful things in Nature. No painter, were he ten times a Turner, could do justice to its effulgence — no poet, were he greater even than Shakespeare, could put its lustre into words. Light was the first and fairest gift of Heaven to man; the diamond is fairer than light itself; it is light, only seven times beautified and refined. For one-half of the human race diamonds are delirium — the true eyes of the basilisk: their power over the fair sex no one will dispute, and no woman could truly profess herself indifferent to their fascination... The man who bedizens himself with gold or jewels is in general denounced as an empty fop, but the wearing of a fine diamond marks its possessor as having a superior taste for what is admirable and beautiful.”

Acid test

You also needed to know right from wrong, since, as the Australian media reported just a few years later: “The more valuable an article is the more it is counterfeited, and the

greater the perfection to which falsification is carried.” And yes, the writer was talking of diamonds. He went on to say: “It by no means follows that because a man deals in jewels his honesty must be of the first water, and the fact of a purchaser having paid for a diamond is not always proof that he has obtained one.” The problem according to the writer was that although there were existing tests for the genuineness of diamond they were chiefly optical ones requiring special apparatus and skill. So, it was with some enthusiasm that a simple and infallible new test devised by an Italian chemist called Massimo Levi was described. You put the diamond into “a leaden or platinum cup, with some powdered flour spar, and a little oil of vitriol; warm the vessel over some lighted charcoal, in a fireplace, or wherever there is a strong draught, to carry away the noxious vapours that will be copiously evolved. When these vapours have ceased rising, let the whole cool, and then stir the mixture with a glass rod to fish out the diamond.” If the stone was a true diamond it will be intact, if a glass paste it would be corroded or “would disappear altogether”. The fluorspar plus oil of vitriol (sulphuric acid) when heated will generate hydrofluoric acid, a highly corrosive acid that does indeed dissolve glass. I am sure the test works a treat, but health and safety regulations prohibit us from including it in our syllabus for our Diamond Diploma practical. (Source: *Border Watch*, Mount Gambier, South Australia, 11 Aug 1869.)

Inside story on theft

Diamonds have always been a target for thieves — the whole way up the supply chain from mine to shop counter. Almost

a century ago one South African diamond miner had the bright idea of using X-rays to find stolen diamonds that couldn't be found through a simple strip search. Wait, you say, diamonds wouldn't show up on X-rays. So explain this then from the April 1919 issue of *Electrical Experimenter* magazine: “One of the successful schemes which has been worked out by the superintendent of a large South African diamond mine... involves the use of a powerful X-ray machine having several X-ray bulbs excited simultaneously. As each miner passes before the X-ray bulbs, the examiner looks thru his fluoroscope and rapidly swings it up and down, so as to take in the entire body in a few seconds. This system of detecting the presence of a diamond, no matter whether it is buried in the flesh, resting in a throat cavity, or even in the stomach — an almost unbelievable practice resorted to in several instances on record — the X-ray examination quickly indicates the presences of the diamond.”

Could have been the potential for an interesting scam there. Demonstrate the X-ray machine to the mine owners using lead-glass imitations of diamond (which would show up on X-rays) and then take a cut on all the real diamonds that were easy to smuggle out thereafter...





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THE GEMMOLOGICAL ASSOCIATION
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