

## GEMSTONES

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**T**he mining and production of gem material (which excludes diamonds; covered in a separate section) was very variable during 2003. The markets were plagued by uncertainty and there was no pronounced recovery in the coloured gemstone markets during this period.

There was an extreme shortage of good-quality untreated gemstones as very few were finding their way on to the market place. The prolific production of gems from Myanmar (Burma) in recent years tailed off and there was a shortage of many gems, especially larger (in excess of 4 ct) fine red spinels.

Chinese producers continued to dominate many of the markets, producing enormous quantities of a wide range of exceptionally inexpensive gemstone-related items. Much of this production was from locally mined gems such as agates, bowenites, nephrites and peridots. But there was also considerable usage of materials from world-wide sources. The Chinese dealers have become major players in the rough gemstone market, some purchasing the entire outputs of mines, so they are able to supply their ever growing factories.

Brazilian mining remained in the doldrums during 2003, although topaz production was still considerable and a few other significant finds were reported during the year.

Madagascar produced a quantity of very beautiful sapphires (very similar in character and inclusions to those found in the gem gravel at Mogok in Myanmar) but Zimbabwe continued to suffer from worsening political unrest in the country, and foreign mining investments were very limited.

In the US, the demand for coloured gemstones was very slow at the beginning of the year. It slowly picked up as the year progressed, although the market failed to show any real buoyancy.

In India, the coloured-gem market remained strong and some parts of the gem industry grew considerably during 2003. Continued investment in exploration was rewarded and a number of new gem sources were found during the year.

Pakistan had a troubled year politically and there were sporadic problems in the gem mining areas. Nevertheless, production continued and finds were made of some rare gem minerals such as bastnaesite and gem-quality epidote. Peridot, kunzite, tourmaline, aquamarine and emerald were all produced in quantities.

Afghanistan had a turbulent year, with continued battles being fought in the remote highland areas. Some of these are the sources of fine emeralds, rubies and other gemstones.

The situation in Sri Lanka showed considerable improvement and there was at last an optimistic outlook for a peaceful solution to the country's long-term political problems. This in turn aided renewed optimism, and the production of gem material increased.

## **Corundum**

### **Ruby**

There was a marked decrease in production during 2003 of good-quality gems from mines in Myanmar (Burma). For the first time in a long while even small high-quality unheated stones were in short supply. Larger gems were simply not available in any quantity and, when they reached the market place, fetched very high prices.

Quantities of variable quality ruby were mined in Vietnam, some rough stones were of considerable size, but the best material was more usually confined to smaller stones, some of which were of a very fine colour. Much of this production has to be heat treated to remove blue coloured areas from the gems.

The Thai gem fields produced limited quantities of various gemstones (mostly rubies and sapphires). Production from Pakistan and Afghanistan was limited but a few very fine gems were produced.

During the year a dark brownish red very clean ruby was seen, which cut into stones of up to five carats in size. It apparently emanated from a new mine in Somalia, but is reminiscent of the dark brownish red rubies that came out the Uмба River Valley in Tanzania, some years ago.

The mines of Madagascar produced large quantities of low-quality rubies, and a few very nice quality facet-grade gems. Tanzania produced a number of very large impure rubies which are mainly suitable for carving, and a very limited quantity of good quality facet-grade material.

The mines south of Mysore in India produced a number of very large ruby crystals some weighing in excess of 2 kg. A completely new find of bright red ruby crystals imbedded in a thin layer of white surrounding rock which in turn was surrounded by a bright green distinctive zoisite rock was discovered from these mines. This material resembled a nougat type of confectionery when it was polished. It was a most striking colour combination and it may well prove to be a very popular and versatile ornamental material.

### **Sapphire**

Sapphires in varying qualities were widely available during 2003, and there was a plentiful supply of gems from the Sri Lankan mines due mainly to the improved political situation in that country. Considerable numbers of these gemstones were heat treated to improve their final colour, although some

members of the trade are now demanding more natural untreated gems (these always sell for considerably more money than treated stones).

Madagascar produced some very good quality gems during 2003, many of which were purchased by dealers from Sri Lanka and Thailand (some even re-sell these as locally-mined material). Many of the gems needed heat treatment to produce commercially acceptable colour shades, but some were of good colour without any treatment and these were very similar to some of the better gems from Burma.

Australia, Nigeria, Thailand and China produced a number of commercial quality gems in 2003. All these gems were of basaltic origin and were more normally dark in colour when mined, due the presence of iron impurities. Gems of this kind are these days usually heat-treated to lighten their colours to make them more commercially acceptable shades.

### **Beryl**

#### **Emerald**

The emerald production in Colombian during 2003 was at similar levels to 2002. Small stones were widely available, although these rarely reached the best colours. Larger gems were less frequently found than had been in previous years, and the better quality larger stones, were in increased demand.

A quantity of exceptionally fine coloured small crystals were found in Afghanistan and appeared on the market place. These crystals mainly produced gems under one carat in size, but were of a richness and colour intensity that is seldom seen on the gem markets in this size of stone.

Emerald production in Brazil remained sporadic with a few fine gems being produced. Nigeria produced a range of pale coloured material, much of which was found as a bi-product of mining for aquamarine.

Small quantities of emeralds of varying quality were produced in Zimbabwe, Mozambique and Zambia.

Madagascar produced a number of large rather sleepy stones of good colour, and Pakistani production of emerald was rather erratic during 2003.

Emerald was produced in Russia during 2003 but much of the production was consumed internally by the ever growing Russian home market.

### **Aquamarine**

Brazil had dominated the world aquamarine production for many years. It had produced very little material in recent years due to the cutting back in that country on gemstone mining. Aquamarines were produced in commercial quantities in Mozambique, Zimbabwe, Nigeria, Sri Lanka, Pakistan, Nepal, India, Madagascar and Namibia.

### **Other Beryls**

There was a find of intensely coloured pink beryl made in Madagascar and these proved upon analyses to be coloured by abnormally high levels of Caesium impurities. The stones are unlike any other pink beryls previously found.

### **Garnet**

There was a quantity of the chromium-rich andradite variety of the garnet, known as Demantoid, which came onto the market place from Russia. There was some speculation as to whether it was a recent find or merely the release of a stockpile of old material, but stones of one carat and under were commonly available. It was also reported that a number of these stones had been heat-treated to improve their colours. This apparently removes the yellow or brownish caste, making the stones nearer to emerald green and therefore a more commercially desirable colour.

### **Spinel**

Fine red spinels were in great demand during 2003, and there was a marked shortage of bright red stones of over 2 ct. Most other colours, with the exception of intense cobalt blue, were readily available.

### **General**

In general, 2003 was a mixed year with a few new finds of commercially valuable gem material. The markets certainly ended on a more optimistic note by the end of the year.