

GEM NEWS

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COLORED STONES

Tucson 1986. In addition to the many extraordinarily fine natural gemstones such as rubies, emeralds, sapphires, tanzanites, garnets, aquamarines, tourmalines, topaz, and the like, usually seen at Tucson, this year's show featured many other interesting gem materials. Robert E. Kane, gem identification and research supervisor for GIA's Gem Trade Laboratory in Los Angeles, supplied the following report on some of the more unusual materials seen at the February 1986 Tucson Gem and Mineral Show for *Gem News*.

Cat's-eye kunzite. Chatoyant semitranslucent to opaque kunzite cabochons and rough from a deposit in South Dakota were displayed.

Covellite. Several firms were selling massive forms of covellite rough, as well as cabochons and faceted tablets. Covellite (CuS) is generally dark indigo blue in color, sometimes with a purple surface tarnish. Covellite has a submetallic luster, a specific gravity of about 4.6, a shade or spot refractive index reading of 1.45, and a hardness of 1.5–2. It is frequently intergrown with small veins of "brassy" metallic-appearing minerals such as pyrite and chalcopyrite. Covellite cabochons are usually inexpensive and sold as a collector's stone. Because of its softness—it can be scratched with a fingernail—covellite is not used in jewelry.

Lepidolite. One dealer had about 50 cabochons of lepidolite, some as large as 20 ct. Most of the cabochons were opaque, ranging in color from light to dark pinkish purple, and nearly all appeared to be identical to the lepidolite "matrix" that occurs in massive quantities at several of the tourmaline deposits in Pala, California. A few of these stones, however, were translucent. A medium-dark pinkish purple stone revealed shade refractive indices of around 1.560–1.590, a specific gravity of about 2.8, and a hardness of approximately 3. It was inert to long-wave ultraviolet radiation, and fluoresced extremely weak to short-wave U.V. rays.

Magnesite dyed blue to imitate turquoise. One dealer was selling necklaces of tumbled nodules of dyed blue magnesite from Africa. This material can be identified by the following:

- Spot refractive index readings of 1.51 and 1.70. Extremely high birefringence suggests a carbonate.
- The specific gravity of magnesite, approximately 3.0, is too high for calcite (2.71) or dolomite (2.85), both of which are also frequently used to simulate turquoise. Once the material has been identified as magnesite, it is immediately evident that it is dyed, since blue magnesite does not occur naturally.

Not only is the magnesite dyed, but the recessed matrix areas in these tumbled nodules are filled with a wax-based black material (probably added during the polishing process) to imitate spiderweb turquoise.

Pectolite. A large selection of rough and cabochon-cut blue pectolite from the Dominican Republic was displayed by a dealer from Santo Domingo who claims to control the entire supply of this material from that source. This attractive translucent-to-opaque blue ornamental mineral usually shows one or more fibrous radial patterns. It has been known for several years by the trade name "Larimar," but this is the first effort we have seen to market it on an international scale.

"Rainbow" moonstone. Several dealers had cabochons from India that were described as "rainbow" moonstone. The cabochons were small, ranging from 1 to 2 ct each. This unusual type of "white" moonstone displays an attractive adularescence of orange, pink, green, and blue, in contrast to the predominantly blue-white adularescence generally associated with moonstones of this body color. These stones were always displayed on a black background, which accentuated the multicolored adularescence, and were most impressive when several were placed together.

Spurrite. Numerous pieces of rough and a few polished slabs of an attractive translucent to opaque, medium to dark purple gem material were displayed by a dealer in Tucson who sells gems and minerals from Mexico. He said that he had just over 100 kg of rough. A polished slab of this material was tested, and revealed shade refractive indices of 1.640–1.680, a hardness of around 5, and a specific gravity near 3.0, all of which matched those properties recorded for the mineral spurrite.

X-ray powder diffraction analysis by C. W. Fryer of



Figure 1. This rare natural twin star spinel weighs 2.12 ct. Note the twin plane running down the center of the stone. Photo © Tino Hammid.

the GIA Research Department confirmed that this attractive purple gemmy material is spurrite. *Dana's Textbook of Mineralogy* states that spurrite, $\text{Ca}_5(\text{SiO}_4)_2(\text{CO}_3)$, occurs in contact zones between limestone and diorite in the Valardena mining district of Mexico, as well as in Ireland.

Taaffeite. Two unusual taaffeite crystals were examined. One, a distorted crystal weighing 46.17 ct, is the largest known piece of taaffeite rough ever recorded. The other weighed 2.81 ct and had several fairly well developed crystal faces, which has never before been reported in taaffeite.

The Tucson show always provides an opportunity to see and examine rare collector stones that have been cut. In addition to those already listed above, excellent examples of the following were also seen this year: ekanite, phosphophyllite, proustite, friedelite, haüyne, pyrrargyrite, bustamite, light blue and brown sillimanite (fibrolite), and purple scapolite.

Collectors, retailers and dealers say that the Tucson show helps pinpoint market trends in colored gemstones, supplies, and price changes, and provides an opportunity to see and purchase all types of rough and cut gemstones, jewelry, and mineral specimens, as well as lapidary equipment and tools. Another important aspect of the Tucson show is the opportunity for structured education. In addition to GIA's lectures and seminars, other groups such as the Accredited Gemologists Association (AGA), the International Society of Appraisers

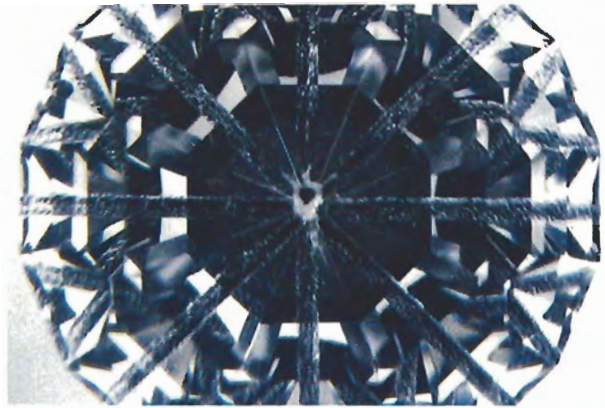


Figure 2. When this 18.57-ct rock crystal quartz was cut, a single included acicular black tourmaline crystal was carefully positioned so that its reflection would create the wagon-wheel pattern evident here. Photo by John Koivula.

(ISA), and the American Gem Trade Association (AGTA) present many industry-related seminars and short courses.

Twinned star spinel. One of the most striking gems we have seen in a long time is shown in figure 1. This pinkish purple natural star spinel weighs 2.12 ct and belongs to David Myerson of Northridge, California. Fine star spinels are not particularly common, and this one is a rarity among the rare. The gem is divided down the middle by a twin plane and its surrounding contact zone. This contact zone is darker than the rest of the stone and contains no star-producing inclusions. As a result of the contact twinning, two complete and distinct stars are readily visible, one on each side of the twin plane, even when just a single light source is employed. This is the only twinned double-star spinel we have ever encountered.

Wagon-wheel quartz. Don Riffe, of Wight Jewelers in Ontario, California, gave us a most unusual faceted rock crystal quartz for examination. It weighed 18.57 ct (15.88 × 13.69 mm) and was well fashioned in a modified round step-cut. The unusual feature of this quartz is that it contains a single acicular crystal of black tourmaline. The cutter, John Boardman, has positioned the tourmaline inclusion so that it runs from the culet through the entire depth of the stone up to the center of the table. As shown in figure 2, the black tourmaline inclusion is reflected in a spoke-like pattern in the quartz, creating the appearance of a wagon wheel. In the past, the editors have seen a few similar stones that have used either tourmaline or rutile as the reflecting crystals. Good rough to cut such stones is difficult to obtain, and is generally referred to as single-needle quartz.

ANNOUNCEMENTS

Sams Collection now on display at the Houston Museum of Natural Science. The Houston Museum of Natural Science recently purchased the Perkins and Ann Sams collection of minerals, to be housed as a permanent exhibit in the new Lillie and Roy Cullen Gallery of Earth Science. The collection encompasses some 500 mineral specimens, including a superb imperial topaz crystal from Brazil; a grouping of fine tourmaline specimens; cerussite and azurite from Africa; emerald, ruby, and diamond crystals; and fine pieces of Japanese stibnite, German manganite, and Bohemian cassiterite. A particularly fine emerald crystal from the collection is shown in figure 3.

For further information, contact the Houston Museum of Natural Science, 1 Hermann Circle Drive, Hermann Park, Houston, TX 77030; (713) 526-4273.

GIA GemFest scheduled. GIA will hold its third annual GemFest on August 14 and 15, 1986, at their headquarters in Santa Monica. GemFest is a program of seminars encompassing gemology, jewelry manufacturing arts, jewelry sales, and business. For registration and further information, contact GIA GemFest, 1660 Stewart Street, Santa Monica, CA 90404; (213) 829-2991.

Winners of the Scheutz Award Design Contest announced. The George A. Scheutz Memorial Fund Jewelry Design Contest added a new category this year for its annual competition hosted by GIA. For the past 10 years, the competition has featured men's jewelry and accessories only. This year, women's colored stone jewelry was added. The winning entries, submitted in the form of color renderings, are: a woman's ring of 18K yellow gold and lapis lazuli designed by Catherine O. Villeneuve of Villeneuve-Lamarche, Montreal, Quebec; and a man's 18K yellow-gold ring inlaid with onyx and set with a quadrillion-cut

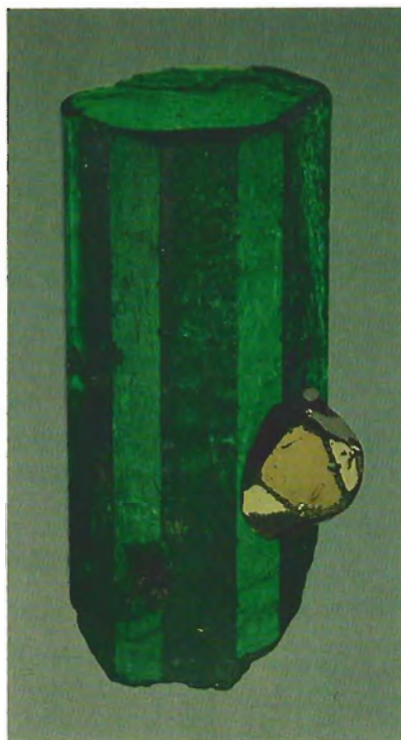


Figure 3. This fine emerald with pyrite specimen (45 mm high)—from Muzo, Colombia—is part of the famous Sams Collection now housed in the Houston Museum of Natural Science. Photo © Harold & Erica Van Pelt.

diamond, designed by Vikki Jirikow of Playa del Rey, California.

The deadline for the 1987 competition is February 28, 1987. For further information, contact the Jewelry Manufacturing Arts Department at GIA—Santa Monica.

Committee formed by ASA and AAA to establish uniform appraisal standards. The American Society of Appraisers and the Appraisers Association of America have announced the establishment of a joint committee to create and produce uniform standards of appraisal practice specifically for the appraisal of personal property, in order to provide guidelines that can be used by the public, the courts, government agencies, commercial

institutions, and members of the appraisal profession. The committee will also formulate the educational curricula for appraisers of personal property leading to academically recognized bachelors' and masters' degrees in Valuation Sciences.

The India Gems & Jewellery Fair will be held at the Taj Mahal Hotel, in Bombay, India, September 4–8, 1986. Organized by the Gem & Jewellery Export Promotion Council and the Hindustan Diamond Company, Ltd., the fair will feature unmounted diamonds, colored stones, and pearls, as well as traditional, antique, and contemporary jewelry. For further information contact: I.G.J. Fair 1986, c/o Hindustan Diamond Company, Ltd., 15, Atlanta, Nariman Point, Bombay, 400 021 India. Telex: 011-4710 HDCL IN.

INTERGEM '86, the International Trade Fair for Gems & Jewellery, will be held on September 26–29, 1986, in Idar-Oberstein, West Germany. The exhibits range from mineral specimens and gem rough to finished jewelry, and products related to the jewelry industry. For further information contact: INTERGEM GmbH, Messeverein e.V., Postfach 12 21 80, D-6580 Idar-Oberstein, West Germany.

The Fourth Hong Kong Jewellery & Watch Fair will be held September 13–16, 1986, at the Regent, New World, and Sheraton Hotels and the Golden Mile Holiday Inn. Over 400 exhibitors from 22 countries around the world will offer a wide range of products for all aspects of the gem, jewelry, and watchmaking industries. Seminars on the international market situation and various other topics will be held concurrently with the fair. For further information contact: Headway Trade Fairs Ltd., 628 Star House, 3 Salisbury Road, Kowloon, Hong Kong. Tel.: 3-697993; telex: 41249 HX.