GEM NEWS

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COLORED STONES

Amblygonite treatment. Pale, straw-colored amblygonite from Tanzania, which was quite common a few years ago at gem and mineral shows, has recently reappeared on the market. This time it is a pale green color, thanks to irradiation. Jonté Berlon Gems of Fallbrook, California, brought the pieces, which range in size from 5 to 15 ct, to our attention. The Research Department at GIA has obtained samples of both untreated and irradiated material for further study. The color stability of this treated material is not known at this time. As reported by Patricia Gray, GIA Research.

Bicolored beryl. Mike Ridding of Silverhorn jewelers in Santa Barbara, California, reported to *Gems & Gemology* on a new find of beryl from an old locality in Minas Gerais, Brazil. The location, close to Coronel Murta, near Araçuaí, produced approximately 400 kg of beryl in the early 1960s. Then, in late 1985, a second beryl strike produced another approximately 100 kg from the same site. The beryl crystals from this strike are quite attractive, with intense orange centers that grade to a pleasing green rim. Some crystals are at least 20 cm long. The orange-colored zones are of faceting quality; small stones cut from these areas are light in color. The remaining material is most suited for gem carving. Mr. Ridding also reports that some of this material is heat treated in Brazil, which turns the green rims blue and the orange cores pink.

Electrically treated chalcedony. Virtually all so-called "black onyx" is the result of sugar-sulfuric acid chemical treatment of chalcedony, and agates can be stained to just about any color using a wide variety of dyes. One of the more clever chalcedony "improvement" methods involves the staining and electrolysis of pale off-white to cream-colored translucent material to produce not only a pleasing body color but also an attractive internal dendritic pattern as well. In this process, copper salts are dissolved in water to a point of saturation, and the precut chalcedony is stained a blue-green color through sustained immersion. Once the chalcedony is the desired shade, an electric current is passed through it and the ionic copper solution begins to break down. As the in-place electrolysis proceeds, a native copper dendrite begins to form, radiating outward from the center of electrical contact. The result, as shown in figure 1, is quite attractive. Although only a few examples of this treatment have been observed over the last two decades, it now seems to be resurfacing. Once this material is seen it is not forgotten, but, until now, no photographs have ever been provided to aid the gemologist in the visual identification of this relatively uncommon enhancement. Gem News wishes to thank Mr. Gerhard Becker of Idar-Oberstein, West Germany, for supplying us with this sample for study.

Green sphene. A gem and mineral collector living in Tijuana, Mexico, reports that a type of green sphene, thought to be colored by chromium, is being marketed as "Mexican Emerald." The sphene is found in the territory of Baja California, Mexico, near San Quintin, in a very limited area and a small deposit. The stones are a rich green color with many flaws, which in part mask some of their high dispersion. This dispersion, as well as the fact that sphene is "over-the-limits" of the standard refractometer, should provide sufficient information for any gemologist to identify it. As reported by Patricia Gray, GIA Research.

Important new amazonite find. A new pocket of amazonite was found in June 1986 in the Crystal Peak District of Teller County, Colorado. The pocket, named the Keyhole Vug, was reported to be approximately 8 × 6 × 2 feet. It has yielded amazonite crystals of solid green color and luster intermingled with small white cleve-

Figure 1. This chalcedony has been treated with electricity, which produced the dendritic pattern in the copper salt-treated subject. Photo by John I. Koivula.

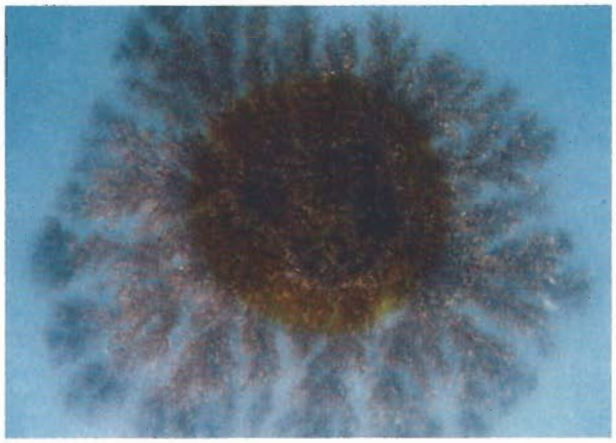

Figure 2. These approximately 7-cm (2¾ in.) birds, carved from red and green tourmaline and mounted in gold with diamond accents for use as a pin, were featured at Intergem '86 in Idar-Oberstein, Germany. Courtesy of F. A. Becker, Idar-Oberstein. Photo ©Harold & Erica Van Pelt.

landite rosettes. There was no smoky quartz associated with the amazonite in the pocket, although the presence of small circular holes on the specimens suggests that quartz had once been present and had been selectively etched away. Specimens of this material are expected to be shown at the Tucson Gem & Mineral Show in February 1987. (*Mineral News*, October 1986)

Intergem Idar-Oberstein '86. Fine green and pink tourmalines from West Africa were popular items at the recent Intergem '86, held in Idar-Oberstein, Germany last September. A variety of new cuts were also featured, as was a new variation on gemstone carvings: Birds and animals delicately carved from tourmaline and other fine gem materials have been mounted in gold for use as jewelry (figure 2). Another highlight of the show was a 1954 Mercedes Benz 300SL carved from rock crystal with accents in rubies, gold, and diamond.

Kenyan rubies exported to Thailand. As reported to Gem News by Karim Jan of Tsavo Madini Inc., in Costa Mesa, California, Thai gem dealers are buying large lots of Kenyan ruby and exporting them to Bangkok, Thailand, for heat treatment.

Anyone familiar with Kenyan rubies knows that they often have very beautiful color but are also just as often clouded to a milky translucency by excessive amounts of fine particulate exsolution rutile. According to Mr. Jan, the Thais are heat treating these "cloudy" African stones using the same method that is also used on Sri Lankan geuda. The change produced by heating these Kenyan gems is rumored to be quite dramatic: The gems go in translucent and come out transparent. Because of the Kenyan rubies' excellent color and fluorescent character, once clarified they look like Burmese material. The best of these treated Kenyan rubies are said to be visual equals to the finest Burmese gems.

Metavariscite. Bart Curren, a gemologist at GIA, recently loaned Gem News a most unusual cabochon for examination (figure 3). The cabochon was cut by Mr.

Figure 3. After gemological testing, this unusual cabochon was discovered to be metavariscite. Photo ©Tino Hammid.

Figure 4. These elbaite tourmalines from a new site in Minas Gerais, Brazil, often make striking mineral specimens. The specimen measures approximately 12 cm. Photo by Mike Ridding.

Curren from the core of a light green opaque variscite nodule. The finished cabochon (18 × 14 × 4 mm) was a very pleasing translucent "chromium" green color reminiscent of fine jadeite and not at all characteristic of variscite. Although the refractive index and specific gravity of the cabochon seemed a little low for variscite, they were still within the accepted ranges. However, the color and translucency suggested that additional testing might be worthwhile. X-ray powder diffraction performed by Chuck Fryer revealed that the cabochon was metavariscite, the monoclinic dimorph of variscite. Dr. Emmanuel Fritsch investigated the cause of the beautiful green color spectrophotometrically. The metavariscite absorption spectrum exhibited two very intense absorption bands, at 430 nm and 620 nm (which together cause the color), leaving a deep transmission window in the green (520 nm). "Chromium" lines are present at 684 and 686 nm. Infrared spectrometry revealed an additional absorption band at 1043 nm in the near-infrared, probably associated with Fe^{2+}.

New find of elbaite tourmaline. In May of 1986, a new deposit of elbaite tourmaline was discovered in the state of Minas Gerais, Brazil. Mike Ridding, of Silverhorn jewelers, also reported the following information to Gem News. The tourmalines from this new deposit may have limited gem potential because they are highly included. However, they make striking mineral specimens because of their often undamaged groupings and interesting color gradations, as demonstrated by the 12-cm specimen shown in figure 4. The pegmatitic matrix associated with these tourmalines consists mainly of albite feldspar and lepidolite mica. The area where the tourmalines are found is located near the old and still actively producing Cruzeiro mine at Havra da Paderneira, Municipio de Aqua Boa, in Minas Gerais.

ANNOUNCEMENTS

The American Gem Society Conclave for 1987 will be held in San Francisco on April 23–28. This year's theme is "San Francisco '87: Your Golden Gate to the New Technology of Success." GIA President Bill Boyajian will be the featured theme speaker. Classes and seminars will be presented primarily at the Fairmont Hotel, with some at the Stanford Court and Mark Hopkins Hotels. For further information contact Laurie Hudson, marketing manager and primary conclave planner, (213) 936-4367.

The International Colored Gemstone Association will hold their annual Congress in Bangkok, Thailand, on May 18–20, 1987, at the Shangri-La Hotel. An estimated 500 delegates are expected to attend, representing all aspects of the colored gemstone industry. Those interested in attending the 1987 ICA Congress should contact the ICA administrative office at: 22643 Strathern Street, Canoga Park, CA 91304. Telephone: (818) 716-0489. Telex: 820801.