THE 2014 TUCSON MINERAL SHOW

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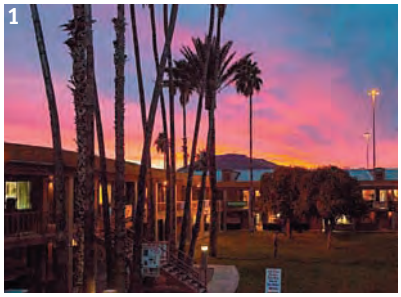

1. Breathtaking sunset at Tucson. Photo: Kai Rösick.

«One cannot embrace the endless», this simple thought, expressed in the middle of the 19th century by Kozma Prutkov, a collective Russian satirist philosopher, is the best definition of the Tucson Mineral Show, which floods Tucson in Arizona for three weeks each year. The crowds of visitors notably increase the population of the city; all hotels are occupied by the dealers and visitors to the show; the vacant lots are covered by the dozens of tents filled with minerals of all kinds. This year, the city hosted thirty eight shows. All these shows, happening more or less simultaneously, create an unrepeatable feeling of the festival of mineral, with an electrified atmosphere of the carnival marathon.

B The Tucson Show has celebrated its 60th anniversary. No special events took place this year. However, many collectors recalled the beginnings. The members of the Tucson Gem and Mineral Society have something to recall and to be proud of. There were only eight dealers who organized the first show in 1954. No one could foresee that in some time this will become the world's largest mineral show, and Tucson will become a mineral capital of the planet. In Arizona at that time, there was another mineral show in Phoenix, just 120 km north of Tucson, and in the USA there were hundreds of mineral amateurs (friends of mineralogy) Clubs, each of which had its own show. However, only one has managed to grow to such extent. There are different reasons for this.

Herbert Obodda, an outstanding collector and well-known dealer, who participated in the Tucson Show during 50 years since the early 1960s, gives a priority to outstanding weather, which is typical for Tucson during this time of the year. Indeed, when Europe and larger parts of North America suffer from winter colds, Tucson has soft, warm and sunny weather. However, it is worth

2–3. This time of the year is a blooming season of the desert. Photo: Kai Rösick.

4. **Asurite**. 16 × 13 cm.
Boy Bekker, Tousite, Morocco.
Specimen: Brian Kosnar, Mineral Classics.
Photo: M.B. Leybov.

5. **Aquamarine**. 45 × 8 cm. Tamil Nadu, India.
Specimen: «Collector's Edge». Photo: M.B. Leybov.

Photo on page 52–53.
Tucson is place to meet old and new friends from different corners of the world.
Photo: Gail Spann, Jolyon Ralph, Kai Rösick.

to remember that show in February is just one of many good decisions of the Tucson Mineral Society Council.

No doubts, Bob Jones, an author of text to the jubilee issue of the Mineralogical Record, dedicated to the 50th anniversary of the Tucson Show, is right by writing directly: *«Keep in mind that a show is only as good as the people running it»*. We pay a tribute to the enthusiasm, cleverness and persistence of the members of the Tucson Mineral Society Council, to those who created a unique and viable model of the show and continues to support and develop it during sixty years, turning it from an ordinary event of the city magistrate into an unrivalled and grandiose world phenomenon. The numbers of exhibitors is counted in thousands, with hundreds of thousands attendees.

Not only have the quantitative indicators managed to grow up. The connoisseurs and veterans of the Tucson Show, such as John White, Herbert Obodda, Gene Schlepp (participant of the First Tucson Show in 1955), say in unison about a constantly growing quality of specimens and an upgraded level of knowledge of both dealers and visitors. William Pinch, an outstanding mineralogist and collector, contributed a lot to the devel-


Das Superbuch!
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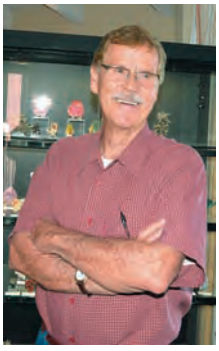
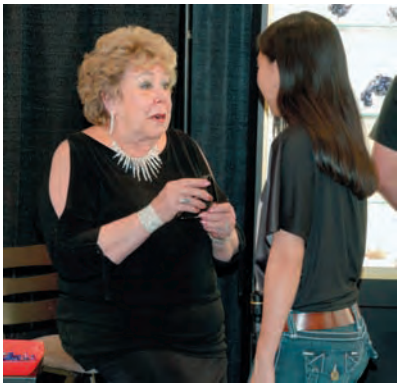












20 years




EASILY
DISTRACTED
BY SHINY
THINGS




SHELBY





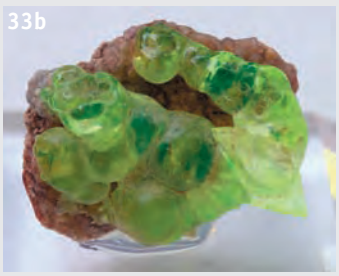
Keep out of
Direct Sunlight

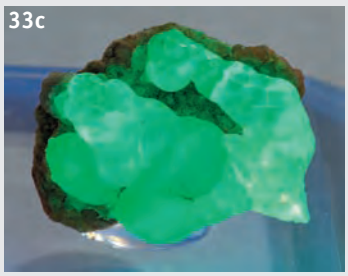

Daylight Florescent Hyalite Opal from Mexico

Dr. Peter Megaw, the exhibits chair for the Tucson Gem and Mineral Society show, and an avid collector of Mexican minerals, was the source of one of the more novel and interesting things I saw in Tucson this year; hyalite opal from central Mexico. Jordi Fabre of Fabre Minerals was selling specimens that he acquired from Peter. What makes these hyalite samples interesting is their strong fluorescence in daylight. Hyalite is most commonly colorless and transparent in sunlight, and only fluorescent when exposed to ultraviolet light (UV) from a source where most of the visible light has been filtered out (i.e. a typical UV lamp made to illuminate minerals). The new samples, however, exhibit a yellow color that varies with the light source. Comparing the color among incandescent, halogen and LED light with sunlight a distinct variation was found. The degree of daylight fluorescence also varies among samples with the strongest effect yielding bright yellow highlights with a district green body color. The effect is best seen in diffuse sunlight, such as in a shadowed area, rather than in direct illumination. As expected, these samples are also particularly intense in their fluorescence when exposed to a UV lamp. The strongest fluorescence response is in short wave UV. The strong yellow-green fluorescence common to most hyalite opal is due to the presence of uranium as the uranyl species; hexavalent uranium with two short bonds to oxygen in a linear arrangement.

Recent work by Drs. Georges Calas and Laurence Galoisy, of the Institut de minйralogie, de physique des matйriaux et de cosmochimie at the Sorbonne in Paris, show that it is a particular uranyl complex, and not all uranyl in the opal, that activates the fluorescence (personal communication). Their results suggest that the fluorescent complex is uranyl phosphate adsorbed on the internal surface area of the opal (Calas *et al*., 2009). Why the new specimens are daylight fluorescent is currently unknown but one speculation is the concentration of uranium in the sample. If concentration is the answer, then given the work of Calas and Galoisy, it is likely the concentration of a specific uranyl complex in these samples, and the total uranium concentration may not be abnormal compared to hyalite from other locations.

32. Opal-hyalite under different lighting. 2 × 3 cm. Mexico. (a) incandescent light, (b) day light, (c) ultraviolet light. Specimen: J. Farbe. Photo: M.B. Leybov.





33. Opal-hyalite under different lighting. 4 × 3 cm. Mexico. (a) incandescent light, (b) day light, (c) ultraviolet light. Specimen: J. Farbe. Photo: M.B. Leybov.

Analysis of the new material by Cйsar Menor Salvбn of the he Spanish National Research Council (Consejo Superior de Investigaciones Científicas – CSIC) indicates the presence of uranyl. His data and an ongoing discussion of the samples are posted by the Friends of Minerals Forum at http://www.mineralforum.com/message-board/viewtopic.php?p=36968.

More detailed studies of the samples and associated minerals are currently ongoing by Dr. Peter Burns and his research group in the Department of Civil & Environmental Engineering & Earth Sciences at the University of Notre Dame in Indiana.

Reference: *Calas, G, Galoisy, L. and Allard, T.* (**2009**) Uranium trapping on opals from the Nopal natural analogue: evidence for complexation on internal surface of opal // Goldschmidt Conference Abstracts.

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«Plata Mexicana», Mexican Silver displayed by Peter Megaw at the 2014 Tucson Gem and Mineral Show

One of eight exhibits featuring native silver and silver minerals from famous localities worldwide including Kongsberg, Batopilas, Colorado, Michigan and Nevada. Peter case featured silver species from some of the most famous Mexican localities including: Pachuca, Guanajuato, Batopilas, Fresnillo and Boleo. Less prolific districts including Santa Eulalia, Bacis, Concepcion del Oro and Naica were also represented. Two pieces are worthy of special historical note. The first is an Acanthite pseudomorph after Argentite on Quartz from the Guanajuato District Guanajuato State. Formerly in the collection of the American Philosophical Society, the oldest scientific society in the United States, this specimen is one of six obtained by Joel Roberts Poinsett in 1822 or 1823; the remainder are in the Smithsonian Institution. Poinsett, then US Envoy to Mexico, had an interest in mining and mineral specimens and was frustrated by his inability to get good specimens in Mexico City. In his 1822 book, "Notes on Mexico" he wrote: "*There is a collection of minerals in one of the apartments (in Mexico City), but it is very limited-surprisingly so when we consider the riches of the mineral kingdom in this country. I have, from the first day after my arrival, used every effort to procure good specimens of minerals, and find it extremely difficult, although assisted by (Andres) Del Rio, professor of mineralogy, and by Cervantes, professor of botany, both learned men, of whom honourable mention is made by Baron (Alexander von) Humboldt. Specimens are not to be bought here, nor are they to be procured by sending to the mines. A good collection can only be made by going to those sources of mineral wealth, and there selecting them. I shall return to Guanaxuato, and hope in that district of country to obtain some few specimens*". This specimen and its five siblings were the fruits of that excursion and were donated by Poinsett to the American Philosophical Society in 1835.

The second is a group of very coarse elongate spinel twins of Native Silver from the Batopilas District in Chihuahua State, also with a Poinsett connection. This piece was formerly in the collection of the Philadelphia Academy of Sciences and was probably sent in 1832 to Joel Roberts Poinsett, then US Envoy to Mexico, along with 5 well-documented mine samples for his authentication as high-grade silver ores. Like the acanthite mentioned above, this was donated to the American Philosophical Society by Poinsett in 1835 and was probably removed by William Vaux and incorporated into the Philadelphia Academy of Sciences collection.

Peter Megaw,
Exhibits Chairman for the Tucson Gem and Mineral

38. Acantite pseudomorph after **argentite** on **quartz** from Guanajuato resion, Guanajuato state, Mexico. Collection of Poincett. Photo: Jeff Scovil.

39. Group of very deformed elongated spinel twin crystals of native **silver**. Batopilas resion, Chihuahua, Mexico. Collection of Poincett. Photo: Jeff Scovil.