On page 59:

27. **Wulfenite** with **calcite**. Crystals up to 0.9 cm. Apex mine, San Carlos, Chihuahua, Mexico. Specimen: Peter Megaw. Photo: Jeff Scovil.

28. **Ludlamite**. 10 cm wide. Bolivia. Specimen and photo: Dan Weinrich.

29. **Cerussite** with **dioptase**. 3 cm high. Sanda, Kimbedi, Mindouli Dist., Pool Dept., DR Congo. Specimen: *Spirifer*. Photo: Jeff Scovil.

30. **Topaz**. 10 cm high. Boryw XVII quarry, Stzregom, Lower Silesia, Poland. Specimen: *Spirifer*. Photo: Jeff Scovil.

31. Elbaite with fluorapatite.
6.2 cm high. Barra do Salinas, Minas Gerais, Brazil. Specimen: Eric Decarlo. Photo: Jeff Scovil.

32. **Olivenite**. 2.8 cm wide. Milpillas mine, Cuitaca, Cananea Dist., Sonora, Mexico. Specimen: Peter Megaw. Photo: Jeff Scovil.

33. Olivenite. 5.8 cm high.Milpillas mine, Cuitaca, Cananea Dist.,Sonora, Mexico. Specimen: Peter Megaw.Photo: Jeff Scovil.

2. Novelty Minerals at Tucson 2020

# Carles Manresa\* and Alfredo Petrov\*\*

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In 2020, the 66<sup>th</sup> edition of the Tucson Show was held, including a very special birthday, the 50th anniversary of *Mineralogical Record* magazine. Happy Birthday *MinRec*! For more information about this event see: https://www.mineral-forum.com/message-board/viewtopic.php? p=70010#70010.

The world is constantly changing, at all levels, socio-economic, socio-sanitary (we are in full Covid-19 pandemic as these lines are being written), and this also affects the world of minerals, and consequently the most important mineral fair in the world. Tucson 2020 saw the final deterioration of what had been for many years the nerve center of the Fair, the Inn Suites hotel, lately Fortuna Inn & Suites.

This has caused widespread confusion, since 2021 a new focus of attention will open at the Hotel-Resort El Conquistador, north of Tucson, a show that will be organized by the Arizona Mineral & Fossil Show group, who previously organized the show at the Inn Suites. Several "satellite" shows are being organized around Oracle Road. This generates some anguish for visitors, and even more so for exhibitors who do not know or cannot decide where to move or whether to stay where they are. Everything is up in the air. A guide to avoid missing part of the shows can be found here: https://www.mineral-forum.com/messageboard/viewtopic.php?p=69814#69814.

But the future is just that, the future, so we will proceed to deal with the certainties of the past and present and talk about the minerals. Tucson 2020 did not disappoint in terms of new things, something that can not always be stated categorically.

The Tucson shows are divided into three main parts: the downtown hotels plus the zone around Oracle Road; the Westward Look; and the eponymous "Tucson Gem and Mineral Show" (usually referred to in conversation as the "main show"). Temporally the hotel shows and Oracle Road zone overlap with the other two major events since they remain open during most of the Tucson show season.

As we said, this year was generous in terms of mineralogical news, with several good finds.

**Mexico** finds provided the highlight, with the Milpillas mine in Santa Cruz Municipality, Sonora, continually yielding surprises. Good **olivenite** crystals were found, among the best

25. Custer of **olivenite** crystals. 1.9 x 1.8 x 0.9 cm. Milpillas Mine (992 level), Cuitaca, Municipio Santa Cruz, Sonora, Mexico, finds of November-December 2019. Specimen and photo: *Fabre Minerals*.

26. Group of **olivenite** crystals. 1.9 x 1.4 x 1.3 cm, crystals up to 1.9 x 0.5 cm. Milpillas Mine (992 level), Cuitaca, Municipio Santa Cruz, Sonora, Mexico, finds of November-December 2019. Specimen and photo: *Fabre Minerals*.











# Tucson Mineral Show (USA), February 2020







### Tucson Mineral Show (USA), February 2020

34. Wulfenite with mimetite and calcite. 4.5 cm wide. San Carlos mine. San Carlos. Manuel Benavides, Chihuahua, Mexico. Specimen: Spirifer. Photo: Jeff Scovil.



35. Cluster of **creedite** crystals with green and violet **fluorite**. 5.5 x 4.3 x 3.2 cm, crystals up to 0.3 x 0.2 cm. Navidad Mine, Abasolo, Rodeo, Municipio de Rodeo, Durango, Mexico. Finds of October-December 2019, a novelty at Tucson 2020. Specimen and photo: Fabre Minerals. The specimen is very different from those known from this locality in recent years, although there are similar specimens from this mine in an old collection, which coincides with the indications that this find came from old mine galleries.



36. Shattuckite inside quartz and with malachite. 6.7 x 5.1 x 1.9 cm. Milpillas Mine, 1100 level, Cuitaca, Municipio Santa Cruz, Sonora, Mexico. Specimen and photo: Fabre Minerals.





37. Quartz (var. amethyst). 9 cm. La Sorpresa Mine, Amatitlan, Guerrero, Mexico. Specimen: Scott Werschky. Photo: Joaquim Callen.

38. Ludlamite crystals on limonite with minor siderite and pyrite. 7.0 x 5.4 cm. Huanuni mine, Dalence province, Oruro Department, Bolivia. Specimen: Luis Miguel Fernández Burillo Minerales. Photo: Carles Manresa.

39. Sulfur. 6 cm high. Sicily, Italy. Specimen: Wayne & Dona Leicht, Kristalle. Photo: Jeff Scovil.



those from Congo.

Tucson.

ful blue-violet zoning.

**Bolivia**: From this country, more specifically the Huanuni mine, in Dalence province, Oruro Department, some of the most impressive novelties of the show were the lud**lamite** crystals on limonite with minor **siderite** and **pyrite**. Not really new, but for



in the world, of a deep green color on matrix, with outstandingly sharp crystals. Some of the pieces are associated with pale yellowish botryoidal aggregates of **hydroniumjarosite** or **ammoniajarosite**, first report of these species at this mine.

From this same mine, **dioptase** specimens have also been found, and although already known from here, these are the best seen so far, although still not reaching the quality of

And to finish off the Milpillas mine some specimens of **shattuckites** included in quartz, some associated with **malachite** and others associated with **dioptase**.

Another Mexican novelty was the appearance of **cinnabar** from the Cocineras mine, in the Santa Eulalia district, Aquiles Cerdán Municipality, Chihuahua. They are intensely red crystals with good luster in a matrix formed by gypsum, calcite and quartz crystals.

An important novelty was the discovery of **wulfenites**, some associated with mimetite, on a baryte matrix, from the La Morita mine in the Municipality of Ascensión, Chihuahua, as outstandingly sharp wulfenite crystals showing their tetragonal morphology, with a very intense orange color. In specimens that also have mimetites these are usually spherical aggregates of yellowish color and always on a matrix of slightly pink baryte crystals. Very aesthetic and balanced pieces. Some of these had already been seen previously at the Denver Show, but their quality has improved a lot and some truly world class specimens were displayed at

Other small finds worthy of mention include the **goethites** from the Ojuela mine in the Municipality of Mapimí, Durango, with multicolored iridescence and which readers will quickly compare with the goethites from Tharsis, in Huelva, and/or Cerro Colorado in Minas de Riotinto, in Spain, perhaps somewhat more similar to the latter.

Even though not a new find *sensu stricto*, the light pink-violet **creedites** from the Navidad mine, Abasolo, Municipality of Rodeo, Durango, merit mention. They exhibit terminal faces and sit on a matrix of greenish fluorite. They must be specimens from old galleries as they are different from the typically orange creedites found there in recent times.

Finally for Mexico there was the **quartz** (variety amethyst), labeled as from the La Sorpresa mine in Amatitlán, more transparent and bright than those known until now, with beauti-

We describe below other new things that appeared at Tucson 2020:

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40. **Beryl**. Odisha, India. Photo: Friends of Mineralogy Forum.

41. Cluster of doubly terminated **tremolite** crystals. Specimen 2 x 1.8 x 1.5 cm. Big Mole claim, West Pierrepont, St. Lawrence County, New York, USA, finds of June, 2019, a novelty at Tucson 2020. Specimen and photo: *Fabre Minerals*.

42. **Tremolite** crystal. 0.6 x 1.1 x 0.8 cm. St. Lawrence County area. Big Mole claim, West Pierrepont, St. Lawrence County, New York, USA, finds of June, 2019, a novelty at Tucson 2020. Specimen and photo: *Fabre Minerals*.

43. Laurentthomasite crystal on matrix.
1.4 x 1.2 x 1 cm. Beravina, Ambaro, Tsaraitso, Betroka District, Anosy Region, Madagascar (type locality), finds in April, 2019.
Specimen and photo: Fabre Minerals. This new mineral species displays a dichroism: blue "Paraíba" color viewed from the front and yellow with green tints seen from the side (with focused light), has the high content of Scandium in its composition (around 3.8%).





both their quality and crystal size, and their arrangement on the matrix, they could be considered among the best in the world. The crystals are apple-green, shiny, well-shaped, and exhibit a characteristic termination on the biggest and most visible crystals, rough and brownish, which could be due to their conditions of growth in very narrow veins where the wall impeded development of perfect crystal terminations. Some of the pieces are accompanied by bluish **vivianite** crystals, which makes them really spectacular.

Apart from these ludlamites, Bolivia also yielded large sharp crystals, to over 5 cm size, of **ferberite** from the Kami mine in Cochabamba department. And finally for Bolivia, very large brilliant and perfect **bournonite** crystals, some on matrix, from the Víboras mine, Machacamarca, Cornelio Saavedra Province, Potosí. Although these were already well known, the ones are an order of magnitude better than what has been seen before.

**USA:** from a new outcrop called the Big Mole claim, West Pierrepont, St. Lawrence County, New York, crystals of **tremolite**, some of them doubly terminated and with a little dolomite matrix, with very well defined faces and edges, grey-green color, with intense luster, and more transparent than seen before in St. Lawrence County.

**Brazil:** a classic species from Ibitiara, Bahia, some new acicular yellow **rutile** with **hematite** were found but of an extreme fragility as the rutile crystals are very thin and delicate. Very aesthetic specimens nevertheless.

*India:* not totally new, but you can still see **beryl** (var heliodor), with a beautiful but faint yellow color, delicate, with very good transparency and basal terminations, from Odisha (ex- Orissa).

**DR Congo:** New **elbaite** from the Kivu region, some of specimens quite remarkable, very sharp and free-standing, with watermelon-like colorations. This country, until now, was not exactly known for its tourmalines, but that seems to be changing.

*Madagascar* gave us a new species, **laurentthomasite**, which forms small dichroic crystals, blue when viewed from the front and yellow-green when viewed from the side. It contains a high content of scandium (Sc), around 3.8%. The type locality for the species is Beravina, Ambaro, Tsaraitso, Betroka District, Anosy Region. Laurent Thomas himself presented the species in Tucson 2020, revealing that the first trace of this new species appeared in 2018, with the most important find made in April 2019.

*Canada*: **quartz** (var. amethyst) was found at a new locality in 2018 in La Manche, Placentia Bay, Newfoundland, and a couple tons of specimens were mined in 2018–2019,



44. **Rutile**. 9 cm. Ibitiara, Bahia, Brazil. Specimen: Scott Werschky. Photo: Joaquim Callen.

45. Rutile, hematite. 6.1 cm wide. Ibitiara, Bahia, Brazil. Specimen: Travis Fishman.
46. Elbaite crystals. 4.3, 5.7, 5.5, 4.4, 4 cm high. Kivu, DR Congo. Specimen: Patrick Mayer.
Photo 45–48: Jeff Scovil.

47. Laurentthomasite. 0.73 ct, 0.94 ct, 0.76 ct,
2.1 cm high. Beravina, Betroka, Anosy Region,
Madagascar. Specimen: *Polychrome Minerals*.
48 (a,b). Laurentthomasite crystal displays a dichroism with focused light: (a) front view –

alchroism with focused light: (a) front view – blue "Paraíba" color; (b) side view – yellow with green tints. 2.8 cm wide. Beravina, Betroka, Anosy Region, Madagascar. Specimen: *Polychrome Minerals*.



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# Tucson Mineral Show (USA), February 2020





#### Tucson Mineral Show (USA), February 2020





DIMENSIONES: 9 x 6 x 4,5 cm. PRECIO: OBTENCION: Fabre Minerals FECHA 28 de ayorte de 2015 DESCRIPCION: cristiles harta 8 mm Bronador per un prisma conte y el pinacide, con caos y aristas muy definidas color verde montano

#### 49. Group of prismatic pyromorphite

crystals. 9 x 6 x 4.5 cm, crystals up to 0.7 x 0.5 cm. San Andrés mine, Del Tunel pocket, Espiel, Comarca Valle del Guadiato, Córdoba, Andalusia, Spain. Ex Ignacio Gaspar Sintes collection. Specimen and photo: *Fabre Minerals*.

50. Rosette aggregates of platy baryte crystals partially covered by small sulfur crystals.
7.8 x 6.4 x 3.6 cm. Tarnobrzeg, Subcarpathian Voivodeship, Poland. Ex Carles Manresa collection. Specimen and photo: *Fabre Minerals*.



first appearing on the world market outside Canada at Tucson 2020. Lustrous deep purple pyramidal crystals to several cm size form groups and clusters up to a few kg in weight. Apart from all those newly mined goodies mentioned above, we should note that recycled collections are occupying an ever increasingly important role in the Tucson shows, and the amount of money being spent on recycled classics exceeds the spending on newly mined material. Every time fresh material from the Rock Currier collection, for example, was put out on the tables, long lines of buyers waited to get at it. So in some sense collectors are consuming "fossil fuel" as more old material than new moves through the market.

The character of the "main" show, (Tucson Gem and Mineral Show®), has changed much over time and is now more of a great social event than a real sales venue. It functions more like a temporary museum with extraordinary exhibits, where some dealers display marvelous booths more to promote their businesses than to actually sell. Sales recede to the background as ever more dealers quit exhibiting there and others try to decide whether continued participation is worthwhile. Everyone agrees that the show should continue, but some creative thinking will be required to ensure its future.

Finally, we say thanks to the FMF forum, for their "Tucson Show 2020" thread https://www.mineral-forum.com/message-board/viewtopic.php?t=6082 which brought attention to most of the new material included in this report.



specimens in the lot because of the black centers some of the crystal faces have. The scale under the specimen is an inch with a rule at one cm. Malachite pseudomorph after New Cornelia Mine, Ajo, Pima Co., Arizona, USA Cuĝ'(CO<sub>3</sub>)(OH)<sub>2</sub>, mon.; Cuĝ'(CO<sub>3</sub>)<sub>2</sub>(OH)<sub>2</sub>, mon.

Acquired in 1986 Small cabinet 156 gm.

ollars the price looks cheap. It was not one of the bette

Bought this specimen from Ken Roberts. Thinking at the time that it was way over priced. Probably was but in today's

The Rock H. Currier Collection No. 4678

51. **Malachite** pseudomorph after crystal cluster of **azurite**. 7.7 x 5.2 x 4.9 cm. New Cornelia Mine, Ajo, Little Ajo Mountains, Ajo District, Pima County, Arizona, USA. Ex Rock H. Currier collection, No. 4667. Specimen and photo: *Fabre Minerals*. Tucson Gem and Mineral Show<sup>®</sup> (TGMS) is famous for ts exhibitions, in the preparation of which many museums around the world, collectors, dealers, friends of mineralogy clubs take part. This year was no exception – below we publish a list of exhibits that were awarded in competitions in various categories, as well as photos of several exhibits made by Peter Modreski, our good friend and editor.

Junior Novice Adanced Master

# Best of Theme

Thumbnail Toe-Nail Miniature Small Cabinet Cabinet Lapidary/Jewelry Self-Collected

# Special Trophies

Desautels Lidstrom Bideaux Romero Gibson Schupp

52. Exhibit case of Erin Delventhal,

YMC exposition. Photo: Peter Modreski.

53. Exhibit of the Young Mineral Collectors

(YMC) exposition. Photo: Peter Modreski.

In the opinion of Peter Megaw, TGMS Exhibits Chairman one of important cases was the cooperative exhibit put in by the Young Mineral Collectors (YMC) group...over 60 different contributors... all under 40 years of age...most under 30. This group has grown rapidly into having nearly 1000 members in less than 2 years. All the members he has met are serious collectors. Lauren Megaw and Gawan Fiore are the cofounders of the group. Information about this group can be found on Facebook



# 3. Exhibits of TGMS-2020

Louissa Stine David Tibbitts Michael Parrott Not Awarded	Educational Thumbnails Miniatures	Sulfur
Alex Schauss	Wittichenite	Australia
Bob Byers	Azurite	Bisbee, AZ
Dave & Kathy Waisman	Beryl	China
Dave & Kathy Waisman	Grossular	Mali
Steve & Rita Maslansky	Babingtonite	China
Diana Mueller	Star Garnet	Brazil
Steve & Rita Maslansky	Amazonite	Colorado
Alyssa Donovan		
Alyssa Donovan	Grossular-	Canada
Steve & Rita Maslansky	Azurite on Malachite-	Morenci
Yale-Stefan Nicolescu	Stephanite	
GIA	World Class Diamonds	
Bob Morgan	Epitaxy	