

Mineral Shows 2019:
Sainte-Marie-aux-Mines (France)

SAINTE-MARIE-AUX-MINES-2019 IMPRESSIONS OF EXPERTS

Mineral Show in Sainte-Marie-aux-Mines is the cosiest and most heartfelt event according to many collectors and dealers. The Sun, les Vosges Mountains, great wine and croissants set up a melancholic mood for its participants. However, one cannot always quietly observe the showcases due to many visitors to this popular event.

Therefore, if you suddenly missed something interesting, while drinking wine and talking to an old friend, or did not reach Sainte-Marie this year at all, the *"Mineralogical Almanac"* will fill the gaps and report the most interesting things about the thematic exhibitions, individual specimens that impressed our authors, who are know the world of minerals and follow the market news.

We present two expert reports: one from Dr. Eric Heinen De Carlo (USA) and second from Dr. Joerg Liebe (Germany). Their notes are illustrated by photographs of famous European photographers Joaquim Callen, publisher of *"Mineral Up"* magazine from Catalonia, Malte Sickingler, and Louis-Dominique Bayle, publisher of *"Le Regne Mineral"* magazine from France.

We hope that you will definitely don't miss this mineral show next year.

1. Grégoire de Bodinat with his outstanding **siderite** (with **dolomite** and **quartz**) plate. 65 x 45 cm. Mine de Mésage, Isère, France. Mined in 2019. Specimen: Grégoire de Bodinat. Photo: Ludmila Cheshko.

2. Museum curators meeting (sitting left to right) Eloïse Gaillou, Farida Maouche, Federico Pezzotta, (standing left to right) Dmitriy Belakovskiy, Alessandro Guastoni, Jean-Claude Boulliard, François Vigouroux, Maria Alferova, Alan Hart, Natalia Borovkova, Pierre-Jacques Chiappero, Denis Boël, Nicolas Meisser, Ludmila Cheshko, Cristiano Ferraris, Yang Liang Feng, Gian Carlo Parodi, Mike Rumsey, Natalya Hermenau. Photo: Alexander N. Mineev.



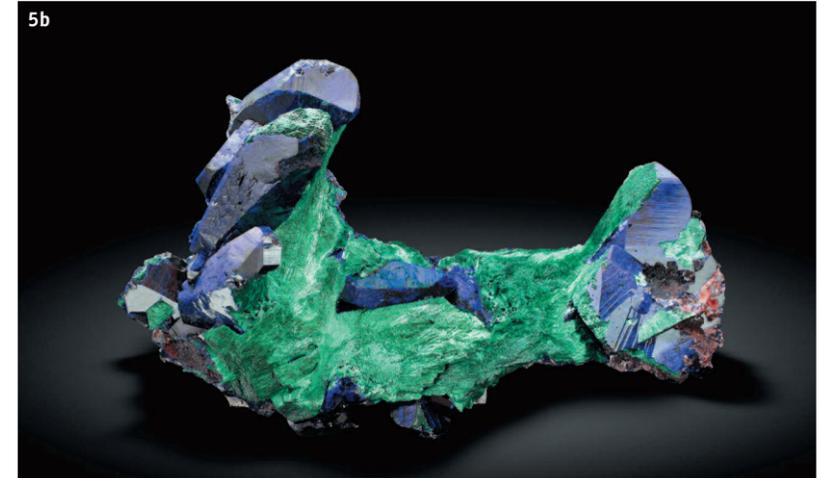
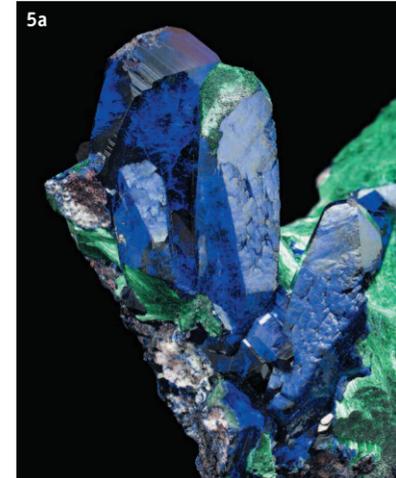
3. **Gold**. 1.5 cm. Asachinskoe Deposit, Kamchatka Krai, Russia. Specimen: Jordi Fabre.

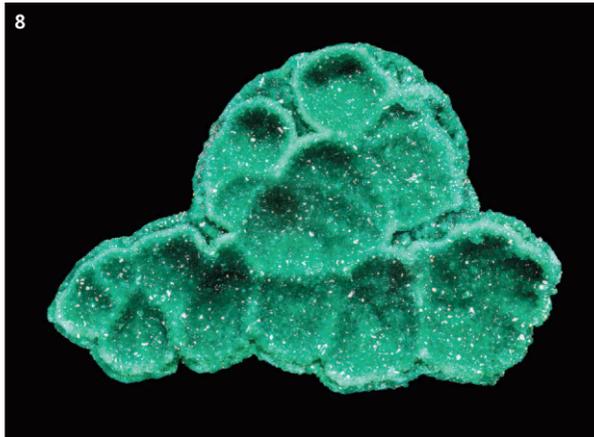
4. **Gold**. 3 cm. Siberia, Russia. Specimen: Jordi Fabre.

5. **Malachite** with **azurite** (~17 cm) from the Milpillas Mine, Cuitaca, Santa Cruz Municipality, Sonora, Mexico. Specimen: Michel and Claudette Cabrol, *Merveilles de la Terre*.

6. **Apatite** crystal (up to 30 cm) on matrix. Dodoma, Tanzania. Specimen: Ricardo Prato (*Minerali*).

7. **Topaz**. 11 cm. Pantaw near Mogok, Myanmar. Specimen: Mikhail Anosov, *Russian Minerals*.





8. **Diopside**. 9.5 x 6.5 cm.
Region de Mindouli, Congo-Brazzaville.
Specimen: Frederic Escaut.

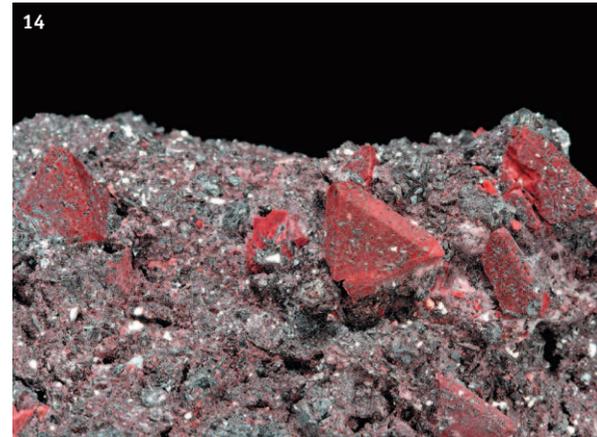
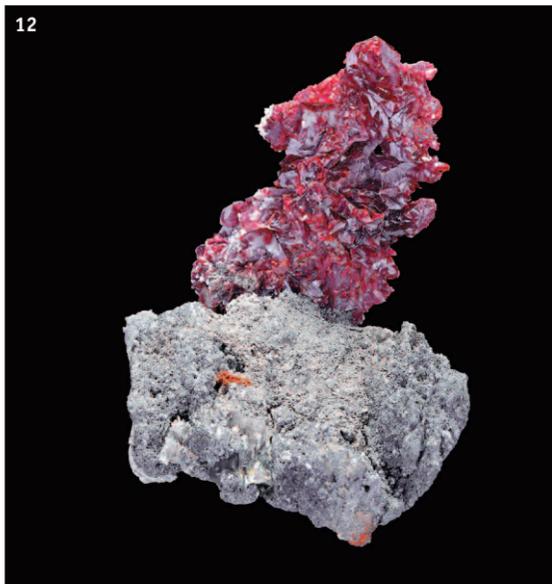
9. **Rhodocrosite**. Manuelita, niveau 1400, Yauli, Junin, Peru. 8.3 x 5.6 cm. Specimen: Jordi Fabre.

10. **Corundum** "sapphire" cluster of eight crystals. 3.5 x 3.5 x 2.8 cm. Kadir-Kadar, Mogok, Myanmar. Specimen: Bill Larson, Pala International.

11. **Spinel** crystal (2 x 1.5 x 1.6 cm) on calcite (with a "cover"). 8 x 5.6 x 6.7 cm. Kyat-Phin, Mogok West, Myanmar. Specimen: Federico Barlocher.

12. **Proustite**. 5 x 7.5 x 4.2 cm. Ait Haman, Bou Azzer, Morocco. Specimen: Jordi Fabre.

13. **Malachite**. 10 x 9 x 5 cm. Star of the Congo Mine, Katanga, DR Congo. Specimen: Christophe Gobin.



14–15. **Zunyte**.
(14) 7 x 3.6 cm; (15) 6.4 x 4 cm.
Qalat-e Bala salt dome, Bandar-Abbas County, Hormozgan, Iran.
Specimen: Museum of Natural History, Paris.

16. **Vanadinite**. 9.3 x 3.7 x 6.4 cm. Coud'a, Mibladen, Morocco. Specimen: Jordi Fabre.

17. **Chrysoberyl**. 11.8 x 14 x 7.7 cm. Manakana, Tamatave, Madagascar. Specimen: Laurent Thomas (*PolyChrome*).

18. **Vivianite**. 7.5 x 8.4 x 4.4 cm. Rosia, Poieni, Alba, Romania. Specimen: Anton Watzl.



3. If it's June, this must be Sainte Marie (aux Mines)...

by Dr. Eric Heinen De Carlo
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Photos:
 Bryan Swoboda,
 Eric Heinen De Carlo,
 Kyoko Tomita.

In 1969 I saw a film named “*If its Tuesday, this must be Belgium*”... a humorous tale of a whirlwind summer tour by an American family of nine European countries in 18 days. The concept can easily be applied to attending multiple international mineral shows that take place every year; thus the title of this brief essay on the 2019 Sainte Marie aux Mines Show.

The annual Sainte Marie aux Mines (SMAM) show is an absolute must for me. The week of the show is a bridge between visits to family and friends in France and Spain during my annual trip! There is this sense of community at the SMAM show that I have not found at major US shows, or at more local ones that I occasionally attend. The historical and cultural aspects, of this region of France, including great food and drink and not to forget the storks, make for an experience difficult to reproduce elsewhere (Figure 19).

Sainte Marie aux Mines, is a sleepy little town of about 5000 people in the Val d'Argent (Valley of silver) in the Vosges mountains of Alsace (France). The normally quiet town turns into a maelstrom of activity during the annual invasion of more than one thousand dealers and 30,000 mineral, gem and fossil enthusiasts every June. Navigating the narrow one-way streets to get to the show, then the mineral and gem “zones” where dealer tents are nestled between public buildings hosting even more dealers, becomes quite the challenge! The town is both “paralyzed” and “energized” by the show. I am always invigorated by this atmosphere. As I love

19. Storks nesting on the roof of the “Hotel de Ville” in Munster, Alsace. Photo: Eric Heinen De Carlo.

20. The steps of the Theatre, the central meeting point for the show. Photo: Kyoko Tomita.



21. Wine bottles chilling in a watering reservoir fed by natural spring water next to a friend's house in the Vosges mountains. Photo: Eric Heinen De Carlo.

22. **Vivianite** crystals from Rosia Poieni mine, Alba, Romania. Specimen: Anton Watzl. Photo: Eric Heinen De Carlo.

23. **Vivianite** crystals up to ten centimeters in a geode from Amazonia, Brazil. Specimen: Alain Martaud. Photo: Bryan Swoboda.

quiet time in the mountains and a peaceful setting to enjoy friends and family, however, the area around Sainte-Marie also makes for a wonderful getaway for convivial evenings (Figure 21). Well, enough of that, let's talk about the minerals!

One of the advantages of the SMAM show is that a treasure trove of minerals, fossils and gems can be found all within a radius of about one kilometer. There is so much to be seen that the few pieces I share with you here are only a small sample of what I saw and I apologize to all who might feel slighted by my not mentioning their amazing displays.

The “Theatre” where showcases full of flashy high end minerals await the visitor, and its steps, become the central meeting point of the show (Figure 20). This “Prestige” area is a crystal wonderland with cases upon cases filled with amazing pieces that most of us can only dream to own. Yet, interspersed among this “eye candy” is a multitude of lesser but still very fine specimens. Thus, visitors of all budgets can find their treasure, all while admiring superb museum quality material. Of course, some of the best pieces at the show this year were in the Theatre but I only focus on a few new or unusual things in this brief article.

Vivianite, an iron phosphate mineral, is not uncommon, yet large, gemmy and complex crystals of this species remain highly sought after by collectors. This year vivianite lovers could rejoice! Two important finds were featured at SMAM. One, by Anton Watzl, consisted of miniature to large cabinet sized aesthetic blue-green gemmy single crystals as well as more complex specimens, recovered from the huge open pit Rosia Poieni copper mine in Alba, Romania (Figures 18, 22). The other new discovery, brought to us by Alain Martaud, was from Amazonia in Brazil. Alain had several large flattened geodes full of gemmy intertwined vivianite crystals in the ten centimeter range (Figure 23). I have not before seen vivianites of such quality in geodes. Some of the crystals from the two different locations were also twisted, adding an interesting touch, and it was quite fortuitous to be able to see stunning vivianite specimens of superb color, transparency and form from two localities on different continents!





24. A showcase full of very large **apatite** crystals reaching near 30 cm from Dodoma, Tanzania. Specimens: Ricardo Prato (*Minerali*). Photo: Eric Heinen De Carlo.

Although I prefer cabinet size to very large specimens, I found it difficult not to notice the array of very large apatites exhibited by Ricardo Prato (*Minerali*) in the theater. Marcus Budil also had an excellent specimen of this apatite from Dodoma, Tanzania, but it was not as large. The crystals in the *Minerali* display, some to nearly 30 cm, (Figures 6, 24) and some of associated with diopside, could not be missed! Tanzania is most famous for the beautiful gems (e.g., zoisite/tanzanite, grossular, spessartine and mangano-axinite) from the Merelani Hills and Loliondo areas but the recent Dodoma apatite find is an important addition to the rich mineral heritage of this African nation!

A stunning specimen that caught my eye in *Marcus Budil Fine Minerals* stand was a rose quartz collar around a pale smoky quartz crystal from Sapucaia (Figure 27). It reminded me somewhat of a similar piece in the mineral hall of the Smithsonian Institution in Washington DC, but this one, although smaller, clearly rivals it in quality. Marcus also displayed a stunning amethyst-smoky quartz on matrix from Goboboseb, Namibia (Figure 25) and, much to my delight, a superb Malkhan pegmatite tourmaline from Russia (Figure 26)! The main crystal was well over 15 cm in height and grew out of a matrix of cleavelandite and tourmaline. Marcus also had a fantastic Japan Law twin quartz with absolutely flawless twins to nearly 4 cm sitting on a nest of slightly smaller clear quartz crystals (Figure 28) from the Sumyaham quartz mine on Makalu Mountain, Savapoklari, Shankhuwasavha, Nepal.

Two other pieces I want to highlight from the displays in the Theatre exemplify the two ends of the collector spectrum! One is the largest and best malachite-azurite specimen from the Milpillas location (Mexico) that I have ever seen and the second is a cute little geode from the Deccan Traps in India that is now in my girlfriend's collection... Michel and Claudette Cabrol proudly displayed the former at their stand "*Merveilles de la Terre*" (Figure 5), and this piece, which looks like a fish, took my breath away more than any of the multitude of specimens from this very prolific loca-



25. Amethyst with smoky **quartz** (~12 cm) on matrix from Goboboseb, Namibia. Specimen: Marcus Budil *Fine Minerals*. Photo: Eric Heinen De Carlo.



26. **Elbaite** crystal (~15 cm) on matrix of **albite** (**cleavelandite**) and elbaite from Malkhan Ridge, Chitinskaya Oblast, Zabaykalski Krai, Russia. Specimen: Marcus Budil *Fine Minerals*. Photo: Eric Heinen De Carlo.

27. Rose **quartz** collar around a crystal of smoky **quartz** (about 15 cm) from Sapucaia, Galileia, Minas Gerais, Brazil. Specimen: Marcus Budil *Fine Minerals*. Photo: Malte Sickinger.



28. Japan Law twin of **quartz** (~4 cm each crystal in twin) from the Sumyaham quartz mine on Makalu Mountain, Savapoklari, Shankhuwasavha, Nepal. Specimen: Marcus Budil *Fine Minerals*. Photo: Malte Sickinger.





29. **Scolecite** spray (~3 cm) on heulandite in cavity in basalt, Maharashtra, India. Specimen: ex Laverriere Minerals, now Kyoko Tomita collection.

Photo: 29–31: Eric Heinen De Carlo.

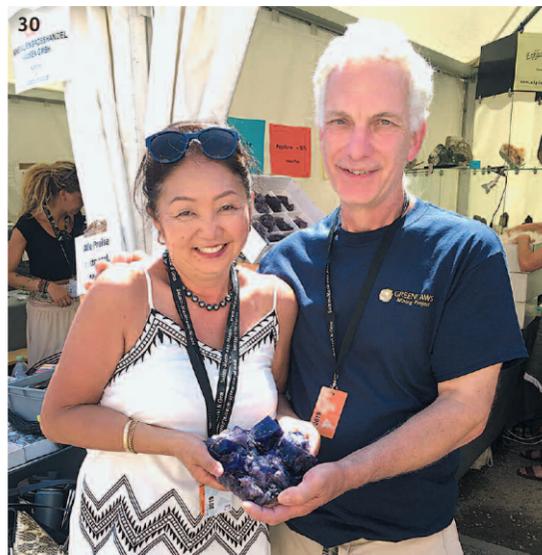
30. Kyoko Tomita and Peter Ward holding a **fluorite** plate from the *Greenlaws Mining Project*, Stanhope, Durham (Weardale), England.

31. Closeup of the **fluorite** shown in the prior photograph, *Greenlaws Mining Project*, Stanhope, Durham (Weardale), England.

tion I have seen! The second, also in the Theatre, was a very cute miniature specimen that I probably would not have noticed while gazing over the treasure trove on display at Jean-Michel and Françoise Laverriere’s stand. It consisted of a sharp spray of scolecite occupying half of the void space in a basalt cavity of about 8 cm, which was fully lined with well-formed peach colored heulandite (Figure 29). This splendid little piece is now in Hawaii. As I said before, there are treasures for all at the Theatre!

Strolling along the alleys lined with tent booths, I later ran into Peter Ward of the *Greenlaws Mining Project*. I first met Peter in 2018 when he showed me (out of the back of his car) some very nice fluorites recovered earlier that year. This year Peter was sharing a booth with Gerd Wiedenbeck and was showing some of his most recent finds. The mine is located in Stanhope, Durham (Weardale), England and the UV fluorescence of Weardale fluorites is world renown. The particularly gemmy green crystals from the Rogerley and the Diana Maria mines come to mind for most of us because they are so fluorescent that simple daylight turns them an electric blue-violet! The fluorite from the Greenlaws mine is just as fluorescent but the specimens I saw were a blueish-purple when in artificial light (rather than green) and the crystals are often large (up to 5 cm on edge) but are not always as gemmy. Peter, however, showed me specimens from a pocket dubbed the “Purple Haze” pocket. The lyrics from a famous Jimmy Hendrix song fit well here, as these fluorites are so stunningly purple in the sunlight that they “cast a spell” on you when you look at them. Several other pockets at Greenlaws produced wonderful plates of large well-formed crystals but the “Purple Haze” specimens truly stand out (Figures 30 and 31)!

Wolfgang (Wolly) Wendel his wife Karin had magnificent cases displaying worldwide minerals in their tent near the Theatre. It is not possible in this



32. **Halite** and **gypsum** (more than 30 cm) from the Bleicherode potash works, in Thuringia, Germany. Specimen: Wolfgang and Karin Wendel, *Wendel Minerals*. Photo: Eric Heinen De Carlo.

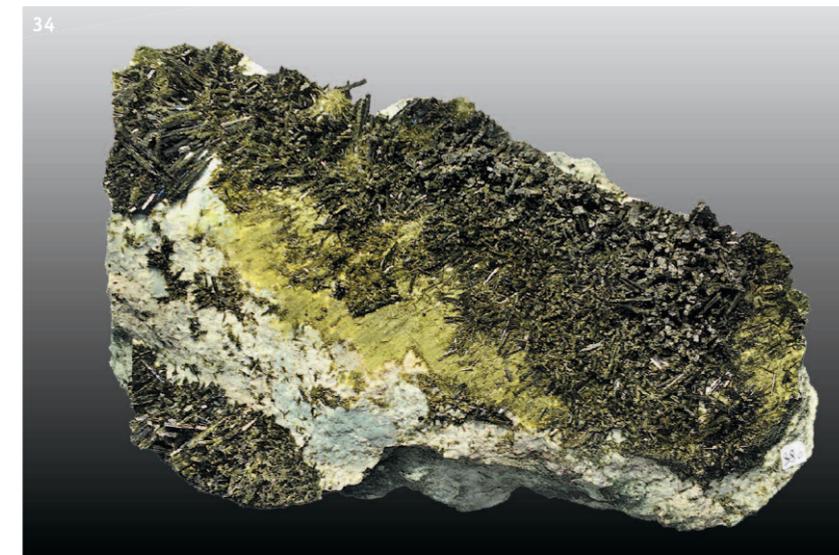
33. **Liroconite** (~10 cm), Wheat Gorland/St. Day United mines, Gwennap, Cornwall, UK. Specimen: *Wendel Minerals*. Photo: Eric Heinen De Carlo.

34. **Epidote** plate (~30 cm) with interspersed quartz, Cornillon, Oisans, Isère, France. Specimen: Jerome Arnou and Jean Marc Pyr . Photo: Eric Heinen De Carlo.

short summary to do them justice but I will highlight two pieces! The first was a very large specimen of halite and gypsum (more than 30 cm) from the Bleicherode potash works, in Thuringia, Germany. It reminded me much more of a beautiful coral than a mineral because of its arborescent nature and size. (Figure 32). The other was a very aesthetic liroconite from the classic location of Wheat Gorland/St. Day United mines in Gwennap, Cornwall. (Figure 33) Such pieces are not commonly seen these days but Wolly actually had two of them!

Several recent finds in older French locations in the Alps were on display at the “piscine”. Recent work by Jerome Arnou and Jean Marc Pyr  at “le Cornillon,” an epidote locality near Le Bourg d’Oisans, Is re, has led to the recovery of very nice material. I found their specimens to be quite attractive, with generous coverage of well-formed dark green lustrous epidotes sometimes interspersed with brilliant quartz crystals. The pieces ranged from miniatures to several large plates of well over 30 cm (Figure 34). The other new find from an old locality was by Gr goire de Bodinat, the owner of the Mine de M sage, a well-known iron mine in the Is re department of France. Beautiful siderite specimens found at the mine over years past grace many collections but Gr goire and his colleagues have worked tirelessly and recently opened a pocket lined with huge crystals. After cleaning off “rusty coatings” the best of these specimens show superbly formed and quite lustrous crystals, of a size nothing short of stunning. I do believe that the large plate Gr goire was showing at the entrance of the “piscine” was my favorite piece for the entire show (Figure 1)!

Each year Alain Martaud and his team of museum and other experts expend tremendous effort to put on a fantastic display in the “Exposition Prestige”: this year the theme was lead (Pb). The displays are put on by major museums and private collectors and compete for the viewers’ eye! Content ranges from technical and educational to aesthetic cases or treat a special theme. Each keeps the viewer





35. **Descloizite** (~15 cm), from Berg Aukas, Otjozondjupa, Namibia.
Specimen: Mines Paris Tech Mineralogical Museum, Paris, France.

36. **Cylindrite**, Poopo, Bolivia.
Specimen: University of Strasbourg museum.

37. **Pyromorphite**,
Les Farges, Ussel, Corrèze, France.
Collection: Muséum National d'Histoire Naturelle, Paris, France.

38. **Bournonite** crystals on galena ore matrix from zinc mine at Les Malines, St. Laurent le Minier, Gard, France.
Specimen: Michel Perraudin.

39. Display case in the *Exhibition Prestige* dedicated to "Arsenic poisoning" in various books published over the years.

Photo 35–39: Eric Heinen De Carlo.

fascinated! Some pieces that caught my attention included a large cabinet size descloizite from Berg Aukas, Namibia (Figure 35), belonging to the Mines Paris Tech mineralogical museum; a lustrous cylindrite ($Pb_3Sn_4FeSb_2S_{14}$) from Poopo, Bolivia (Figure 36), belonging to the University of Strasbourg museum; a bright lime-green specimen of pyromorphite from the classical location of Les Farges, Ussel, Corrèze, France (Figure 37), displayed by the Muséum National d'Histoire Naturelle in Paris; and a substantive piece of galena ore covered with large lustrous bournonite cogwheels found in the huge zinc mine at Les Malines, St. Laurent le Minier, Gard, France (Figure 38), this time owned by private collector Michel Perraudin. Two excellent display cases presented wulfenites from the private collection of Caroline Martaud. Finally, a special display on tales of "arsenic poisoning" with book covers from Agatha Christie novels (Figure 39), brought back good childhood memories of reading in bed late at night.

All in all, it was another wonderful show at Sainte Marie aux Mines in 2019 and I can only say to you: come next year if you can, it's much better in person than in this short report!

4. Special Mineral Exhibitions

by Dr. Joerg Liebe

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Photos 40–68: Joerg Liebe

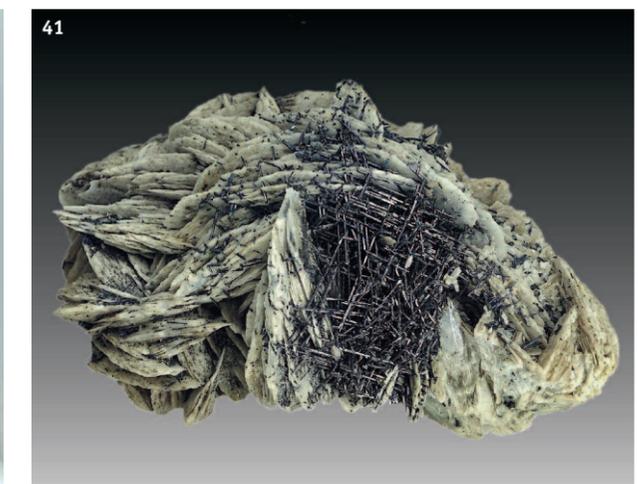
As in many years before it was sunny and hot in the small beautiful valley around the old mining town of Sainte Marie aux Mines. But nevertheless many visitors found their way to this second largest mineral show in Europe, and the set-up was as exciting as always, in tents, in halls, in the theater, and in the parks – every corner was filled with exhibitors of minerals, gemstones and fossils. Totally different than the shows in large commercial exhibitions halls, and loved for exactly this reason!

The topic of the 2019 exhibition was "Lead Minerals," which promised a very colorful exhibition and expectations were more than fulfilled. Currently more than 420 lead minerals are known. Lead is a metal, very well known since more than 7,000 years. It was also in the focus of alchemists who tried desperately to transform heavy lead into also heavy gold. But instead of gold silver was extracted from many lead mines with galena. One show case focused on the use of lead in alchemy, with some old specimens of other elements frequently used by the alchemists, like mercury, antimony and tin.

As in the previous years the special exhibition was very well organized and commissioned by Alain Martaud, with the support of several of the most famous mineralogical museums in France, like the Natural History Museum in Paris, the Mineralogy Museum MINES Paris Tech (former Ecole de Mines), Musée de Confluences in Lyon, and the Mineralogical Museum of

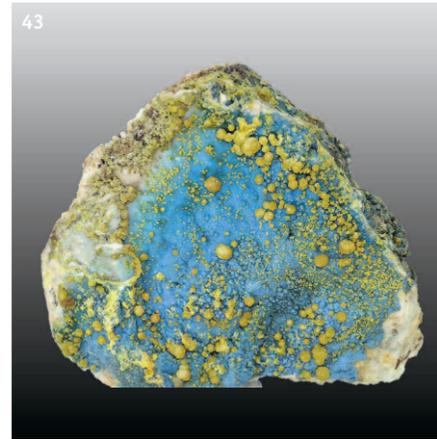
40. Display of the Alain Martaud collection of extraordinary French lead minerals.

41. **Galena** crystals, "knitted", on **baryte**.
10 x 6 cm. Les Malines, Saint-Laurent-de-Minier, Gard, France. Specimen: Alain Martaud.





42. **Zinkenite**. 5 x 5 cm.
Graf Jost Christian Mine, Wolfsberg,
Harz mountains, Germany.
Specimen: Natural History Museum, Luxembourg.



43. **Plumbogummite** with **mimetite**. 14 x 12 cm,
Roughton Gill, Caldbeck Fells, Cumberland, UK.
Specimen: Natural History Museum, Paris.



44. **Cerussite** twin. 8 cm high.
Touissit, Morocco.
Specimen: Christian Mondeilh.

45. **Cerussite**. 18 x 12 cm.
Tsumeb, Namibia.
Specimen: Mineralogy Museum MINES Paris Tech
(Ecole de Mines).

46. **Arsenic**. 15 x 10 cm.
Gabe Gottes mine, St. Marie aux Mines, Vosges,
Alsace, France.
Specimen: Natural History Museum, Paris.



the Strasbourg University. Also the Natural History Museum of Luxembourg and the Museum from the University of Liege/Belgium brought beautiful specimens from their hidden stocks.

Six show cases focused on lead minerals in France; three about mines around the Central Massif, one about mines in the Vosges Massif, including the mines around Sainte Marie, and one about the Armorican Massif. And even the Alps, Provence and the Pyrénées were represented with impressive lead minerals. Alain Martauld contributed also with many specimens from his own collection (Figure 41) and filled one show case with specimens only from France (Figure 40).

“Lead in Europe” presented lead containing specimens from famous old localities in Germany, e.g. zinkenite from Wolfsberg/Harz Mountains (Figure 42), Austria, e.g. nice wulfenite crystals from Bleiberg, Karinthia, the UK (Cornwall, Cumbria, Devon, Derbyshire), Belgium, Sardinia, Spain, Czech Republic, Romania and Bulgaria

Other show cases focused on lead “... in the Americas, in Africa and in Asia and Australia”. Morocco is a source of several colorful lead minerals like



47. **Arsenic in quartz**. 12 x 3 cm.
Saint Jacques mine, St. Marie aux Mines,
Vosges, Alsace, France.
Specimen: Natural History Museum, Paris.

48. **Galena**. 6 cm.
Madan, Bulgaria.
Specimen: Gilles Emringer.

49. **Galena**, pseudomorph after
pyromorphite. 6 x 4 cm.
Huelgoat, Finistère, France.
Specimen: Eric Asselborn.

50. **Galena**, pseudomorph after
pyromorphite. 9 cm.
Kautenbach Mine, Bernkastel-Kues,
Rhineland-Pfalz, Germany.
Specimen: Natural History Museum,
Luxembourg.



cerussite, vanadinite and wulfenite from Touissit, Mibladen, and Taouz, presented also separately by Christian Mondeilha. The cerussite crystals from Touissit were quite unusual and attracted a lot of attention (Figure 44). China was represented by nice wulfenite crystals, thin blades, from Xinjiang. From the USA a beautiful large wulfenite crystal from the famous Red Cloud Mine in Arizona was shown (Figure 62).

Of course also Sainte Marie aux Mines itself was represented in four show cases, one with classic minerals of this old mining town, another one with different “Carbonates.” Native arsenic (Figures 46, 47), as one of the preferred materials used by poisoners, was well presented together with criminal history literature, for example by Agatha Christie. The fourth case focused on minerals found first in St. Marie, and named after someone or mines in this region. The most recent mineral newly discovered is giftgrubeite, a calcium/manganese arsenate from the Giftgrube Mine (a literal translation is “poison pit”), approved by the IMA in 2017 (IMA 2016-102).

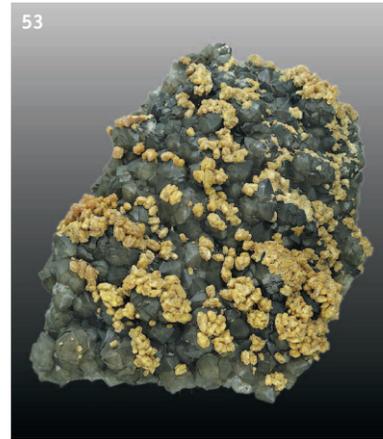
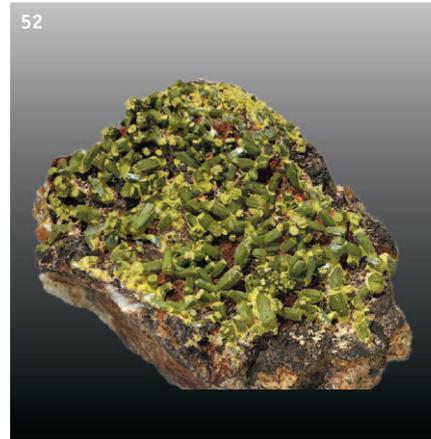
Several private collectors presented their personal highlights, and their exhibitions were more than worth to study in detail.



51. **Galena** on **quartz** (amethyst). 15 x 12 cm. Mantallot, Cotes-d'Armor, France. Specimen: Maxime Tomljanovic.

52. **Pyromorphite**. 8 x 6 cm. Vézis, Labastide-L'Eveque, Aveyron, France. Specimen: Maxime Tomljanovic.

53. **Pyromorphite** on smoky **quartz**. 18 x 16 cm. Les Farges, Ussel, Corèze, France. Specimen: Gilles Emringer.

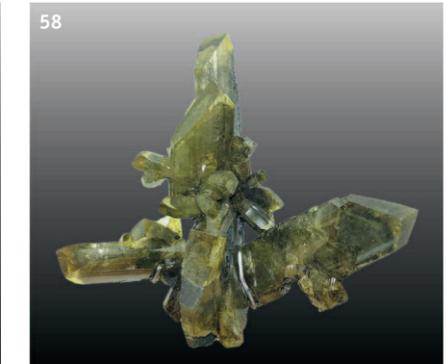
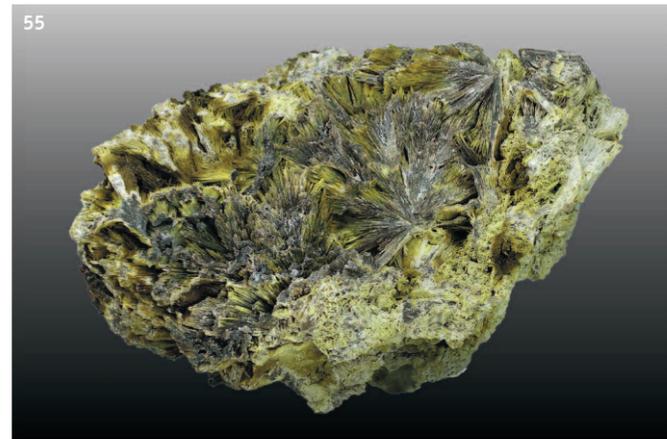
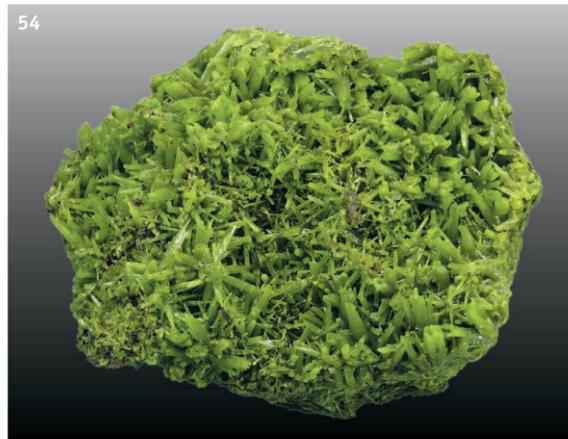


Eric Asselborn, one of the most well known collectors in France, selected specimens from the old French locality of Huelgoat, Finistère, which is famous in France for large crystals of galena, pyromorphite, anglesite, and pseudomorphs of galena after pyromorphite (Figure 49) – obviously not only the Kautenbach Mine in Germany (Figure 50) produced such excellent specimens! Huelgoat supplied specimens to many museums all over the world, but is not that well-known in other countries outside of France.

Gilles Emringer presented lead minerals from Madan in Bulgaria, one of the most interesting localities for beautiful galena. Some galena specimens show wonderful skeletal growth (Figure 48). Many specimens of galena, often associated with sphalerite, from this still active mine were available at the show at reasonable prices.

A young collector, Maxime Tomljanovic (nickname “Max Tom”, less than 30 years old) contributed also with a nice exhibition of lead minerals from France of an excellent quality (Figures 51, 52). Probably a lot more can be expected from this engaged collector in later years.

Caroline Martaud, wife of Alain, disclosed her love for wulfenites from worldwide localities with an exhibition already shown in Tuscon in 2019 (the theme of the



56. **Galena** with **dolomite**. 5 x 5 cm. Peisey-Nancroix, Tarentaise, Savoie, France. Specimen: Natural History Museum, Paris (ex collection: Haijü).

57. **Bournonite** on **siderite**. 6 x 6 cm. Saint Pons, Alpes-de-Haute-Provence, France. Specimen: Alain Martaud.

58. **Anglesite**. 8 x 8 cm. Touissit, Morocco. Specimen: Christian Mondeilh.

59. **Dufrenoyite** (crystal 2,5 cm!) in **dolomite**. Binn Valley, Valais, Switzerland. Specimen: Mineralogy Museum MINES Paris Tech (Ecole de Mines).

60. **Bournonite** with **sphalerite**. 8 x 8 cm. Les Malines, Saint-Laurent-Le-Minier, Gard, France. Specimen: Michel Perraudin.

61. **Galena**, pseudomorph after **pyromorphite**. 9 x 5 cm. Huelgoat, Finistère, France. Specimen: Eric Asselborn.

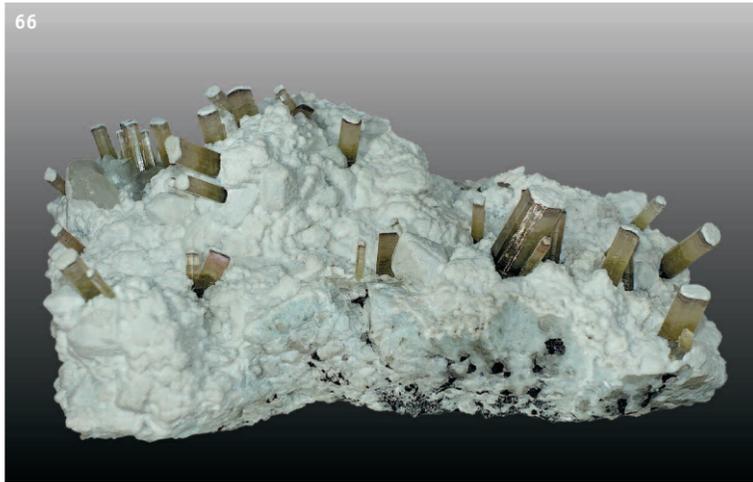
62. **Wulfenite** crystal (5 x 4 cm) on matrix. Red Cloud Mine, La Paz, Arizona, USA. Specimen: Mineralogy Museum MINES Paris Tech (Ecole de Mines).

63. **Galena**, quartz. 15 x 10 cm. Madan, Bulgaria. Specimen: Alain Martaud.

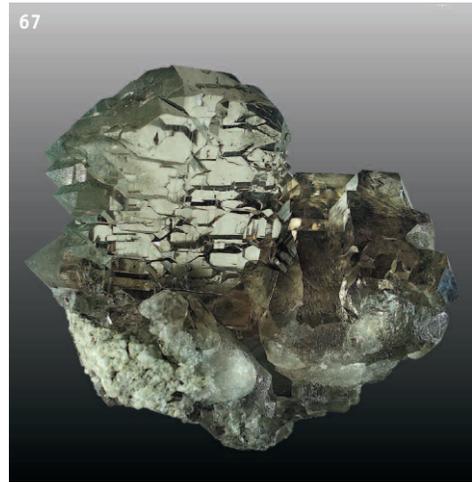
64. **Vanadinite**. 10 x 8 cm. Taouz, Er Rachidia, Morocco. Specimen: Christian Mondeilh.

65. **Vanadinite**. 16 x 9 cm. Mibladen, Morocco. Specimen: Christian Mondeilh.





66. **Elbaite**, approx. 30 x 15 cm.
San Piero in Campo, Elba Island, Tuscany, Italy.
Specimen: Frederico Pezzotta.



67. Smoky **quartz** gwindel on matrix. 20 x 20 cm.
Mont-Blanc massif, Chamonix, France.
Specimen: Sébastien Khayati.

68. **Galena** in **sphalerite**. 7 x 7 cm.
Schmalgraf, Moresnet, Wallonia, Belgium.
Specimen: Mineralogical Museum
University of Liege, Belgium.



Tucson Show was wulfenite!), she filled two show cases easily with specimens from Bleiberg/Austria, Mezica/Slovenia, Durango/Mexico, Arizona/USA and also from Morocco and the Congo.

The exhibition around the swimming pool (“Piscine”) focussed only on a few specimens, but ones of extraordinary beauty, size and rarity, mainly from Alpine collectors. Two specimens with enormous siderite crystals in combination with some smaller crystals of quartz and ankerite from a new find in January 2019 in the Mine de Mésage, Saint-Pierre-de-Mésage, Isère, France caught the eyes first. The size of the crystals was 10–15 cm, and one specimen of 65 x 45 cm size got the name “bomb de fer” (Iron sensation). The collector was Grégoire de Bodinat, a french cristallier (alpine collector). This specimen was for sale... P.O.R. It would be really hard to find a siderite specimen of this size and beauty from any other locality in the world (Figure 1).

Another unforgettable specimen from the collection of the Tourmaline specialist, Frederico Pezzotta showed more than 30 nicely colored, up to 3 cm high elbaite crystals, pink to greenish, and partly with black caps, as they are very much looked for at this location, San Piero in Campo, Elba Island, Italy. It is one of the very famous, classic tourmaline localities in Europe and such a large perfect specimen with so many crystals is rarely seen in any museum (Figure 66).

And, of course, another highlight was a smoky gwindel quartz on matrix, which is already rare to find, but also the perfection and size of around 20 cm surprised every visitor. It was found at the Mont-Blanc massif, near Chamonix, France, by Sébastien Khayati in 2018 (Figure 67).

In short, the special exhibitions at Sainte Marie are an attraction of its own. A mixture of old historic specimens, partly with old labels, and new finds of the last 50 years, together with a lot of information in both French and English languages is something no visitor at the show should miss.

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Precious opal ('Yowah nut'). 6 x 4 cm each. Koroit, Queensland, Australia. Photo: Michael B. Leybov.

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