The Mineralogical Society of Victoria

Incorporated

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Newsletter No. 239

September 2019

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The Mineralogical Society of Victoria Inc.
P.O. Box 153
Lara, Victoria, 3212

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Membership Details:

Joining Fee	$5.00		
City Adult Member	$25.00	Country Adult member	$20.00
City Family membership (2 adults & children under 18)	$35.00	Country Family Membership (2 adults & children under 18)	$30.00
Student Member (full time)	$15.00	Newsletter only	$15.00

(N.B. - Country membership - more than 50 km from Melbourne G.P.O.)

Applications for membership can be obtained by writing to:-
The Secretary, Mr Fred Kapteina, P.O.
Box 153
Lara, Vic, 3212.

General meetings are held on Wednesday evenings every two months (except January and Public Holidays). Please see the Forward Diary in this Newsletter for upcoming meeting dates and locations.

Visitors are most welcome.

Newsletter of the Mineralogical Society of Victoria
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FORWARD DIARY

PLEASE NOTE - General Meetings are held approximately every second month on Wednesday evening.

Sept 15 Sunday	Mineral Appreciation Group: 10:00am, Nunawading Lapidary Club, Oval Way, Nunawading. Topic: Minerals from the IMA list, coded Rn (Renamed) or Rd (Redefined)
Sept 29 Sunday	Micro Group Meeting: George Lysiuk's home Topic: Sulphate minerals
Oct 9 Wednesday	GENERAL MEETING 8:000pm, at Royal Society of Victoria Building, Cnr La Trobe and Victoria Streets, Melbourne Speaker: Oskar Lindenmeyer (Collections Manager Melbourne Museum), Topic – The Museum's Collections.
Oct 22 Sunday	Mineral Appreciation Group No meeting due to non-availability of NDLC rooms
Oct 27 Sunday	Micro Group Meeting: George Lysiuk's home Topic: Study of the Min Soc Victorian micro collection
Nov 2 & 3 Sat. & Sun	Field trips at Broken Hill. (Please see Excursions Report)
Nov 17 Sunday	Mineral Appreciation Group: 10:00am, Nunawading Lapidary Club, Oval Way, Nunawading. Topic: Minerals with special properties
Nov 24 Sunday	Micro Group Meeting: George Lysiuk's home. Topic: The group 17 minerals (halides)
Dec 8 Sunday	Field trip to Flinders. (Please see Excursions Report)
Dec 11 Wednesday	GENERAL MEETING 8:000pm, at Royal Society of Victoria Building, Cnr La Trobe and Victoria Streets, Melbourne. Speaker: Ian Strachan, Topic– Namibia
Dec 15 Sunday	Mineral Appreciation Group: 10:00am, Nunawading Lapidary Club, Oval Way, Nunawading. Topic: Minerals from the basalts of Victoria
Jan 19, 2020 Sunday	Mineral Appreciation Group: 12:00noon, Nunawading Lapidary Club, Oval Way, Nunawading. Topic: Specimens acquired in 2019
Feb. 12, 2020 Wednesday	GENERAL MEETING 8:000pm, at the South Melbourne Community Centre, 1 Ferrars Place, South Melbourne. Swap and sell night with Pristine Minerals bringing in specimens for sale
Feb 16, 2020 Sunday	Mineral Appreciation Group: 10:00am, Nunawading Lapidary Club, Oval Way, Nunawading. Topic: Borates

For any of the usual attendees to MAG meetings or other members that wish to attend, if you would love a particular topic to be covered or even re-covered, please let us know.

MINERAL RELATED EVENTS

Sep. 14 & 15	Bendigo Gem Club Expo 757 McIvor Hwy, Junortoun VIC
Sep. 21 & 22	Waverley Gem Club Exhibition Brandon Park Community Centre, 649 Ferntree Gully Rd., Glen Waverley
Oct. 19 & 20	Nunawading & District Lapidary Club show. Dorset primary School
Nov 2 & 3	Geelong Gem and Mineral Club Show West Geelong Town Hall, Packington Street, West Geelong
Apr 10-13,2020	56th Gemboree Albury Show Grounds

NEXT ISSUE

PLEASE NOTE:- Material for the **January** 2020 Newsletter to be with Michael Hirst by **December 20th.**

FROM THE COMMITTEE

Welcome to the September edition of our newsletter, the last issue for 2019.

The Annual General Meeting has come and gone and the new committee is raring to go. Well, not really a new committee, as it is the same members, less one, who will be the committee this coming year, but we are definitely raring to go. We will be happy to accept additional committee members, all you need to do is to come forward and indicate that you wish to join the committee. We need your input at meetings even if you do not have a specific role. This invitation applies to past committee members as well.

Please, please, please, help make the editors life a little easier by providing articles for the newsletter. Our stalwart contributors are slowly running out of steam. Thank you John Haupt for your continuing great articles. We note with interest the travels of some of our members, but where are your articles?

If you can't make it to our General Meetings into the City at the Royal Society because it is too difficult to get there, please note that we are planning to change the Wednesday night General Meeting venue to the South Melbourne Community Centre at 1 Ferrars Place, South Melbourne. The first meeting there will be in February 2020. The change has been necessary for three reasons, the first is the cost of the venue at the Royal. With a smaller membership and even smaller attendance at General Meetings the cost of the Royal is proving unsustainable. At South Melbourne the cost is about 1/10 that of the Royal. The second reason is the poor lighting at the Royal. We are a mineral Society where study and appreciation of minerals is of high importance. With the poor lighting at the Royal, viewing minerals at their best is not really possible and it is tedious to have to bring in suitable lighting. The South Melbourne venue has bright modern lighting. The third reason is parking. This has been an issue at the Royal for some time. At the South Melbourne venue parking isn't an issue. We still hope to have the Annual General Meeting at the Royal, subject to the Royal being prepared to make our usual rooms available for that event.

If you can't make it to Wednesday night General meetings, how about attending either the Micro Group or Mineral Appreciation Group get togethers. Check out the forward diary in this newsletter for both the Micro Group and the Mineral Appreciation Group. The meeting day/times for these meetings may suit more and the topics coming up are challenging and always educational. You do not need to bring any specimens to attend as meetings are totally relaxed and informal.

Members have voiced the need for the Society to get back to its core which must include regular field trips. The committee has therefore decided that since Flinders is our most prolific collecting area, but collecting there subject to approval from Parks Victoria, that we will arrange for an excursion there every year. Please read further about other fieldtrips being planned for the near future under the 'Excursions' report.
If you want to stay abreast with what is happening at the Society or changes to our forward diary please check our current web site, www.minsocvic.org.au. If you are on Facebook, there will be similar postings and updates on our site "Mineralogical Society of Victoria".

Fred Kapteina Secretary

PRESIDENT'S REPORT

I recall writing once before that no matter how busy our lives become or how fast time seems to fly, it can be comforting to know that minerals have probably been around far longer than we have and will (hopefully) continue well beyond our lives without showing any signs of the years.

For our society, the past year has been one of change, some challenges and progress towards the future. An important theme at the 2018 Seminar hosted by Victoria was time and progress. Not just in the overall theme of interpreting the 'Golden Age' of minerals but also in the discussion sessions around the future of mineralogical and future of the societies. As is often the case with these things, there are many challenges to list, think about and perhaps worry about. But the answers are not so easy to put down on paper. The current committee, and those committees from recent past years have a range of ideas about things we can do to help the Society. Some we are doing and have seen results. Some we are not sure about but are exploring them further. And then there are some problems that we really don't have the answer to, or perhaps we have some ideas but feel they might not work. Expect to see ongoing changes to your Society in the coming months. Nothing too drastic, but building on the work from the past few years.

To the committee, thank you all for the year past. Yes, the bulk of the work seems to fall on a couple of shoulders, but that is the way with all organisations. As I have said to many people in the past, never undervalue the contribution that anyone can make to the Society or the committee. Every additional voice, thought, idea, opinion or suggestion is vital. Organisations fail because they become stuck in doing things the way they always do things. All society members should be grateful to anyone who has ever done time on the committee, and I know there are a lot of people who have put in very many years of time. The names of your outgoing committee and the new/current committee are listed in the newsletter, and every one of them has played an invaluable role in keeping the wheels moving.

General Meetings

Our Secretary Fred Kapteina set a goal for us back in mid-2018 which was to set a forward diary planned six months in advance. That is, to get away from the old habits of last-minute changes in venue and speakers, and to avoid the dreaded "TBA" in the schedule. Whilst not always successful, because circumstances can change (such as late cancelation of one meeting due to venue unavailability), and it is hard to lock people into providing a presentation six months ahead, we have certainly been moving towards a longer-term diary of events. We also settled back into holding General Meetings every second month and at the Royal Society rooms when possible. Whilst we had tried meetings on different days of the week and different locations to capture those members who could not get to the regular Wednesday evening events, it seems the inconsistency of the schedule was instead causing attendance to fall. The committee continues to look forward to again holding meetings every month, however this will require greater availability of speakers and stronger support from members when we do have visiting speakers.

A quick summary of the speakers and topics from the General Meetings in the past year is:

- Alex Blount – Ringwoodite, a tale of a Melbournian solution to global water shortages?
- Laura Brehaut (GAA) – Feldspar
- John Haupt – Nickel
- Fred Kapteina – Report on the 2019 Tucson Show
- Alex Blount – Alpine Minerals, but not just from The Alps.

Field Trips

Aside from the collecting trips during the Seminar in June, members returned to Cairns Bay near Flinders. As Parks Victoria felt a need to limit the number of attendees on this occasion, there was a relatively small group that ventured down to possibly the most pleasant collecting locality in Victoria (in nice weather anyway). I have no accurate idea of how many times the Society has visited this locality, but every time we go there are reports of good material being collected and occasionally of something different being found. This trip was no exception with some very impressive natrolite and unusual bright red calcite on analcime with natrolite overgrowth. An example of this material was featured on the cover of the January 2019 Newsletter. Look for details of a return trip planned for later in the year. A potential trip to Mooralla was cancelled as there weren't sufficient numbers of people going during the week to justify the effort of digging a decent hole. With limited locations or opportunities for collecting trips in Vitoria, if members wish to collect minerals for themselves it is important to try to support the trips when we can organise them.

Newsletter and Communications

The Newsletter remains the primary communication with our members although we have ventured into the world of Facebook and emails are also important for contacting many of our members. With too many commitments and too many missed deadlines, the President was relieved to accept the offer from Michael Hirst to again take up the Editor role and this has seen the newsletter back to more regular publication and reduced file size – allowing it to be emailed directly rather than relying on the sometimes quirky download option. Some of our members do still received printed copies, and we understand that many people do not regularly use the internet or computer systems. However, use of the electronic version allows us to include many more high quality photos of minerals or other details from articles without the cost and loss of quality that comes from printing.

Thank you to Michael for continuing to present our newsletter in such high quality and thank you to those contributors, including of course the almost never-ending series of articles provided by John Haupt.

Membership and Attendance

The Society's membership numbers have increased again after the rocky few years where our future looked bleak and many members chose not to continue. Whilst we're not back to the 'good old days', our numbers are solid and provide a good base from which to organise events and diverse opinions to allow us to explore what the Society (that is you the members) really want.

Sadly, we said farewell to Frank Robinson at the end of 2018. A society member for nearly 40 years, Frank was a dedicated and enthusiastic collector especially during the many Society trips in the 1980s and 1990s and in recent times Frank maintained his keen interest in mineral photography coordinating our photographic special interest group.

Attendance at meetings, whether General Meetings, Micro or MAG groups has remained relatively low and is always a subject of discussion and surprise. We have never found a good answer as to why people can't or don't attend, so it is difficult to come up with plans to help encourage more to come along. None of the meetings should be intimidating for 'beginners' and hopefully there is something of interest for the experts as well. I encourage everyone to at least get along to one session to see what they are all about and bringing a friend or two never hurt either.

Special Interest Groups

Our Micromount and Mineral Appreciation Groups continued to meet during most months of the year, each with their respective core members. As noted above, the attendance is open to anyone and no knowledge of the topic and no specimens are required – just an interest in seeing what it is all about. The meetings are a friendly gathering of people to look at and chat about a topic and everyone seems to learn something not matter how experienced they may be. One big change that we have seen in recent years is the availability of good quality digital photography from the meetings allowing impressive visual reports to be presented in the newsletter. If you ever had any doubts about the wonders of the Micromineral world, then once look through a micro group report should be enough to fix that!

Financial Report

There were a few tricky moments during the past year, with changes in committee members and some 'hiccups' with our bank meaning we did not always have control of our finances. Not to suggest we were ever 'out of control', but rather than we didn't have all the information we needed. Ed Richard came on board to take up the treasurer role and after some difficulty, we have managed to update our bank accounts and move them further into the modern world. Ed presented his financial summary at the AGM which to paraphrase a little says that 'we are all ok'. Our strong financial management in the past means that we are in a good position during these current times when investments are only returning very small amounts and costs of everything seem to be rising every year.

Summary and Thanks

This is now my 12th year as President of the Society and it does feel reassuring to know that we have a future with some interesting events planned and a dedicated and enthusiastic team of people working to explore this fine hobby (passion? obsession?). From the seminar in Western Australia this year, future fieldtrips and regular mineral gatherings there is much to see and do. The number of attendees at international shows (obviously Tucson), number of people involved in mineral information and dealing web sites and the readership of journals are all encouraging signs that there are a lot of people out there who share your interests.

Thank you to all of our members and to those members of the other societies who, along with you, carry on this hobby and can continue to inspire some of the next generation about the wonders of the natural world.

Alex Blount
Society President

EXCURSIONS

A number of exciting excursions are in the process of being planned. Two of these have already been publicized via email and expressions of interest sought. Names of parties that have indicated an interested have been added to the relevant list. If you wish to attend either of these field trips, please let one of the Committee members know or send an email to the Secretary at fkaptein@bigpond.net.au.

The first trip is a weekend excursion to a number of collecting sites around the Broken Hill area. This excursion will be held on the weekend prior to the Melbourne Cup, Saturday 2 and Sunday 3 of November. This is ideal for those of you who are normally working, as many would take off the Friday and the Monday to make it an extra-long weekend. This should allow you travelling time to and from Broken Hill.

The Broken Hill Mineral Club will be joining us on the excursions and their President will lead us to the various collecting localities we hope to visit (please note there is no access to main lode mines). Permissions to access properties are currently being sought and we are also deciding on a venue for a Saturday night dinner. More details will be provided to those of you that have registered through the Secretary of our Society.

The second field trip will be to Cairns Bay, Flinders on Sunday December 8. This date was chosen taking into account suitable tides at the collecting area. Again, more details as to meeting place and time will be advised to those that have registered. Expect to collect the full suit of the common zeolites and calcite with an expectation always of something special to be found.

A trip is also being planned to Berry's Beach and Redcliff Head at Phillip Island. On this trip we will be looking for Heulandite, Chabazite, Baryte and Ferrierite. This will be a trip in the first quarter of 2020. More details will follow in due course.

SHORT TALKS

We have not been able to get members to step forward and present a Short Talk for some time. It has also been difficult to squeeze the time in for short talks prior to the main talk at meetings at the Royal due to strict time limits at this venue. Many attendees prefer to have the extra time to socialize over a cuppa after the main lecture. It has therefore been decided to do away with single Short Talks as a pre main lecture event. Instead, if we are to have short talks, we will organize it so that there will be up to three such talks as the primary event at a General Meeting. So, if you think you have a short talk you would like to present in the future, please let a committee person know and we will get two to three such short talks together on one General Meeting night.

MUSEUM FUND

Donations to the Museum Fund are always appreciated and can be made through your annual membership renewal form, through buying or donating specimens for sale, or by contacting the Treasurer or a Committee member at any time.

EDITORIAL

Michael Hirst our regular editor of this newsletter will be back from his holidays in time for the January 2020 edition of the newsletter. So for articles, adverts or other contributions to the newsletter please send them to **The Secretary** of the Society or directly to Michael Hirst (mike7354@hotmail.com) before December 20.

PLEASE don't leave everything to just the regular few to do all the work on the next issue!

Fred Kapteina
Acting Editor

PUBLICITY

Micro Group Report

By John Haupt (All photographs: J. Haupt)

Meeting of the micro-mineral group, June 2019.

The topic was a study of the Society's Broken Hill micro collection. Members were also asked to bring along up to 10 rare or unusual species to also study and compare with any similar species in the collection. The micro collection contains 306 specimens with 91 separate species. Many of the specimens have been donated by members from field trips that they had gone on and collected in the Kintore and Block 14 opencuts and the dumps at the Pinnacles mine between 1975 and 2002. The collection well represents many of the micro-minerals that have been found at Broken Hill. Sadly, the opportunity to collect further from the mines appears remote.

Naturally there were many specimens to look at and discuss - many were excellent specimens of the species and showed what a bonanza of micro sized minerals came from Broken Hill. Some of the rarer or more notable specimens we saw were:

Cuprian adamite as lustrous yellowish-green crystals; excellent crystals of the lead minerals - anglesite & cerussite and of the zinc minerals - smithsonite, hemimorphite, rosasite & aurichalcite. Copper minerals included bayldonite, connellite, ktenasite, pseudomalachite, sampleite, schulenbergite & serpierite.

Attractive crystals of native crystals and native silver in blocky untarnished crystals and as a mass of wires.

Several excellent specimens of raspite - whilst not the rarest mineral from Broken Hill, it is probably the most recognised and sought after species from Broken Hill; also were attractive specimens of the similar species, stolzite & wulfenite.

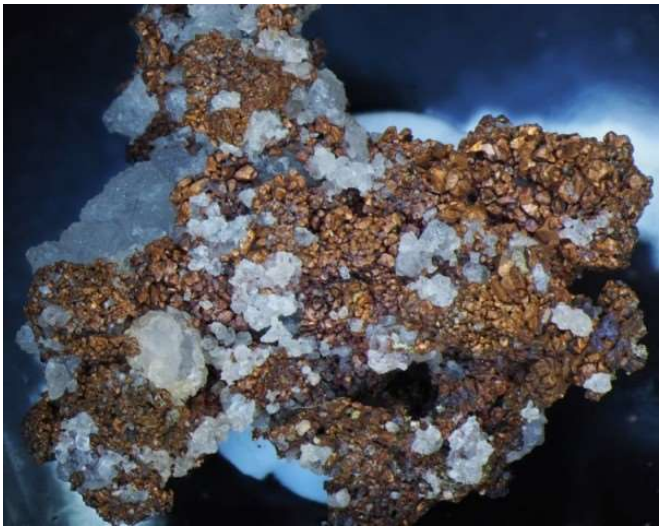
Others species, first described from Broken Hill, were kintoreite, marshite, mawbyite, miersite, plimerite & segnitite; and there were specimens of the halide group minerals, atacamite, chlorargyrite & iodargyrite.

And the list goes on and on!!

Photographs of some of these are included in this report.
The collection is available for members to borrow –
Please contact Alex Blount.

Above: Adamite from Block 14 opencut. 2mm FOV. BH154.
Below left: A cluster of cerussite crystals. Block 14 opencut. 7mm FOV. BH006
Below: A 2mm crystal of anglesite from the Kintore shaft. BH160.

Above: Wires of native silver from the South mine, 1mm FOV. BH028.
Below: Chlorargyrite and smithsonite, Block 14 opencut, 5mm FOV. BH026.



Above: Broken Hill copper crystals, 15mm FOV. BH199.
Below: Raspite crystals from Broken Hill, 10mm FOV. BH117.

Below left: A 1.5mm wulfenite crystal with a beudantite group mineral. BH121.
Below: Connellite from Broken Hill, 1mm FOV. BH205.

Meeting of the micro-mineral group, July 2019.

Our meeting was deferred to the 4th August in order to have more members attending. The topic, minerals from Central & South America, brought out a large number of specimens for the meeting, many being from Mexico and Brazil that were commonly available to collectors in the 1970s & 80s.

Mexico

From the famous Mapimi mine, Ojuela were adamite crystals in colours ranging from white, yellow, green and purple; aurichalcite and rosasite; the rare legrandite and fluorapatite. There were deep blue cubes of boleite from the Amelia mine, Santa Rosalia, Baha California. From the Chihuahua state, there were attractive specimens of mimetite and wulfenite, the former occurring as colourful yellow and orange botryoidal crystalline groups, from San Pedro Corralitos; 'toffee' coloured tabular crystals from Los Lamentos and an unusual green arsenian? wulfenite. There were several wire and dendritic silver specimens from Batopilas.

Above: Lustrous green adamite crystals, Ojuela mine, Mapimi, Mexico, 20mm FV.
Below: A 15mm tall translucent yellow fluorapatite crystal. Cerro de Mercado mine, Durango, Mexico.

Brazil

There were many specimens from the famous Minas Gerais district. These included specimens of attractive pink and green zoned elbaite from Barra do Salinas; red tourmaline (rubellite) from the Itatiaia mine; sharp tabular blue-green apatite crystals from the Sapo mine; several chrysoberyl crystals including a sixling twin from Padre Pariso; bertrandite as clear hexagonal crystals from Governador Valadares; brazilianite, Corrego Frio mine - and there were rarer species from their type locality including ruifrancoite, Sapucaia mine and correianevesite, Cigana mine. Amongst other Brazilian specimens there were rutile sprays with hematite from Novo Horizonte.

Chile

There were a number of uncommon and rare copper species. These including the colourful halide minerals - atacamite, botallackite, clinoatacamite, haydeeite, leverettite, paratacamite & tondiite.

Peru

There were a number of different sulphide and sulphosalt minerals. Particularly noted were the characteristic 'cog-wheel' crystals of bournonite from Casapalca mine, Lima and from the Quiruvilca mine, La Libertad. Also from the same mines were attractive pink crystal groups of rhodochrosite. Orange crystals of orpiment were also from the Quiruvilca mine. There were specimens of the less common tungstate mineral, hubnerite, from La Libertad and Pasto Bueno.

Bolivia

From Poopo, Oruro were attractive deep blue-green crystals of vivianite; the unusual cylindrical shaped crystals of cylindrite; and the silver lead antimony sulphosalt mineral, andorite. From the tin mines at Llallagua, Potosi, were specimens of the rare species - vauxite, paravauxite and sigloite from the type locality the Siglo XX mine. Also from Potosi was the tin sulphosalt mineral franckeite, Chocaya mine. (type locality)

There were only a few species from the other South American countries. These included a nice green beryl, (var emerald), from the Chivor mine in Colombia and florencite-Ce from Amana, Catamara, Argentina.

Once again there were plenty of unusual and attractive minerals to observe and discuss.

Above: Sharp crystals of acanthite crystals from the Reyas mine, Guanajuato, Mexico, 25mm tall.

Below: Deep blue vauxite crystals on sprays of paravauxite from the Siglo XX mine Llallagua, Bolivia, 20mm tall.

Above: a sixling twin of chrysoberyl from Padre Paraiso, Brazil, 10mm FV.

Mineral Appreciation Group Report

By Alex Blount (All photographs: A. Blount)

Meeting of the-mineral appreciation group, March 2019.

An executive decision was made by the group to stop the President from choosing obscure and unintelligible topics for the meetings. So, our topics have been taking a turn towards 'more normal' in recent months.

Our March topic was 'Minerals acquired in 2018', intended to be a retrospective on new minerals added to your collection during the previous year. There were a few different ways that people acquired new minerals, ranging from collection at the Seminar fieldtrips to Mortlake and Dookie; Society field trip to Cairns Bay; purchases from dealers at a show or during a trip to Tucson; and specimens passed on from other collectors who may be down-sizing or offloading spare material. As the specimens came from a wide range of places, I'll let the photos speak for themselves. However, it is worth mentioning a particular pink Spodumene crystal obtained from a collecting trip to the Pala Mining District in San Diego, if only we have collecting like that in Victoria!

Above: Calcite, natrolite, Cairns Bay, Flinders, Victoria

Above: Erythrite, Bou Azzer Mine, Tazenahkt, Quarzazate, Morocco

Above: Fluorite on quartz, Huanggang Mines, Ulanhad, Inner Mongolia, China

Above: Spodumene (var. Kunzite), Oceanview Mine, Pala, San Diego Co., California, USA

Meeting of the-mineral appreciation group, June 2019.

With no meeting held in April and an unfortunate occurrence meaning we had to postpone the May meeting at the last minute, our next gathering was in June where the (May) topic was carried over as "My Favourite Mineral".

Most of the regular attendees had made some educated guesses at what each of the others would be bringing and whilst some were true to expectation, others surprised us. A common thought on the day was "I have several favourites and it was hard to decide, so I have brought these ones for this reason". It was also apparent that our favourites may have changed over the years as well. We discussed whether it was likely that, for a favourite species you would therefore have many of them? Or perhaps it meant that you really only wanted very good examples of the species and so only had a few very nice one? Or perhaps your favourite is an interesting and rare species so you necessarily have a few or perhaps only one?

As a summary, the species as presented were calcite, azurite, cerussite, beryl, baryte and olshanskyite. And thus, we saw a wide variety of calcites and barytes and azurites and beryl and cerussite. A rather smaller number of the interesting and rare olshanskyite. Unfortunately, as wonderful as the azurites were, my photography of them was mostly terrible, so they are not represented in the photos below.

Above: Cerussite, Comet Mine, Dundas, Tasmania

Above: Cerussite, Tsumeb, Namibia

Above: Cerussite, Tsumenb, Namibia

Above: Calcite, Elmwood Mine, Smith County, Tennessee, USA

Above: Olshanskyite and roweite, Shijiangshan Mine, Inner Mongolia, China

Above: Calcite, Dali, Yunnan, China

Above: Baryte, Jebel Ouichane, Sagangane, Nador Province, L'oriental Region, Morocco

Above: Baryte with stibnite, Baiut, Maramures County, Romania

Above: Baryte, Taouz, Er Rachida Province., Draa-Tafilalet Region, Morocco

Above: Baryte, Machow Mine, Tarnobrzeg, Subcarpathian, Volvodeship, Poland

WANTED SECTION

This is your section if you wish to sell or swap anything mineral related, or if you are looking for anything specific to buy that you think a member may be able to help you with.

FOR SALE:

A heavy-duty rock trimmer.
Needs to be refurbished and the 12 ton hydraulic jack repaired or replaced.

Best Offer
John Haupt
e-mail: john.haupt@bigpond.com
Phone: 0407345806

What's New

Introducing a new section for our newsletter. We hope this to become a regular article contributed by dealers or members, showcasing new finds in the mineral world.

What's new in the world of mineral collecting?

From and for the perspective of the amateur mineral collector

By Ed Richard (Pristine Minerals)
All pictures in this article are by Ed Richard. The specimens are from the collection of Pristine Minerals. Specimens like the ones shown are readily available on-line or in the Pristine Minerals showroom.

These days, the internet and social media are greatly benefitting the mineral collectors as they can now obtain and maintain a broad knowledge of events that are happening around the globe when it comes to mineral collecting. Previously we had to rely on slow communication, visit mineral shows, attend seminars or assimilate and dissect second hand information from dealers, etc. Now it's almost a matter of information overload, but I do of course realise that many members don't have access to all those modern sources of information. As a dealer I have developed an extensive network that provides me with plenty of interesting information regarding mineral finds worldwide. In this, the first article, I will try to share some things I find noteworthy – I can't even pretend that this may be a complete list. Instead I will just give you some things to read about and consider what I think might be of interest to you. It hopefully provides some perspective on what you may not see elsewhere, and allow you to be a bit more informed when you do decide to spend some of your hard earned money on a new specimen for the collection.
In this article I thought I'd highlight some of the more interesting discoveries that came across my radar in the past few years. In future articles I may try to focus a little more on 'news' as it happens.

1. Apatite and Aquamarine (10cm) on Muscovite from Chumar Bakhoor, Pakistan

The Northern areas of Pakistan and Afghanistan is one of the localities that seems to be more and more prolific in recent years, when it comes to minerals that are of more interest to us collectors. We are now seeing a much more diverse offering compared to some years ago. My reasoning is that the local dealers have more information at their disposal by now using the internet. They have an easier job selling a broad range through the same digital sales channels. In my opinion, the quality of gem minerals, in attractive and affordable mineral specimens for collectors has also greatly improved. It is now relatively easy, for example, to add specimens of Aquamarine, Tourmaline, Morganite and Topaz to your collection. There are two main Aquamarine producing locations of special interest to the mineral collector.

The first are the classic mines of Chumar Bakhoor where mining has taken on a revival due to the availability of better tools, which in turn has resulted in nice combination specimens not only of the classic Aquamarine in Muscovite but also pieces with nice Fluorite and Apatite.

2. Fluorite with Aquamarine in Muscovite on a museum sized piece

The second location is Shigar valley which is prolific in Aquamarine and these days yields spectacular crystals, often associated with Albite and Tourmaline.

The pegmatites in Afghanistan are often of a different nature when compared to Pakistan and they provide us with quantities of Spodumene in a variety of colours. These days it is even possible to find specimens on matrix. This was something that was previously not common at all, as due to the sheer remoteness of the mines, crystal were always collected loose and put into bags to be sold as gem rough.

Another aspect to consider is that these days miners and dealers are a bit more aware of other (and sometimes rare) minerals of interest to collectors.

Tormiq valley (and other places in Pakistan) are the source of high quality 'Alpine' minerals such as Hematite, Rutile, Adularia, Axinite and Titanite. A relatively recent area now being explored for by mineral dealers is Baluchistan where for example we are seeing fantastic Anatase, Fluorite, Brookite and Brucite. Rather than talk about it, I will just show you some nice pictures as examples of the above-mentioned species.

It's very exciting to be able to enjoy all these wonderful minerals from faraway places and it's good to know that many can be added to the collection without too much of a burden on the budget.

3. (Below) 5cm tall flawless Aquamarine with Albite from Shighar Valley collected in 2019

4. (Below) Large feldspar group (15cm wide) hosts both Aquamarine and Garnets, from Shigar valley, Pakistan

5. (Below) Kunzite (7cm) on matrix from Afghanistan

6. (Below) Titanite (Sphene) on adularia with chlorite 6cm from Tormiq

7. (Above) Albite on Sphene 7cm from Tormiq

8. (Above) 5cm Brookite on quartz from Kharan, Baluchistan

9. (Above) Anatase crystals (ca 8mm each) on a matrix covered with Pericline from Kharan, Baluchistan

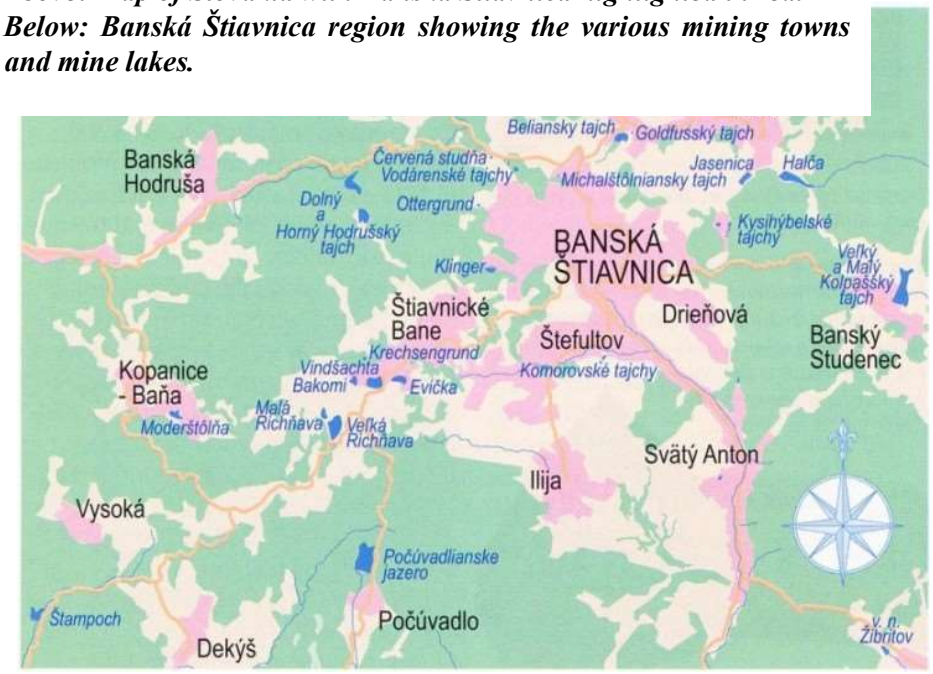
Mineralogical Travels in Europe Part 13
BANSKA STIAVNICA, SLOVAKIA
By John Haupt
(Part 12 in this series was in Newsletter 202, December 2009)

Introduction:
Banská Štiavnica is a historic mining town in Slovakia. Previously known as Schemnitz it has been a producer of silver, copper & zinc for over 2000 years. It was included on UNESCO List of World Cultural and Natural Heritage sites in 1993. Many of the buildings in the old town date from the mid 1700s, when great wealth came from the mines. The Plague Column, the centrepiece in the central Holy Trinity Square, was constructed in 1784 as a memorial to the people who died from the plague, when over half of the town's population (5,000 people) died. Adjacent to the column is the mineralogical museum, which is housed in the 3 story Berggericht (Mining Court), which dates from the mid 1700s and was originally the home of the town's doctor. The only operating mine the Rozália mine at nearby Hodruša-Hámre is currently producing ~20,000 ounces of gold per annum.

History:
The Banská Štiavnica ore district is in the central zone of the largest stratovolcano in Central Slovakia, with a large caldera 20 km in diameter. It started forming around 15 million years ago (15Ma) and progressed with intervals of igneous extrusions, subsidence, weathering and subsurface igneous intrusions and the formation of epithermal polymetallic veins which have been dated to around 13Ma. Later small-scale volcanism formed rhyolites. Subsequent erosion has created the hilly countryside. Approximately 140 separate veins, up to 14km long and 10 m thick were mined between Banská Štiavnica and Hodruša-Hámre.

The Celts are believed to have commenced mining for silver in the 3rd century BC. The Slavs were mining in the 5-6th centuries. The first written account of mining was in 1217 when the area was named Bana (mine) and in 1228, the name argentifodina (silver mines) first appeared. In the 13th century the area was colonised by German settlers with the town being named Schemnitz. Around 1530, the Ottoman Turks conquered many of the surrounding villages, but the town was defended from them for some 150 years. The Old Castle was heavily reinforced and a new castle built to allow the use of modern artillery. In the 1700s the area was part of the Habsburg Empire then became part of the Austro-Hungarian Empire. Following the establishment of

Above: Map of Slovakia with Banská Štiavnica highlighted in red.
Below: Banská Štiavnica region showing the various mining towns and mine lakes.



Czechoslovak Republic after WW1, the Hungarian name Banská Štiavnica, was adopted in 1921. Banská (Mine); Stiavnica (acidic stream).

Local legend says a shepherd used to graze goats on steep rocky sun-drenched places. Once he noticed two lizards. One of them looked like it had been sprinkled by silver, another by golden dust. The shepherd ran to catch the lizards, but they hid under a stone. The young man rolled the stone away and was blinded by glittering gold and silver ores. The salamander (lizard) is the town emblem and is on the town's coat of arms.

The Banska Stiavnica mines were a major producer of gold and silver. Most of the early Hungarian silver coins were made from Schemnitz silver. At its peak in the mid 1700s, over 4,000 miners were working in more than 400 mines and the district produced 680kg of gold and 26 tons of silver, representing 25% of the world's annual silver production. By the end of the 1800s, the population was around 24,000 and was one of Hungary's biggest cities. Mining declined during the 1900s from increased costs and low silver prices. Mining continued into the 20th century, producing copper, lead and zinc ore until 1993. The only currently operating mine is the Rozália gold mine in nearby Hodruša-Hámre, which commenced operations in 1991 and currently produces ~20,000 ounces of gold per annum from ore with a grade of 12.5 g/t Au. Prospech Limited currently have exploration licences covering an area of approximately 115 square kilometres in the Hodruša-Hámre/Banská Štiavnica mining district in Slovakia. In over 1,000 years of historical mining, the mines are estimated to have produced 2.4 million ounces of gold, 120 million ounces of silver, 70,000 tonnes of zinc, 55,000 tonnes of lead and 8,000 tonnes of copper.

A mining academy was founded in 1735 in Banská Štiavnica as a technological university. Its original name was Bergschule (Berg Schola). In 1762, it was given the status of an academy by Empress Maria Theresa, when it was established to train specialists in silver and gold mining and metallurgy for mines for the whole country. It is the world's first technical university with tertiary technical education. It led the way in the development of mining technology including the first to use gun powder for blasting rocks. It was here that one of the most sophisticated hydro-power systems (tajchy of Štiavnica) was developed, with numerous lakes, water races and water wheels for draining water from the mines.

Many of the town's buildings date back to the mid 1700s, when the wealth coming from the gold & silver produced by the mines financed their construction. It also led to the development of associated mining craft guilds. On the hill overlooking Banská Štiavnica, the baroque evangelistical monument, the Calvary, was constructed in 1750, also funded by wealthy mine owners and mining families.

Right and below right: Main street in Banská Štiavnica.

Below: View overlooking Banská Štiavnica.

Below: The Calvary on the hill overlooking the town.

Mining Heritage

A mineral museum is housed in the Berggericht (the former mining court building) in the town square. It has an excellent display of minerals from the region and other Slovakian mines. The Glanzenberg tunnel, in the town's centre, is an ancient mine tunnel which was restored in 2003 and opened up for public visits. The Open Air Mining Museum (Banské múzeum v prírode) on the edge of the town retains the mining heritage with surface mine buildings, shafts and guided tours of the underground workings through the Bartolomej tunnel. A small mining museum is also in Hodruša-Hámre.

There are also unique academic traditions that were formed by the mining academy - Salamander parades are among the best-known. Originally, they were organised after the death of a professor or student of the academy. Students paraded to farewell the deceased, making the movement of a lizard – the symbol of Banská Štiavnica. Every year the Salamander parade was to welcome first year students. The parade left the Mining Academy, and singing, went through the town to the Glanzenberg shaft entering underground for the first time.

In 1919, when Mining Academy was moved from Banská Štiavnica, the tradition of Salamander parades ceased, but were later restored. Since 1990, they have been organised by the town as part of the Salamander Days mining festival, which is held each September to commemorate the town's mining history.

Above right: The town's emblem - the salmander on parade.

An old miner in his traditional costume at the Salamander Days festival.

Below: A poppet head at the Open air museum.

Below right: The mining museum in Hodruša-Hámre .

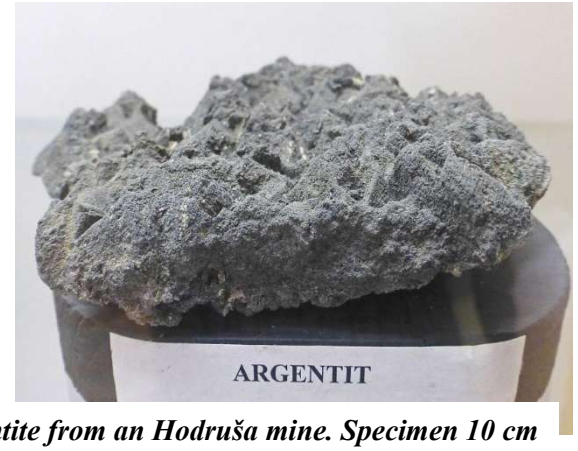
Above & Left: The Lil mine tramway in Hodruša-Hámre (left c1920, right 2016).

Minerals:
MINDAT lists 146 mineral species as coming from the Banská Štiavnica mines. The following is a brief description of some of the more notable mineral species from the mines. Refer to Oldin et al, 2016 for more detailed descriptions. The associated photographs were taken of specimens in the Slovak Mineralogical Museum in Banská Štiavnica in 2016.

Acanthite Ag_2S
Acanthite is the most abundant silver mineral in the deposits. It forms crystals from a few mm to over 1cm. It is commonly covered with a thin layer of pyrite or chalcopyrite giving a yellow to blue patina on the crystals. Cubic or blocky crystals are paramorphs of acanthite after argentite.

Aragonite $CaCO_3$
Attractive specimens of the floss ferri form of aragonite was common in several of the mines.

Barite $BaSO_4$
Barite occurred in many of the mines. Clear tabular crystals came from the Anna adit and large plates of white barite rosette leaves are found in many museum collections.



Above: Acantite from an Hodruša mine. Specimen 10 cm across.
Below: Large plates of barite, 10cm tall.

Calcite $CaCO_3$
A common mineral in the district, it occurs in many different forms. Spherical aggregates up to 5 cm in diameter came from several of the mines, with large plates of opaque white scalenohedral crystals being particularly attractive. Manganese rich calcite was also common with more of a brownish colour than pink. However recent tests found that they do not contain manganese. (Ozdin, et al, 2016).

Chalcopyrite $CuFeS_2$
Is a common ore mineral. Crystals to 4 cm came from several of the Banská Štiavnica mines, most were covered by quartz or calcite. Attractive golden yellow crystals up to 5cm occurred in the Rozália mine at Hodruša-Hámre in 1997.

Dolomite $CaMg(CO_3)_2$
A common mineral in the district, occurring as pale brown opaque crystals in many of the mines.

Galena PbS
Galena is also a main ore mineral and commonly associated with sphalerite, pyrite, quartz, calcite and dolomite. Large cubic crystals up to 5cm were common. Argentiferous galena was an important source of silver.

Gypsum $CaSO_4.H_2O$
Was a common mineral in many of the ore veins, forming crystals to 4 cm on quartz and sulphide minerals.

Hodrušite $Cu_8Bi_{12}S_{22}$
A rare Cu–Bi sulphosalt, hodrušite, occurs in the Rozália mine in two unusual morphological forms. The first type are brownish bronze thin acicular striated crystals, up to 3 mm long, in drusy cavities of quartz-hematite gangue, which are usually grouped into chaotic or irregular aggregates. The second type comprises flattened columnar aggregates, up to 1.5 cm long, overgrown by hematite in quartz gangue. These aggregates are distinctly striated with brownish bronze colour and metallic lustre. Abundant W and Al-rich hematite, chalcopyrite, kaolinite/dickite, siderite, baryte, rare bismuthinite and kupčíkite were found in association. It is named after the Hodruša township.

Marcasite FeS_2
Yellow-grey crystals of marcasite were relatively abundant in most of the ore veins.

Pyrite FeS_2
A common mineral in the ore veins, large cubic crystals were uncommon.

Quartz SiO2
The main gangue mineral in the ore veins and was common in the district. It occurs in many varieties, including transparent crystals, milky, smoky and amethystine. Banská Štiavnica is historically the most significant European locality for amethyst. The Rozália mine produced plates of large amethyst crystals in 1967.

Rhodochrosite $Mn^{2+}CO_3$
Relatively common in the ore veins. Attractive specimens of sparkling pink rounded crystal masses are considered a classic Banská Štiavnica mineral.

Siderite $Fe^{2+}CO_3$
Most commonly forms small dark brown rhombohedral crystals.

Silver Ag
Masses of wires of native silver occurred in the upper levels in most of the mines.

Sphalerite ZnS
Also a common mineral in the ore deposits, it occurs as black, brown and yellow crystals. Rounded yellow to yellow-brown crystals to 2.5 cm were found in 1989 in the Nova shaft. Attractive specimens of glossy black sphalerite to 1cm, associated with lustrous galena crystals came from the Rozália mine in 2000.

Stephanite Ag_5SbS_4

Above: Large 'dog-tooth' crystals of calcite, 10cm tall.
Below: Chalcopyite crystals. Specimen 14cm across.

Above: Lustrous group of dolomite crystals.
Specimen 10cm across.

Along with other sulphosalt minerals, excellent specimens of stephanite have come from several of the mines.

Above left: Pyrargyrite crystals. Specimen 6cm across.
Above right: Marcasite crystals and

Right: Attractive cubic crystals of galena. Specimen 10cm across.

Right: Striated crystals of pyrite. Specimen 10cm across.

The species recorded from Banska Stiavnica (MINDAT):

Acanthite	'Agalmatolite'	Aikinite
Albite	Allophane	Alunite
Alunogen	'Amphibole Supergroup'	Anatase
Andersonite	Andradite	Anglesite
Anhydrite	Ankerite	Aragonite
Arcubisite	Arsenopyrite	Augite
Azurite	Baryte	Bieberite
'Biotite'	Bornite	Boulangerite
Brianyoungite	Brochantite	Calcite
Manganoan Calcite	Celestine	Cerussite
'Chabazite'	Chalcanthite	Chalcocite
Chalcopyrite	'Chlorite Group'	Chrysocolla
Cinnabar	Coffinite	Copiapite
Copper	Coquimbite	Covellite
Cristobalite	Cuprite	Devilline
Diadochite	Diaspore	Diopside
Dolomite	'Electrum'	Epidote
Epsomite	Ferberite	Fluorapatite
Fluorite	Forsterite	Freibergite
Galena	'Ganomatite'	'Garnet Group'
Goethite	Gold	Goslarite
Gypsum	'Halloysite'	Halotrichite
Hauerite	Hematite	Hemimorphite
Heteromorphite	Hydrozincite	Ice
Inesite	Jamesonite	Jarosite
Kaolinite	'K Feldspar' 'var: Adularia'	Kutnohorite
'Limonite'	Linarite	Magnesite
Magnetite	Malachite	Marcasite
Matildite	Mckinstryite	Melanterite
Mercury	Miargyrite	Molybdenite
Montmorillonite	Muscovite	
	Natrojarosite	Natrozippeite
Opal		Ourayite
'Parisite'	Pearceite	Pharmacosiderite
Pitticite	Polybasite	Proustite
Pyrargyrite	Pyrite	Pyrolusite
Pyromorphite	Pyrophyllite	Pyrostilpnite
Pyrrhotite	Quartz	
Quenstedtite	Realgar	Rectorite
Rhodochrosite	Rhodonite	Römerite
Rutile	Safflorite	Scheelite
'Schirmerite'	Schorl	Serpierite
Siderite	Silver	'Smectite Group'
Sphalerite		Stephanite
Stibnite	'Stilbite subgroup'	Sulphur
Szomolnokite	Tennantite	Tenorite ?
Tetrahedrite	Todorokite	'Tourmaline'
Tremolite	Uraninite	Uranophane
Vanadinite	Voltaite	'Wolframite'
Wollastonite	Wulfenite	Xanthoconite
Zellerite	Zinczippeite	Zircon
Zunyite		

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https://en.wikipedia.org/wiki/Mining_

Above: Yellow sphalerite crystals with calcite. Specimen 12cm across.
Below: An attractive specimen of a Banská rhodochrosite. Specimen 10cm across.

Below: Large crystals of stephanite from a Hodruša mine. Specimen 14cm across.