BRITISH MICROMOUNT SOCIETY

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THOUGHT FOR THE DAY Mick Cooper

This issue's food for thought is taken from a book by the early mineral dealer John Mawe of London. His "A Descriptive catalogue of minerals intended for the use of students by which they may arrange the specimens they collect" ran through several editions from 1815 to 1821. The paragraph below is taken from the 2nd edition of 1816 :

"Can any mind be so vacant or insensible, as not to notice the correct forms which Minerals present ? They are the Geometry of Nature, cloathed in mathematical exactitude. Examine a Rhomb of

Calcareous Spar, a Cube of Fluor, an Hexagonal Prism of Crystal, an Octahedron of Diamond, or a Dodecahedron of Garnet, and contemplate the laws of affinity by which they are produced in the mysterious laboratory of Nature..."

It is unfortunate that one must answer Mawe's opening question with "yes!"

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PARYS MOUNTAIN, ANGLESEY

There have been several reports recently of renewed interest in the metallic ore deposits of Parys Mountain, type locality for anglesite and once one of the largest copper mines in Europe. Of principal interest now is zinc : the deposit is estimated to contain reserves of 5.3m tonnes of ore averaging 6.04% zinc, 3.03% lead, 1.49% copper, with 2.02 troy ozs silver and 0.013 ozs gold per tonne. A Canadian company, Imperial Metals Corporation, is expecting to finance a mining operation through the sales of shares in a subsidiary company, Anglesey Mining. The construction and development of the mine and plant is expected to cost nearly £20M but the company are anticipating large profits, perhaps as high as 110%. Gwynedd County Council have approved the operation which is intended to start this Summer.

Neil Thapar, The Independent 4.5.1988

Kenneth Gooding, Financial Times 28.4.1988

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REMINDER

Have you sent off your British Directory of Micromounters questionnaire and nominations for B.M.S. officers ?

GOLD Eric Otty

The British Geological Survey has identified 13 "principal gold localities" in Scotland after completing a geochemical reconnaissance throughout the country. The most promising area appears to be near Tyndrum but there is also great interest in the layered deposits of barite with associated zinc, lead and silver found near Aberfeldy.

Since the closure of the Clogau mine last year, the only source of Welsh gold has been the Gwynfynydd mine owned by Sir Mark Weinberg. Threatened with closure last year this mine has survived and employs a manager and 11 men. Although the gold commands a 100% premium on world prices because it is uniquely Welsh, the venture is not very profitable and more funds are required to finance aerial ropeways to take waste rock to a new site as demanded by the Snowdonia National Park Authority, and to increase the workforce.

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AN ALTERNATIVE MOUNTING TECHNIQUE P Braithwaite

The majority of micromounters seem to use the techniques described in the excellent book by Milton L. Speckles - 'The Complete Guide to Micromounts'.

Over the years, however, I have developed a modified method which I find is simple, quick and capable of giving neat, properly orientated, specimens. I hope you find it if interest.
Basically the method is to use a round pedestal on a circular disc base and to paint it as the last operation

The materials used are :-

1. The base. After using square bases for some years I was able to obtain cardboard discs which are the waste after

a cardboard box manufacturer's stamping-out operation. I had to persuade the firm to allow someone to sweep up this 'rubbish' and put it in a box. A £5 'tip' bought me a couple of thousand; the discs are one inch diameter x 3/32 thick (25 x 2mm).

2. The Pedestal. Always round and a variety of diameters : - Balsa wood, ABA plastic tubing, stems from 'Cotton Buds' etc. Recently, thanks to a gift from Peter Reynolds, hollow cardboard tubes (ex GPO telephones, I think!).

3. Glue. Generally 'UHU'. I use Balsa cement to glue the mount into the box, the solvent partially melts the box base and ensures a good bond.

4. Paint. I use, exclusively, 'Tamiya Colour' XF1 Flat Black Acrylic paint. This is Japanese and intended for plastic kit modellers. It is quick drying with a dense matt blackness. The odour can, however, be a little offensive after prolonged use.

The method is as follows :-

1. If you prefer, paint the edges and the top of the discs; sometimes I first do a batch but usually I leave painting until the end.

2. Prepare the pedestal, cut to length allowing for the thickness of the base.

3. Use a turret-type leather punch to pierce a hole of proper size in the base (or push a pencil through, but this is not as good). Glue the pedestal and push into the hole and then put aside until set (30 minutes).

4. Mount the specimen in the usual way and put aside for about an hour, check, prick blisters and flatten, remove glue strings, etc. and then leave for 24 hours.

5. Holding specimen upside down under microscope, carefully paint over glue and down the pedestal, using a No.3 brush. Put on a flat surface and paint (or touch up) base.

6. Put glue in bottom of box, place specimen in appropriate

position and, using a needle or similar, rotate the base whilst the glue is wet until exact orientation is achieved. With practice I can mount about 40 specimens in two evenings. Writing the labels is the tedious job.

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NORTHERN GROUP FIELD MEETING 30 APRIL - 2 MAY 1988
LEADHILLS - WANLOCKHEAD Roy Starkey

Seventeen members and friends gathered at Sanquhar on the evening of 29 April. Arrangements had been made through Bob Reekie of the Royal Museum of Scotland for the party to visit Loanhead Quarry at Beith and the various spoilheaps in the Leadhills - Wanlockhead area.

Saturday 30 April - Loanhead Quarry, Beith.
Most of the party assembled at the filling station in Sanquhar at 9.30 a.m. for the drive north to Beith. The weather was fine, and upon arrival at the quarry, the party was welcomed by Brian Jackson of the Royal Museum of Scotland, and Gordon Todd of Kilbarchan.
Species collected (field identification only) were as follows :-

Prehnite	Garnet	Quartz
Thomsonite	Analcime	Calcite
Epidote	Hematite	Laumontite

No greenockite crystals are known to have been collected, although the species has been reported on previous occasions.

In the afternoon the party moved on to the nearby Trearn Limestone Quarry. Here interesting micro-specimens can be found inside fossil brachipods (Productus sp).
Minerals noted were as follows :-

Fluorite	Strontianite (previously XRD identified)
Barytes	Calcite
Chalcopyrite	Quartz

Best specimens of the day considered to be a prehnite hand specimen collected by Richard Bell, and a strontianite of Mike Leppington.

Saturday 30 April - Wanlockhead

The remainder of the party met outside the Wanlockhead Mining Museum at 10.30 a.m. Roy Starkey had already been paddling in the cold waters of the Mennock Water and had a few tiny grains of gold to show for it. The group moved off promptly, lead by Steve Rust, to visit a small shaft dump on Roan Burn Vein between Wanlockhead and Leadhills. This dump had previously produced a very extensive suite of minerals including some extremely rare ones, but visual identifications in the field included only the following :-

Linarite	Cerussite	Pyromorphite
Galena	Caledonite	Leadhillite

Several bags full of promising material (heavily oxidised galena - pyromorphite pebbles) were taken home for detailed examination.
At around 1.00 p.m. the weather turned foul and the party retreated to the cars for lunch - hail and snow made things quite unpleasant and we headed for the more protected valley of Whytes Cleugh.
The dumps here can be quite rewarding, but wet and cold, our enthusiasm waned. Species which could be confirmed included the following :

Linarite	Cerussite	Pyromorphite
Hematite	Chrysocolla	? Possible vanadinite (Roy Starkey)

Everyone joined up at the Nithsdale Hotel in Sanquhar for an evening meal and to discuss the day's activities.

Sunday 1 May - New Glencrieff Mine, Wanlockhead

Everyone gathered at the Mining museum in Wanlockhead to await the arrival of our guides - Bob Reekie and Brian Jackson of the R.M.S. First stop was the dumps of the New Glencrieff Mine - yielding a good selection of typical material, in steady rain :-

Pyromorphite	Cerussite	Leadhillite	Chalcopyrite
Descloizite	Sphalerite	Dolomite	Chrysocolla
Hemimorphite	Smithsonite	Galena	

The group gradually worked its way up into Whytes Cleugh, where the onset of bright sunshine aided collecting no end. Specimens of the following were collected :

Caledonite	Leadhillite	Pyromorphite	Quartz
Cerussite	Linarite	Chrysocolla	Hematite
Hemimorphite	Calcite	Descloizite	

A small group (Messrs. Spence, Rust, Hubbard and Green) moved onto a small, mostly grassed over, tip in the centre of Wanlockhead (on Straitstep Vein). The dump was listed by Temple (ms notes) as yielding lanarkite, but their search failed to yield any specimens of the mineral. However, several nice specimens of bright blue botryoidal hemimorphite were collected, together with a number of pieces showing most interesting dark blue to light green bi-pyramidal crystals. The finest of these showing half a dozen deep blue crystals to 4 mm on matrix (Neil Hubbard). The species has subsequently been shown (by X-ray diffraction) to be veszelyite - a species new to the British Isles.

During the course of discussions in the evening, again spent in the comfortable surroundings of the Nithsdale Hotel, it was agreed that the Straitstep Vein material was potentially of such mineralogical interest that permission would be sought the following day to allow a more extensive dig.

Monday 2 April - Hopeful Vein, Leadhills

The party spent the first part of the morning digging on the Hopeful Vein dumps (holes being carefully back-filled) whilst Jean Spence and David Green waited to contact the estate representative in Wanlockhead. Species collected were :

Pyromorphite Cerussite Mottramite

Permission was granted for us to dig into the Straitstep dump, and the party therefore moved on to this locality. Within a short time, several pieces of hemimorphite encrusted matrix bearing the blue - green crystals were recovered. Jean Spence was particularly successful, and John Dickinson and Mike Rothwell hit a pocket which yielded what was undoubtedly the finest specimen - a single greenish bi-pyramid around 5/16" from base to apex sitting on a pale botryoidal hemimorphite. On this, and several other specimens, the veszelyite is mostly altered to chrysocolla. The party gradually dispersed around lunchtime to begin the long journey home.

Summary

The field meeting was a great success, both from a recreational and educational/scientific standpoint. In particular the discovery of fine crystals of veszelyite from Straitstep Vein adds yet another interesting species to the rich catalogue of minerals known from the area. Many other species are certain to be recorded as members gradually work through the material collected, under the microscope back at home.

Acknowledgements

Particular thanks are due to the Buccleugh Estates and Hopetoun Estates for permission to enable the meeting to be held. The proprietors of Loanhead Quarry (Kings) are gratefully acknowledged for permission to visit their site, and the willing assistance of Bob Reekie and Brian Jackson (Royal Museum of Scotland), and Gordon

Todd (Kilbarchan) as field leaders all helped to make the weekend a success. Finally, thanks are due to the organisers of the weekend - in particular Jean Spence.
It is hoped that future requests to carry out work in the area may also be received favourably.

SUPPLEMENTAL LIST OF FINDS Mick Wolfe

Since Roy's excellent report was produced a number of additional finds have been identified from this field trip. If you have found anything not listed above please advise me and it will appear in the next newsletter.

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HARTSOP, PATTERDALE, CUMBRIA Max M. Wirth

There are several spoil heaps from old mines in this area which is generally known as Myer's Head. A recent search in May 1988 yielded very little of micromount quality. Nevertheless, it seems worth recording those minerals which were present in the area.

Antimony, bournonite and sphalerite are mentioned for this location in B. Young's "Glossary of the Minerals of the Lake District and Adjoining Areas" (1987).

Hartsop Hall Mine NY 395 119

This rather sterile spoil heap consists of volcanic rocks containing galena in a gangue of barytes and quartz. Pyrite and sphalerite are present in small amounts and the only secondary found was cerussite. Calcite is also present as nailhead, rhombohedral and dogtooth crystals.

Myer's Head Lead Mine NY 412 128

This is indicated on the OS map but is no longer visible at the given grid reference.

Myer's Head 1 NY 411 126

Anglesite was found as stubby prisms in galena vugs and identified by its optical properties. Azurite was found on a single piece of rock. It was in the form of brilliant, ink blue, tabular prisms and identified by its optical properties. Aurichalcite occurred as the usual pale blue, leafy clusters It was also characterised by its optical properties. Leadhillite was recognised on one specimen by its characteristic hexagonal plates. Other species present were galena, sphalerite, cerussite, pyromorphite, hemimorphite and malachite.

Myer's Head 2 NY 415 126

Barite was the only mineral positively identified by its optical properties. Sphalerite was particularly abundant though mainly in matrix. Hemimorphite was also quite common in the form of tiny blades lining vugs. In one case cerussite crystals were covered in such tiny blades. Linarite was present, but of poor quality. A trace of paler blue crystals could be langite, though optical properties make wroewolfeite more likely. Cerrusite, galena, pyromorphite and malachite were present, only the cerrusite being of resonable quality. A few groups of aurichalcite were found.
Two small pockets of rosasite were nested in hemimorphite druses. The distinction from aurichalcite is difficult but the tight, hemispherical balls are fairly characteristic as is the pale blue colour. Optical properties were not those of aurichalcite. The most surprising mineral was wulfenite, in both the acute pyramidal form and the tabular form. These were first spotted by Bev Yates. Only wulfenite and rosasite were worth keeping as micromounts.

Myer's Head 3 NY 417 126

This small spoil heap yielded nothing worth keeping, but the following minerals were observed : pyromorphite, anglesite, cerussite, malachite, goethite, galena, sphalerite, linarite, chalcopyrite, aurichalcite and hemimorphite.

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PYROMORPHITE FROM 'WATTS SHAFT' - OLD MILLCLOSE MINE, DARLEY DALE, MATLOCK GRID REF. 258 618 P Braithwaite

Pyromorphite in sprays of needle-like micro crystals, translucent dirty yellow or opaque white, was found on the dumps in 1987. The crystals are in vugs filled with colourless fluorite crystals in a granular fluorite matrix. In most cases the sprays are associated with greatly altered galena, which has a black powdery appearance with some partial re-crystalisation nearby and, in some cases, coating the pyromorphite crystals. There are two epimorphs after galena which are lined and covered with pyromorphite. Thanks to David Green for the identification of pyromorphite by X-ray diffraction.

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SHAP PINK QUARRY, CUMBRIA Max Wirth

The BMS collection contains only a single specimen from this quarry, a beautiful anatase contributed by Neil Hubbard. The Glossary of the Minerals of the Lake District by Brian Young (1987) mentions a large number of minerals from this site and I felt that a further visit was worthwhile. A permit is essential to visit this quarry but this is generally easy to obtain from Thos.W.Ward(Roadstone) Limited, Shap Granite Quarries, Shap, Penrith, Cumbria. CA10 3QQ.

The most rewarding rock turned out to be a medium pink granite peppered with a lot of dark green chlorite. This contained many vugs but they were often iron stained. A large number of minerals were identified either visually or by their optical properties (o.p.) Calcite occurred as hexagonal prisms with a serrated termination (o.p.). Some took the form of acute rhombohedra. Anatase was found as typical octahedra distinguishable from magnetite by transparency (o.p.). The quality was nowhere near that of Neil's specimen. Molybdenite was present in typical curved plates with the colour of galena but not the cleavage. Pyrite was abundant, mainly as groups of small cubes. That it was not chalcopyrite was deduced from the total absence of blue or green colours. Bismuthinite occurred as lead grey curved crystals with a good longitudinal cleavage, but not as individual crystals. Albite and orthoclase we recognised by their characteristic shape and formed the main components of the rock. Crystals were often well terminated. Chlorite was mainly green and showed as cleavages or as nodules of plates. A similar brown material in much smaller nodules is probably also one of the chlorites. Biotite and quartz were of course abundant. Apatite was found in very small brilliant crystals, hexagonal in shape and mostly multi-facetted terminations. These were identified by the optical properties. When lying flat they were doubly terminated. Fluorite seemed to be an indication of the correct type of rock. It was purple but not fluorescent, generally as broken masses but sometimes as individual, ill-formed cubes. Sphene was recognised by its characteristic lenticular shape and clove brown colour. It occurred as groups of crystals and was quite abundant but not brilliant. White masses of platy material could be the reported talc, nacrite seems less likely. Finally scheelite was found. It was not obvious until examined by short-wave UV. A few moderately large crystals were distinctly tetragonal bipyramids even though ill formed (o.p.). They were generally in close proximity to fluorite. Only a specimen of scheelite will be entered into the

BMS collection. The other minerals were not good enough for this. It is interesting that so many minerals can be found ... providing the right bit of rock is picked up in the first place.

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RED GILL, CALDBECK FELLS, CUMBRIA Max Wirth

Two specimens collected in passing from the spoil heaps at Red Gill, have proved to be interesting:

The first piece contained many vugs lined with fine bladed caledonite, identified by optical properties. In addition, there was a mat of fine white needles, looking at first glance like mattheddleite. However, they seemed a bit too flat and were not pointed. Optically they proved to be both length slow and fast, meaning that they could not be hexagonal. In the hope that these might be lanarkite I sent them to the Royal Museum of Scotland. X-ray examination proved them to be anglesite. This is an unusual form and could easily be confused with mattheddleite.

The second piece proved even more interesting. On splitting it a bluish vug was revealed containing many very thin, white blades with a vaguely hexagonal outline. These stood upright in the vug and had a diameter of about 1 mm. Optical properties showed them to be pseudohexagonal with a very small 2V, a high refractive index and birefringence. They were identified as hydrocerussite by X-ray (BM(NH)) and seem to be a very good example of this mineral. The specimen will be added to the National Reference Collection. In the same piece of rock there were crystals of susannite (X-ray by (BM(NH)) and in a small vug two extremely small arborescent groups looking like native metal. These were identified as either silver or gold by X-ray (BM(NH)). Unfortunately these were so small that none could be preserved. Other minerals present in this piece were

galena, pyrite, sphalerite, cerussite, anglesite and leadhillite. My thanks are due to the BM(NH) for handling these very small specimens.

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NORTHERN GROUP MEETINGS Eric Otty & Mick Wolfe

A record attendance of 19 attended the 5th March meeting including 4 visitors from the Kingston Lapidary Society in Hull. One of this group, Chris Jewson, who has since joined the BMS, brought some fine cinnabar micros collected at Coldstones Quarry, Pateley Bridge. The discussions were centred around new finds made during the winter months - rare earth minerals from Brittania Mine on Mt. Snowdon and more unknowns from Red Gill and other localities on the Caldbeck Fells. Mick Cooper showed some beautiful slides of minerals from various museums and private collections. Tea and refreshments were provided by Jean Spence and Muriel Tissington during which arangements for the Mayday weekend field trip to Scotland were discussed.

The next meeting on the 4th June had another record attendance - this time 20. Among the visitors were Joop and Anneke Wolters from Holland who were in Britain on one of their regular visits, Frédérick Dormeau-Escaut, a French mineral dealer from Paris, and Chris Jewson had brought along two colleagues from the Kingston Lapidary Society. The main topic of conversation was the recent highly successful field trip to Leadhills and Wanlockhead. A full report on this can be found elsewhere in this newsletter. After we had all enjoyed the excellent range of refreshment put on by Muriel and Jean a slide show given by Mike Rothwell treated us to views of Brittania Mine and some excellent, considering the circumstances, slides of underground workings in Carrock Mine. The afternoon closed with the promise of a video of a trip down Carrock by Max Frier of the Doncaster Mines Research Group for the next meeting.

Next meeting on Saturday 3rd September. There is still room for more to attend but Jean Spence would like to know in advance because of the refreshments.

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FORTHCOMING EVENTS

Bakewell Rockswop : Medway Centre 8-9 October 1988.
Munich Show : 15-16 October 1988.
17th Paris Show : Hotel Pullman St Jacques, 2-4 December 1988

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NEW FINDS

Kemp Meikle has advised the newsletter of the following :-

Copper **Loanhead Quarry, Beith** (NS 363 557)
as small crystals to 0.5mm or as small masses & strings on, or slightly embedded in, prehnite.

Silver **Same location** as minute cubic crystals, masses and filiform growths to 1.8mm.

Both species have been found in the course of several field trips this year ; the copper is more common than the silver.

Silver **Hartfield Moss, Renfrewshire** (NS 420 575)
as filiform crystals, cubes and dendrites to about 0.6mm, associated with prehnite and thomsonite.
Some of the silver is suprisingly bright & untarnished.

This site is roughly equidistant from Paisley, Barrhead and Beith. It is a long established source of fine prehnite and zeolites (mentioned by Heddle) but is now a much overgrown bog !

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