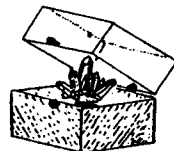


# BRITISH MICROMOUNT SOCIETY



NEWSLETTER NO. 20

JULY 1987

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## OPEN LETTER FROM THE CHAIRMAN

Dear Members

The British Micromount Society has been breaking new ground and setting high standards for the past seven years, since its inception at the Leicester Show in March 1981. From those first beginnings we now have a flourishing and strong society, a group of dedicated knowledgeable enthusiasts; one of the leading amateur bodies in the UK.

As the Society has grown, so it has become more sophisticated - the Newsletter has become a significant medium for micro-mineralogists to exchange news and ideas, to record new finds and techniques. More recently with the advent of the National Reference Collection we have established the first systematically curated collection of micro-mineral specimens available for loan and study in the UK. The Collection has grown rapidly and is now a splendid source of reference and research material for members.

Gradually, responsibility has been delegated to an increasing number of people within the Society, through Officers and co-opted helpers, and we now have a formal committee structure. The strength which this greater involvement brings can only be good for the Society, and I now feel that the time has come to stand back from the Society - at least for a while, and let someone else 'have a go'. In organisations which have been led by one individual for a long period there is a risk of gradual stagnation or bias, and I have been Chairman for the entire life of the BMS. When I resign the post of Chairman at the AGM in October I shall do so confident in the knowledge that the Society will continue, and hopeful that there will be no shortage of candidates to come forward and take their turn at the helm in the future. As time goes by, we must expect those amongst us who have served in committee posts to stand down, and with a group so strong as the BMS there should be no difficulty in planning a succession.

One of the hallmarks of the BMS which has made it unique in my experience, is the total open-ness and friendliness of members, particularly as displayed in the trust and honesty at the Symposium. This 'special relationship' is precious and must be jealously guarded - It has been said on more than one occasion that "we like it as it is" - let's make sure that we keep it that way!

I will be pleased to continue to offer help or advice and assist in any way possible. I look forward to the opportunity at some stage in the future, of taking an active role once again in the management of the Society.

I would like to take this opportunity to thank all of you most sincerely for the help and support which you have offered during the past seven years, and which have made creating and running the British Micromount Society a truly memorable experience. As I look back over my time as Chairman there are many things which we have done first or best in our field, and I am sure that the Society will continue to go from strength to strength as new initiatives come to the fore.

Good luck!

ROY STARKEY

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#### EDITORIAL

You may notice that this newsletter is much later than it should be, this is partially because you the member, and potential contributor, have not written anything for publication! Or have not read something elsewhere you feel might be of interest to the rest of us, or not heard some fascinating gossip that could be passed on (if only to me); and partially because of administration difficulties.

There are a fair few "New Finds" reported this issue, many thanks to the indefatigable Steve Rust. My own continuing investigations into the minerals of the Caldbeck Fells has also turned up a few more localities which, with any luck, will be properly published in the not too distant future.

That's it for now: lets hear the results of those summer collecting trips in time for next November's Newsletter. No contribution too small. You don't have to be an expert, just concerned and enthusiastic!

NAMHO CODE OF PRACTICE FOR MINE EXPLORATION is enclosed.  
Please read them, and bear them in mind when next planning an underground trip.

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SYMPOSIUM WEEKEND 3rd/4th October 1987

You will all have received your application forms by now. It will help administration purposes if those proposing to attend return their application as soon as possible. To those members who have never attended the Symposium, you don't know what you are missing - to new members who may attend for the first time, welcome, we look forward to seeing you.

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## THOUGHT FOR THE DAY

Said by William Whewell (1794-1866), he of whewellite fame, and quoted most recently in an excellent and highly recommended history of geology by R M Wood "The Dark Side of the Earth" (George, Allen & Unwin 1985; paperback 1986 £7.95).

"The connection of mineralogy to geology is somewhat of the nature of that of the nurse with the healthy child, born to rank and fortune".

Puts you in your place doesn't it.

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## THE POWER OF MINERALS

Mick Cooper

A yet more provocative thought perhaps is the resurgence of belief in the occult powers of certain minerals. Collecting crystals for their supposed healing powers or as aids to meditation is becoming increasingly popular over here, stimulated no doubt by the vogue for this form of therapy in the USA. Modern interest in these alleged powers appears to have begun on the continent but it was not until it crossed the Atlantic, to what one report called "the loony centres of the world", that it really took off. Quartz and tourmaline are the most prized minerals, their potential being linked to their piezoelectric properties. A match between your "personal resonances" and the electromagnetic fields of the stone enhances the effect. Photographers must take care though: whilst photographing an apophyllite specimen at the last London show I was chided by a crystal therapy practitioner for using electronic flash. Apparently this can destroy the aura of a good crystal, but he did admit there was not much occult energy in apophyllite so perhaps I was alright. I pointed out this shortcoming in the specimen to the dealer concerned but she would not reduce the price.....

The ancient beliefs in the mystic properties of crystals, especially gems, have been well mixed with modern science (and pseudoscience) to create the present theories. They say the power of stones can often be harnessed by steeping the stone in water and then drinking the water. This may explain the lack of aura accorded to minerals like arsenolite or villiauminite. According to Dr Demetrius Pohl of the American Museum of Natural History the only thing you can be sure of in this field is the price inflation following from the increased demand.

You know, I always wondered why I was particularly drawn to collecting wulfenite; why it was I felt a voluptuous pleasure in holding a big, chunky, richly coloured piece of crystallized lead molybdate.....

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## BMS MEMBERS COLLECTING HABITS

Mick Cooper

This ambiguous headline is not journalese for an article on micromounters entering monasteries: I was in fact looking for something to do as an exercise on some state-of-the-art computer hardware I had access to for a weekend and thought it might be interesting to draw up a graph of BMS members' collecting histories as given in the 1986 micromounters directory. (What do you do with your weekends?) So I totalled up the number of collectors for each time period that they admitted to having been either collectors of minerals in general or micromounts in particular. Looking at the graph you can see readily a recent decline in the numbers collecting specimens other than micros and a corresponding leap in those collecting micros. Well, so what? It is, of course, difficult to make solid deductions from information like this since it's not a cross-section of all mineral collectors. It suggests that most people took up collecting micros relatively recently, that the numbers of people who collect both types of specimen (i.e. micros and the rest) is declining. Most worrying is the apparent lack of new collectors of either in the last couple of years; however this may

be a false statistic since many members did not have collecting details published in the directory. I assume many of these are new members whose details just hadn't come through in time. Anyway, on the assumption that you can prove anything with statistics I leave it up to you, the reader, to make more of it. One further point; It seems from the spread along the time axis that mineral collecting is a relatively youthful hobby, very few members have been collecting for over 20 years. Most remarkable is Max Wirth's score of 62 years - he must have started in the cradle!

number of collectors



MICROMOUNT BOXES

Following an inconclusive discussion at the last BMS' AGM during the Leicester Symposium, Richard Belson has decided to stop importing micromount boxes. Should anyone like to try importing these boxes - It works out much cheaper than buying from Talbots in Birmingham - the address to try is: Lina Grosch, Mainstrasse 13, 6057 Dietzenbach/Steinberg, Germany. Discounts offered are up to 30% on orders over 1000 boxes. This dealer also sells slides of minerals including sets of stereo-pairs of specimens from various German mines.

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Some optimistic members of the northern group, having become accustomed to their annual wet May day collecting weekend and perhaps also suffering from heat stroke following the unusually hot weather after Easter, decided to spend the holiday weekend this year in the Caldbeck Fells. The decision to meet at Mungrisdale at 9.30am on Saturday morning did nothing to increase the numbers, neither did the weather forecast.

Driving along the Penrith-Keswick Road we had a brief glimpse of Blencathra with a white cap of freshly fallen snow before the clouds hid the summit once again. Clearly it was not a day to visit Driggeth or Dry Gill so one half of the party consisting of Jean Spence, David Green, Richard Bell, John Dickinson and Mike Rothwell started with a bit of a dig at the Driggeth smelter site which is situated at low altitude. We soon located colour which lifted spirits to such an extent that remarks like "I don't mind hail, it bounces off one", and "isn't the snow pretty" were being made. We were expecting to meet the rest of the party, Mike Leppington, Peter Braithwaite and Michael Cooper at this site, but they failed to appear, rumour has it that staying in bed was deemed preferable to getting up, or was it that they got lost on the way from Cockermonth? (No. Ed. Far from being lost we were collecting carminite and pharmacosiderite from dumps on the Netherrow Brow Vein.)

The second site visited was Carrock mine tips, where some scheelite was collected along with one or two small specimens of the "hairy metallic sulphides", which are relatively common on these tips. By now the snow had turned to rain so we decided to head for the coast in search of sunshine. David led the way with Jean navigating in search of the Pallafat mine dumps, after taking two wrong turnings, a short tour of the countryside around St Bee's head, and two tips and a wood, we finally located some promising dumps which looked well dug into. At about the same time the rain stopped, the sky turned blue, and the sun started to shine on us. It was still freezing cold but I suppose one cannot expect too much in May in Cumbria!

We spent a good couple of hours unearthing calcite specimens from the Pallafat mine dumps and getting liberally covered in iron oxide in the process. Richard Bell found the largest specimen and then generously listened to some advice on how to trim it into three specimens.

The evening was spent in the Mill Inn, Mungrisdale discussing the day's finds and planning the next day's excursions. On the Sunday we decided to visit Red Gill for starters. The Cockermonth party showed up on time and the sun shone. (No connection between these two events. Ed.)

The wind was still blowing in a direct line from the north pole but at least it was behind us at that stage.

We soon lost two thirds of the Cockermonth party, one decided to transfer a portion of Brae Fell dumps to his car and another disappeared to be spotted occasionally with a camera under one arm and a tripod under the other stalking purposefully across the fells.

Red Gill tips provided some of the most interesting material of the weekend, several, as yet unidentified specimens being found as well as macphersonite (XRD), and a very nice linarite crystal close to 6mm in length on quartz matrix. Encouraged by this and perhaps feeling in need of some exercise we decided to return to Fell Side via the Roughton Gill south vein and Potts Gill where it was rumoured that cornwallite, pseudomalachite and other interesting minerals could be found. Sure enough after some diligent searching microspecimens of these minerals were indeed found. Viewed under the microscope they are most attractive and well worth the long walk in an icy northerly gale.

For the last day of the weekend we chose Dry Gill via Brandy Gill, whilst waiting for the Cockermonth party the tips at Carrock once again yielded some specimens and Richard Bell dug out some very interesting material at Dry Gill. This could turn out to be plumbogummite pseudomorphing mimetite, we shall see. The weather also stayed fine.

In summary then, a very enjoyable weekend and we are all looking forward to the next Northern group meeting on July 11th, when we hope to see each other's finds.

#### REGIONAL MEETING - NORTHERN GROUP

Eric Otty

Fourteen members and friends attended the meeting at Bircotes Library on 11 July. Specimens collected in the early Summer mainly from Cumbria and Cornwall were unveiled, visually identified by Mick Cooper and David Green, and many exchanges were made. After excellent refreshments provided by Jean Spence and Muriel Tissington, Mick Cooper showed slides of the group's recent visit to the Caldbeck Fells and some excellent specimens from that area. The next meeting will be held on Saturday 12 September commencing 2pm. New members will be welcomed - directions can be obtained from Jean Spence.

#### SOUTH EAST GROUP

Elsie Hansford

The Group continues to meet every 3 months and is well attended by approx. 25-30 members at each meeting. The South East Group members prefer the meeting to be informal without any planned programme but there is always much to discuss or look at as usually various members have either just come back from a field trip or are just going on one. The hours fly by and we usually managed to squeeze in a film show of members slides. A break for tea, a raffle - much looked forward to - and sometimes a general discussion.

The next meeting is on Sunday 16 August at 3pm at Wydeville Manor Road, SE12 and any other Society members are welcome to join in. Contact Elsie Hansford if you wish to come. The last meeting of this year will be on Sunday November 22nd.

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#### BRITISH GOLD

Roy Starkey

Whilst attending a recent Welsh Mines Society Field Meeting I was introduced to the technique of panning mine tailings in pursuit of the precious metal. Trevor Chester has had considerable success with the technique around the old dumps of the Dolgellau gold belt, and I myself recovered three reasonable grains from the silty ground below the dumps at Vigra. It would be interesting, in the light of Rex Bingham's efforts to introduce us to the noble art, to know how many members have tried to pan dump material, where, and with what success. Trevor assures me that gold is quite common on mine spoil heaps in trace quantities.

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#### NEW FINDS

Mick Cooper

##### Wulfenite $PbMoO_4$

Can a newsletter go by without further British localities being noted for this 'rare' mineral? Several have come to my notice this year and are listed below with a note as to the finder.

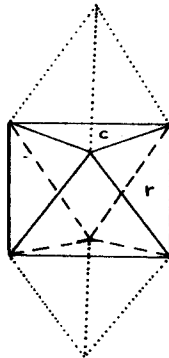
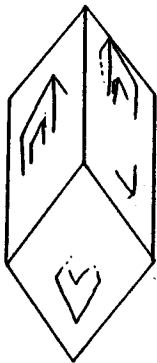
1. Ecton Hill, Staffs (Richard Belson). One small specimen with tabular and steeply bipyramidal, yellow translucent xls from 0.5-2.0mm on quartz from a dump about midway between Ecton Deep Adit and the Bag Mine found at Easter 1986. (Previously recorded from Waterbank m., Ecton by Rust, BMS Newsletter 13,6 in 1985).
2. Ladywash Mine, Eyam, Derbys. (Richard Belson). Deep orange-yellow steeply bipyramidal xls with fluorite and baryte. The wulfenite xls are from 1-2mm in singles and clusters and also as pyramidal growths on a tabular form.

3. Cwm Orog, Llangynog, Powys, Wales. (Richard Belson). One specimen with pale lemon yellow tabular xls on baryte. Crystals reach 3mm.
4. Mexico Mine, Caldbeck Fells, Cumbria. (David Middleton). As small steeply bipyramidal xls to about 1mm with other, as yet unconfirmed, lead secondaries from debris above the Mexico Mine high level.
5. Mexico Mine, Caldbeck Fells, Cumbria. (Mick Cooper). As tiny (to 2mm) but sharp, transparent, yellow tabular xls combining low bipyramids and pinacoid, associated with tabular pyromorphite-mimetite and massive cerussite in quartz; from the Low Level dumps in Todd Gill.
6. Bwlchrennaid Mine, Goginan, Dyfed, Wales. (Steve Rust). Minute (less than 0.3mm) bright yellow to orange-yellow tabular to bipyramidal xls on hemimorphite.

The Ladywash occurrence was confirmed by XRD at the BM(NH); other id's are visual.

Beudantite  $\text{PbFe}_3^{+3}(\text{AsO}_4)(\text{SO}_4)(\text{OH})_6$  XRD confirmation by BMNH

Burdell Gill, Caldbeck Fells, Cumbria. (David Middleton). Occurs here in 2 different habits: (i) as minute (less than 1mm) brownish xls of pseudo-octahedral aspect due to equal development of the pinacoid and a rhombohedron. The latter faces are lustrous, the pinacoids dull; these characters show readily that the habit is not an isometric octahedron. (ii) As somewhat sheafy aggregates of several rhombohedral individuals partly embedded in massive beudantite. Xls reach about 2mm.



Beudantite from Burdell Gill. The crystal on the left shows sub-parallel growth; that on the right shows a rhombohedron (r), indicated by the dotted lines, truncated by the pinacoid (c). The pinacoid faces are dull whilst the (r) faces are lustrous.

Lanarkite  $\text{Pb}_2(\text{SO}_4)_2\text{O}$  XRD confirmation by David Green

Red Gill Mine, Caldbeck Fells, Cumbria. (David Middleton). A single specimen with sprays of tiny, pale blue, acicular xls on altered galena. Lanarkite is very rare in the Caldbeck Fells being known only from a few specimens found by Kingsbury & Hartley at the Brae Fell Mine and in Upper Roughton Gill in the old south lode crop workings.

Tetrahedrite  $(\text{Cu,Fe})_{12}\text{Sb}_4\text{S}_{13}$  XRD confirmation by BMNH

Bwlchrennaid M., Goginan, Dyfed, Wales. (Steve Rust). Massive masse to 5mm.

Bindheimite  $Pb_2Sb_2O_6(O,OH)$  XRD confirmation by BMNH

Bwlchrennau M., Goginan, Dyfed, Wales. (Steve Rust). Resinous to powdery yellow masses.

Bournonite  $PbCuSb_3$  XRD confirmation by BMNH

Brownley Hill M., Nenthead, Cumbria. (Steve Rust). As crude rounded oblong crystals to 3mm.

From a trial level near Bontddu, Dolgellau, Gwynedd, Wales, all found by Steve Rust and confirmed at the BM(NH) by X-ray:

1. Chalcoalumite  $CuAl_4(SO_4)(OH)_{12} \cdot 3H_2O$

Minutely botryoidal whitish crusts and as pseudomorphs after lath-like devilline.

2. Chalcophyllite  $Cu_{18}Al_2(AsO_4)_3(SO_4)_3(OH)_{27} \cdot 33H_2O$

Typical emerald-green hexagonal plates, forming aggregates to 1.5mm, associated with malachite, devilline, and a tyrolite-like mineral.

3. Devilline-serpierite  $CaCu_4(SO_4)_2(OH)_6 \cdot 2H_2O - Ca(Cu,Zn)_4(SO_4)_2(OH)_6 \cdot 2H_2O$

Blue-green lath-like crystals lying flat on veinstone, and as free-standing crystals to 2mm long forming divergent sprays. Sometimes altered to chalcoalumite and iron oxide.

4. Monohydrocalcite  $CaCO_3 \cdot H_2O$

Identified on one specimen in one tiny vugh, as minute (less than 0.5mm) triangular dipyrnidal crystals. In a corroded calcite-chalcophyllite veinstone.

5. Tyrolite-like mineral

Occurs as bright blue spherules to 0.3mm and as small botryoidal masses to 2mm; associated with erythrite and, more rarely, chalcophyllite and devilline.

Namuwite  $(Zn,Cu)_4(SO_4)(OH)_6 \cdot 4H_2O$  BM(NH) X-ray confirmation

Waterbank Mine, Ecton, Staffs. (Steve Rust). Extremely rare. As pale green platy pseudo-hexagonal crystals forming aggregates to 1.5mm or so. Associated with langite-posnjackite, serpierite, hydrozincite, and a mineral with a spangolite type structure. On and in a corroded sphalerite-calcite veinstuff with very minor chalcophyllite.

Wulfingite  $Zn(OH)_2$

Milltown G., Ashover, Derbys. Wulfingite is a new mineral recently described from Richelsdorf, Hesse, W. Germany. It is unusual in being one of the very few slag weathering products, other than those found at Laurion, Greece, to be described as a new mineral. Steve Rust found this mineral 3 years ago at Milltown Quarry and has been waiting for publication of the type material. It occurs at Milltown G. as colourless broad bladed crystals in masses to 2mm, associated with sweetite and the soon-to-be-published new mineral ashoverite. Only one specimen was found.

Mottramite  $PbCu(VO_4)(OH)$  BM(NH) X-ray confirmation

Roughton Gill south vein, Caldbeck Fells, Cumbria. As minute subtransparent olive green crystals on limonite/goethite from an outcrop under Iron Crag. David Middleton specimens.



Mattheddleite  $Pb_{20}(SiO_4)_7(SO_4)_4Cl_4$  New Mineral

Leadhills, Strathclyde, Scotland. Mattheddleite, named for the famous Scottish mineralogist Matthew Forster Heddle, is a new mineral of the apatite group, a sulphite-silicate analogue of pyromorphite. It occurs as minute colourless hexagonal prisms with characteristic steeply pointed terminations, associated with other sulphates and carbonates of lead including leadhillite, susannite, macphersonite, lanarkite and caledonite. For more information see Livingstone, Ryback, Fejer and Stanley in the Scottish Journal of Geology 23, 1-8 (1987). This species has also been known for some time from the Caldbeck Fells, Cumbria. An article on the Cumbrian occurrences is being prepared.

Macphersonite  $Pb_4(SO_4)(CO_3)_2(OH)_2$  David Green specimen and X-ray confirmation.

Red Gill M., Caldbeck Fells, Cumbria. Identified on one small specimen collected recently from the Old Dutch level dumps. Associated with caledonite and other, leadhillite and mattheddleite

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ALSTON MOOR

Mick Cooper

If you have ever read any of the older geological or mineral literature you have probably been struck by the difference in style from modern writing on the subject. Earlier writers often did not maintain the air of studied detachment from their subject in vogue today but would often allow their enthusiasms full reign. Curiously, modern continental (French and German anyway) writing seems to have kept more of this character than English language writing.

I quote below from a particularly good example taken from Westgarth Forster's 1821 "Treatise on a section of the Strata, from Newcastle-upon Tyne to the mountain of Cross Fell, in Cumberland; with remarks on mineral veins in general..." in which he describes, in a wonderful flood of observations, the marvellous appearance of the crystal-lined vughs once common in the mines of Alston Moor.

"There is, commonly, a hard concreted stony crust, called druse, or rider, by the Alston Moor and Allendale miners, adhering to the inside of the cavity, out of which, as out of a root, an innumerable multitude of short prismatical crystals are shot, which sparkle like a thousand diamonds, with the candle, or when brought up to the sun. Between these clusters of mock diamonds, and sticking to them promiscuously, there are often lead ore, black jack, pyrites, or sulphur, and spar, shot also into prismatic, cubic or other figures; and, besides these clusters of grotesque figures, which grow out of one another, and are, as it were, piled upon one another, the whole inside of the cavern is, sometimes, most magnificently adorned with the most wildly grotesque figures which grow upon, and branch out of, one another, in a manner not to be described, and with all the gay and splendid colours of polished gold, of the rainbow, and of the peacock's tail; and all these blended together, and the masses reflecting all the beauty of such an assemblage of gaudy colours.

But, it may be remarked, that these caverns are never so magnificent and glorious, as when there is less or more of yellow copper ore, or of the pyrites, or black jack in them; as these ores are found to produce, in hard veins, the most beautiful colours in the world....seen at Allenheads, Coal-cleugh in Northumberland and Nenthead in Cumberland.

These mineral loughs, shakes, or caverns, are the great source of materials for grotto-work; and the specimens, collected from the miners, are, generally, the most showy and dazzling articles in the whole arrangement of the splendid grotto."

In the 18th Century such vughs that came to the attention of the mine owners were soon closed up to prevent the miners from wasting time collecting specimens for sale to the fashionable gentlemen collectors of the day. Although they were probably just as quickly opened up again, you never know, somewhere under Alston Moor there may be an ancient brick wall through a hole in which you could see, as Howard Carter once did, "wonderful things".

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### WHAT CRYSTAL SYSTEM IS THAT?

Mick Cooper

Knowing the crystal system of an unknown mineral is a great aid to identifying the species but, for most specimens the determination of the system is a difficult and specialised job, necessarily left to the experts. Whilst pondering the problems of crystal identification I wondered just what are the chances that a particular mineral belongs to a given crystal system? So to pass the time on boring commuter trains I analysed the species listed in Fleischer's 1980 Glossary of mineral species. The results, on 2744 species are:

System	No.	%*
Cubic	278	10.0
Tetragonal	211	7.5
Orthorhombic	629	23.0
Hexagonal	236	8.5
Trigonal	231	8.5
Monoclinic	897	33.0
Triclinic	237	8.5
<u>Amorphous</u>	25	1.0
Total	2744	100.0

\* to nearest 0.5%

Orthorhombic and monoclinic minerals are by far the most common, accounting for 56% of the total. The systems most easily identified by simple visual inspection (cubic, tetragonal, hexagonal and trigonal) are definitely in the minority. These figures are broadly similar to those published in the first two parts of P. Groth's "Chemische Krystallographie" (1906 & 1908), which covers inorganic compounds in general, i.e. man-made or natural.

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### CHEMICAL HINT.....CORRECTION

Max Wirth

When describing the test for arsenate in the last Newsletter I made a serious mistake. Norman Thomson has kindly pointed out that several cations also give a positive test, namely Cu and Fe when 3-valent. This means that minerals like olivenite or mixite or bayldonite can not be positively identified.

It is therefore necessary to separate the arsenate from the cations and this can best be done by paper chromatography. Since the separation is quite easy, a much simplified procedure may be used.

The nitric acid solution of the mineral is spotted onto the end of a 90 x 10mm strip of filter paper. The eluent consists of 15 drops of acetone, 12 drops of methyl-ethyl-ketone and 6 drops of nitric acid (50/50) in a glass phial measuring 80mm by 30mm diam. Development takes 10 to 15 minutes, whereafter the strip is air dried. A second strip of filter paper is placed on a glass slide and soaked with an aqueous potassium iodide solution (only a few drops are required). The chromatogram is then pressed onto it and the iodine spots gradually show up.

The iodine spot for the cations will show that these have hardly moved, whilst the arsenate spot will have moved half as far as the solvent front.

All the above dimensions and concentrations are approximate. The method is crude but simple and requires very little in the way of chemicals. It has been used successfully for olivenite and clinoclase and has shown that a specimen labelled bayldonite was not bayldonite.

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## GOLDSCHMIDT'S ATLAS DER KRYSTALLFORMEN

The first volumes of the Society's set of this classic work have now arrived - after several exchanges of letters. There have been complications and delays, and we have in fact been sent volumes 6,7,8 and 9 so far. The other volumes are expected to be posted during June, so with luck we should have the complete set by the Symposium - exactly 1 year after deciding to purchase it!

This is the 9 volume set in German, however over three-quarters of the set are crystal drawings and charts. The text and plates are bound together in soft covers in 8½" x 11" format.

A scheme for accessing the Atlas will be decided at the Symposium in order to enable as many members as possible to make use of it. The crystallographic enthusiasts amongst you have a real feast in store!

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## BOOK REVIEWS

Geoff Deverell

### The MacDonald Encyclopedia of Precious Stones

by Curzio Cipriani and Alessandro Borelli. Published (1985) by MacDonald. Softback, 384 pages, 7½"x 4½"; over 380 illustrations, most in colour. Good quality paper and printing, £7.95.

This book gives a good general coverage of precious stones and associated organic materials, but does not go into detail on specific physical properties, cutting and polishing techniques etc.

In addition to descriptions of individual stones there are sections which briefly touch on history, crystal structures, identification methods, and optical properties. Also briefly, there are descriptions of the methods used by the lapidary and diagrams of the main types of faceted cuts.

The stones are presented in sequence of a descending order of hardness, which roughly corresponds to a descending order of value.

There is a general description, visual appearances, physical properties, genesis and current principal locations; in most cases there is a photo of the stone in both rough and finished conditions. Where a stone is commonly available in several colours these are treated separately. There is usually a subjective statement on value, but no absolute values are given. Along with value there is advice on whether simulants or synthetics are known and on the market.

The organic gems, such as pearl, amber and coral are well covered with interesting detail concerning cultured pearls. Finally the synthetic and artificial products are covered with explanations of the manufacturing procedure, their history and how to tell the difference between the natural and synthetic materials; which in some cases is very difficult.

I like this book and consider it to be very good value for the money charged. It tells me most of what I would wish to know about precious stones, and includes rareities such as Tsavorite and trade names such as Fabulite.

The MacDonald "Encyclopedia of..." series is an excellent venture. The brief nature of the facts given is amply compensated for by good to excellent photographs. An earlier edition on "Rocks and minerals" was reviewed in BMS Newsletter 12,6. Other titles include "Plants", "Trees", and "Shells". Occasionally the American editions of these volumes are available in bookshops over here under the general titles of "Simon and Schuster's guide to...", the volume reviewed above is known as "...gems and precious stones". Production values of the US edition is higher, involving better quality (coated) paper and better printing. It is also somewhat more expensive (£8.95). Ed.

#### The Jade Kingdom

by Paul E Desautels, published by Van Nostrand Reinhold. £31.45. Hardback 11½"x 9", 118 pages, good quality paper and printing, illustrations and photographs but mainly in black and white.

I have a copy of Mr Desautels earlier book, The Mineral Kingdom, and when I read that he had produced The Jade Kingdom this coincided with my wife's plea of "what can I get you for Christmas". In the event it had to be ordered and did not arrive until well into the New Year. When it did arrive I judged it as such poor value for the money that it was embarrassing. Putting aside the matter of cost, the book itself did not meet expectations. It is not, and was not intended to be, a book on the mineralogical aspects of jade, though these matters are given a relatively brief coverage by describing the differences between nephrite and jadeite, substitutes and limitations, and methods of testing for jade which in a word is "difficult". The larger portion of the book deals with jade artifacts from all over the world and the symbolism behind these artifacts. This is profusely illustrated with photographs and line drawings. Unfortunately the majority of the photos are black and white.

A colour section (16 sides) has been inserted "en-bloc" between chapters 8 and 9. This type of segregated presentation while economic for the publishers makes it difficult to relate the photos to the relevant chapters. The colour photos, which are excellent, range from thin sections under polarised light to carvings.

The book concludes with a brief chapter on cutting and carving, the emphasis is on early techniques and I do not think the amateur lapidary could find much help in this chapter.

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#### OVERSEAS REQUESTS

Elsie Hansford

I have received two requests from Micromount collectors overseas, namely, Mr Poloni Giancarlo of Italy and Mr Hans-Peter Klinger of Switzerland.

Mr Giancarlo would like to hear from British Micromounters who have micros to sell - so please send your lists to:- Mr Poloni Giancarlo, Via G.B. Brocchi 3, 21031 - MILANO M1, Italy.

Mr Hans-Peter Klinger wishes to exchange with British Micromounters - He enclosed a comprehensive list of minerals of which he says "many of them are extremely rare and found up to now only here". He is interested in 'good crystallized and terminated MM especially beryllium minerals and Zeolites' so if you wish to exchange lists and micros write to:- Hans-Peter Klinger, Traubenweg 29, CH-8700 Kusnacht, Switzerland.

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Last year was the centenary of the discovery of reef gold on the Witwatersrand of South Africa. The first settlements were small communities of miners and traders and later the city of Johannesburg was built. As part of the celebrations and to accommodate the tourist visitors, the mining industry has reconstructed Gold Reef City with period buildings of architectural styles reminiscent of the 1886-1920 period, a large luxury hotel and restaurants. The original Gold Mine Museum is incorporated in the development, which has created much work for skilled craftsmen capable of working to Victorian standards. The reprocessing of old sand dumps and slimes dams on the Witwatersrand is adding about 20 tons of gold to South Africa's annual mine output. The oldest sand dumps left by the industry which used mercury amalgam techniques for gold extraction are particularly valuable while the slimes dams resulting from the cyanidation chemical recovery process are yielding pyrite for sulphuric acid production and uranium as well as gold. The removal of the high degree of acidity on the surface of the dumps has enabled vegetation to grow and green hills are now part of the landscape. Wildlife abounds and there is the prospect of establishing a nature reserve close to Johannesburg.

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## NEW FOSSIL MAGAZINE

"FOSSIL FORUM" is a new quarterly magazine for fossil collectors of all levels. It contains articles on recent finds, museum collections, famous collectors, conservation and will discuss all aspects of collecting. Annual subscription (UK) is £5. For further information contact: C.M.Pamplin, Palaeo-enterprises, 39 Drake Avenue, Torquay, Devon, TQ2 6JU.

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## GEOLOGICAL HOLIDAYS

"EARTH'S LEGENDS" offers walking tours, weekend breaks to 3 week holidays, with the accent on understanding the geological history and makeup of the ground underfoot. The brochure to hand gives details of tours in Derbyshire, Dorset, Devon, Snowdonia, Skye and....Kenya. Proprietor (and sometime mineral dealer) Frank Birkin offers £5 discount on any tour to BMS members. For brochure write to Earth's Legends, 22 Heathend Road, Alsager, via Stoke-on-Trent, Staffs., ST7 2SQ; Tel (09363) 77744.

And talking of holidays, (and who isn't?) Roy Starkey is rumoured (by Roy Starkey) to have taken a whole weeks holiday in the Swiss Alps without so much as a geological hammer. Not only that but NO minerals were collected whatsoever! Is this a record?

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## DIARY DATES

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|--|--|
| Harrogate Gem & Mineral Fair<br>Crown Hotel, Harrogate.                  | 29, 30 & 31 August                                       |
| British Micromount Society Symposium<br>Leicester University, Leicester. | 3 & 4 October  |
| London International Gem & Mineral Fair<br>Rembrandt Hotel, London SW7.  | 3 & 4 October<br>(Note: This clashes with the Symposium) |
| Rock Exchange<br>Bakewell, Derbyshire.                                   | 10 & 11 October  |

Federation of Lapidary & Geological Societies Exhibition  
In conjunction with the Geological Association's Re-Union.  
University Buildings, Gower St, London SW1.

7 November

Arnold Fisher's Mineral Fair  
Haywards Heath, Sussex

14 November

Amateur Geological Society's Bazaar  
Golders Green, NW1

5 December

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#### BRITISH MUSEUM (NATURAL HISTORY)

An article in the first issue of the new "World" magazine describes some of the research work carried out by museum staff. In the section dealing with the Department of Mineralogy is the following passage: "Deputy Keeper, Dr Paul Henderson... clearly feels warmly towards the enthusiastic groups of amateur mineralogists who bring him their finds. Unfortunately they are few and far between. The British public are not as keen as say the French who are much more turned on by minerals."

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#### BMS MICROMOUNT COLLECTION

Mick Cooper

For many years I have worked in museums recording collections from nineteenth century chemist's bottles, bedpans, beetles, books, to, yes, even minerals. My first reaction on seeing a collection is "is it catalogued?", the second is "is it indexed?". As is well known the BMS micromount collection is well catalogued but there are no indexes available, and although the curator, Max Wirth, can provide any user with a listing by species or by grid reference for example it is not possible, for a variety of reasons, for him to produce a complete index.

As a project at a computing course I have been taking I decided to build up a database of the BMS collection and then to devise command files to produce species-by-locality and locality-by-species indexes from it. This project is now nearing completion, although yet dogged by inconsistencies in the locality records (no two collectors seem to agree on where a mine is, or which is the nearest town of note!). This database has been produced using dBase II on an Amstrad 1512. Anyone with access to such soft and hardware who would like a copy of the files I have made should contact me soonest.

And, speaking of indexes.....BMS archivist Muriel Tissington has produced a card index of BMS Newsletters. It is intended to consider publishing a version of this index in a Newsletter in the near future. Watch this space, but don't hold your breath!

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#### NEWSLETTER BACK ISSUES

There was a very small response to the paragraph on back issues in the last Newsletter. Since it is not worth reprinting the few copies required by members I suggest those that need them write directly to BMS Archivist, Muriel Tissington, enclosing sufficient stamps to cover photocopying and postal charges.

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**NEW MEMBERS**

Welcome to the following new members:-

Philip Taylor  
2 Aldermary Road  
Manchester  
M21 2GN  
Tel: 061-8819645

Colin Robinson  
40 North Green  
Staindrop  
Darlington, Co Durham  
Tel: 0833-60638

William Ford  
31 Rosemont Way  
Liverpool  
Merseyside  
L17 3BY  
Tel: 051-724-3313

Betty Thompson  
12 Castle Drive  
Formby  
Liverpool  
L37 6EH  
Tel: 07048-75278

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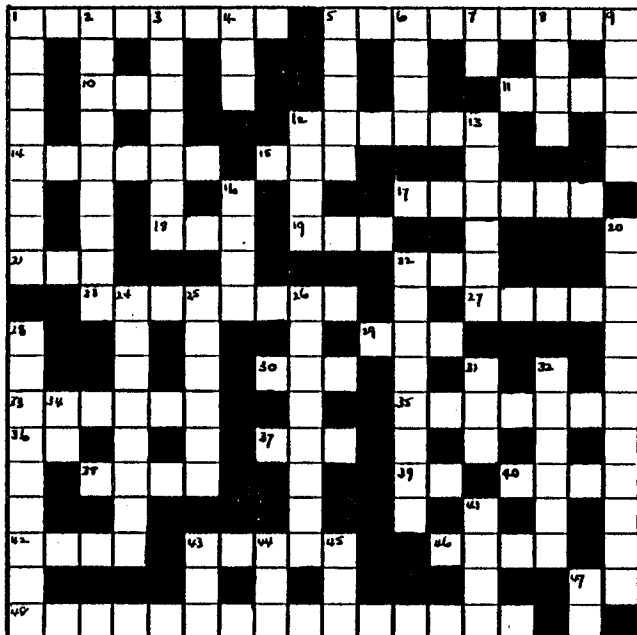
**YOUR CONTRIBUTION COULD HAVE  
FILLED THIS SPACE**

**BRITISH MICROMOUNT SOCIETY**

**NEWSLETTER EDITOR**

Michael Cooper  
41 Albany Road  
Sherwood Rise  
Nottingham  
NG7 7LX

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**Clues Down**

1. Extinct gigantic reptile (8)
2. Polymorph of calcite (8)
3. Period of mountain building (10)
4. Attach 14 across to sticks with wax (3)
5. Emerald, aquamarine & BMS member (5)
6. Stork-like bird sacred in Ancient Egypt (4)
7. - And behold! (2)
8. Number One - person (4)
9. Hardness 8 on Mohs' scale (5)
12. Rush to Yukon for it (4)
13. Metamorphosed limestone (6)
16. Man-eating giant (4)
20. Hop, muse; prod into different shape (10)
22. Deposition of material by floods and rivers (8)
24. Cutter of stones (8)
25. Swallow-like bird (6)
26. Quartz crystallises in this system (8)
28. Industry in the St. Austell area (5.4)
31. Mountain peak (3)
32. Lead sulphide (6)
34. Reply to John (2)
41. Hardness of Fluorite (4)
43. Lunar athlete, bovine variety (3)
44. Small, social, industrious insect (3)
45. Kith & - (3)
47. Chemical symbol for Antimony (2)

**Clues Across**

1. For ever a girl's best friend (8)
5. Favourite cut for 1 across (9)
10. Much - about nothing (3)
11. I took it to a party (4)
12.  $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$  (6)
14. Precious, semi-precious and rolling (6)
15. C.Robin's wise tree-dwelling friend (3)
17. Original inward thoughts (6)
18. Simulates 1 across (3)
19. Suitable activity for field trips (3)
21. Don't get into one of these (3)
22. - for one and one for - (3)
23. Carbon, Sulphur & Nickel are examples of these (8)
27. Premium bond selector (5)
29. Have it with cakes (3)
30. Produced from cassiterite (3)
33. Accuse (6)
35. Mauna Loa and Stromboli, for example (7)
36. Injunction to Nanette (2)
37. Spare this & spoil the child (3)
38. A small lake formed in a highland region following glaciation (4)
39. Chemical symbol for 12 down (2)
40. Abbreviated note to remember (4)
42. Underneath the Lamplight (4)
43. Extensively laid down during cretaceous (5)
46. Unnatural heavy sleep (4)
47. Please be quite (2)
48. Home of "Old Faithful" (11.4)

Answers to this crossword will be printed in the next newsletter.