

# Welsh Mines Society

(Member of the National Association of Historical Mining Organizations)



NEWSLETTER 27

DECEMBER 1992

- 1 1993 PROGRAMME
  - a) 24/25 April Red Dragon  
Volunteers please, to complete the excavation of this historic gold-mill near Dinas Mawddwy, prior to consolidation next year. If you can come please phone Simon Harris 0794 58337
  - b) 19/20 June Summer Meet  
Dolgellau gold and manganese, based at the Cross Foxes Inn. Leaders Harold Morris and George Hall (currently in the Phillipines for the winter).
  - c) 18/19 September Autumn Meet  
Esgairhir and district - Tercentary of the abolition of the Mines Royal monopoly. Leaders Dr Marilyn Palmer and David Sick. Simon Hughes is finding a suitable base.
- 2 REPORT OF SUMMER MEET, CARNARVON June 1992  
Very well attended, even if the hotel ripped us off (see section 5). Thanks are due to Colin and Liz for making the arrangements.
- 3 REPORT OF AUTUMN MEET, LLANIDLOES Sept 1992  
Memorable for a fascinating illustrated talk by David Pelham, geologist, of small scale marginal mining in East Africa and Equador, for emeralds and gold, where stamp batteries and other primitive machinery still do a useful job.  
Note : I am aware the above reports are perfunctory in the extreme. Maybe someone will volunteer to write more worthy epistles.
- 4 ANNUAL GENERAL FIELD MEETINGS  
The following subjects arose:
  - a) Congratulations to Liz Pugh and Colin Armitage on their wedding  
We wish them many happy years above ground and below.
  - b) Our best thanks are due to David Roe for the 1992 Directory of nearly 240 WMS members - the third largest mining society in the the country and the cheapest!
  - c) The promise of £250 to the Welsh Mines Preservation Trust from the WMS was confirmed.
  - d) Boo's socks. Boo Vernon is knitting heavy duty socks to order, bearing the legend "WMS". I can vouch for them at £5 per pair, of which Boo is kindly donating £3 to WMS funds.
- 5 WEEKEND BOOKINGS -Organisers please note.  
Recently more than one unprincipled hotelier has defrauded the society by breaking verbal contracts such as charging for a room when he has said he would not. In future, it is essential that all details are confirmed in writing, and this includes the cost of catering, as well as accommodation. To avoid us having to commit ourselves to exact numbers, hoteliers should be willing to put on a buffet for say £80 or £90 which would suffice for average numbers. If more turn up, they can usually russle up a bit more, or we can eat less per person. Hopefully this will render things less fraught in future.



m) David Bick The Old Metal Mines of Mid Wales Parts 1-6 388 pgs £34 post paid. The hardback signed limited edition complete with detailed index should be on sale in Feb/March 1993 from the Pound House Newent Glos. Cheap at the price.

7 MINING ARCHIVES

The National Library of Wales has a "large and important" archive, the Roberts and Evans (Solicitors) papers, not yet catalogued. Reportedly much on 19th C Cardiganshire.

8 MYSTERY MINE

Where was Wheal Caroline near Aberystwyth, referred to in Pigot's Directory of 1844, and worked by John Taylor and Sons?

9 ROMAN MINE

Dave Smith of Colwyn Bay says that a feature called "Ditch of Wolves" crosses the limestone at Coed y Gopa, Abergele, and has all the hallmarks of an ancient, possibly Roman, lead mine. Underground it suggests a high antiquity. Early Mines Research Group, where are you?

10 EARLY MINES RESEARCH GROUP

This summer they excavated at Llancynfelin and Nantyrarian near Goginan, where evidence of ancient mining was found. I joined the venture for a day or two; we concluded with a splendid dinner at Hafod Lodge, where we drank to all mines and all absent friends in England, much as Francis Thompson had done 200 years ago, and not far away either. Really the ambience of such gatherings is something unforgettable.

Note: we would welcome an occasional paper from them - DEB.

11 CURIOUS WHEEL PIT

Whilst at Nantyrarian I examined a wheelpit just below the cart-track, and noticed a very peculiar, not to say unique, feature. There were apparently two arched outlets in the wall for water, one above the other, the lower one being below the bottom of the wheelpit! Explanations please.

12 RHAIADR COPPER MINE AND CROESOR QUARRY

Whilst researching Croesor and compiling a historical record, Adrian Barrell found a reference to a Rhaiadr mine as being in the Rhaiadr wood near Park Quarry, where a dyke containing copper could be traced for over ½ mile. "Tunnels" had been driven in at the western end and ore taken out. Has anyone visited the site?

13 SMELTING SITES IN WALES

Peter Claughton writes as follows:

"At a recent Historical Metallurgy Society seminar on early lead and silver-lead smelting, there were contributions from Derbyshire, Durham, Devon, and Yorkshire, but nothing from Wales. Little is known of the extent and nature of smelting sites in the Principality. Before its concentration in centres such as Llanelli, smelting was carried out at, or near the mines and a number of sites representing the last phase of that decentralised industry have featured in published articles; Anchor (Aberystwyth), Camarthen, the Llangynog area, and the silver-lead smelters of the North Cardiganshire coast. But about the earlier sites there is virtually no mention, particularly the bole hearths used up to the mid 16th century. Current work on medieval silver-lead relies heavily on documentary evidence of smelting at the Devon mines. Undisturbed sites in the remote parts of Cardiganshire and Mid-Wales, where silver content was significant could help to fill the gap; particularly as these mines were rising stars, as those in Devon waned at the end of the medieval period.

Could I appeal for information on such sites, however scant. Anything found whilst walking over the mines, such as an isolated patch of slag could lead to large strides in the understanding of early smelting techniques.

Note: for an ancient smelting site near Cwmystwyth, see 1858 Mining Journal pg 513 - DEB.

14 THE RUSSELL SOCIETY

The Russell Society celebrated its 20th anniversary this year by establishing a new international award - the Russell Medal - to individuals who have given outstanding services to mineralogy. The society is a body of amateur and professional mineralogists which encourages the study, recording, and conservation of mineralogical sites and material, much of which is published in the Society Journal and Newsletter. The first award of the Medal was made to Dr R.J.King. Further information from P S Jackman, 116 Gipsy Lane, Kettering, Northhamptonshire NN16 8UB

15 CLOGAU MINE

This is again at work with a few men, and reports gold being raised. No more details.

16 MINERS IN THE 1990s

I was shocked to learn that there are so called mining engineers at open-cast operations who have never been underground, and what is more, some are afraid to! How do such people qualify? It is like 'archaeologists' who have never put a spade in the ground - and they exist also!

17 THE CARNO ADIT AND ITS CAVES

This unlikely project began in 1905, by the Ebbw Vale Urban District council in search of water. It begins at GR 164126 and was driven nearly 2 miles, the first mile and a quarter being dead straight. Cave systems were encountered and cavers have been developing their potential for years, without however, much success.

18 MINERA NEAR WREXHAM

Good progress here; a steam driven crusherhouse and dressing floors with ore bins have been revealed under old tips at Meadows Shaft. Money is now available for more work on the enginehouse, and a reception centre with car park is now in operation. Worth a visit.

19 EARLY MINING IN CORNWALL

In July I attended an interesting conference, only to learn that little or nothing approaching the antiquity of Cwmystwyth or the Great Orme has yet been proven: not to mention enginehouses. They have none before 1800, whereas there are 5-6 in West Shropshire alone! Our Cornish cousins must try harder.

20 WMS OCCASIONAL PAPER 1992

We are pleased to enclose with this N/L an article by Peter Hay on comparisons between slate mining in North Wales and Cumbria. Any comments would be welcome.

21 ACKNOWLEDGEMENTS

My thanks are due to all contributors including Steve Grudgins, Peter Claughton, Dave Smith, Adrian Barrell, Roy Starkey, Peter Hay and D Frazer.

A merry Xmas to all. Next N/L May 1993.

David Bick (Editor) Pound House Newent Glos. (0531 820650)

22 WELSH MINERALS

Mr G S Camm of the Old Coach House, Bar View Lane, Hayle, Cornwall TR27 4AJ (0736 754498) is carrying out a research project for the British Museum and the Countryside Council for Wales on an inventory of metalliferous minerals in Wales. Part of the project aim is to assist in the site protection from the forest and the bulldozer (which is a familiar cry). Information on any unusual minerals or sites, especially if threatened would be most gratefully received by him.

23 FRANCO-WELSH CONNECTION

Armand-Paul Le-Sang is very interested in Welsh lead mines and roads from 100 to 300 AD and would be delighted if any one could assist his interest in any way, particularly as he is resident in the Principality at 151, Pen Y Cae, Mornington Meadows, Caerphilly, CF8 3BX. He urgently wishes to contact the Bristol Exploration Club, and obtain the Caving Report No.15 (1969).

24 CHWAREL BLAENYCWM

Yet another largesse is heaped upon the Slate enthusiasts. I have been sent a copy of an extremely detailed and informative 100 page treatise by members of the Fforwm Plas Tan y Bwlch on Chwarel Blaenycwm Slate Quarry. It contains a wealth of maps, site plans, photographs, and diagrams, and the extensive text is in Welsh. Members with an interest in Slate are welcome to borrow this from David Roe and a contribution of £2 towards postage would be welcome.

25 SUBSCRIPTIONS

The address label gives your subscription expiry date. Should you be in arrears then £2 per year would be gratefully received by the Treasurer:

DAVID ROE, 20, LUTTERBURN STREET,  
UGBOROUGH, IVYBRIDGE,  
DEVON. PL21 ONG.

TEL:0752 896432

Payment of 2 years at a time is even more gratefully received.

26 WELSH MINES PRESERVATION TRUST

During its brief existence, the Trust has directed its efforts towards two ends - identifying appropriate projects and making itself known to those who may be interested in, or benefit from, the Trust's activities. As far as the first objective is concerned we have now established a good relationship with a number of local authorities and organisations. It appears likely that our advice will be sought by Clwyd County Council in respect of their Enginehouse Restoration Programme (in particular Penrhos), and by Arfon Borough Council vis-a-vis a quarry site at Waunfawr. We have hopes of making a positive contribution to a project at Cwmsymlog.

In practical terms we have already repaired White Grit enginehouse and hope to follow this up by obtaining a grant for proper restoration. We are pursuing enquiries at several other possible sites.

A press release was printed by a variety of Welsh newspapers from Llandudno to Pembroke. An introductory letter has been sent to Welsh County and District Planning Offices and a number of other organisations have been contacted.

It now seems certain that the Trust has a useful role to play, and new members are welcomed. Any offers of specialised knowledge or experience would be of great assistance and much appreciated - please contact; John Bennett, 7 St Johns Way, Cuddington, Cheshire CW8 2LX.

STOP PRESS: James Thorburn (0970 625077) is planning more mining trips to Spain in 1993. June: Roman Gold mines. Autumn: mines of Andalucia.

## WELSH AND CUMBRIAN SLATE WORKINGS : SOME COMPARISONS

By Peter Hay, 8 Hove Park Way, HOVE, Sussex BN3 6PS

Having spent two weeks in 1991 and 1992 surveying the slate mines at Penarth and Moel Fferna between Corwen and Llangollen, it seemed useful to look at some Lakeland slate workings underground to try to draw some comparisons. After all, Welsh slate mining is supposed to have begun as a consequence of the arrival of the lakeland miner William Turner of Seathwaite, whose father ran Walna Scar Quarry. In the earliest Welsh workings that were not simple open quarries - Clogwyn Y Fwch and Pan Y Ffridd near Llanrhychwyn - there is a notable resemblance to Lakeland practice.

After I had looked at more than a dozen Cumbrian workings, three major points of difference from North Wales become apparent.

The first concerns transport. Honister and Yew Crag apart, the railed incline which is so common in North Wales was little used in Cumbria. I believe the inclines in the Honister area date from the end of the nineteenth century, whereas in Wales they appeared at the beginning, often in groups joined by several level stretches to make lengthy routes. The Cumbrian use of aerial ropeways for moving blocks (clogs) was rare in Wales, though the 'Blondin' flight spanning a quarry (rather than connecting it to the outside world) was in use until recently.

The second major difference concerns the working of the slate after extraction. Sawing of the slate in North Wales probably began around 1775 and by 1803 there were two mills sawing with water power. The circular saw was in use by 1810, though sawing blocks prior to splitting into roofing slates did not happen until the 1850's. Two consequences of this form of slate-processing are that even quite small workings could muster a mill of sorts; and there is an abundance of sawn ends of slate in the walls of buildings. In Cumbria they seem to be a rarity and I got some funny looks in Keswick as I wandered around literally fingering the walls of old buildings in search of them.

Digging out ruined mills is a significant part of Industrial Archaeology of the Welsh slate industry: to uncover the evidence of saws, other machinery, and their power sources. It would not happen in Cumbria, for few sites have much by way of mill remains to dig, though there is plenty of evidence of underground slate processing. I am not sure why there should be this difference but it did seem that lakeland slate often appears to split very neatly, across the strike of the vein and at right angles to what in Wales is called the Pillaring line. If this is so, there would be less need to saw so as to obtain a rectangular block which could then be split. Therefore no mills are needed for sawing and most of the work could be done underground. As a further consequence there would be no blocks to move over a distance to the mill, and hence (perhaps) no incline. Might the coming of the latter, and the aerial ropeways, coincide with centralisation in mills to improve efficiency?

The third major difference I noticed was in the shape of the underground chambers (closeheads) and the way in which they appear to have been worked. In Wales, whether the dip of the slate is less than 10 degrees (Moel Fferna) or nearly 90 degree (Aberllefeni) the chambers have ceilings that are reasonably regular and horizontal at least in one plane, making roughly a right angle with the walls (pillars). Many Lakeland chambers, I noted, have ceilings which 'grow out of' the walls and are hard to distinguish from them. My initial reaction was to see it as evidence of slovenly working, but underground discussions with Jon Knowles have altered my view. In Wales a vein dipping nearly vertically typically produces a chamber of definite width and sometimes great height, with a clear run from ceiling to floor. Some at Aberllefeni are several hundred feet high. By contrast, in Rigg Head for example, though a chamber may be reached on three floors, its height is concealed by the fact that there is much waste present, stacked or otherwise, and that the chamber seems to "step " sideways. Work seems to have begun at the bottom and proceeded by what Jon Knowles perceptively calls "overhand stoping" as in a metal mine. As the chamber got taller the workers stood on a growing pile of their own slate waste, using comparatively short ladders to reach the working face above them. I saw none of the chains hanging from long -inaccessible places in the roof, by which the Welsh suspended themselves as they drilled and levered the rock.

Those with more knowledge of the history and practise will, I hope, refine our understanding of these matters. From somewhere I got the information that triangular drill holes where to found in Lakeland slate mines and in due course I found some, high up in Coniston Old Man. Being on my way to an Industrial Archaeology meeting at the Snowdonia National Park Study Centre, I thought I might mention such a curiosity there. Recognising that the experts would never believe me, I managed to take several pieces of waste with triangular holes. On announcing the finding I was greeted by incredulity and ridicule. Producing the waste pieces drove the experts into silence, but more to the point, to find out how such holes had been made. So something useful came from one man's ignorance.

Below is a list of the sites visited with a brief description of the workings. Some of the names I have taken from nearby features on the O S map.

LOW WOOD (205947) North West of the river Duddon. One open quarry and one with several chambers opening off one another. Several approach adits.

STAINTON GROUND WEST (217932) Underground with several chambers, one having two adit accesses and a skylight

STAINTON GROUND EAST (222934) Open quarry.

LINGMOOR FELL (310043) Several quarries, some with access adits and chambers, open and closed.

THRANG CRAG (Chapel Stile 321055) Accessible shaft to blocked underground workings. Several independent chambers, one with the remains of a slate wheelbarrow. The 'slate stretcher ' shown in the 1833 engraving was not seen.

UPPER RIGG HEAD (235152) I found one chamber only.

RIGG HEAD (235153) Several open chambers, some approached through corbelled tunnels through the waste. Also adits direct into the hillside, leading to several chambers in line across the vein reached by way of corbelled tunnels through tipped waste in the outer chambers. The innermost chamber (the last worked?) is almost clear of waste. The gauge of the internal railway appears unusually large at about 2' 8". There are remains of an aerial ropeway.

HOWS WOOD/ CASTLE CRAG (250160) South of Grange. A number of small open quarries, some much overgrown.

QUAYFOOT (252167) An open quarry with a few chambers.

WREN GILL (475084) Top : one long, narrow chamber. Several open chambers lower down. A long slot quarry with much slate debris washed down by a stream flowing through the workings, which appear to have flooded one or more chambers.

SELSIDE BROW / UPPER LONGSLEDDALE (480090) A series of small open quarries, mainly on the Kentmere / Wren Gill vein, which strikes West North West.

MOSEDALE (495097) An open quarry working a long face on the northern side of Mosedale.

RAINSBARROW CRAG (445071) There appear to be at least two open chambers on the eastern face of the crag, and just north of it on the eastern face of Steel Rigg is an open quarry. Tongue Scar is on the opposite side of the Kentmere valley is Tongue Scar.

TONGUE SCAR quarry and mine (451072) Has a completely blind adit at bottom level. By its size great things were expected. Higher up is an adit with most unusual patent rail track which gives access to several chambers, one of which has been worked to a height of approximately 100ft. The usual corbelled tunnels have been built through the waste piled up in the chambers.

Further quarries were seen from a distance as slots into the western flank of Kentmere Pike above Ullstone Gill, and these remain to be visited.

I hope these brief notes will stimulate discussion and extend our knowledge of slate mines, quarries and their working.