



Cymdeithas Daearreg Gogledd Cymru

North Wales Geology Association

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Issue No 68

NEWSLETTER

March 2012

Chairman's Message:

Welcome to the first newsletter of the 2012-2013 season. I am very pleased to report that the recent AGM was well attended and very positive. However, I am afraid that you will have to put up with the same crowd on the committee, but unless you volunteer to take up a post they will remain at the helm. As the next meetings will be at Pencychnant we will be opening the committee meeting early before the formal proceedings, so if you want to join in any discussions please come along. There will certainly be tea and coffee, and probably a bite to eat, and you are most welcome if you have suggestions or questions for the Association.

You will recall a note in the last newsletter announcing a sale at the AGM of the library of our late member Dennis Wintch. It was the wish of his wife Margaret, who is still a member that we ask for donations for items of interest to members to be given to St. David's Hospice (Llandudno) where Dennis spent some time as a day patient. I am very pleased to say that through the generosity of our members I was able to present the sum of £132 to the hospice. Some of the books and papers were not taken up, and those have all been taken by Keith to Geotechnics Limited, where they will form part of their Open Archive Service - see inside for details.

We have links through our members with local organisations such as Geomôn (Anglesey Geopark) and we are pleased to publicise their programme of guided walks, which has now been published for all of 2012 and covers much of the

geologically rich coastline which is accessible by the Coastal Path, as well as inland sites of great interest. The walks are a great introduction to geology and will suit family and friends who do not have such a rocky outlook as we might. Please note there is usually a fee of £5 payable.

The same might not be said about BBC1's latest foray into popular geology, The Great British Countryside. Previously I have held Julia Bradbury in very high esteem, though I didn't take to Hugh Dennis's manner at all. It would be interesting to hear what you think, as I was forced to turn off after just 10 minutes when I could no longer stomach swooping camera takes and creepy goings-on which have nothing to do with either countryside or geology.

Julia's walking programmes at home and abroad were brilliant - her walk on Iceland was one of the best 'landscape with geology' programmes of recent times. So thumbs down Ms. Bradbury, and shame on you for joining such a tacky and poorly-scripted programme. Shame too on BBC Scotland, who have made a couple of excellent series recently, fronted by Ian Stewart, the people's geoenthusiast, "Making Scotland's Landscape" and "Men Of Rock". I hate to be negative because rocks need friends, but this was a turn-off.

Come to our meetings instead - good geology and good company (I hope). See you there.

Jonathan Wilkins

Castell Dinas Bran, Llangollen

Castell Dinas Bran is located at SJ 223 430 and is readily accessible by foot, with easy parking, interesting historical context, and (weather permitting) spectacular views of the Dee Valley and Llangollen. A visit to Dinas Bran is very worthwhile.



Parking is available along the minor road which runs sidelong at the base of the Eglwseg escarpment. It is not a coincidence that the road follows the unconformity between the Ludlovian Dinas Bran Formation and the overlying Carboniferous Limestone. Unfortunately the contact is not visible, buried beneath the limestone scree at the toe of the escarpment.

At the site of the Castle itself the medieval masons constructed the defences by excavating a ditch in the Dinas Bran Formation, and using the rock won from the excavation to construct the walls of the fortifications. The ditch walls are where the main features of geological interest can be seen. The site is a SSSI, listed as a

consequence of the geology with the citation noting:

*“... as the type locality for the Dinas Bran Beds of Late Ludlow age (Silurian). The sections exposed here consist of fossiliferous calcareous shales and siltstones containing the characteristic brachiopod **Dayia navicula**. These shelly facies, and indeed fossiliferous exposures of Ludlow rocks generally, are a rarity in the region. This is an important site for exhibiting rocks which are correlative of the Ludfordian Stage rocks of the Ludlow type area.”*



Much of the rock seen shows a characteristic spotted texture, and these nucleations are believed to be relatively rich in rare-earth minerals.

It should be noted that a cursory examination of the rocks suggests that the fossil content is, at best, sparse. It should also be remembered that, as a geological SSSI, hammers and sample bags should be left in the car.

An insight into 19th Century Coal Mining (Part 3)



This nineteenth Century print records the sinking of a shaft at the point just below “rock head” where conditions are suitable for the excavation not to require support. In this case the shaft is brick lined, and would most probably have been sunk as a caisson. This involves simultaneous laying of brickwork, and cutting away the toe so that the lined shaft sinks under its own weight, until it reaches an appropriate footing.

In this case access / egress is via a man riding “kibble”. Permanent access would probably be by man riding engine, or more likely permanent ladder ways.

Water is pumped to surface through the riser pipe at right of the picture.



The caisson footing is potentially problematic with respect to the ingress of water. Some sort of gasket is required to seal the shaft – and this is known as the “garland”. Straw was used to plug the gaps beneath the caisson. And this was secured in place (caulked) with timber.

Geotechnics Ltd Open Archive Service

Geotechnics Ltd have opened their library facility to the public – making available to all NWGA members the specialist technical literature held therein.

The available information includes most of the published 1:50,000 Geological Maps for Wales, North West England and the Potteries, together with many equivalent maps from further afield including Ireland, Scotland, parts of Brittany and Hong Kong. The library also includes many standard geological text books, various journals, mine plans (mostly from North East Wales) and other items of geological interest.

The library is situated in Saltney, Flintshire on the outskirts of Chester (behind the new Morrison's superstore) – directions available at:

http://www.geotechnics.co.uk/contact_us.html

Visits are by appointment – between 10AM and 4PM weekdays. Ring Keith Nicholls on 01244 671117 and check with Keith that they have what you are looking for before you travel.

Reports:

NWGA Meeting 21st January 2012

Talk by Dr Jacqui Malpas (Clwydian Range and Dee Valley AONB)

Following the AGM the audience regrouped in the Lecture Room at Pensychnant to hear Jacqui talk on the efforts being made with respect to Geoconservation in the North East. Geoconservation as a formal discipline is a relatively recent phenomenon, able to identify its roots in the book Murray Gray's 2004 book "Geodiversity: valuing and conserving abiotic nature" (John Wiley and Sons).

Nevertheless, the concepts have a much longer history with historical action recorded in the nineteenth century in Germany (Siebengeberghe Volcanoes), the USA (Yosemite) and the UK (Salisbury Crags, Edinburgh and Cheesewring Tor, Cornwall) to protect features of geological interest. There is also a somewhat more difficult to define but no less profound reverence toward the physical natural world in many global cultures both ancient and modern.

The concept of "abiotic nature" underpins the fundamental fabric of both ecology (why flora and fauna are found where they are) and society (why we settle where we do) but geoconservation is rarely afforded the same public profile as ecological conservation.

Jacqui illustrated her talk with a wide ranging tour through the geology of north east Wales.

Work is continuing in Wales to update the GCR programme and to publish an All Wales RIGS catalogue.

Following Jacqui's talk there was a wide ranging discussion with considerable interest expressed in the relative value of reclamation works and industrial heritage sites considered at length. Specific concerns were expressed with respect to the loss of slate tip sites due to ill considered "greening" with potential loss of the geological and historical context.

Editor's Notes:

1. Anyone wishing to follow up the principles of geo-conservation could do worse than to read

Gray's interesting and very accessible review article available on line at: <http://www.georgewright.org/223gray.pdf>

2. During the talk Jacqui made reference to the find of a remarkable starfish fossil from the Silurian of the Glyn Ceiriog area. This has recently been formally published in the Geological Journal (reference follows)

“A new species of *Siluraster* (echinodermata: Asteroidea) from the Late Ordovician of North Wales”, Botting JP, Appleton P, Muir LA, Malpas J and Riddington K. Geological Journal Special Issue: “Early Palaeozoic ecosystems, environments and evolution”, Volume 46, Issue 5, pages 427–433, September / October 2011.

Abstracts

**Berta Rosen –
Kamchatka - Russia's wild east.
Geology and landscape on the NW
Pacific subduction zone.**

The Kamchatka peninsula is one of the most dynamic parts of the earth's surface but the geological events in this remote, challenging and sparsely populated region have remained largely unreported in western news and geological literature until the 1990's when controls on access to this formerly militarised zone were relaxed for both Russians and foreigners. Yet it remains an underdeveloped frontier territory.

The southern half of the peninsula has some 300 volcanoes dating back nearly 50 million years, formed over three phases and with 29 remaining highly active. There are still nearly 500 alpine glaciers, many on active volcanoes. Everywhere in the southern part of the peninsula there is clear evidence of the internal heat of the earth.

The geotectonic activity influences many aspects of geomorphology, climate, vegetation, natural history in general, and human occupation and presents both challenges and opportunities for everything from humans and bears to migrating birds and extremophiles.

Professor Cynthia Burek (University of Chester) -

The first holistic classification of limestone pavements: a unique and protected habitat.

Limestone pavements are protected habitats under the European Habitats Directive. However there has never been a holistic approach to their classification or management. This talk will illustrate the classification using both geodiversity and biodiversity features, and will look at previous biological or geomorphological classifications.

It will also discuss how pavements were formed, and why they are so special. The most extensive area of limestone pavement in Europe is in Ireland on the Burren but there are pavements in Yorkshire, Cumbria and Scotland.

There are also limited limestone pavements in Wales, and these are restricted to the south east and to the northern parts of Wales.

Dates for your Diary:

NWGA – Ordinary Meetings

Unless noted otherwise these meetings will be held at Pensychnant, Conwy <http://www.pensychnant.co.uk>. Talks will commence at 7:30 PM sharp. Prior to each meeting the committee will hold a business meeting (commencing 6PM). All bona fide and / or prospective new members are welcome to attend.

March 14th

Berta Rosen - Kamchatka - Russia's wild east. Geology and landscape on the NW Pacific subduction zone.

April 4th

Professor Cynthia Burek (University of Chester) - The first holistic classification of limestone pavements: a unique and protected habitat

Other Groups' Meetings

GeoMon

Wednesday 21 March

Cemaes Bay to Llanbadrig Church. 12.45pm for 1.00pm start available.

Saturday 7 April

GeoMon Members Free Walk to Parys

Monday 9 April

Llanddwyn Island

Meet at 1.45pm for 2.00pm start. Start from Newborough Beach Car Park

Saturday 28 April

Parys Mountain – Metal Links Walk.

Meet at 9.45am for 10.00am start from Copper Trail Car Park

Thursday 3 May

Pwllfanogl to Menai Suspension Bridge
Meet at 9.30am at Coed Cynrol

Monday 7 May

Llanddwyn Island

Meet at 1.15pm for 1.30pm start. Start from Newborough Beach Car Park

Saturday 12 May

Lligwy to Moelfre. Geology and ship wrecks.

Meet at 9.45am for 10.00am start. Linear walk starting from Southern car park at Lligwy Bay

Sunday 13 May

Cemaes Bay to Llanbadrig Church,

Meet at 2.00pm

9-17 June 2012

GEOPARK WEEK with Anglesey Walking Festival

See Mentermon brochure www.angleseywalkingfestival.com and www.geomon.co.uk for details

Saturday 19 May

Breakwater Park – walk for people with limited mobility.

Meet at 1.15pm for 1.30pm start from Visitor Centre in the Car park.

Sunday 20 May

Bodafon Mountain/Lligwy Bay/Iron Age Village

Meet 11.00am at Bodafon Mountain Car

Monday 4 June

Llanddwyn Island

Meet at 12.15pm for 12.30pm start. Start from Newborough Beach Car Park

Saturday 9 June

Lligwy to Moelfre.

Meet at 9.45am for 10.00am start. Linear walk starting from Southern car park at Lligwy Bay (SH 497871)

Wednesday 13 June

Malltraeth –

Meet 10.45am for 11.00am start by Geomon Information plinth near Car park (SH406 687)

Sunday 17 June

Rhoscolyn Walk

Start at 10.00am - meet at Rhoscolyn Church

Saturday 23 June

Penmon Geology and History.

Start at 10.00am in Penmon Priory Car park

Saturday 7 July

Newborough Forest and Llanddwyn.

Meet at 2.15pm for 2.30pm start. Start from Newborough Beach Car Park

Saturday 14 July

Llanddwyn Island

Meet at 9.15am for 9.30am start. Start from Newborough Beach Car Park

Sunday 15 July

Cemaes Bay to Llanbadrig Church.

The meeting place is Cemaes Promenade at 9.45am for 10.00am start and parking is available.

Wednesday 18 July

Cemaes Bay to Llanbadrig Church.

The meeting place is Cemaes Promenade at 9.45am for 10.00am start

Thursday 19 July

Pwllfanogl to Menai Suspension Bridge

Meet at 9.30am at Coed Cynol carpark.

Walk will start at 10.15am approx.

Sunday 22 July

Lleiniog Beach and Norman Castle.

Meet at 10.00am at Lleiniog Car Park

Saturday 28 July

Rhosneigr to Porth Nobia.

Meet at 10.45am for 11.00am start at beach at bottom of Beach

Saturday 4 August

Llanddwyn Island.

Meet at 2.15pm for 2.30pm start. Start from Newborough Beach Car Park

Saturday 18 August

Llanddwyn Island

Meet at 12.45pm for 1.00pm start. Start from Newborough Beach Car Park

Sunday 19 August

Rhoscolyn

Start at 10.00am - meet at Rhoscolyn Church SH268 757.

Saturday 25 August

Beaumaris Town Walk

Meet at 10.30am in Beaumaris Town Square outside Court Room

Monday 17 September

Llanddwyn Island

Meet at 12.45am for 1.00pm start. Start from Newborough Beach Car Park

Sunday 14 October

Holyhead Mountain Geo Walk –

Start at 10.00am Meet at RSPB Car Park on the Range

Wednesday 17 October

Llanddwyn Island

Meet at 12.45am for 1.00pm start. Start from Newborough Beach Car Park

Wednesday 14 November

Llanddwyn Island

Meet at 11.45am for 12.00pm start. Start from Newborough Beach Car Park

Wednesday 12 December

Llanddwyn

Meet at 10.15am for 10.30am start. Start from Newborough Beach Car Park

Please note that some of the GeoMon meetings carry a small fee, others require payment of a car park charge. Some of the walks are lengthy, and in some cases traverse difficult terrain. Further details are available in a downloadable pdf file at:

<http://www.geomon.co.uk/>

Geomon's web e-contact details are available at:

<http://www.geomon.co.uk/#/contact/4533286691>

Alternatively you can write or telephone The Old Watch House, Porth Amlwch, Angelsey or telephone 01248 810287

Liverpool Geological Society

Sat 10th Mar - National Science Week
Event - Rock Around William Brown
Street with Joe Crossley & Hazel Clark.

Sat 31st Mar Rock Around Wirral with
Hilary Davies.

- further details from the LGS web site
at:

<http://liverpoolgeologicalsociety.org.uk/index.php>

Manchester Geological Association

Wednesday 7 March 2012 (to be
confirmed) at 18:30 - Joint Meeting with
the Geographical Association

Natural Hazards in the Caribbean:
Causes and Impacts - Dr. Servel Miller,
University of Chester

- further details from the MGA web site
at:

<http://www.mangeolassoc.org.uk/indoormeetings.htm>

**Geological Society – North West
Regional Group**

Thursday 22nd March 2012 – Geology
volcanoes and God, Dr David Chester
(University of Liverpool) at UoL.

- further details from the GSoL web site
at:

<http://www.geolsoc.org.uk/webdav/site/GSL/shared/pdfs/specialist%20and%20regional%20groups/nwrg/2011-2012%20NWRG%20Programme.pdf>

Shropshire Geological Society

Wednesday 14th March 2012 –
Mineralisation in the Triassic Rocks of
the Cheshire Basin Geoff Warrington,
Shire Hall, Shrewsbury (nominal charge
for non-members of SGS), 7:30PM –
further details available from:

<http://www.shropshiregeology.org>

**Geologists Association and the
Geological Society of London**

Wiley / Geology Today On-line event:
5th - 16th March 2012

“Minerals and fossils explained” – sign
up at:

<http://www.keysurvey.com/votingmodule/s180/survey/405572/8df0/>

Web News:

For those with an interest in the sort of
features displayed on the front cover of
the newsletter (Drosgol Formation,
western shore of Llyn Clywedog) please
have a look at the web content available
at Jurgen Schreiber’s web page
(University of Indiana) there is an
absolute wealth of information (albeit
rather specialised) in his Atlas at:

<http://www.shale-mudstone-research-schieber.indiana.edu/mat-book-2007.htm>

There are rather more accessible
collection of sedimentological research
papers and the like available at:

<http://www.shale-mudstone-research-schieber.indiana.edu/Publications.htm>

Our Facebook and Linked-in pages don’t
seem to be generating much in the way
of a following. Please take a little time to
visit and “link” or “join” as appropriate
at:

<http://www.facebook.com/groups/northwalesga/>

and

http://www.linkedin.com/groups?gid=3031675&trk=myg_ugrp_ovr

Finally a reminder of the NWGA Web
site itself at: www.ampyx.org.uk/cdgc

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