



Newsletter June 2023

Sixty fourth session

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Welcome to the June Newsletter and a big thank you to all those who have provided material for this issue. As you will see this edition contains reports of the field meetings that have taken place so far this year that I hope will become a regular feature in the future. However, this is dependent upon there being volunteers to write them up so if you are asked to write a report please say yes! Amongst other things you will also find an outline programme for the winter series of lectures, a report on SEWRIGS, information on the Winchcombe meteorite at the National Museum, an obituary to Mike Bassett, and a number of news items so I hope that you find something of interest.

Stephen Howe



Message from the President

We had our first committee meeting since the AGM last month and there have been a few changes for you to note. After many years of service, both Janet Hiscott and Caroline Davies stepped down from their positions as Secretary and Membership Secretary respectively. We would like to thank them both for all they have done for the South Wales GA. We are extremely grateful to Elen Statham and Cindy Howells for taking over these two vital committee roles - I am sure that both will do a superb job for us all. To fill their places on committee we welcome back Janet, and are delighted also to welcome Kath Ficken, who will give us a new Swansea connection. Please remember that we are still without a Programme Secretary, and that we can't guarantee to be able to organise a full series of events if this important committee post continues to remain vacant. Please think seriously about this and let us know if you would like to be involved on the committee. I can assure you that we are all very nice!

We do have some interesting field meetings arranged for July, August and September - see details below - and hope to have confirmation of our October meeting soon. The lecture programme for October onwards is also taking shape, and we hope to be able to bring you full details of some exciting talks in the next Newsletter. Meanwhile, have a great summer, which seems to have arrived at

last! Enjoy your holidays - but remember that I will be pestering you soon for talks for "Holiday Geology", so don't forget to look at the rocks!

John Nudds, President

Summer Programme 2023

The first three field meetings of the year were blessed with good weather and good numbers attending. As you will see below there have been changes to the last two planned field meetings due to unforeseen circumstances. The meeting programmed for September 23rd at Martley will go ahead as planned despite the sudden and unexpected death of the original leader, John Nicklin, at the end of April. John was Chairman and founding member of the Teme Valley Geological Society (TVGS) whose drive and enthusiasm helped create their extremely active group. He had led a couple of field trips for us in the past and organised the highly successful joint trip to the Woolhope Dome last year. He was a lovely man who will be sorely missed by all those who knew him. We offer our condolences to his family and the Teme Valley Group. TVGS are sorting a new leader for the meeting and we will update you about this in due course.

The October meeting has also had to be changed as Chris is likely to be in Australia at the time. At the time of writing the Committee is working on finding a replacement excursion.

The remaining field meeting programme is as follows:

Sunday July 16th: *Ogmore-by-Sea: John Nudds and Cindy Howells*

Meet at 10.00am at the Rivermouth Car Park (SS 862 754), Ogmore-by-Sea. Parking charges apply. Bring a packed lunch. Toilets are available in the car park only.

We will start by examining the Carboniferous Limestone and Triassic wadi deposits adjacent to the car park, before walking south-east along the coastline. Ogmore-by-Sea has excellent exposures of three different units within the Carboniferous Limestone Supergroup and we'll be examining and discussing these. The limestones are cut by late Triassic wadi deposits, and are also unconformably overlain by early Jurassic marginal facies - the Sutton Stone and Southerndown Beds. This walk will be an excellent starting point for those who are less familiar with the overall geology of south Wales, as we will be covering the basics as well as discussing the detailed stratigraphy. We will also be looking for fossils in the rock-ledges as supporting evidence for the Carboniferous stratigraphy and depositional environments.

The walk may involve some scrambling up and down rock ledges, although it should be possible for some participants to stick to an easier route along the grassy cliff top if needed. We will be finished at Ogmore car park by mid-late afternoon, depending on how many questions are asked!

Saturday August 19th: *Family Geology Day, Penarth: Leaders: John Nudds and Cindy Howells.* 1.00pm – 3.30pm

As in previous years we will have our gazebo and geological materials on the beach, just south of the RNLI slipway at Penarth. We will be setting up from about 12.15pm and will be extremely grateful for any assistance during the afternoon, if only for a short time. Could anybody interested in helping out please contact Cindy. For those attending please note that there is time-restricted parking on the road up the hill and along the esplanade but you can park all day for free in the Cliff Parade car park at the top of the hill.

Saturday September 23rd: Martley, Worcestershire; Leader: tbc

Meet at 10.00am at Martley Village Hall, Berrow Green Road, Martley, WR6 6PQ. Full details of the meeting to follow later.

October: tbc.

Details to be confirmed.

Safety Policy

Please note that although full Risk Assessments are undertaken prior to each field meeting members are reminded that they attend the excursions at their own risk. They are expected to take reasonable precautions to ensure the safety of themselves and other participants and to behave in a responsible manner at all times. The Group has a Safety Policy and Safety Fieldwork Code that all participants should have read prior to attending a meeting. Copies can be found on the Group's web site.



Winter Programme 2023-2024

The committee has been working hard on compiling the winter lecture programme for the next indoor session. These meetings will be hybrid meetings held both in person and also available live on Zoom. The speakers and themes are as follows. Full titles will be announced in due course.

Saturday 14th October 2023: (Cardiff): Ricardo Ramalho: Geoenvironmental hazards.

Saturday 11th November 2023: (Swansea): Katie Preece: Volcanology

Saturday 9th December 2023: (Cardiff): James Cresswell: The Geology of Antarctica

Saturday 13th January 2024: (Cardiff): Holiday Geology

Saturday 27th January 2024: (Swansea): Joe Botting/Lucie Muir: The Llandrindod Wells Lagerstätte

Saturday 10th February 2024 (Cardiff): Jeremy Hucker: The Legacy of Coal Mining in South Wales

Saturday March 2024 [date tbc] (Swansea): AGM followed by the Presidential Address by John Nudds : Probably the Best Lagerstätten in the World: Exceptional Preservation of Fossils



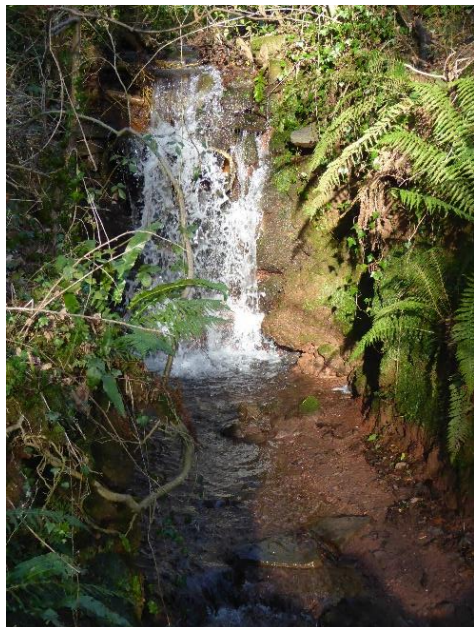
Field Meeting Reports

Cefn Onn and Craig Lysfaen: 22nd April 2023: Leader: Stephen Howe

The first meeting of the year was a circular walk across the southern rim of the South Wales Coalfield and was attended by 12 members.

From the car park we crossed the Rhymney Railway before taking the path up through the woods to start the ascent of the coalfield rim, which would take us up the geological succession from the St Maughans Formation of the Old Red Sandstone to the Pembroke Limestone Group of the Lower Carboniferous. As we were to see actual outcrop is limited over much of the area, apart from the

harder formations, but by looking at the landscape, especially the change in slope and the plants, it is possible to work out roughly where you are in the succession.



Our first outcrop was a section in the Llanishen Conglomerate Formation in the banks of the path that leads down to the old Cefn Onn Halt station, which exposes a series of upward fining cycles from coarse sandstones to mudstones. A good section within a coarse conglomerate occurs in a stream gully at the bottom of the golf course higher up in the formation. Unfortunately, as a result of the recent wet weather the water level in the stream was quite high which put off some members from getting down and up close with the outcrop. These conglomerates are of especial interest as unlike the rest of the sediments in the Lower Old Red Sandstone in this area, which are derived from the north, these came from the south and are related to a short-lived uplifting of land to the south of the Bristol Channel.

Stream section in the Llanishen conglomerates. ©SR Howe

Our ascent noticeably steepened as we continued up Graig Road, as we moved from the Llanishen Conglomerate Formation onto the more resistant, sandstone-rich, Brownstones Formation, numerous outcrops of which occur in the road banks. The presence of calccrete-rich horizons is indicated by the sudden appearance of Hartstoungue Fern. Nearing the top of the hill we stopped to take in the view across Cardiff and the Bristol Channel before continuing up to the ridge summit, in the process crossing the unconformity (unfortunately not visible) between the Brownstones and the Upper Old Red Sandstone Quartz Conglomerate Group. Being deposited as lags in river channels the quartz conglomerates have a patchy outcrop along the strike but where they do occur they form distinctive little knolls along the hillside, one of which we were able to access to examine the rocks.

We now turned northwards, thankfully downhill, and dropped into a little valley that lies between the two ridges. in the process ascending through the Upper Old Red Sandstone succession. On the north



side of the valley the land rises as the base of the Avonian sequence (Lower Limestone Shales) is reached. This is divisible into two units; the lower is limestone-rich while the upper is dominated by softer mudstones. Accordingly, the lower unit produces a pronounced ridge in the landscape and the upper a shallow valley before the second, steep ridge composed of the main limestones rises steeply beyond.

We ascended the second ridge and then turned west along the top taking in the extensive views across the coalfield to the Brecon Beacons (Bannau Brycheiniog) beyond before arriving at

Cefn Onn Basic Slag Quarry. ©SR Howe

the old Cefn Onn Basic Slag Quarry where lunch was taken in the sun. After examining the limestones and mineralisation in the quarry a discussion ensued as to how the stone was removed from the site to the steelworks, which was later solved by a couple of members finding evidence of an aerial ropeway from the quarry down the north side of the hill after examining old OS maps of the area.

We then began our descent back down to Cefn Onn via Transh yr Hebog and in the process working our way back down the geological succession. We stopped at a couple of the air shafts along the line of the railway tunnel to see the waste material from the tunnelling that showed what rock they had been digging through before reaching the car park via Cefn Onn park. The timing was immaculate as just after we returned to the cars the first spots of the forecast rain arrived.

An exploration of the eastern Clydach; -ologies galore! May 14th 2023: Leaders: Alan Bowring and Dilys Harlow

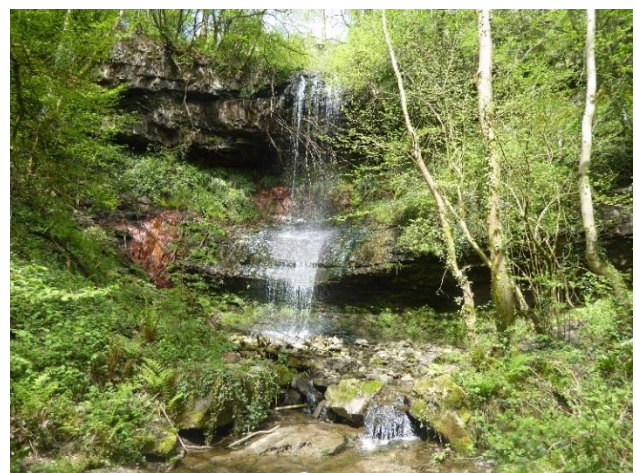
The 19 members who met at the Clydach Ironworks for this excursion were once again blessed with glorious weather. The Clydach gorge pierces the north-eastern rim of the South Wales Coalfield and so reveals a more or less complete section from the Lower Coal Measures, through the entire lower Carboniferous succession and down to the Brownstones Formation (Old Red Sandstone). The area also contains some of Britain's most extensive cave networks under the surrounding hills while there is probably more industrial archaeological interest than any comparable area of Wales. The gorge also has an important ecological significance, built upon its geodiversity, which encompasses SSSIs, NNRs and SACs.



The Devil's Bridge, Black Rock. ©SR Howe

Returning to the cars we drove to a new lay-by at the top of the gorge where there is a long section through Lower Coal Measures sandstones and mudstones. The sandstones are 1-2 meters thick and heavily fractured and exhibit northerly-derived cross-bedding. Just below the lay-by we were able to examine the mudstones in some detail, especially some ironstone nodules and the way that the sediment had become impacted around them. A debate ensued as to whether the sandstones were actually the Farewell Rock (which marks the base of the Coal Measures in South Wales) and which is exposed on the other side of the gorge. The outcome was inconclusive!

After a brief explanation of the plan for the day we set off for the top of the gorge in a reduced number of cars, stopping at Black Rocks, below the large quarry that worked beds within the Dowlais Formation of the Pembroke Limestone Group (Carboniferous) and then walked the short distance down to the Devil's Bridge. The bridge carries an old track over the River Clydach where it enters a narrow gorge as it flows over the limestones of the Pwll-y-Cwm Oolite. In the river above the bridge a number of resurgences could be seen from water emanating from the caves that underlie Black Rock.



Waterfall on the Nant Melyn. ©SR Howe

We then began our descent of the gorge along Dadford's Tramroad, which was built in 1791 for the Clydach Railroad, and runs along the west side of the gorge. We examined exposures of the Farewell Rock exposed in the cuttings along the tramroad before stopping at the Hafod Arch, which carries the tramroad over the deep, narrow valley of the Nant Melyn. Upstream of the arch is a large waterfall created by the thick sandstones of the Farewell Rock (see above). The sandstones exhibit some spectacular channel structures and a number of them were seen to have pebbly bases.

Continuing down the tramroad the Namurian age Twrch Sandstone begins to appear in the sides of the cutting, here quite fine-grained, well laminated and showing cross-bedding. We then crossed over to the east side of the gorge and continued our descent along the bed of an old railway, passing yet more Twrch Sandstone, before stooping for lunch at the Gelli Sidings on the edge of the Cwm Clydach NNR, which gave us extensive views down the gorge to the Black Mountains beyond. After lunch we continued along the old railway line and viewed the two portals of the tunnels that took the railway through the hillside, noting how the older one was totally stone faced while the younger was a mix of stone and brick. At the north end of the tunnels the line runs around the face of the gorge with high cuttings driven through the Dowlais Limestone. The limestones are well-bedded with muddy horizons in between some of which appeared rippled suggesting deposition in peritidal conditions. We also saw re-worked burrows and potential karstic surfaces. Further along the cutting the basal beds of the

Dowlais Limestone are reached. Here the limestones are separated by some quite thick mudstones, many of which have been bricked up to protect the railway line from rock falls.



The next stop was at Llanelly Quarry, a large high-faced quarry that exposes the Llanelly Formation at the bottom, overlain by the Gilwern Clay and topped by the base of the Dowlais Limestone. The soft Gilwern Clay produces a pronounced break in slope, a feature that can be mapped on the ground across the district, while a number of rubbly karstic surfaces and palaeosols occur at the top of the underlying Llanelly Formation.

Llanelly Quarry ©SR Howe

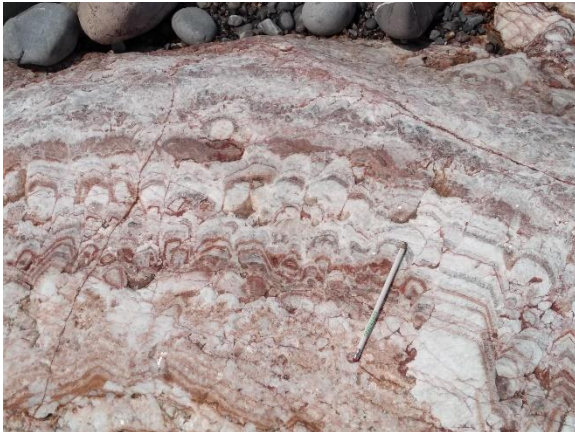
Leaving the quarry we descended a steep incline belonging to the Llam-march Tramroad back down to the River Clydach, descending the geological succession as we went. At the bottom of the incline the dry side valley of the Nant Sychnant has exposures of beds of sandstone belonging to the Upper Old Red Sandstone Quartz Conglomerate Group. Detouring a long a leat we came to a waterfall formed where the river cascades over some thick sandstones that form the lowest beds of the Upper Quartz Conglomerate Group with the uppermost Brownstones exposed at the base of the fall.

From here it was short walk back to the car park via the impressive remains of the Clydach Ironworks. These are currently being excavated and consolidated and new interpretation panels installed and only survived because they were buried under waste. This brought us to the end of a magnificent field trip in which we all learnt a lot and under wonderful blue skies. Our sincere thanks go to Alan and Dilys for such a great day out.

Oxwich: Saturday June 17th 2023. Leader: Prof. Peter Kokelaar

The aim of the fieldtrip was to examine some of the key localities for Peter's interpretation of the landscape evolution of Gower as described in his book (*All our own water*. 2021).

We set off from the Greenways Caravan Park on a fine sunny morning, walking first across onto the cliff top to look across at Port Eynon headland. The extent of the Paviland lobe of the Devensian ice is evident on the profile of the headland; moraine gravels are left on the Limestone cliff top paths. Peter interprets the cliff platform as a raised marine abrasion surface sloping gently south, formed after the Welsh Ice retreated. The modern day equivalent is the coastal limestone foreshore sloping gently offshore.



We proceeded to the beach to look at a fault fissure and fill in the Carboniferous Limestone, with spectacular calcite crystal growths interspersed with fine grey calcite bands, red haematite and red muddy sediment layers. The last of these are clearly Triassic. Some brecciated red beds have angular calcite clasts. It was an interesting comparison with the conglomerates we saw on Tom Blenkinsop's trip earlier this year.

Limestone fault fissure fill, Oxwich. ©Lesley Cherns

After a lunch break on the beach we walked on and discussed the slades – headless valleys preserved in the limestone cliff tops along the south Wales coast. Limestone caves, such as occupied by the 'Red Lady of Paviland' are pre-glacial and must have formed below the water table. Peter interprets the slades as valleys originally cut into a Triassic massif, removed by late Pliocene peneplanation.



Finally, we went across to look at the *Patella* Beach deposits on the limestone foreshore. These very atypical beach deposits are unsorted conglomerates with boulders, cobbles and pebbles mostly of limestone, a sandy matrix and commonly littoral gastropods and *Patella* limpets. Apparently repeated conglomerate units pass up into coarse sandstones and then dune sandstones. Peter outlined the case for these being the products of a period of super-storm events, deposited well above the sea level which was probably < 10 m lower than now.

Peter Kokelaar at the Patella Beach deposits on and in fissures of the Carboniferous Limestone, Oxwich. ©Lesley Cherns

It was a fascinating trip on a lovely day, thoroughly enjoyed by all.



Odds and Ends

New BGS maps available on-line

BGS has launched an updates maps portal that provides access to over 45 000 maps and sections covering geology, geophysics, geochemistry and hydrogeology. This update allows access to their large scale 1:10 000 and 1:10 560 onshore geological maps as well as the key to their 1:50 000 and 1:63 360 maps of England, Wales and Scotland. Access and more information can be found at bgs.ac.uk/data/MapsPortal.

New book on Henry Hicks

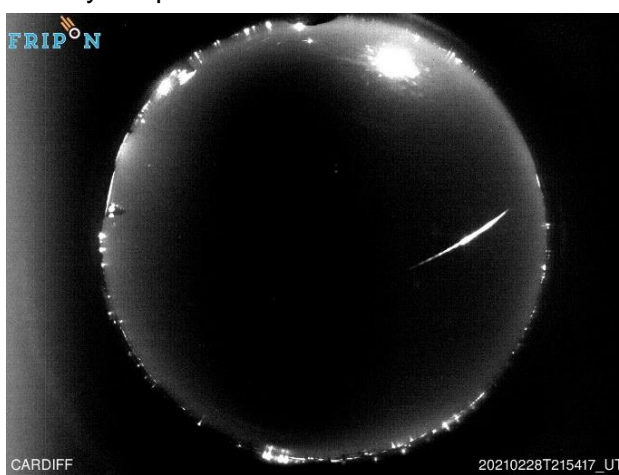
Dyfed Elis-Gruffydd, a long-standing member of the Group, has produced a new book about Henry Hicks. Hicks, a native of St David's and amateur geologist, researched and wrote numerous papers on geology, including on the Precambrian rocks of Pembrokeshire, and made a large collection of local trilobites and had *Paradoxides hicksi* named after him in recognition of his work. Dyfed has long sought proper recognition for this rather overlooked geologist. The book is titled ***Henry Hicks (1837-99) – The Life and Times of Dr Henry Hicks of St David's and the Bubble that Refused to Burst*** and is published by Y Lolfa at £4.99.

Winchcombe Meteorite at the National Museum, Cardiff

Amgueddfa Cymru/ National Museum Cardiff, has recently opened a small display about the Winchcombe meteorite; the first meteorite to be noted falling in the United Kingdom for 30 years. Although small, this meteorite has a massive scientific significance, as it is a rare type, a carbonaceous chondrite (which comprise less than 5% of all meteorite finds) which formed at the same time as our planet around 4,500 million years ago. It contains organic molecules which have the potential to provide information on the origins of life. The opportunity to host this display arose as Jana Horák (Head of Mineralogy & Petrology and currently- co-acting Head of Natural Sciences) is part of the UK Fall team. This runs a network of cameras which continuously monitors the UK sky for fireball activity, including one on the roof of National Museum Cardiff, data from which is critical in locating the find site of the meteorite. The finders of the Winchcombe meteorite contacted the UK Fall team to enquire who might like to display it and we were considered worthy recipients.



The Winchcombe meteorite ©Amgueddfa Cymru-Museum Wales



Fireball image ©SCAMP_Meteors

Since the camera was installed in 2018, we have recorded 20 fireballs, many of which could have dropped a meteorite somewhere! Most exciting was one which streaked across the sky in May last year. However, not enough data was available to pinpoint exactly where it fell, although we know that

this is in the vicinity of Bridgend. Look at the UK Fall website to see more details (<https://www.ukfall.org.uk/>), as there are meteorite fragments out there! We know there is a great interest in meteorites; Jana and Andrew Haycock (Curator Mineralogy & Petrology) handle over 100 enquiries a year identifying possible meteorites. Unfortunately, being in an area with a long industrial history, most specimens turn out to be iron ore or slag, although we live in hope of identifying a recently fallen meteorite specimen! If you have something you would like verified please contact us through the Museum on-line enquiry form (<https://museum.wales/enquiries/>).

The display can be found in the Insight Gallery in the museum's west wing.

Jana Horak



SOUTH -EAST WALES RIGS GROUP (SEWRIGS)

SEWRIGS is a small group of enthusiastic volunteers dedicated to geoconservation and the preservation of the best of our local geological heritage in south-east Wales (the name RIGS is defined as Regionally Important Geodiversity Sites). Sadly, too many important rock exposures away from the coast, especially old quarries, have rapidly become overgrown and/or infilled with rubbish and are in danger of being lost forever. With limited resources we are actively engaged on several clearance projects to save at least some of these sites through a series of work days, which are a lot of fun and are very rewarding. The group holds around three indoor meetings a year at different locations to discuss project progress and the work programme as well as a range of geoconservation issues. This can include the proposing the designation of new RIGS sites, protecting existing ones, and consultations with various bodies through the Local Planning System. We also have an educational role that is partly served through the development of geological trails that hopefully engage with the public. RIGS also provides the opportunity of advancing our geological knowledge by identifying new geological features and structures.

In recent years we have been engaged on highly successful clearance projects at Ruperra, near Draethen, Quarella Quarry at Wildmill, Bridgend, and a group of three sites near Usk. The key to the success of these projects has been working with a willing landowner and also the scale of the work involved.

Ruperra. This site lies on land owned by the Ruperra Conservation Trust and our work has to fit in to their woodland management scheme. This site exposes the Llanishen Conglomerate (Lower Old Red Sandstone) that lies just below the Brownstones and was formed as a distal part of an alluvial fan system under an arid climate. The succession consists of conglomerates, sandstones, siltstones and mudstones that were deposited as part of a meandering river system with both channel and overbank sediments preserved. The most significant feature is the Ruperra Limestone, essentially a thick series of calcretes, which was quarried on a small scale for agricultural lime. It comprises two different types of calcrete – groundwater and pedogenic – one of the few places where you can examine both at the same small site. We have carried out clearance work on four different exposures along a low ridge, each of which displays different features.

Quarella. This large quarry produced the Quarella Sandstone, a localised building stone that was used widely in south Wales, as well as clay to supply the on-site brickworks. The site is owned by Bridgend Council but is managed by the Wildmill Community Association as a public park. The quarry has been partially infilled and most of the faces have become obscured by vegetation. We have now cleared several areas along the main quarry face, one of which displays a stratigraphical sequence from the Upper Trias into the base of the Lower Jurassic. The sediments exposed show the changing palaeogeography of the area beginning with a marine shoreface during the deposition of the Quarella

Sandstone. This was followed by a regression to create a coastal plain on which the Cotham Beds (green and yellow mudstones with a distinctive nodular bed and thin green siltstones) were deposited in shallow water. There was then a return to marine conditions during which the limestones of the White Lias and Blue Lias were deposited, each distinguished by their different bivalve content.



The Ruperra Limestone, Coed Craig Ruperra ©SR Howe



Quarella Quarry, Bridgend. ©SR Howe

The Usk Inlier. These sites are of Silurian age and are contained within the Usk Inlier, a pericline that was formed during the Variscan orogeny. We have carried out work on three different sites; a small outcrop of bedded Usk Limestone (Wenlock Limestone) at Cefn Ila on land owned by the Woodland Trust; a much larger old quarry of reef limestones and shales within the Usk Limestone (Wenlock Limestone) deposited around a coral and bryozoan reef at Cilwrgi, on land belonging to the Prescoed Open Prison farm and a small exposure of brachiopod-rich Ludlow Shales at Llandegfedd Reservoir that is owned by Dwr Cymru/Welsh Water. The Llanbadoc Geology Trail is nearing completion and covers the area's dramatic scenery as well as the geology of the Usk inlier.



Ludlow Shales, Llandegfedd Reservoir. ©SR Howe



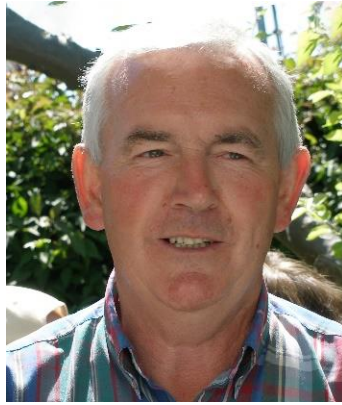
The Usk Limestone, Cilwrg Quarry. ©SR Howe

As work on these sites nears completion the Group will soon be turning its attention to getting involved on new projects. We will, however, still need to carry out ongoing maintenance work on all of our existing sites. This is a great opportunity for new volunteers to come and join us on this exciting and rewarding work. Please visit our web sites at <http://sewrigs.wordpress.com>.

Nigel McGaw



Michael Gwyn Bassett 1943-2023



©Cindy Howells

Mike Bassett was born and bred in Barry; he passed away on 15th January 2023 following a long illness. He attended Barry Boys' Grammar School, where in the 6th form he was taught by Alun Thomas, a stalwart of the South Wales Geologist's Association, and who was later (1964-89) Schools Service Officer for Geology at the National Museum of Wales. Following his 'A' levels, Mike took a BSc degree in Geology at the University of Wales, Swansea, where he stayed on to read for his PhD (awarded in 1968), studying Silurian brachiopods from Wales and the Welsh Borders, under the supervision of Dr Vic Walmsley.

In autumn 1967 he was appointed to the National Museum of Wales as an Assistant Keeper in the Department of Geology in charge of Palaeontology. With the appointment in 1977 of the then Keeper, Dr Douglas Bassett (no relation!) as Director of the National Museum, Mike was appointed Keeper, a post that he held until his retirement in 2008. During this period he enhanced the profile of the Department of Geology at the National Museum of Wales to that of an internationally recognized centre of excellence for geological research.

Mike published over 150 scientific and popular articles, with his last being on Silurian brachiopods in 2017; his research on these and Lower Palaeozoic stratigraphy was widely recognized for its high standard. He received his DSc from the University of Wales in 1984, and the quality of his research work was recognized with a number of significant awards including Honorary Professor at Cardiff University, Fellow of the Learned Society of Wales, and the receipt of the Edward Fitzgerald Coke Medal of the Geological Society of London. On the international scene he visited numerous institutions abroad, including many in Europe, USA, China and parts of the former USSR; he spent sabbatical periods in Oslo and Uppsala universities, where the latter awarded him an Honorary Doctorate in 2000. He held the prestigious post of Secretary General and First Vice Chairman of the International Commission on Stratigraphy of the International Union of Geological Sciences (IUGS) from 1993-2000.

Under his keepership, Mike encouraged colleagues and PhD students working in Wales and the Welsh Borderland to donate their research collections to the museum, helping to raise the palaeontology holding from some 80,000 to over 700,000 specimens, as well as enhancing the mineralogy and petrology collections. Mike was also strongly involved with exhibitions, firstly with the award-winning *Evolution of Wales* gallery, opened by the Queen in 1993. He also brought popular temporary exhibitions to the museum, beginning with the highly successful *Dinosaurs from China*, which attracted over 180,000 visitors between December 1986 and January 1988. Others followed, including *Mammoths and the Ice Age* (1991-92) and (2001). An important element of Mike's tenure as Keeper was to increase the staffing and enhance the scope of expertise in the Department of

Geology, and with the extension of the museum's East wing, office, research and laboratory facilities were greatly improved.

Mike took a lively part in the various scientific societies of which he was a member. He was President of the Palaeontological Association from 2006-2008, and Chairman of the South Wales Geologists' Association from 1992-1994, of which he was a strong supporter, being involved in numerous lectures and field excursions. He was also editor of three well-received regional field guides (South East Wales, Dyfed and Powys) produced by the Association. Mike was a strong supporter of the informal Ludlow Research Group, of which his PhD tutor Vic Walmsley was a founder member in 1954. Through this association, he made many life-long friendships among his colleagues. Growing out of this, he initiated a well-attended international meeting in 1989, based at the University of Keele, to celebrate the 150th anniversary of the publication of Murchison's seminal *Silurian System*.

Outside geology, Mike's other life-long passion was rugby. He played for Barry Rugby Club, and was one of their presidents, and whilst on sabbatical in Uppsala, coached the local team. Later in life he enjoyed golf, and spent many holidays with his long-time partner Sheila at the La Manga resort in southern Spain.

Mike is survived by Sheila and by his two sons, John and Owen, and is much missed by his family and numerous friends and former colleagues. He will be fondly remembered for the enormous contributions that he made to the National Museum of Wales, and to geological science in the UK and in many other countries worldwide.

Robert M Owens



On-line Geological Events

- The Geologists' Association have their ***Geology from your Sofa*** section on their website which is packed full of information and can be found at the following link:
<https://geologistsassociation.org.uk/sofageology/>
- **Earth Heritage Magazine** This is now only available as an electronic copy, which can be found at:
http://www.earthheritage.org.uk/wp/wp-content/uploads/EH-53_final.pdf
- Most of our lectures are recorded and uploaded to our website (www.swga.org.uk) for a few months.
- We also have a YouTube channel as well as maintaining a Facebook presence (<https://www.facebook.com/groups/179899022064977>) and Twitter account (@swgeologists). With Facebook and Twitter, anyone can join in and the more that do, the better it is!

Contacts for other local geological organisations

- **Russell Society, Wales and West Branch:** Contact: Tom Cotterell. Tel: 01594 845935 before 9 pm
- **Welsh Stone Forum (Fforwm Cerrig Cymru):** Contact Jana.horak@museumwales.ac.uk or www.museumwales.ac.uk/en/welshstoneforum
- **Open University Geological Society:** Contact: Andy Mitchell ougs.org/severnside
- **South East Wales RIGS Group :** <http://sewrigs.wordpress.com/>
- **West Wales Geology Society:** www.westwalesgeolsoc.org.uk



Data Protection: The Group keeps records of names, contact details, membership type, and Gift Aid declarations. These are used only within the Group for maintaining the membership list, mailings, Gift Aid reclamations, general

administration, and matters relating to the carrying out of the Group's activities (may also include non-members and historical records). We will not share / sell your information with any other organisation and will destroy your records when you leave.