


Here are the reports from our Geology Trips and talks in 2015

Great Orme


On Friday the 26th June at 10am twenty two members from both the Ruthin and Corwen U3A Geology Groups met in the summit car park on the Great Orme.




Waiting to meet us was geologist Dr. Jacqui Malpas. After introductions, handing out name badges and a health & safety talk, Jacqui spoke about the route we would take, what we would see and how long in time and miles the trip would be. She was pleased to see the group wearing hard hats and sensible foot gear.

Our first stop was Bishop's Quarry. Jacqui explained how the limestone was formed in warm, shallow, tropical seas, 330 million years ago in the Carboniferous period from shells, coral, algae etc forming sediment on the sea bed.

In the quarry there were eleven layers of limestone bedding each overlain by a rubbly layer. The rubbly layers (mud stone) being deposited during changes in sea levels. Some of the limestone showed brachiopods, coral and bryozoa fossils. As the whole area is a Special Site of Scientific Interest no one is allowed to hammer out fossils.



We lunched in an area of rocks just full of brachiopods and coral. Then made our way to the limestone pavements, passing a dry stone wall also supporting fossils galore. Apparently these pavements are the most extensive coastal ones in Wales. At the end of the last ice age the melting, moving ice scoured the top of the limestone removing all traces of soil and left it bare to the elements. Over time large cracks were formed, grykes. The flat areas are referred to as clints. Certain plants growing in the grykes are only found on the Great Orme. Jackie then pointed out a sink hole. A round depression in the limestone with a fluted rim. Luckily the hole had been filled in with its own debris so we didn't lose any members. Almost at the end of the trip we passed the erratics. Large boulders transported by the moving ice then left behind when the ice melted.




All 22 members returned safely to the car park. 10 of us stayed on to visit the Great Orme Copper Mine. A visit to the very small museum, then an information film on the mine. Hard hats on again and we all followed Richard, one of our members who guided us down the mine and pointed out the seams of malachite and many other points of interest. Once out in the open again we wandered around the perimeter of the mine, a very interesting, worthwhile visit.

Everyone appeared to enjoy the field trip and the weather was excellent. So it's Parys Mountain Open Copper Mine in July and that should be another great day out.

A thank you for everyone for wearing hard hats, sensible shoes and not needing any first aid, and a big thank you to Jacqui who had provided us with an explicit handout and a wonderful field trip.


Isabel Stewart

Parys Mountain



On Friday 24th of July at 10.15am 32 U3A geology group members from both Ruthin and Corwen met at the Parys Mountain car park for a guided tour of the copper mine. Badges were handed out, fees collected and risk forms signed

At 10.30am our Geo Guide David Wilson met us, he spoke about the mine workings over the different ages, the minerals and rocks that we would see and how they had been formed by black smokers and vents on the sea floor pumping out metals dissolved by the hot thermal waters that then spread out over the sea bed. As well as copper, sulphur, alum and ochre were mined. He then explained about hidden shafts and other dangers and how we should stay on the paths.




We were given various rock samples to examine and he showed us the Anglesey penny and half penny copper coins. Produced for the mine workers in 1787 when there was a national shortage of small currency.


The walk around the mine was a geological delight. Most of the group descended into the 'crater' the others walked around the perimeter.

After that it was a visit to the harbour to see where the clipper ships sailed off with the copper ore, then it was picnic time. After which we were introduced to Dr. Margaret Wood a geologist who explained how and why such a variety of rocks were formed in Anglesey. She has written a marvelous book 'Footsteps Through Time' a real must have. So maybe the group will club together to buy it. This will be discussed when we have a general geological meeting.

There was a small interesting museum run by Margaret where she showed us a Precambrian stromatolitic rock, a very important and rare find of hers. Stromatolites produced some of the first oxygen into the atmosphere. A minute museum but well worth a visit.




Next it was the Stone Science museum. Absolutely full of fossils, gems, minerals etc. Everywhere you looked there were shelves groaning with the weight of them. It is owned by Dave our Geo Guide who readily answered all our questions. Another place to visit for both adults and children. His prize possession was a 3.5 billion year old rock sample from Greenland.



So I think it was a successful trip and the weather was once again dry and fair. I hope that all the photographs taken on our field trips can be put onto a DVD for us all to enjoy.


Isabel

Pen-y-Pas




On Friday 25th of September at 9.30am a group of geology members from both Corwen and Ruthin U3A's met Paul Gannon, geologist/author and our guide for the day, in a car park in Llanberis. Fees were paid, forms completed and badges handed out.

We caught the local bus to Pen y Pas. Then Paul took us up a short stretch of the Pyg track explaining what we would see during our visit, how long the walk would take and I spoke about H&S. He pointed out a U shaped valley which had been carved out by the various ice ages.



Then it was a trek up the Miners track with many stops for Paul to point out different kinds of rock and geological formations.




We saw, rhyolite, andesite, basalt and now know that lichen covered rocks are probably basalt, quartz veins, slaty cleavage, inclines, anticlines, tension gashes, cwms, columnar jointing, moraines, grooves on rocks caused by the moving glaciers, and much more. He also explained about plate tectonics and the volcanic activity which created the whole of Snowdonia, with a little help from weathering and glaciation.

All these key words can be explained on Google or in a great book by Paul called Rock Trails in Snowdonia.

We lunched by a glaciated lake surrounded by fantastic views. The weather was sunny, sheep were being brought down from the mountain tops for winter and a few helicopters were buzzing around.


We hope Paul will meet up with us next year with another great field trip and thanks to Mike Cryne for the great photographs.



Isabel.

Llangollen


The Geology group met at the Horseshoe falls car park at 1.30 pm on Friday 9th of October. Our last field trip of this year. Next month is a visit to the World Museum, Liverpool, to enjoy a few hours looking at the geology exhibits. Forms were signed, a £1 fee collected (to cover the costs of future lectures & books) and a short H&S talk given.




Kay a group member was guiding the tour. She told us the route we would take and what we expected to see. Then explained how the river Dee had been affected by the last Ice Age and in two areas had changed its route. We later saw a rather insignificant stream where once the Pre-Ice Age river Dee had flowed.

After descending down a rather steep grassy slope the Horseshoe falls came into view. A rather magnificent sight. The distinctive shape of the weir is 460ft. long. It was designed by Thomas Telford, a civil engineer and completed in 1808 and was built as a feeder for the newly constructed Llangollen canal for the transportation of slate.

Kay told us about Henry Dennis who in 1852 joined up four slate mines with tram lines to get the slate down to the canal. Later in the walk we saw the Motor Museum shed which was once used as a dressing shed to cut the slate.




Walking along the canal towards the Chain Bridge Hotel we had a good view of the Silurian slate. As we were making our way up to the A5 main road to catch the local bus into Llangollen we had to pass over the newly rebuilt chain bridge and from there the views of the river Dee were spectacular. The bridge was built in 1817 and has been rebuilt twice before this recent rebuild.



The flow of the river changes after the Horseshoe falls and it becomes wilder, splashing and winding around the partly submerged rocks. On our return journey we saw where the river passes through a 15 ft. gap called Robbers Leap. No members offered to prove it could be jumped.

Once in Llangollen we visited the museum to see the finds from the Lynx Cave, from a limestone escarpment called Bryn Alyn near the village of Eryrys. We had visited this area in August. The exhibits included animal bones, jewellery and part of the jaw bone of a Lynx. There was a small selection of fossils found in Llangollen but these have yet to be classified, rather disappointing I thought but there was plenty of information on the canals, tram lines and the old wooden canal lifting bridge.



After a head count and a talk about the rest of the route we enjoyed tea/cake followed by a return walk along the canal. The weather was sunny and warm. The long canal boats parked for the night and one weary horse was being led home after a days work. Mallards followed us hopeful of the odd crumb. A lone Heron was catching his supper and we arrived back at the car park after a lovely afternoon's field trip.

Everyone thanked Kay for her hard work.

Cwm Idwal

On Friday 23rd October at 10am 14 members from the Corwen & Ruthin U3As met Paul Gannon, a geologist, author & science technology journalist in the National Park Centre at Cwm Idwal. He was our guide for the day on a geological walk around Llyn Idwal.



In the Information Centre he explained our route, what we would see and talked about plate tectonics and the volcanic activity that has taken place in Snowdonia. After a H&S talk our day began.

Paul took us up a steep ravine that had been cut out of the rocks by miners mining for Tuff, a hard compacted volcanic ash. Once out of the ravine we had a wonderful view of Nant Ffrancon, a spectacular 'U' shaped valley. Previous Ice Ages had formed a glacier from snow falling and becoming impacted and under great pressure over thousands of years forming ice which gouged out the valley we now see.

The last Ice Age ended around 12,000 YA. Mounds at the side of the valley are Moraines, the product of earth, boulders and small rocks that had been pushed along in front of, or sideways by, the movement of the glacier then deposited when the ice retreated.

We began our walk around the lake, 800m by 300m, the product of glaciation. It has its own splendid natural pebble beach.

400 MYA in the Ordovician era most of Wales was under water with perhaps just tips of volcanoes visible. There were many periods of volcanic activity with breaks in between. So over the millions of years volcanic rock then layers of sedimentary rocks were laid down. Pyroclastic flows, volcanic eruptions, land subsidence and plate tectonics all helped in lifting and forming the mountains we now see. Some were folded in the process.

We saw basalt, rhyolite, quartz, Pitt Head welded ignimbrite, pyroclastic breccias containing large angular rocks and pumice, slaty cleavage, basalt columnar columns and more moraines.



Climbers on the Idwal slabs were oblivious to the intrusive rhyolite (now exposed through erosion), pyroclastic breccias, tuff and marine sediment that they were climbing.

With the excellent weather we had a good view of the Idwal Syncline. A trough shape depression in the sedimentary rock. More information about the above types of rock, their geological history, formations and time scale can be found by using Google.

Also Paul has written a book 'Rock Trails Snowdonia' plus others on geology.

So once again a great day out, we had lunch by the lake, fine weather and an excellent guide.

Isabel.

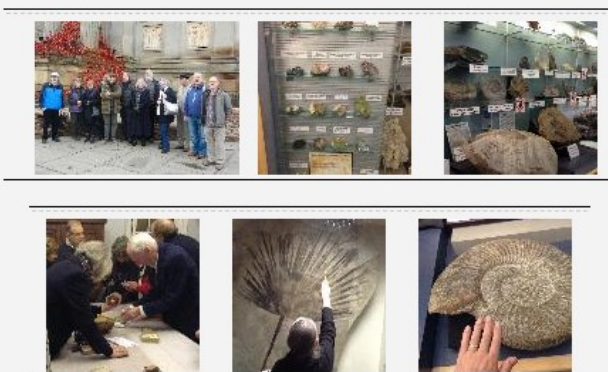
World Museum Liverpool

On Friday 27th November fourteen U3A members from the Corwen and Ruthin groups visited the World Museum in Liverpool. Travelling by car, then train. An added bonus to the trip was passing by St. Georges Hall and seeing the Weeping Window display of poppies. An ideal place for a group photograph.

Wendy Simkins, Curator of Earth & Physical Sciences and Geoff Tresise (her former Boss) now retired, greeted us on arrival.

After a welcome coffee in the delightful museum coffee shop we spent the next hour listening to a talk on fossils followed by a hands on session of the fossils that had been on show for us.

Before lunch we visited the Natural World of Dinosaurs. After lunch it was a visit to Natural History Center. This department was full of fossils, gems and minerals plus much more. A very knowledgeable young man explained various exhibits to us and opened many of the drawers to show us specimens not on display.



Some members then explored other exhibits on different floors, it was very interesting to see the meteors on show in the Planetarium Department.

Everyone enjoyed the visit and we intend to return next year and spend a whole day there.

The World Museum was another successful geology trip.

Isabel.

Christmas

On Friday 11th December at 2pm in Ruthin library the geology group held its final meeting for 2015.

Group member Richard Thompson gave an excellent talk on 'Different aspects of geology and how it affects our daily lives'. He also had on show a good example of mineral specimens.

This was followed by a geological quiz and a raffle. Mince pies were served at tea break. It was a very good end to the year. I hope the programme for next year is even better.

Many thanks for the help the librarians are giving us, setting up the meeting room and providing books. Thanks to all those who brought in raffle prizes and a big thank you to Brian Hubble who won the quiz and shared his tin of sweets with the 24 members present.

6 new members attended the meeting and I hope to see them all next year.

We have now accumulated a fair amount in our funds. This will help pay for speakers, DVD's and books.

So I wish everyone a Very Merry Christmas.

Best Wishes,

Isabel.