

ESEF Cymru
“Geotourism in Wales – by land and air”
5.00pm Tuesday 2nd May 2006, National Museum of Wales, Cardiff

**Presentations by Dr Peter Brabham (Cardiff University),
Allan Cuthbertson (Neath and Port Talbot CBC)
and Tony Ramsey (Fforest Fawr Geopark)**

Abstracts and Biographical Details - introduction

Allan Cuthbertson will give an overview of the whole of Wales. Peter Brabham will be concentrating on the Heritage coast and the inland areas of SW and Tony Ramsey will be speaking primarily on the Geopark. Allan will lead the talk in order to give the audience an appreciation of the whole of Wales and Peter and Tony will follow with the detail.

Allan Cuthbertson – allan@cuthbertson.org

1. Abstract:

When someone takes the trouble to explain the wonderful heritage we have in this land we call Wales, you cannot help but marvel at its diversity and fashion in which it was assembled. Piece by piece we can uncover half a billion years of earth history. Our rocks tell of the first plants and animals, the first forests, the great journey across the face of the globe, of volcanoes and great seas displayed along 175 miles of rugged coastline, hills and mountains.

We shall begin the air tour in a valley of outstanding natural beauty, the Wye Valley and make our way in a clockwise direction around the coastline, passing the Heritage Coastline at Southerndown and on to the limestone cliffs of Gower and the vast sands of Pembrey. At Laugharne, The Boathouse, and Saundersfoot the superb chevron anticline of Coal Measures that form Lady Cave. We see the limestone arch of the Green Bridge of Wales and the lime kilns of Solva. Precambrian kept safely, in the Pembrokeshire Coast Park. The Iapetus turbidites of Cardigan Bay and Cader Idris protecting Dolgellau, her golden child. We wonder at the multitude of metaliferous mines in mid Wales and the huge opencast development in the South Wales Coalfield. The magnificent Rhinogs of the Harlech Dome and the secret of the Mochras Fault. Portmerion is a jewel in the trees and Angelsey a treasure to behold. The pillow lavas of Newborough Peninsular, the tight folds of South Stack, the colourful mess of Parys Mountain. Turning south we admire the limestone of Great Ormes Head and the malachite mined by our Bronze Age ancestors. We cross the Strait again and see the bridges made by Mr Telford and Mr Stevenson. The massive slate quarry of Penrhyn, and the Slate Museums of Llanberis and Blaenau Festiniog eagerly await to tell their tales. Finally we arrive at the most majestic mountain of all.

2. Biography:

Born in Wales, University of London degree, field geologist in Saudi Arabia, mine geologist in South Africa, consulting in the UK, mud logging in the North Sea. Presently working for Neath Port Talbot Council as a minerals officer in the Appeals and Enforcement section. Lecture for the Continuing Adult Education Department of Swansea University, Past President of the South Wales Geologists Association, member of the Geologists Association and IMMM, Fellow of the Geol Soc.

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1. Abstract

Wales is fundamentally defined by its Geology. For such a small country we have rocks exposed from most of geologic time. From the Pre-Cambrian rocks of Anglesey which are 600 million years old, to the Jurassic rocks of Southerndown (150 million years old), the glacial sediments of Gower which are less than 23 thousand years old, to the sediments of the Mawddach estuary which were deposited yesterday.

Wales has also been pivotal in the global understanding of geology. In fact three of the geological periods mapped worldwide; the Cambrian, Ordovician and Silurian are named after Wales.

Geotourism is a major factor in the Welsh economy. Many tourists visit Wales to walk amongst the beautiful scenery. Snowdonia, Brecon Beacons, Preseli hills, the Welsh Borderland spring instantly to mind. Other coastal walks include Strumble Head, Gower, Holyhead and the Vale of Glamorgan; these are just some areas that you can instantly think of. It's vital that we improve the standard of information available to geotourists so that they can gain maximum benefit from their visits to Wales and hopefully return.

It's not just the unspoilt pretty places that geotourists visit. Many people are interested in the link between geology and our industrial past. In North Wales there is an obvious link between geology and the slate mining industry. Visit the slate caverns, take a ride on the Ffestiniog railway from Blaenau Ffestiniog to Porthmadog and you follow the tracks of millions of tons of slate exported from North Wales to cover the roofs of our industrial cities. However hidden away in the North East corner of North Wales is the one time greatest copper mine in the world Parys Mountain, still without an interpretation centre. Do you realize Dolegllau is a Gold town? I read recently a letter that suggested we remove the "ugly slate spoil" from Llanberis and return the glacial landscape, surely the writer of that letter could not be Welsh?

In South Wales we have the World Heritage site and Big Pit mining museum at Blaenavon with excellent free tours by ex-miners to guide you underground. Big Pit is particularly popular with hundreds of bus loads of French exchange children. However the South Wales economy was built on coal, coal is energy; the Industrial Revolution was founded on energy and heat, melting Iron and Copper ore, firing steam engines on railways and in ships. Where can the geotourists to South Wales make that link, where is the live steam to show the children of today why 3 billion tons of coal came from the South Wales valleys? I personally do not think audio visual displays are the way forward. You cannot recreate the size, the heat and the noise of coal fired engines. Let's make molten Iron again at Blaenavon, why not other museums do it. Not all museums in South Wales are free to school parties, that's another issue the Welsh Assembly should address.

Within the South Wales industrial area there is a tendency to regard beautiful landscapes as only being around the fringes, such as the Beacons, Gower or the limestone areas of Ystradfellte. Look around you the councils of South Wales, there has been a dramatic change in the past 25 years. There are now only 6 colliery headshafts left in South Wales most of the tips have gone.

Let's try and look and re-interpret at our local landscape and be proud of it. Get up out of the valleys onto the plateau to look down onto the landscape. For example the car park at the summit of the Rhigos Mountain in the Rhondda, on a major road accessible by coaches, has a view of; the most southerly glacial cirque in the UK, a major active fault line, limestone scenery, the Beacons ridge and the last working colliery in Wales. What facilities are available to the geotourists? – An ice cream van and friendly sheep.

As an experienced fieldcourse leader to many areas of Wales, I can tell you what you need for successful fieldcourses is a focal point to aim for. That focal point is an information centre which has toilets, secure parking and ideally a warm café and a study room. You can't take a bus full of children to a pub for lunch.

In North Wales let's try and re-enforce the link between geology/ scenery and geology/industry with improved educational material. However we have a lot to do in South Wales, areas of world class geology such as at Ogmere have no up to date information available to visitors. Within the coalfield the response to geo-tourism is patchy at best; some encouraging advances have been made. Recently the mountain biking trails in the Afan valley were voted amongst the best ten in the World.

What we should aim for is that every child in Wales should:

- Understand the basic geology and geography of Wales, how it has contributed to our industrial past and to the present geographical distribution of towns and cities.
- Visit sites of both natural and industrial beauty. In North Wales that might be both captured at Llanberis, in South Wales a visit to Big Pit and the new Geopark and in West Wales the coastal geology and Dolaucothi Gold mines.
- Understand their local landscape area around the school and how it evolved through time.

Geotourism is about educating the young and getting people to come and visit Wales time and time again hopefully to explore new areas to spread the money - we have a lot of work to do.

Our ancestors carried stones from the Preseli Hills to make Stonehenge they knew the importance of Welsh geology!!

2. Biography

Peter Brabham comes from an ex-coal mining family background. He is a native of Gelli in the Upper Rhondda Fawr valley and an alumni of Treorchy Comprehensive School. He graduated in Geophysics from Cardiff University in 1982 and spent the mid 1980s in Durham University, undertaking postgraduate research into the use of seismic imaging techniques in coal exploration.

Peter has over 16 years experience of lecturing at Cardiff University in the School of Earth, Ocean & Planetary Sciences. He has adapted his teaching methods to accommodate the dramatic growth in student numbers over this period, often lecturing to classes of over 150. He recently won a teaching initiative grant to develop new 3D imaging techniques for use in geoscience lectures. For nine years he was the course director for the degree course in Exploration Geology. His teaching duties presently involve Undergraduate courses in natural resources; geophysical hydrocarbon exploration; earthquakes; 3D digital mapping and Masters courses in brownfield clean-up / regeneration techniques. He manages residential fieldcourses to Dorset and North Wales, plus numerous practical field-based activities in the South Wales area. He is the local expert on “Welsh Earthquakes” which involves periodic appearances on the Welsh media.

His research interests are diverse, recently undertaking two industrially sponsored projects in the geophysical imaging of landfill sites and active landslides in the South Wales area. He has geophysically mapped glacial deposits along the North Wales coast, sites in the high Alps and on Svalbard within the Arctic Circle. A current research project involves the collaborative development of an offshore shallow marine seismic imaging capability for Cardiff University. He is also looking forward to commencing a new research programme “3D imaging the historical landscape of South Wales” jointly with the Department of Welsh History at Cardiff. He is the present chairman of the Southern Wales group of the Geological Society of London.

Peter has been an enthusiastic photographer of industrial landscapes for over 30 years and utilizes his vast library of images in all his lectures. He has practical experience of geo-tourism, for eight years was part of the management team of Dolaucothi Gold mine and is now a member of the management committee of the Fforest Fawr Geopark.

Tony Ramsey – tonhel@btinternet.com

1. Abstract

The Fforest Fawr Geopark is the first Geopark in Wales to have been admitted into the European Geoparks Network and the Global UNESCO Network of Geoparks. The purpose of this presentation is to outline the concept of the European Geoparks Network, to explain the rationale in defining the boundaries of the Fforest Fawr Geopark and to show how European Geopark status was achieved by a partnership between Cardiff University, the British Geological Survey and the Brecon Beacons National Park Authority. The nature and proposed function of the management structure for the Geopark will also be considered.

The presentation will introduce some aspects of the geology, pre- and post-industrial archaeology and cultural heritage. All of which will be used to develop Fforest Fawr Geopark for education and research and as a recreational resource for the promotion of geotourism and sustainable economic development.

2. Biography

Born in Burry Port, South Wales. University of Wales PhD in Micropaleontology (1966). Research Associate at the University of Cambridge (1966-1968) and Senior Research Associate, University of East Anglia (1968-1971). Lecturer and Senior Lecturer in Geology at Swansea and Cardiff Universities (1971-2004). Visiting Professor at the University of Illinois, Urbana USA (1971) and visiting Research Scientist at the Ocean Drilling Project, Texas A&M University (1990-2000).

Tony has 31 years experience of lecturing and leading fieldtrips. He has delivered undergraduate courses in Hydrogeology, Micropaleontology, Sedimentology and Environmental Geoscience. He was course director for the undergraduate degree scheme in Environmental Geoscience in the School of Earth, Ocean and Planetary Sciences, Cardiff University (1994-2004).

Tony's research interests are mainly in Marine Geology and he is currently involved in projects in the Amazon Fan and Somali Basin. Tony has also researched the Carboniferous Limestone in South Wales.

Tony is currently the Director of the Fforest Fawr Geopark and an Honorary Research Fellow at Cardiff University.

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