



NORTH EASTERN GEOLOGICAL SOCIETY

Newsletter March 2012

<http://www.northeast-geolsoc.50megs.com>

Dear Member,

1. **NEGS AUTUMN/WINTER LECTURE PROGRAMME.**
2. **NEGS SPRING/SUMMER FIELD TRIPS.**

3. **OTHER NEWS.**

2012/2013 Committee

Subscriptions now due

Review by Brian Young of Reading the Rocks by Dr Elizabeth Pickett

The Healeyfield Lead Mine, Castleside, by Ray Thompson,

4. **ADMINISTRATION.**

Part 2 Geology of North East Churches

1. **NEGS AUTUMN/WINTER LECTURE PROGRAMME.**

The final lecture of a most enjoyable season was given by Dr. Mike Norry, Univ. Leicester: Shetland; the evolution of geology, language and people.

A different approach

Mike Norry of Leicester University delivered a stimulating fun lecture outlining contrasting approaches to 'who am I'

Wrapping his tale around a holiday in the Shetlands and the geology exposed there; he invited the audience to consider some of the events in the geological history of the earth that were vital to our own evolution. The Tsunami from the Storegga Slide in 6100 BC or the snowball earth event will have affected evolution. He identified four key glaciations in the Pre Cambrian and suggested there may be DNA evolutionary steps linked with severe weather events. He invited us to consider another series of events including for example, anoxic interludes. These could have cleared ecological niches allowing evolution to progress as a consequence.

Changing tack to other evidence including language routes, DNA (Y-chromosome) evidence and even family surname links to evolutionary steps he demonstrated that there might be a connection between language changes and evolutionary steps.

A more detailed look at DNA evidence suggests, at our present understanding, remarkably few key changes that allowed whole groups of evolutionary events to appear and then diverge as speciation developed. These steps may have a link to cosmic ray events changing key connections in the DNA record.

Thus he demonstrated a number of routes and events that could have been crucial in the evolution that led to our own existence.

Thanks to Gordon Liddle for the summary.

Please remember Professor Gillian Foulger, our Lecture Coordinator, has a website which gives details about the lectures, lecturers and their websites. To access it, [click here](#). She also has her own website which members might like to view: [click here](#).

2. NEGS SPRING/SUMMER FIELD TRIPS

John Waring has sorted out some interesting trips for us in the new year, please make a note in your diary/calendar now of the dates below.

More information can be found on the web site <http://www.northeast-geolsoc.50megs.com/pages/page3fieldvisits.htm>

12th. May: Ryhope Dene, Seaham and Blast Beach

Leader: Andy Lane, Univ. of Sunderland.

This excursion will take us to some little known sites from just south of Sunderland to the Blast Beach just south of Seaham. We will look at rocks belonging to the top of the Permian Magnesium Limestone sequence - not just the Concretionary Limestone Formation, but the Roker Dolomite and Seaham Formation, too. We will look at a history of deposition, dissolution and disturbance of the beds repeated up the succession. Other features to see will be our geologically young (Devensian) glacial beds, coastal erosion, and the impact of past industries on the coastline – the last two events being closely linked!

***ASSEMBLY** – Cars meet at Ryhope Green (NGR 414529*) at 10.30hrs on the day. Landmarks around the Green are the Albion pub, the Farmers Club and the prominent War Memorial in the middle. The assembly point can also be reached by bus from Sunderland's Park Lane Interchange, catching any bus heading towards Peterlee, Easington, Hartlepool or Dalton Park but the most frequent are the 60 and 61 (the "Drifter" service, usually painted a dark green!). All NGR's are read from the OS Landranger sheet 88 (Tyneside).*

Please see web site for further information of where we will move onto.

23rd. June :Wards Hill South of Rothbury.

Leaders: Derek Teasdale & Gordon Liddle

One of the localities to be visited is Wards Hill (south of Rothbury) a roadstone quarry that provides an exposure of the Whin Sill. The quarry demonstrates some unusual features of the intrusion and allows some examination of the effects of the intrusion. The country rock is Lower Carboniferous with fossils. A hard hat is essential to examine some of the exposures.

(Some may wish to take the opportunity to measure some of the deformations present in the quarry and develop a possible explanation for the effects described. If so, bring a tape measure, compass and recording sheet if you wish to do this exercise).

Meet at GR NZ078967. The grass verge can be very soft. One route is to follow the A697, turn off at Weldon Bridge, turn left at Pauperhaugh, bear left about 300 metres further on, up a steep hill and on for about 3 kms.

July:

Leader Mr J Knight: The Sedgewick Geology Trail.

If time permits, other localities may be visited, e.g. the Rawthey Valley or Dent village (Adam Sedgwick's Granite Memorial & his father's church). **Meet 10.30am** at the viewpoint and large parking area (SD694912) at the side of the A684 (Hawes road) at 3.6 km to the ESE of Sedbergh. The car park is immediately adjacent to the minor road descending to Danny Bridge (SD698913), where the Sedgwick Geological Trail commences. More details of the trail and other possible localities to be visited can be found by clicking [here](#).

4th. August: One of the tributary valleys of Swaledale or Wensleydale.

Leader: Jon Barber, Univ. of Leeds. (Further details later).

September/October: Upper Teesdale, possibly Cronkley Fell area

Leader: Brian Young. Examining metamorphic effects of the Whin Sill on the surrounding rocks, e.g. existence of garnets and magnetite.

3. OTHER NEWS.

COMMITTEE

I am pleased to report that the following members were elected to the committee Christine Taylor, Chris Burridge and Eric Johnson.

Brian Young – Without portfolio
Christine Taylor – Membership Secretary
Derek Teasdale – Chairman/Webmaster
Eric Johnson – Field Trips Secretary
Prof Gillian Foulger – Lecture Programme and Academic Liaison
Ian Johnson – Hon Treasurer
Joan Hardy – Liaison with Geographical Association
John Smith – Without portfolio
Judy Harrison - Secretary
Michael Rabin – Student Representative
Dr Nigel Sprague – NHSN Representative

Subscriptions are now due for 2012. Please send it to the Treasurer,

Thank you to all those who have already paid their subscription for this year – for those who haven't yet paid please send a cheque made payable to NEGS with your address on the back to The Treasurer, NEGS, The Old Police House, Moor Rd, Cotherstone, Barnard Castle DH12 9PH.

There is no change in the subscription rate for this year.

Full Member	£15
Additional Family Member	£10
Concessions	£8
Postal	£6

Cheques made payable to NEGS please.

BOOK REVIEWS

Members may be interested in the following two recently published books which touch upon the geology of NE England.

READING THE ROCKS

Elizabeth Pickett, North Pennines Area of Outstanding Natural Beauty, Stanhope, Co.Durham 2012
ISBN 978-0-9565161-5-2 49pp £8.00

This book's sub-title – *Exploring the geology and landscape of the North Pennines* – gives a useful clue to its purpose. Using numerous photographs and some extremely attractive watercolour paintings, diagrams and short 'bites' of easily assimilated text the book takes the reader on a chronological journey through the past half billion years or so of Earth history. Bearing in mind its economy of text, the book achieves its purpose remarkably well within its comparatively modest 49 pages. Whereas no prior knowledge of geology is needed to enjoy the journey, the book is also a valuable addition to the bookshelves of those with some understanding of Earth science. Giving, as it does, interesting clues into how the area's rocks formed and where good examples of these may be seen, it has much to offer to the general interest reader, but it should also be a 'must' in any school where aspects of the local landscape or environment are taught. Sections on the formation of the area's sedimentary rocks, the intrusion of the Whin Sill and the formation of mineral veins testify to the author's flare for clear, concise interpretation and huge talent in illustrating so attractively the concepts and processes involved. It might be argued that karstic features are given a little too much prominence for an area where caves and limestone pavement are generally scarce, and with a personal inclination towards the area's mineralogy I might also be allowed to regret the absence of any reference to witherite mining, one of area's virtually unique industries. These are, however the sort of tiny 'gripes' expected of any book reviewer and do nothing to detract from the high quality of the product. And how refreshing to see that, whether deliberately or otherwise, the section headed 'Changing times' avoids the trendy climate change mantra so commonly regarded as *de rigueur* in texts of this sort today – Congratulations! This book will not turn you into an expert on local rocks and landscape, but it will give you a wonderful introduction to why this area is so special. Do buy it. You will enjoy it.

Brian Young – March 2012

THE HEALEYFIELD LEAD MINE, CASTLESIDE

Ray Thompson, Friends of Killhope, Killhope, Co.Durham 2011
ISBN 978-0-9518939-5-1 109 pp £9.95

Passing along the A68 today, many people otherwise familiar with Northern Pennine lead mining, may well assume that remnants of this once great industry lie well to their west. How many see Castleside as a former coal mining village and its pub, the Smelters' Arms, as a relic of the former nearby Consett Steel works? Yet this was once an important lead mining settlement, and its pub recalls lead, not iron, smelting.

Castleside's lead mines are well documented, but until the publication of this book, mainly with regard to their geological features and within learned treatises on geology. Ray Thompson's book highlights otherwise unreported aspects of a formerly important local industry. His book puts on record a fine selection of some of the large volume of documentary records he has meticulously extracted and studied in various archives, not just of the rocks and minerals, but mainly of the people involved, illustrating his account with numerous often lengthy extracts of contemporary accounts and letters. In addition, detailed descriptions of those parts of the mines to which he has managed to gain access recall his many years of equally painstaking personal 'hands on' research and exploration. Not only the mining, but the smelting of the ores raised are described, including intriguing references to, and pictures of, what may be genuine Castleside silver. Writers of texts of

this sort are commonly confronted with the difficulties of reproducing old, and often poor quality, original photographs and plans. In this book the designers and printers have returned a generally good job. Books on the mining history of Northern England have enjoyed something of a boom in recent years ,though it has to be said that this is a *genre* distinguished by more than its fair share of volumes not worth taking down from the shelf (or in some cases of even putting on a shelf!). Happily this book belongs with the minority of excellent titles. It is a valuable addition to the literature of mining in the Northern Pennines and belongs on the bookshelf of anyone interested in this topic.

Brian Young – March 2012

Many thanks to Brian for these reviews

A free online version of **Earth Heritage**, the geological and landscape conservation magazine.

You can now view and download the new issue of Earth Heritage, number 36, as a .pdf file at www.earthheritage.org.uk

3. ADMINISTRATION

If you receive this newsletter by post and have an email address, then please let me have it. negssecretary@btinternet.com

For those without a computer if you require any further information please ring me on 0191 261 1494.

Part 2 of Geology of North East Churches, if you are a new member and would like a copy of Part 1 please check out the website or email me.

Best Wishes,

Judy Harrison
NEGS Secretary