**NSGGA Dates for Your Diary**

**Thursday 23 January @ 19:30**  
**Lecture:** ‘Scallywag Bunkers’: Geophysical Investigations of WW2 Auxiliary Unit Operational Bases (OBs) in the UK by Jamie Pringle (Keele)

**Thursday 13 February @ 19:30**  
**Lecture:** The Evolution of Phytoplankton by Jim Riding (BGS)

**Thursday 12 March @ 19:00**  
**AGM and Chair’s Address:** AGM @ 19:00 followed by Lecture @ 19:30: The post-Carboniferous geological evolution of the Peak District: some insights from temporary exposures by Peter Jones (Derby & NSGGA Chair)

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**Winter Lecture Programme 2019/20**

Lectures are held in room WS0.06 in the William Smith Building, Keele University

**Thursday 23 January 2020 @ 19:30**  
‘Scallywag Bunkers’: Geophysical Investigations of WW2 Auxiliary Unit Operational Bases (OBs) in the UK  
**Dr Jamie Pringle (Keele University)**

In 1940, secret British Auxiliary Units were created in response to the predicted Axis Invasion of Britain. They were tasked with guerrilla operations (or “scallywagging”), including sabotage and assassination of high-ranking Axis Officers, to give time for regular army coastal units to retreat to the General Headquarters Lines (GHQ) for final defence operations. The patrol units comprised 4-8 civilians, often gamekeepers and poachers with expert local knowledge, and below-ground Operational Bases (OBs) deliberately set in remote locations to avoid detection. Likely survival rates were judged to be low (12 days).

This lecture will describe investigations of three such OBs sites in Suffolk, all in secluded wooded locations. They were

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![Image: Jamie Pringle – A Mark II “Scallywag” Bunker](image-url)
located and characterised by geophysical surveys using metal detectors, mid-
frequency (250 MHz) GPR and electrical resistivity tomography. Archaeological
finds included home-made lantern tins, a 1940 kerosene heater stove still in situ and
metal pans together with intact ventilation systems and escape tunnels. The study
shows that remaining Operational Base shelters are varied in construction and
condition, with geophysical surveys able to detect, characterise and assess their
state of preservation, thus helping to bring WWII British ‘invasion’ history into the
wider scientific community and public domain.

The committee would be delighted if any NSGGA members would like to join us for a meal in the
Refectory before the lecture on Thursday 23 January. We meet at 6pm in the entrance to the
William Smith Building.
If you would like to come along please telephone the Refectory on 01782 734121 before 5pm on
Tuesday 21 January and make a booking to join the NSGGA table giving them your choice between
Main Dish and Vegetarian Option.
Main course menu (£8.75 per person - dessert and coffee extra)
Main Dish: Salmon leek and fennel parcel with a chive butter sauce
Vegetarian Option: Lentil & Mushroom Stew served in Filo Pastry
(Both with accompanying vegetables: Buttered Cabbage, Courgettes Provencal, Lyonnaise
Potatoes)

Thursday 13 February 2020 @ 19:30
The Evolution of Phytoplankton
Dr James Riding (British Geological Survey)

Phytoplankton are drifting microscopic plants and are the most abundant marine
organisms. Early Palaeozoic biotas were abundant and diverse, represented largely
by the acritarchs which are the presumed resting cysts of unicellular phytoplankton.
The inception of the modern phytoplankton came after an interval of particularly
low diversity during the Carboniferous and Permian, when sea levels were
particularly low. Modern phytoplankton floras (coccolithophores and
dinoflagellates) emerged
during the Triassic Period and underwent major radiations
in the Middle Jurassic
(Bajocian). The diatoms
emerged later, during the
Cretaceous. The
dinoflagellate cyst fossil
diversity record rose and fell
in congruence with global
sea levels and temperature
fluctuations. It is hypothesised
that high sea levels result in
significantly greater
ecospace for
coccolithophores and
dinoflagellates, which thrive
in epicontinental sea settings.
The coccolithophores and
dinoflagellates were
badly affected by the end-Triassic mass extinction and recovered slowly during the Early Jurassic. Both groups also declined during the Toarcian Oceanic Anoxic Event, some 11 myr before the Bajocian radiations. The latter phenomena have been linked to continental breakup, sea level rise and a positive shift in isotopically light carbon isotopes.

The committee would be delighted if any NSGGA members would like to join us and the speaker for a meal in the Refectory before the lecture on Thursday 13th February. We meet at 6p.m. in the entrance to the William Smith Building.
If you would like to come along please telephone the Refectory on 01782 734121 before 5pm on Tuesday 11th February and make a booking to join the NSGGA table giving them your choice between Main Dish and Vegetarian Option.
Main course menu (£8.75 per person - dessert and coffee extra)
Main Dish: Leg Lamb stuffed with apricot and rosemary
Vegetarian Option: Puff Pastry Heart of Lentil & Mushroom Stew
Accompanying Vegetables: Vegetable Ribbons, Broccoli, Braised Cabbage, Fondant Potato

Thursday 12 March 2020 @ 19:00 – AGM and @ 19:30 Chair’s Address
The post-Carboniferous geological evolution of the Peak District: some insights from temporary exposures
Dr Peter Jones (Emeritus Fellow, Derby University)

Situated at the southern end of the Pennines, the Peak District essentially comprises a degraded upland terrain with deeply incised valleys. The underlying Carboniferous rocks form a dome-like structure with a thick sequence of limestones at the core and younger mudstones and sandstones in the surrounding area. Isolated pockets of weakly lithified gravels, sands and Neogene clays occur within solution hollows on parts of the limestone outcrop but are now poorly exposed.
Quaternary superficial sediments present at the land surface are generally sporadic or thin and accumulations of detrital and chemical deposits preserved in limestone caverns and underground cavities are characteristically less accessible. With the relative lack of well-exposed post Carboniferous stratigraphical sequences, attempts to elucidate the Mesozoic and Cenozoic history of the Peak District have often focussed on geomorphological, speleological and tectonic evidence. However, various temporary exposures provided by construction work, quarrying operations and mineral extraction have occasionally revealed some unusual post Carboniferous deposits as well as remarkable examples of non-tectonic structures. This talk will refer to examples of such features in the Peak District and also discuss their significance for palaeoenvironmental reconstruction.

Electronic Payments Bank Payments to NSGGA and Membership Subscriptions
Subscriptions for 2019/2020 Now Overdue

We have had a number of requests from members to make payments to the NSGGA via standing order or online bank transfer, what with cash and cheques now being so last decade. This presents a number of problems for a small voluntary
organisation such as the NSGGA since a fully secure electronic solution would cost us more than is viable and simply publishing the NSGGA bank account details in the freely downloadable bulletin would be a temptation to online fraudsters (and we know from previous email spear-phishing attempts that those persons of questionable parentage have scoured past bulletins for information to back up their nefarious actions).

If you would like to pay the NSGGA electronically in the future could you please contact the membership secretary either in person at one of the lectures or via email using the account associated with your NSGGA membership to obtain the account and sort code. Could you also use the “reference number” part when setting up the standing order / direct payment to indicate what you are paying for e.g. “Family Membership” or “Buxton Fieldtrip” (and who you are if it is not obvious from your account name!) otherwise our Treasurer will get very upset.

Just a reminder that subscriptions are now overdue for the 2019/2020 season as subscriptions now run October-October.

Geoconservation, geotrails and improving public awareness; a new and ‘novel’ way of getting the message across.

As many of our readers will be aware, in the late 2000s, Geoconservation Staffordshire (or Staffordshire RIGS as it was known then) proudly published a series of geotrail leaflets to celebrate the importance and diversity of the county’s geological sites with a view to improving public awareness about our subject. The first of these trails published in 2007 focused on the amazing array of rock and landscape features in the Hamps and Manifold valley area, in the heart of North Staffordshire’s limestone country. Few could then have anticipated that this area would later provide the setting for Stephen Booth’s murder mystery book ‘Lost River’ a modern crime thriller published in 2010.

A bit of creepy read ‘tis true, but this book makes frequent and informed reference to the landscape and to landscape-forming processes in the area, as well as to a number of the locations highlighted on the Hamps & Manifold Geotrail (there’s even a specific reference to it on page 319!). So, thanks Mr Booth for all your good work in publicising our trail, in promoting our interests and helping the good cause of Geoconservation. Grateful thanks also go to Don Steward for drawing our attention to the ‘Lost River’ in the first place - a highly recommended read for all those with an interest in murder mysteries and perhaps especially recommended to those with an interest in Staffordshire’s glorious bit of the Peak District (which is of course the best bit!). It’s a good read!

Patrick Cossey

January 2020
Annual GA Local Groups Meeting and Festival of Geology
Annual GA Local Groups Meeting 1November 2019

Janet and David Osborn represented the group at this meeting held annually in the council chamber of the Geological Society in Burlington House. The president of the GA Nick Pierpoint welcomed everyone to the meeting.

This is an opportunity for local groups to hear about what is going on within the GA and to raise subjects from within their local group. These are some of the points that may be of interest.

- Safeguarding policies will be sent out to all groups.
- School Rocks (a Haydon Bailey initiative) has been running for 2-3 years. A box containing rock and mineral samples along with lesson plans for KS2 and GCSE Geography. Take-up still small but growing. Anyone who knows of a school locally that might be interested is urged to contact Haydon for further information. There is a small deposit for the box which will be repaid on its return. Peter Jones stated that the EMGS is already doing a similar scheme. There is a stand at the Festival of Geology tomorrow where there will be a stand with further information. They are in the process if modifying the boxes with more fossils included.
- There are increasing numbers in local groups taking people to look at local rocks and outline ‘what geology is’.
- There will be a workshop with GA Council in January to kick-start membership. David Osborn reported that the NSGGA promotes student membership alongside the John Myers award to promote our group.
- GA Conference 2019, Manchester - Peter Jones of the EMGS & NSGGA reported on the event. 5 groups were involved in this event. The event started on Friday evening with a tour of Manchester Museum by Phil Manning. On Saturday there were 9 talks and a meal in the fossil gallery in the evening accompanied by a dinosaur! On Sunday there were field trips which went well including one to Apedale organised by Ian Stimpson.
- GA Field Trips. There are a number of these are very successful. Trips to Turkey and Madrid in particular. There is a proposal for a trip to Kazakhstan and Russia in 2021. Trips are open to non-GA members but members have priority. There are a number of field trips coming up in the New Year, see the GA magazine for more details.
- Curry Fund - has given away over £32,000. Grants from £250 up to £4,000 supporting leaflets, excavations, site consultation, specimens, museum displays, etc. 20 different things have been supported over the year. £3000 was donated for the retention of the Lyell papers which have now been retained. Jonathan Larwood went through a list of this year’s recipients. There are four dates by which Curry Fund applications should be received: 20/2, 20/5, 20/8, 20/11.

AOB - The ongoing issue of insurance cover for field meetings. Groups charge a small fee of £2 to cover for 3rd party insurance. There has been a change of insurance company and charging a fee for non-members is covered.
Festival of Geology UCL, Gower Street London EC1 2nd November 2019

Held annually at UCL this is a free entry festival. There are a variety of display stands from Local Groups as well as the GA, BGS and private individuals who have items for sale including fossils, minerals, books, maps, geological equipment etc.

This is an excellent opportunity to meet up and exchange ideas with other societies who have stands there.

There were a series of four talks through the day plus on the following day some local field trips, one being to the Thames Barrier.

An annual event is the Photographic competition. There were more entries than ever this year and the winning entries are included in the GA calendar.

Janet and David Osborn
Other Societies

Geologists’ Association
Lectures at Geological Society of London, in Burlington House, Piccadilly but the lectures are available to view by members of the GA online via their website.

**Friday 7 February @ 17:30**
- Drilling the Chicxulub Impact Crater - Jo Morgan

**Friday 6 March @ 17:30**
- Environments and Landscapes during the development of the mid-Palaeocene Hebridean Igneous Province, NW Scotland - Ian Williamson

**Weekend 21-22 March**
- Field: Dorset

**Friday 3 April @ 12:00**
- Visit: GA behind the scenes NHM – William Smith’s fossils

**Friday 3 April @ 17:30**
- “Pills and Politics”; a new look at George Bellas Greenough and his Geological Map of 1820 - Hugh Torrens

More details at [www.geologistsassociation.org.uk](http://www.geologistsassociation.org.uk)

Black Country Geological Society
Indoor meetings at Abbey Room at the Dudley Archives, Tipton Road, Dudley, DY1 4SQ

**Saturday 8 February @ 10:30**
- Geoconservation: Saltwells NNR

**Monday 17 February @ 19:30**
- The Impacts of Future Climate Change on Industrial Landscapes: recent work in The Derwent Valley Mills WHS and its relevance to the Black Country – Andy Howard

**Saturday 7 March @ 10:30**
- Geoconservation: Barrow Hill

**Monday 16 March @ 19:00**
- AGM + Young Geologists’ talks

More details at [www.bcgsg.info](http://www.bcgsg.info)

East Midlands Geological Society
Indoor meetings at the Clive Granger Building, University of Nottingham

**Saturday 8 February @ 18:00**
- Ignimbrites and associated rocks from the Paleocene Isle of Skye, NW Scotland and the Ordovician Upper Borrowdale Volcanic Group, English Lake District – Simon Drake

**Saturday 14 March @ 18:00**
- Salt Tectonics – Chris Jackson

**Saturday 4 April @ 18:00**
- The value chain of minerals for the green transition - a reflection on raw materials demand and supply – Karen Hanghoj

More details at [www.emgs.org.uk](http://www.emgs.org.uk)

East Midlands Regional Group of the Geological Society
De La Beche Conference Suite, British Geological Survey, Keyworth, Nottingham
More details at [www.geolsoc.org.uk/emrg](http://www.geolsoc.org.uk/emrg)
Liverpool Geological Society
Indoor meetings at Lecture Theatre 137, James Parsons Building, Liverpool JMU, Byrom Street, Liverpool, L3 3AF unless otherwise specified
Tuesday 4 February @ 19:30  Image Analysis in Earth Sciences – Steve Barrett
Tuesday 18 February @ 19:30  Archaeopteryx – John Nudds
Saturday 22 February @ 10:00  Herdman Symposium: Climate throughout Earth’s History @ University of Liverpool Central Teaching Hub (Booking deadline 15 February)
Thursday 27 February @ 19:30  2010 Chile Earthquake – Iain Henrys
Tuesday 17 March @ 19:30  Lanzarote – Cynthia Burek
More details at liverpoolgeologicalsociety.org

Manchester Geological Association
Indoor meetings at the Williamson Building, University of Manchester unless otherwise specified
Wednesday 12 February @ 19:00  AGM & Presidential Address: Living in a greenhouse world: what the Cretaceous can tell us about global warming - Cathy Hollis
Tuesday 3 March @ 18:30  The 2018 Sulawesi Earthquake and the Hazard Management in Indonesia - David Petley @ Brooks Building, MMU
More Details at www.mangeolassoc.org.uk

North West Regional Group of the Geological Society
Indoor meetings at Manchester University unless otherwise specified
Saturday 1 February @ 11:00  Visit: Family-friendly field trip - hunting dinosaurs in the 21st century – Phil Manning @ Manchester Museum
Thursday 27 February @ 19:30  2010 Chile Earthquake – Iain Henrys @ Liverpool JMU (Joint meeting with LGS)
More details at www.geolsoc.org.uk/Groups-and-Networks/Regional-Groups/North-West

Shropshire Geological Society
Indoor meetings in Room 019, University Centre, Guildhall, Frankwell Quay, Shrewsbury SY3 8HQ
Wednesday 12 February @ 19:30  Earthquake risk – Martin Degg
Wednesday 11 March @ 19:30  Subduction-related volcanics – Sebastian Watt
Wednesday 1 April @ 19:30  AGM and Bring a Rock
More details at www.shropshiregeology.org.uk/SGS/SGSintro.html
Warwickshire Geological Conservation Group
Indoor meetings at St Francis Church Hall, Warwick Road, Kenilworth CV8 1HL
**Wednesday 19 February @ 19:00** Geology and Wine in Southern France – Roger Sutheren
**Saturday 22 February @ 09:45** Workshop: Making Sense of Geological Maps @ Kenilworth Senior Citizens’ Club
**Wednesday 18 March @ 19:00** The Anthropocene: Man’s impact on our planet - Ian Fairchild
**Sunday 29 March** Visit: Nottingham Caves – Tony Waltham
More details at [www.wgcg.co.uk](http://www.wgcg.co.uk)

West Midlands Regional Group of the Geological Society
Indoor Meetings at Deritend Room, St Martin’s Church, Edgbaston St, Birmingham, B5 5BB unless otherwise specified
**Tuesday 11 February @ 18:30** Provenance - The search for a source – Haydon Bailey

Western Institute of Mining and Minerals
Indoor meetings are held at the William Smith Building, Keele University
**Monday 3 February @ 19:00** Can the British Isles Develop a Sustainable Lithium Supply? – Chris Broadbent
More details at [www.iom3.org/wimm](http://www.iom3.org/wimm)
NSGGA - Next Committee Meeting:
Thursday 19 March 2020 @ 19:00
In room WS1.44, the William Smith Building, Keele University

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Honorary Life Member: Ann Myatt

Executive Committee (honorary):
Peter Floyd, Don Steward

Executive Committee (elected):
Janet Osborn (Minutes Secretary), John Reynolds, Jeff Ackerley, Gordon McKeown

Executive Committee (co-opted):
Keele GeoSoc Reps.: Daniel Newman & Hannah Plant

NSGGA web page: www.nsgga.org

The NSGGA website has moved!
The servers that have hosted the old NSGGA web pages since 2006 are very much past their best before date. Before we lost everything, the website has now moved to a shiny new home at www.nsgga.org