GeoConservationUK Newsletter

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This is the Year that . . . We Promoted Palaeobotany?

On the day that this *Newsletter* is published, and harking back to the last issue, in 2010 Bhutan became the first country to institute a total ban on tobacco. In 1871 The University Tests Act allows students to enter the Universities of Oxford, Cambridge and Durham without religious tests (except, of course, for those intending to study theology). In 1911 IBM was founded as the Computing-Tabulating-Recording Company in Endicott, New York. Both in their own way have had some impact on education in the UK over the past one-hundred years or so - it's difficult to underestimate the impact of the modular personal computer pioneered by IBM on modern geology; doubtless too, the withdrawal of religious tests eased the passage of some students into late Victorian geology.

Thinking of geology, Constantin von Ettingshausen was born in Vienna in 1826; he was a distinguished researcher on the Tertiary floras of various parts of Europe, and the fossil floras of Australia and New Zealand - especially noteworthy is his co-authored (with J. Starkie Gardner), *A Monograph of the British Eocene Flora*. Palaeobotany does not perhaps, given the British penchant for horticulture, attract the attention it ought; domestic gardens and public parks (in which the UK was, and valiantly struggles to be so in today's constrained public spending, a world leader in Victorian times). It was in the UK that the world's first palaoebotanical visitor attractions were opened - Fossil Grove, Glasgow is the world's oldest geological visitor attraction and is set in a splendidly presented public park.

E D I T O R I A L

This second *Newsletter* of 2014 carries articles on a range of geoconservation activities in England, together with advance notice of conferences and events that should hold some appeal for the geoconservation community. It is pleasing to see that these are mainly co-operative ventures that should constituency build for geology with colleagues in other disciplines.

It is also pleasing to note that the practical work of site clearance has got off to a good start in Southern England, after the dreadful weather in the early months of the year; one can only hope that the statutory conservation and land management agencies really do fully appreciate the work freely undertaken by volunteers and importantly also recognise that such work is not without its costs; perhaps something in their budgets to support this work might be in the offing in the near future - one can but hope, even if past . . . !!!

TOM HOSE

ISSUE CONTENTS

ENGLAND — *Dorset's Important Geological Sites Group*

Early April Geoconervation Site Clearance Work

The DIGS group undertook a couple of practical geoconservation sessions in early April after a period of enforced inactivity due to the foul weather.

A dozen of us carried out some work at the Tarrant Rawston Chalk Pit *(see top left and right)*, near Blandford, on April 1st. This site provides the type section for the Tarrant Chalk Member (Cretaceous, Campanian). The face is quite badly weathered due to some frost action in the past two winters. There was

also the usual annoying problem of fly-tipping so there was some rubbish to remove. A good specimen of the sea urchin *Echinocorys* was found in loose scree during our work and subsequently cleaned up *(see middle right)*.

On 6th April, seven of us carried out some conservation work, with prior permission from Natural England, on a SSSI at Goat Hill, near Milborne Port. The site exposes Fullers Earth Rock (Jurassic, Bathonian) which is not seen on the coast as there is a change there in lithology to clay. Two hours hard work cleared the obscured face *(see bottom left)* by the team *(see bottom right)*. A few fossils, including some bivalves, terebratulid brachiopods, and an echinoid, were collected from loose material during the work.

Alan Holiday

GeoConservationUK Newsletter

ENGLAND — *Sussex Geodiversity Partnership*

The Sussex RIGS movement awakes!

The earliest recording of geological locality information in Sussex started with the work I initiated in the early 1980s as part of the then National Scheme for Geological Site Documentation. This led eventually to the production of over 7000 records of Earth science sites in Sussex – extant and extinct. This made the work of the nascent Sussex RIGS somewhat easier when that too began its work in the early 1990s, designating some 123 sites as RIGS. But with its work over, the Panel could not pursue any further development, particularly in the light of my own career moves into various non-geological roles within the Royal Pavilion & Museums Department in Brighton.

However, I am delighted to say that in recent times there has been a revival taking place, led by colleagues in the Sussex Wildlife Trust which has been ever-present as a parental umbrella for Sussex conservation, including Earth science though only of late taking an active role in this regard. Hence the rebirth of Sussex RIGS as the Sussex Geodiversity Partnership.

The Partnership was formed in 2011 with the aim of promoting and protecting geodiversity in East and West Sussex and the City of Brighton and Hove. Members of the Partnership represent a range of organisations including:

- East and West Sussex County Councils
- Natural England
- Geologists' Association
- Sussex and Brighton Universities
- Sussex Wildlife Trust and Sussex Biodiversity Record Centre
- South Downs National Park Authority
- High Weald AONB
- Local geological groups and societies

The Partnership's objectives are to share information on the geodiversity of Sussex, influence policy and establish cross-regional working for geodiversity as well as providing the following functions:

- A regional network for organisations, groups and individuals involved in geodiversity
- A regional voice and profile for geodiversity
- Easy access to information about Sussex geodiversity
- Influence planning, policy development and practice
- Share good practice

At the core of our presence within the UK RIGS (GCUK) community and our audiences is our website which is still developing; the following link will allow you to explore its current version:

http://www.geodiversitysussex.org.uk/

The Partnership continues to develop its options. I am immensely grateful to the Sussex Wildlife Trust for its active encouragement of all the Partnership members, many of whom volunteer for free their time and work, and for funding which has allowed such good progress. We would be pleased to hear from other members of the GCUK community and I look forward to meeting up with you in future meetings. Having returned to my post, heading up the Booth Museum in Brighton, this revival feels entirely timely and appropriate.

John Cooper
[Keeper of Natural Sciences,
Booth Museum of Natural History,
194 Dyke Road,
Brighton,
BN1 5AA]

ENGLAND — *Dorset's Important Geological Sites Group*

Further April Clearance work in Dorset

The Group has been doing some more spring cleaning of geology sites in Dorset!

On 15th April a group of DIGS members carried out geoconservation work at Holt Farm, Melbury Osmond, south of Yeovil. The site had become quite overgrown *(see top right)*, with even access to the faces difficult.

Work was carried out to clear ground vegetation (see middle right) using equipment paid for by financial support received (for site surveys) from GeoConservationUK over the past four years. Following on from this the Group cleared moss from the rock face - fortunately, no rare or unusual moss species were involved; apparently the last winter, being mild and wet, has been ideal for moss growth! As a result of our efforts the rock faces are now better exposed for study. The team *(see bottom far right)* were justifiably pleased with their efforts,

This site is itself a former quarry, when the faces would have been kept clear by constant working from which the Jurassic Forest Marble (shelly limestone) was exploited. The bioclastic Forest Marble (known as the Yeovil Marble in Somerset, and also sometimes as the Bowden or Crackement marbles in Dorset).

The Forest Marble's flat lying shell fragments make it impermeable due to calcium carbonate (lime) from dissolved shells being recrystallised to cement together the remaining broken shells during diagenesis. Consequently, it was much used in the past for paving, flooring, and the damp-proof courses in buildings; the latter can be well seen in the wall of Mill Cottages *(see bottom middle; Copyright JO Thomas)* in Burton Bradstock; the Cottages have Forest Marble in the lower part of the wall and Inferior Oolite above. Elsewhere in Burton Bradstock, the Forest Marble has been used for entire walls and much of the fabric of some larger houses for which the original occupants could cover the considerable extra expense.

Alan Holiday & Tom Hose

GeoConservationUK Newsletter

ENGLAND — *London Geodiversity Partnership*

Geoconservation at Chalky Dell, Sunday 27th April

The London Geodiversity Partnership and the London Branch of the Open University Geological Society arranged a joint geoconservation day at Chalky Dell; they were joined by members of London-based geology groups and some local Conservation Volunteers from Lesnes Abbey and Shooters Hill. The Dell is a small quarry that mainly supplied chalk for the construction of nearby New Road in 1851. A 1925 photograph shows that when the Dell was operating the junction between the Chalk and Thanet Sands could be seen.

The main aims of the day were to reveal this junction near the top of the scree slope, to cut steps up the scree so that the contact could be seen easily and to expose a section of the Chalk next to the path from the entrance gate. All three aims were achieved but the steps, on which the day's team can be seen standing *(see top right)*, will need to be made more durable on a future visit. We hope that Chalky Dell will form part of the education remit for the new Visitor Centre adjacent to the Abbey ruins; together with the Lessness Shell Bed (SSSI), famous for Eocene mammals, there is an interesting geological story to be told in Lesnes Abbey Woods.

Geology and its Uses in Highgate Wood and Queen's Wood

A small display is on public view in the information hut beside the restaurant in Highgate Wood. Four panels tell the story of the rocks beneath the local area and how they have been utilised in the past.

Flint debitage has been found and Highgate Wood was once known as Gravel Pit Wood. Romano-British pottery was discovered in Highgate Wood; an experimental kiln, using the underlying Claygate Beds at the top of the London Clay, has been used to produce some sample pots. Highgate Wood forms a plateau whereas the topography of Queen's Wood is very incised.

The display *(see bottom right)* includes minerals and fossils found in the London Clay as well as one of the experimental Romano-British style pots made on the site.

Diana Clements

ENGLAND — *London Geodiversity Partnership*

London Geodiversity Action Plan 2014 – 2018

Following a widespread consultation over the winter (as reported in *GCUK Newsletter*, Vol 4, No, 4), the London Geodiversity Partnership is pleased to announce that its Action plan for 2014 – 2018 has now been published and is available on the Partnership's website (www.londongeopartnership.org.uk). While the responses to the consultation were limited in number, they were constructive and have been taken into account in finalising the Action plan. The Partnership was particularly pleased to have positive responses from London Borough councils and it will continue to work closely with them to obtain recognition of London's geodiversity.

In particular, we will continue to assist Greenwich BC in its development of a management plan for the Gilbert's Pit SSSI and with the London Borough of Bexley in its management of Lessness Abbey Woods, which includes the Abbey Wood SSSI and the proposed Chalky Dell RIGS. A geo-conservation day, similar to that at Gilbert's Pit (see *GCUK Newsletter*, Vol 4, No 2) was held on 28th April. All the GLA sites listed in London's foundations (GLA, 2012) have been inspected and over 50 potential sites have been assessed for their geodiversity value. The identification and assessment of potential sites remains an important element of the Partnership's work in developing knowledge of London's geodiversity. Similarly the dissemination and interpretation of that knowledge is high in our priorities and we are working with the boroughs and a developer on that aspect. The *Green Chain Geo-Trail* has already been developed from Greenwich to Abbey Wood and members of the Partnership are actively researching and publishing further geo-trails and building-stone walks.

David Brook

ENGLAND — *GeoSuffolk*

Copper and Copper Minerals at Ipswich Museum

On 22nd March GeoSuffolk members manned this public demonstration, for National Science Week 2014. at Ipswich Museum *(see right)*. One of the specimens of Atacamite (a copper chloride, containing 59.4 -5% copper) was donated to Ipswich Museum by the Rev. Daniel Greatorex (1829-1901), East End social reformer and local philanthropist, of St Paul's Church, Dock Street, London Docks. He was also a keen traveller, including visiting Australia, where he obtained this specimen from the Burra Burra copper mines, north of Adelaide in South Australia. The mineral was discovered there in 1845 and large amounts were mined until the exhaustion of the deposit in 1877. Another exhibit was of the Powder for Bronze, of 90% copper and 10% tin, which forms Bronze when alloyed, as used by the Manganese Bronze Company in Ipswich.

Fossil Crinoids at Ipswich Museum

On Saturday, 19th July (at 10am-12noon and 2pm-4pm) GeoSuffolk members will again be demonstrating some of the Museum's geology collection to the public.

Roger Markham

GeoConservationUK Newsletter

M E E T I N G S and C O N F E R E N C E S

The Lyme Regis Fossil Festival: 2nd-4th May

A packed seafront *(see top right)* marque on all three days attests to the popularity of this annual event on Dorset's Jurassic Coast. Thursday saw a host of exhibitors ranging from commercial fossil and mineral dealers to universities and geological societies setting up their stalls - the contrast between then and the following day *(see bottom left)* was very marked; bare tables and booths transformed by numerous volunteers into exciting and interesting discrete activity centres for adults and children.

The Friday was entirely given over to schools with a host of organisation such as Rockwatch and the Natural History Museum running a range of practical and fun activities; the former offered activities from colouring pictures and fossil rubbings *(see middle left)* to hat making *(see middle right)* and specimen identification.

A particularly novel activity running over the entire Festival was the papier-mâché dinosaur *(see bottom right)* *Chickenosaurus* assembled by children under the guidance of a local professional artist. Plymouth University's 'walk like a dinosaur' stand attracted much, and for those on the Rockwatch stand, loudly vocal engagement with, especially school parties and the younger, visitors.

Also good to see was the engagement with the public by several noteworthy geology academics and societies; it was particularly good to see Davis Shilston, the President of the Geological Society, functioning as an excellent ambassador for geology as he enthusiastically chatted with numerous visitors at the Society's stand. It was also good to see the Geologists' Association well represented on an adjacent stand. The GCUK membership was also quite well represented with various individuals helping out on several stands such as the Dorset Geologists' Association Group and Rockwatch (including the *GCUK Newsletter* Editor and the Chair of Dorset's Important Geological Sites Group!); despite hugely enjoying the experience, I think it's true to say we were all grateful to pack up on the late Sunday afternoon, just for the chance of a well earned rest, after a very hectic three days.

Tom Hose

NEWS ITEM — *Geology and the National Curriculum: a Brief Update*

Some Change for the Better, but . . .

The curriculum for 5-14 year olds in England has been finalised recently and, following strong lobbying by the Earth science education community, contains slightly more geological science in both science and geography than the previous curriculum version. This is good news since, without the lobbying there would have been a good deal less geological content.

However, the situation is not nearly so 'rosy' for the 14-16 curriculum in England – this is the curriculum that will be examined through GCSEs. Plate tectonics was included in the previous version of the science curriculum, but does not appear in the current draft curriculum. The current draft science curriculum contains a heading 'Earth science' but the Earth science content is not the material familiar to geologists, but is closely related to the chemistry curriculum in which is it found. Strangely the draft curriculum is already being used to prepare the new GCSEs even though its content has not yet been finalised.

Many geological bodies, including the Earth Science Education Forum (ESEF), the Earth Science Teachers' Association (ESTA) and the Geological Society have lobbied for plate tectonics to be reinstated to the science curriculum, but so far, without success. We are most grateful to our supporters and particularly those who have written to MPs about this issue – all future support will be most welcome.

Meanwhile, the situation in Scotland is also not very 'rosy'. The Scottish Qualifications Authority still seems set on discontinuing the current Higher in Geology qualification in the near future, despite strong lobbying in Scotland. Imaginative ways forward are being discussed – so it is perhaps hopeful that the eventual outcome for geology will not be as bleak as it currently appears to be.

Chris King

NEWS ITEM — *Some benefit from the winter storms?*

It's an ill wind . . .

This winter's storms have caused considerable damage and personal heartache along much of the UK's coastline; recovery, repair and renewal of coastal protection work will be with us for quite a few years to come. However, for those determined to find some good news amongst the bad, one of the fortunate results is that many coastal cliff and shore sections that had become vegetated or covered in talus over the years have had that veneer removed; fresh sections in interesting strata can now be found along various stretches of the coast.

This is an excellent time to revisit coastal sections and see in fresh surfaces the detail of the cliff sections, in some cases not easily seen fro many years. A good example of recent re-exposure is the cliff section *(see right)* at Porth Ceriad, near Abersoch (OS grid ref: SH310248); there, a glacial diamict is seen to wrap itself around an *in-situ* horst-like feature in the bedrock, consisting of easterly dipping Cambrian Ffestiniog Flags Formation sandstones.

Keith Nicholls

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MEETINGS and CONFERENCES

Geology and History in Southeast England

The West Sussex Geological Society (Local Group of the GA) plays host to the Southeast Regional Conference of The Geologists' Association

supported by the Brighton and Hove Geological Society and the History of Geology Group

Saturday 29 November 2014 in the Exhibition Hall of **Worthing College**

at their new college campus, on the northern outskirts of the town

Programme

9.00-9.40	Registration
9.40-10.20	Matt Pope *'Prehistoric Peoples and Wealden Landscapes'*
10.20-11.00	Rory Mortimore *'The Geological Mysteries of Flint, the Implement of the Neolithic Age'*
11.00-11.30	Coffee/Biscuits
11.30-12.10	David Bridgland *'Gravel in the Southeast: Superficial deposits and under-rated resource'*
12.10-12.50	Roger Cordiner *'Building in Stone in Medieval Sussex'*
12.50-2.00	Buffet Lunch
2.00-2.40	Matthew Pitts *'The Making of the High Weald'*
2.40-3.20	David Brown *'Mineral Extraction from Ancient Woodlands of the Weald'*
3.20-4.00	John Lonergan *'Transport Innovations and Wealden Geology: Canals and Railways'*
4.00-4.25	Tea/Biscuits
4.25-5.05	David Martill *'Sir Arthur Conan Doyle, Pterosaurs and Piltdown'*
5.05-5.45	Geoffrey Mead *'Brighton and Hove Basement: Geological Foundation of a Conurbation'*

Registration Form

Name: _____

Address: _____

_____

_____

Contact: Tel: _____ **Mobile:** _____

Email: _____

Conference Fee is £25 for the day, including coffee/tea, buffet lunch and Conference publication.
Please make your cheque payable to - *West Sussex Geological Society*
and forward, with this completed Registration Form, (photocopied) to:
Anthony Brook, 15, Cambourne Court, Shelley Road, Worthing, BN11 4BQ
Conference Fee for Full-time Students is only £20

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MEETINGS and CONFERENCES

GeoConservationUK acknowledges the support of ***Rockhounds Welcome!*** in the production of this *Newsletter*

GEOLOGY AND MEDICINE: EXPLORING THE HISTORICAL LINKS AND THE DEVELOPMENT OF PUBLIC HEALTH AND FORENSIC MEDICINE

History Of Geology Group

(Celebrating the Tercentenary of Sir John Hill)

3rd–4th November 2014

Burlington House

Organisers: Dick Moody, Chris Duffin and Christopher Gardner Thorpe

CALL FOR PAPERS

Building on the success of the *History of Geology and Medicine* conference held in 2011 and the subsequent Geological Society publication SP375 of the same name, the History of Geology Group calls for written and poster contributions on the following topic(s):

- **Founding Fathers of Geomedicine, recording the historical links established by individual scientists such as Darwin, Astley Cooper, Charles Daubeny, Gideon Mantell etc.**
- **Geological Therapies, dealing with the evolution of treatments from primitive lithotherapies to the therapeutic use of geological materials in medicines and the advent of hydrotherapy.**
- **The Origins of Public Health including Soil Chemistry, Water Quality, Health and Safety and the provision of the necessary infrastructure during the Victorian Era.**
- **The Evolution of Forensic Medicine.**

Oral, written and poster contributions are invited from historians, medical professionals, geoscientists, including geochemists and civil engineers, whose work crosses subject boundaries. International contributions are most welcome.

Contributors of both oral presentations and posters will be registered at a reduced rate. No financial assistance can be given to speakers but HOGG will provide a letter of invitation on request. It is hoped that the conference proceedings will be published as a book.

Those wishing to contribute should contact Professor R. T. J. Moody rtj.moody@virgin.net. Extended abstracts of 500 words and a maximum of three figures should be submitted by 31st AUGUST 2014.

Pliocene Forest Open Day: 15th June

As part of the ***Sutton Village Open Gardens*** event ***GeoSuffolk*** welcomes you to our Pliocene Forest from 12 noon to 5pm.

Celebrate with us 5 years of this imaginative interpretative venture. Learn about our unique rocks with GeoSuffolk's on-site geologists. Read our two newly refurbished and updated information panels – on the Coralline Crag exposures and the Pliocene Forest.

Walk amongst the 150+ trees in the enclosure and talk to GeoSuffolk's tree specialist about sourcing the living representative genera from all over the world.

Entrance tickets to the Open Gardens will be sold at the Sutton Memorial Hall, IP12 3JQ where copies of the garden route will be available. Cream teas will be available from 3pm at The Old Vicarage.

Sidmouth Science Festival: 13th-19th October, 2014

'Science in our Lives'

The Festival aims to inform, educate and inspire everyone. We hope to show how science, technology, engineering and mathematical disciplines impact on our everyday lives by integrating art, music, dance and drama with serious technical talks. We, amongst other things, will have:

- Internationally renowned speakers
- Displays, exhibitions, competitions
- Stalls and hands-on science experiments
- Astronomic events and family day at the Norman Lockyer Observatory
- Geological Society and Jurassic Coast Teams, Sidmouth Museum

This Festival coincides with Earth Science Week organised by the Geological Society - we intend to have a special focus on geology on some Festival days.

Copy for the next *Newsletter* must be with the Editor by 22nd August 2014 at the very latest.

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