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Best wishes for 2016

ESTA News 7.2 features photographs illustrating some of the geological features in Newfoundland. These images were kindly provided by ESTA member Stephen Davies who recently spent time in this part of Canada. If you would like to see more Newfoundland photographs, Stephen has prepared a Newfoundland case study for his *Geopix* series.



Flag of Newfoundland and Labrador
Credit: Robert Crosbie



The Tablelands, Western Newfoundland

The Tablelands are in Gros Morne National Park in Canada. These mountains are made of peridotite a mantle-derived ultramafic rock which is a major component of an ophiolite suite. Peridotite is dark green when fresh, but the rock is rich in iron and so weathers to a brownish colour.

Do send photographs for the next newsletter to the Editor: hiatus@liv.ac.uk

What's new in the field?

GA Guide 72: Devonshire Marbles: their geology, history and uses
Written by Gordon Walkden. Published in 2015.

(Vol 1: ISBN: 9780900717765, Vol 2: ISBN: 9780900717819)

Price for each volume: £12.00.

Wester Ross Rocks-The Geology & Scenery of Gairloch and District
Written by Jeremy Fenton. Price: £4.99.

Geological Excursion Guide to the Stirling and Perth Area

Edited by M. A. E. Browne and C. Gillen. (ISBN: 9781905267880)

Price: £15.99.

Banner Rocks: The geological heritage of County Clare

Written by Matthew Parkes and published in 2015.

(ISBN: 9780954187057) Price £9.99.

A Photographic Guide to Shetland's Geology

By D. Malcolm & R Barton. (ISBN: 9781904746973) Price £15.99.

Isle of Wight (Extended sheet explanation plus 1:50,000 special sheet)

By PM Hopson. (ISBN: 9786000010010) Price: £24.00.

Classic Geology in Europe: Almeria.

Published 2015. By Adrian Harvey & Anne Mather. (ISBN: 9781780460376) Price £24.99.

Walking the Jurassic Coast: Dorset and East Devon - The Walks, the Rocks, the Fossils

Published in 2015 and written by Ronald Turnbull. (ISBN: 9781852847418) Price: £12.05.

Quarrying industry in Wales: a history

Written by Ian A Thomas and published in 2015. (ISBN: 9781871827385) Price: £19.95.



Useful websites

Web resources

A website explaining the science of Antarctic glaciology.

www.antarcticglaciers.org/

Go to this site to find out about REE - Rare Earth Elements and their uses.

<http://geology.com/articles/rare-earth-elements/>

This site shows the growing problem of space junk.

<http://www.bbc.co.uk/news/science-environment-33782943>

A useful site that tells you everything about volcanic ash.

<http://geology.com/articles/volcanic-ash.shtml>

A site to find out about gold prospecting in the United States.

<http://geology.com/usgs/gold-prospecting/>

Details about the world's largest recorded earthquake.

<http://geology.com/records/largest-earthquake/>

Find out more about the Dallol volcano and hydrothermal field.

<http://geology.com/stories/13/dallol/>

Siberian Traps likely culprit for end-Permian extinction.

<http://phys.org/news/2015-09-siberian-culprit-end-permian-extinction.html>

Find out how scientists have developed a new method for predicting volcanic eruptions.

<http://phys.org/news/2015-10-scientists-method-volcanic-eruptions.html>

On this site a NASA simulation shows how ancient flood volcanoes may have altered climate.

<http://phys.org/news/2015-08-nasa-simulation-ancient-volcanoes-climate.html>

Study indicates Earth's inner core was formed up to 1.5bn years ago.

<https://news.liv.ac.uk/2015/10/07/research-indicates-earths-inner-core-was-formed-1-1-5-billion-years-ago/>

Where dinosaurs walked: eight of the best places to see prehistoric footprints.

http://www.smithsonianmag.com/travel/where-dinosaurs-walked-8-places-prehistoric-footprints-180956982/?utm_source=facebook.com&no-ist

Earth science records.

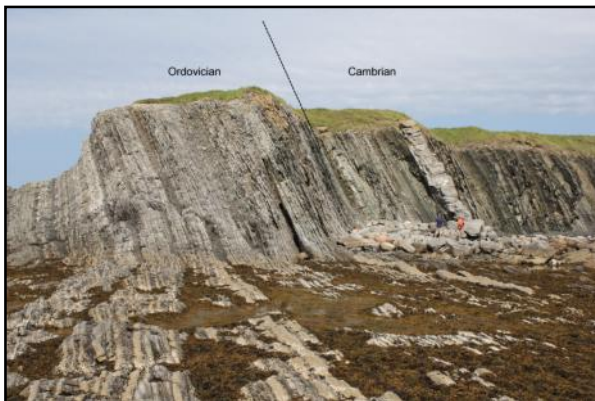
<http://geology.com/records/>

Useful photographs of different types of sand.

<http://www.sandatlas.org/sand-types/>

Stromboli online.

<http://www.swisseduc.ch/stromboli/>



<< Left
Green Point
The GSSP boundary
between Cambrian
and Ordovician is
overturned here.

Right >>
Gros Morne
Here Precambrian
gneiss is capped by
Cambrian quartzite.



News items

Sea defences not enough to protect delta cities from rising flood risk - study.

<http://www.theguardian.com/environment/2015/aug/06/sea-defences-not-enough-to-protect-delta-cities-from-rising-flood-risk-study>

NASA camera shows Moon crossing face of Earth.

<https://www.nasa.gov/feature/goddard/from-a-million-miles-away-nasa-camera-shows-moon-crossing-face-of-earth>

Ancient rocks record first evidence for photosynthesis that made oxygen.

<http://phys.org/news/2015-10-ancient-evidence-photosynthesis-oxygen.html>

Japanese sea defense guidelines could assist other tsunami-prone nations.

<http://phys.org/news/2015-10-japanese-sea-defense-guidelines-tsunami-prone.html>

El Nino could be strongest in modern history: US.

<http://phys.org/news/2015-08-el-nino-strongest-modern-history.html>

Volcanic eruptions affect flow of world's major rivers, study finds.

<http://phys.org/news/2015-10-volcanic-eruptions-affect-world-major.html>

Nasa Satellite Image: Flooding on the Irrawaddy River.

<http://earthobservatory.nasa.gov/NaturalHazards/view.php?id=86394&src=nha>

2013 Colorado Front Range storm accomplished up to 1,000 years of erosion.

<http://phys.org/news/2015-08-historic-colorado-front-range-storm.html>

Greenland's Jakobshavn Glacier sheds big ice chunk.

<http://www.bbc.co.uk/news/science-environment-34041531>

Many atolls may be uninhabitable within decades due to climate change.

<http://www.usgs.gov/newsroom/article.asp?ID=4346#VhwZr3r2CUk>

Bubble plumes off Washington, Oregon suggest warmer ocean is releasing frozen methane.

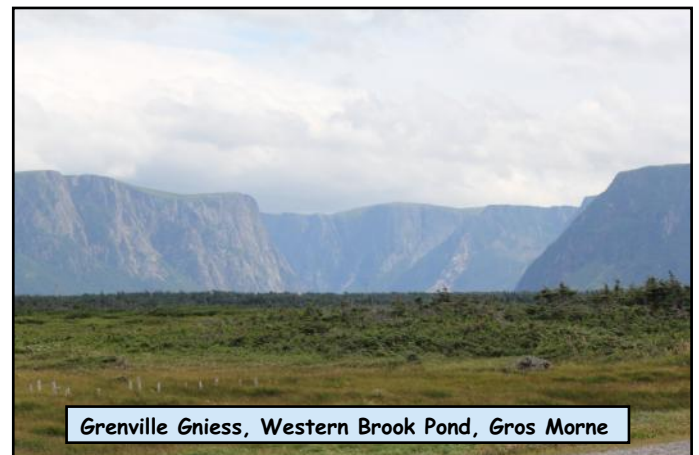
<http://phys.org/news/2015-10-plumes-washington-oregon-warmer-ocean.html>

The Aurora Borealis - better known as the Northern Lights - has been visible over parts of the UK.

<http://www.bbc.co.uk/news/uk-34472301>

Life on Earth may have begun 300m years earlier than previously thought.

<http://www.theguardian.com/science/2015/oct/19/life-on-earth-began-300m-years-earlier-than-previously-thought>



Diary Dates 2016

6th - 9th January

ASE Annual Conference, University of Birmingham
Contact: www.ase.org.uk/conferences/annual-conference/

10th January

UKAFH Free fossil hunting event, Overstrand, Norfolk
Contact: www.ukafh.com

16th - 17th January

Mascalls School Rock n Gem Show
Mascalls School, Paddock Wood
Contact: www.rockngem.co.uk

23rd - 24th January

Chepstow Racecourse Rock Gem 'n' Bead Show, Chepstow Racecourse
Contact: www.rockngem.co.uk

7th February

UKAFH Free fossil hunting event, Hastings (Petts level), East Sussex
Contact: www.ukafh.com

20th - 21st February

Harrogate Rock Gem 'n' Bead Show, Pavilions of Harrogate, Harrogate
Contact: www.rockngem.co.uk

27th February

Herdman Symposium
University of Liverpool
Contact: hiatus@liv.ac.uk

27th - 28th February

Cheltenham Rock 'n' Gem Show, Cheltenham Pittville Pump Rooms
Contact: www.rockngem.co.uk

5th March

Lectures: The Oxford Colloquium
Oxford Museum of Natural History, Parks Road, Oxford
Contact: www.geologistsassociation.org.uk/otherevents.html

5th - 6th March

Kempton Park Rock 'n' Gem Show, Kempton Park Racecourse
Contact: www.rockngem.co.uk

13th March

Oxford Mineral Fossil Show, Exeter Hall, Kidlington, north Oxford
Contact: www.oxfordshow.co.uk/home

19th - 20th March

Brighton Rock Gem 'n' Bead March Show, Brighton Racecourse
Contact: www.rockngem.co.uk

22nd - 24th March

GSL Conference: Rifts III: Catching the Wave
The Geological Society, Burlington House, Piccadilly, London
Contact: www.geolsoc.org.uk/water16

26th March

Guest Lecture: Geoengineering the Climate
Burlington House, Piccadilly, London
Contact: www.rsc.org/events/detail/20243/

2nd - 3rd April

Newton Abbot Rock Gem 'n' Bead Early Show
Newton Abbot Racecourse, Newton Abbot
Contact: www.rockngem.co.uk

7th - 9th April

Geographical Association Annual Conference
University Place, University of Manchester
Contact: <http://geography.org.uk/cpdevents/annualconference/>

23rd - 24th April

Newark Rock Gem 'n' Bead Show, Newark Showground, Newark
Contact: www.rockngem.co.uk

24th April

UKAFH Free fossil hunting event, Hallelujah Bay, Isle of Portland
Contact: www.ukafh.com

8th May

Oxford Mineral Fossil Show
Exeter Hall, Kidlington, North Oxford
Contact: www.oxfordshow.co.uk/home

14th - 15th May

Bath & West Rock Gem n Bead Show, Bath and West Showground,
Contact: www.rockngem.co.uk

15th May

UKAFH Free fossil hunting event, Maylandsea & Steeple Bay, Essex
Contact: www.ukafh.com

30th May

Event: European Geoparks Week
Contact: www.europeangeoparks.org/

2nd - 3rd June

GSL Conference: William Smith Meeting 2016 - Glaciated Margins: The Sedimentary & Geophysical Archive
The Geological Society, Burlington House, Piccadilly, London
Contact: www.geolsoc.org.uk/water16

4th - 5th June

Kempton Park Rock Gem 'n' Bead June Show, Kempton Park Racecourse
Contact: www.rockngem.co.uk

10th June

GSL Lecture: Groundwater in Fractured Bedrock Environments: Managing Catchment and Subsurface Resources
Queen's University, Belfast, Northern Ireland
Contact: www.geolsoc.org.uk/water16

12th June

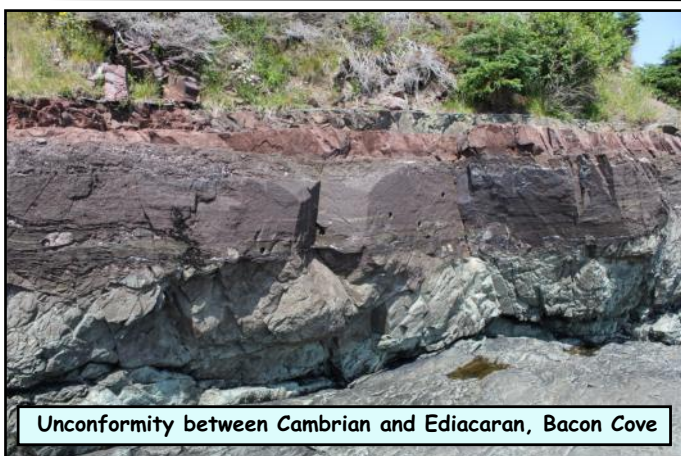
UKAFH Free fossil hunting event, Whitehaven, Cumbria
Contact: www.ukafh.com

20th - 21st June

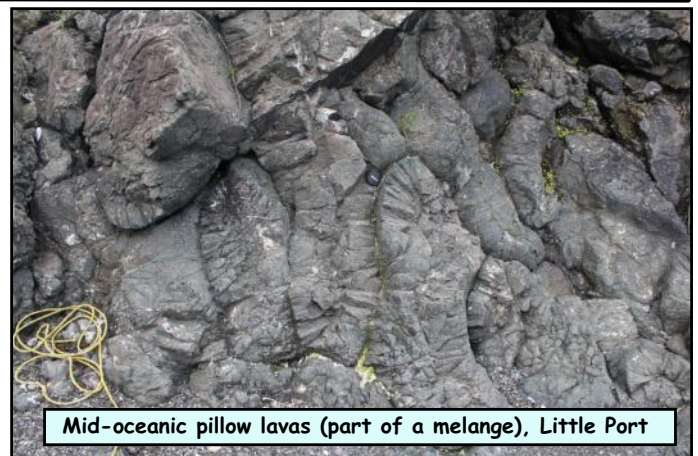
GSL Conference: Martian Gullies and their Earth Analogues
The Geological Society, Burlington House, Piccadilly, London
Contact: www.geolsoc.org.uk/water16

ESTA Annual Course and Conference 2016

This will be held at the University of St Andrews on 23rd - 25th September. The conference theme is 'Geological Fieldwork'. There will be opportunities to visit classic sites and look at glacial landforms along the A9, study the volcanics, sediments and structures of the Fife coast or do a traverse across the Highland Boundary Fault. For details go to the ESTA website or contact: conference@esta-uk.net



Unconformity between Cambrian and Ediacaran, Bacon Cove



Mid-oceanic pillow lavas (part of a melange), Little Port



News about the ESTA website



- The interactive map of UK schools teaching *Geology* has been updated on the website.
- A photograph of the new ESTA Chair (Nikki Edwards) has been added.
- A link to the consultation documents on GCSE and A level reform, published by DfE, has been placed on the front page of the website.
- 'Blasts from the past' has been updated so that there are now 6 activities available to download.
- 'Water, rivers and coasts' is a new section of the website. It contains information and activities suitable for teachers and Primary age pupils in the UK,
- 'Virtual Experiments' now also includes three permeability experiments and an earthquakes experiment.
- The web manager is now Peter Williams. Contact Peter via: webmaster@esta-uk.net



<< Left
Keels
Cambrian
algal mats
Right >>
Ediacaran
fauna,
Johnson
Geopark, St
John's



Consultation on GCSE and A level reform

This open consultation, published by the Department of Education on 3rd November 2015, closes at 15th December 2015 5:00pm. Details are available on the front page of the ESTA website and can also be accessed at: <https://www.gov.uk/government/consultations/gcse-and-a-level-reform-geology-and-politics-pe-short-course>

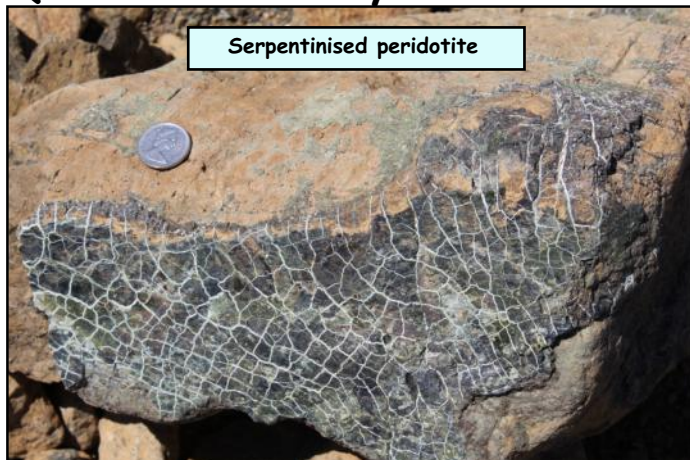
ESTA volunteers needed

Can you spare a couple of hours to look after the ESTA stand at one of the following conferences in 2016?

- ASE Conference - University of Birmingham on 6th - 9th January.
- The Geographical Association Conference - University of Manchester on 14th - 16th April.

If you live near one of these venues and can help, please email: webmaster@esta-uk.net with the subject BOARDS.

Quotes of the day



Serpentinised peridotite

Newfoundland geology:

<http://www.nr.gov.nl.ca/nr/mines/outreach/nlgeology.html>

Newfoundland fossils:

<http://www.newfoundlandlabrador.com/PlacesToGo/GeologyFossils>

Newfoundland World heritage sites:

Gros Morne National Park:

<http://whc.unesco.org/en/list/419>

L'Anse aux Meadows National Historic Site:

<http://whc.unesco.org/en/list/4>



Credit: Geological Survey NFLD

Signal Hill is a high cliff where Italian inventor Marconi received the first wireless signal (1901) from across the Atlantic Ocean.

Titanic, a large passenger ship, sank in 1912 after hitting an iceberg south of Newfoundland.

Gros Morne National Park, in western Newfoundland, was declared an UNESCO World Heritage site in 1987 to recognise and preserve its unique geological landscape which has been described as the 8th Wonder of the World.

A transatlantic telegraph cable was laid on the bottom of the ocean from Ireland to Heart's Content, Newfoundland in 1866.

St. John's is the oldest city in North America.

There are more pubs per square foot on George Street in St. John's than anywhere else in Canada.

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