

#### Shell London Lecture Series: Stranger than Fiction: Worlds around and beneath us www.geolsoc.org.uk/shelllondonlectures13

### Geological Society of London

# **Exceptionally preserved fossils: Windows on the evolution of life**



#### SPEAKER: David Siveter (University of Leicester)

Our understanding of the history and evolution of life on Earth relies heavily on the fossil record and especially on rare cases of so-called 'exceptional preservation', where the soft parts of animals and entire soft-bodied animals are preserved. Such exceptionally preserved fossils provide unique insights of animal palaeobiology and the true nature of biodiversity. The lecture will illustrate beautifully preserved fossils through geological time. It will focus especially on spectacular finds from two of the world's most important fossil assemblages, from 530 million year old rocks in China and 425 million year old rocks in the Welsh Borderland. These deposits contain a wide range of marine animals that lived on the sea floor and in the water column, including sponges, worms, starfish, snails and other molluscs, arthropods of various kinds and the earliest known vertebrate. The fossils from the Welsh Borderland are being studied by tomographic techniques, resulting in the reconstruction of high fidelity three-dimensional 'virtual fossils' that furnish remarkable anatomical details of the animals. Such fossils are crucial in helping to fill gaps in our knowledge of the history of life and in helping resolve controversies about the relationships of animals still alive today.

#### Date: Wednesday 27 March 2013

Timings: This lecture will be given at 3pm and 6pm on this day (with tea/coffee served for half an hour before each), so please let us know, when applying for tickets, which talk you would like to attend.

Venue: The Geological Society of London, Burlington House

Entry to this lecture is free to all, but places are allocated on a ballot basis. Please call at reception (to your right) or contact the Society by post, phone, fax or email (see below).



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For further information, please contact: Conference Office, The Geological Society, Burlington House, Piccadilly, London W1J oBG T: 020 7434 9944 F: 020 7494 0579 E: registrations@geolsoc.org.uk W: www.geolsoc.org.uk/shelllondonlectures13 Follow us on twitters #shelllecture



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## Shell London Lecture Series Stranger than Fiction: Worlds around and beneath us

All past lectures can be viewed on our website at www.geolsoc.org.uk/shelllondonlectures13

# 2013 Programme

9 January	Reconciling past and future worlds: Geology and ground engineering	Jackie Skipper, Geotechnical Consulting Group
27 February	Landslides and subsidence: Engineering geology in an age of austerity	David Shilston, GSL President
27 March	Exceptionally preserved fossils: Windows on the evolution of life	David Siveter, University of Leicester
17 April	Rivers under the sea	Jeffrey Peakall, University of Leeds
29 May	Latest developments in Carbon Capture and Storage	Paul Garnham, CCS Project Manager, Shell
3 July	TBC	Sanjeev Gupta, Imperial College
11 September	Dwarfism in animals on islands	Victoria Herridge, Natural History Museum
9 October	New discoveries of life at deep - sea hydrothermal vents	Adrian Glover, Natural History Museum
20 November	TBC	Caroline Gill, Senior Production Geologist, Shell

18 December Lakes Beneath the Ice



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Martin Siegert, Edinburgh University