### **BOOKING FORM**

#### From Fossil Fish to Fossil Forests

This is essentially a residential\* course with an all inclusive fee per head of £225

to include service of guides for three days, accommodation for three nights, evening meals Thursday and Friday, breakfast and packed lunches on all days and mini-bus transport.

Name(s)
Address
Post code:
Telephone:
e-mail:  Enclosed cheque (Payable to: Lucton School) for £  Please make the following special dietary provisions:
Signed:
Date:
Detach this booking form and send with your remittance

Detach this booking form and send with your remittance to Mrs Lowther, Lucton School, Lucton, Leominster HR6 9PN. Tel: 01568 782000 (f.a.o. Mrs Lowther).

Further information can be obtained from: Andrew Jenkinson on 01938 820777 or Robert Williams on 01544 318022

(\*NB To attend on a non-residential basis please contact Andrew or Robert in the first instance)

Cancellation Insurance - we regret that we cannot provide our own cancellation insurance scheme. We will refund your fee, less 10% handling charge, only if your place can be re-booked. We recommend that you take out your own holiday insurance.

# **The Course**

This is our fifth Lucton Summer School in the heart of classic geological country on the Welsh Marches. Here the variety of rock types, their continuity of age and the range of fossils found in them allow us to follow the story of the evolution of life and the way in which the rocks have influenced the present landscape. It was in this landscape that a young Charles Darwin, born 200 years ago in Shrewsbury, was fired with an enthusiasm for natural history and geology that was to lead him to publish *The Origin of Species* in 1859. This year we have therefore made the evolutionary theme central to our course. We will look at the evolution of life in water during the Devonian Period and of life on land during that great flourishing of land plants during the Carboniferous Period. With a great leap in time we will bring the story up-to-date with a look at how the present landscape has been carved out of the ancient rocks.



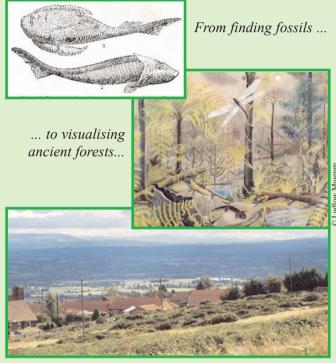
# **Your Guides**

Andrew Jenkinson has lived in The Marches nearly 40 years, first as an Adult Education Tutor for Environmental Sciences; then since 1980 as a countryside interpreter, explaining the story of the Marches landscape through lecturing and publications.

Robert Williams has lived and worked in the area for 30 years and has specialist interests in geography, history and economics. He is a member of the Woolhope Naturalists' Field Club (Geology Section) and Marches Tours and Talks (MT&T), a local group of tour guides.

# FROM FOSSIL FISH TO FOSSIL FORESTS

Evolution of Life and Landscapes in the Welsh Marches



... in today's landscape between the Brecon Beacons (background) and Clee Hill (foreground)

A short residential summer school at Lucton School near Leominster 9th - 12th July 2009

led by

**Andrew Jenkinson & Robert Williams** 

(in association with Lucton School, and Shropshire Geological Society)

# **PROGRAMME**

#### Geology in the Field:-

The aim of this course is to relate the discoveries made in the Welsh Marches to current theories of evolution and plate tectonics. In doing this we shall visit sites both of particular practical significance and of special interest in the history of geology. Lucton School itself sits almost astride the boundary between the shallow sea of the Silurian, studied previously, and the Old Red Sandstone often referred to as "the age of fishes".

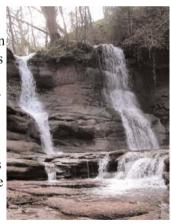
#### Thursday 9th July - setting the scene

Arrival and registration (from 4.00pm) followed by evening meal at 7.00pm. After dinner a welcome and introduction to the course from your tutors, Robert and Andrew.

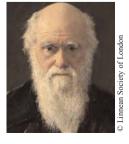
#### Friday 10th July - fishing in the Devonian

Our first excursion looks at an area that hitherto has only been a backdrop to our view on Lucton

courses, the northeastern part of the Brecon Beacons. Here in a few favoured localities such as Pwll-y-Wrach (right), where sedimentcharged rivers ran off newly uplifted mountains 400 million years ago creating great deltas of silt and sandstone, we will find evidence of early fish.



In the evening, dinner will be followed by a talk by Professor Michael Bassett, Keeper of Geology at the National Museum of Wales in Cardiff, on the subject of "Charles Darwin as a Geologist".



#### Saturday 11th July - fossil forests

We will follow the course of evolution from the sea onto the land with an excursion up through the Carboniferous rocks of south Shropshire. As plate movements took 'Britain' across the Equator so life flourished in the clear, warm, shallow seas of the Carboniferous Limestone. A few million years later, the equatorial forest swamps of the time became fossilised in the Coal Measures. On the flanks of Titterstone Clee we will follow this transition, well exposed in a distance of less than three miles.



On Saturday evening, after a meal in Ludlow, we attend a talk by Professor Simon Conway Morris, Professor of Evolutionary Palaeobiology at Cambridge University, entitled "What happens when we re-run the tape of life? Evolution and the Cambrian Explosion re-considered"

#### Sunday 12th July - evolution of today's landscape

We stay close to Lucton with visits to see how, over the past few million years, the older rocks have been revealed and carved by water and ice into the landscape of today. In particular we will study the area between Lucton and Ludlow on the important geological boundary between the marine Silurian and the following terrestrial Old Red Sandstone. Then we will look at the Ice Age diversion of the local drainage, the evidence of Glacial Lake Wigmore and the work of the late Peter Cross, who lived amongst this border landscape on Bircher Common

Transport for the course will be provided by mini-bus (cost included in fee). There will be some walking, but at a gentle pace and generally on good paths. Strong footwear should be worn.

A book list will be provided to all participants, with the opportunity to buy books and maps for the area in advance or during the course.

There will be some opportunities for fossil collecting, but hammering is not permitted at all sites. Bring a small hammer, chisel, good hand lens and wrapping materials for your specimens.

#### **Lucton School Accommodation**

Accommodation is provided in a modern, purpose-built house with blocks of eight small single rooms on two floors. Each block of eight rooms has ample washing and toilet facilities.

Linking each block is a general area providing a small kitchen where evening or early morning drinks can be made.

