

# The Geology of Mid-Wales

A talk with slides by Bill Bagley, January 2013

More than 50 members of the Field society, and also several prospective members on their first visit, came to hear Bill Bagley talk about the Geology and Landscape of Montgomeryshire. Bill proved an excellent and entertaining speaker, despite starting his presentation by stating that he was not a geologist. However, he then went on to demonstrate an impressive expertise in the subject, taking us on a geological journey starting 600 million years ago, and describing the origins of the United Kingdom - how it had started life as part of a large land mass, Gondwana, situated somewhere close to the South Pole. The basics of plate tectonics were then used to explain how it had gradually moved north, and how Scotland originated in a separate land mass and collided with the rest of the UK. There was once a land bridge that connected it to the continent of Europe and even today the English Channel is in fact a very shallow sea.

440 million years ago the larger part of Wales was part of a great basin covered by water, which explains why many of the rocks here are in fact sediments. The ice ages and their effects on the landscape were described. Apparently 10,500 years ago Mid Wales experienced a greater depth of ice (about a mile in thickness) than anywhere else in Wales, this created cwms and u-shaped valleys, many of which were subsequently "sharpened" into a V shape by river action. A good example is the dramatic 'gorge' at Dylife. Other features include drumlins, which can clearly be seen between Welshpool and Newtown. These are large deposits left by glaciers and are manifest as tear-shaped hills.

Bill then illustrated many other geological features which can be found in the area. His photos of the topography of the landscape, and of local quarries, introduced us to a wealth of geological terms including cleavage, cone-in-cone formations, slickenslides, erratics, trace fossils, orogeny and pingos. The area is also rich in deposits of concretions, rugby ball shaped or round stones composed of sediment glued together with a naturally...  
...occurring cementitious material such as calcium or silica. Several sites in the county show evidence of spectacular bedding planes, many of which are severely contorted and twisted, occasionally into an almost vertical plane by the forces exerted by the moving tectonic plates, volcanoes and earthquakes.

At the end of the talk, Bill was ably assisted in dealing with the many questions by Tony Thorpe, and we were able to examine the fascinating exhibits they had brought along, over tea and refreshments.

We were all inspired to be more observant as we reflected on the abundance of geological and topographical features to be found on our doorsteps, and in our wider Montgomeryshire landscapes  
(Sue & Steve Southam)

