Several times in these pages we have discussed how the Bicton landscape owes so much to the last Ice Age – moraines, kettle holes, sand and clay soils etc., - and their significance to human history. Bit by bit over the years our interpretation of such features has been improving, thus continuing a process which started almost two hundred years ago.

When Charles Darwin was growing up in Shrewsbury, he was shown the 'Bellstone' (now by the Morris Hall), a boulder of crystalline rock quite alien to Shropshire, which the 'wise men' of the town thought could never be explained. Within his lifetime, however, the mystery was solved when the role of ice transport was recognised. It was a typical glacial 'erratic' brought from Scotland, providing a valuable clue to the direction of ice flows. Likewise, similar 'erratics' of dull volcanic rock decorate walls in our old village and demonstrate a different ice stream from Wales.

Related to this particular mystery were the widespread sheets of clay and sand covering so much of the 'solid' rock of the Shropshire Plain and the Midlands in general. Road works along the improved Holyhead Road east of Atcham exposed some in 1835, which those same 'wise men' could only explain as deposits from an invading sea. 'Modern' sea shells were important evidence.

Just at this time, however, Louis Agassiz was demonstrating that Swiss alpine glaciers once extended far beyond their present limits. Biritish academies then suddenly realised that the work of former glaciers could also be recognised in British mountains. Darwin was embarrassed to admit how he had quite failed to appreciate such obvious features on his first visit to Snowdonia before the Beagle.

However, the wider spread of ice sheets over the lowlands was still not believed at first, so that drifting icebergs dropping stones in that 'sea' were blamed for those 'erratics'.

The reasons for climate change was another problem, but Dr James Croll discovered a mechanism. Regular variations in the Earth's orbit, together with a progressive wobble in the axis of rotation, could vary the impact of solar radiation. It was not until the following century that the Yugoslav astronomer Milankovitch applied mathematical analysis to this mechanism and discovered the actual 'cyclic rhythm' of changes which it would produce. (The pioneering work of Croll has therefore been largely forgotten, rather like those who discussed evolution before Darwin).

By the early 20th century, evidence for an early glaciation reaching East Anglia and the most recent reaching just to Bridgnorth was well recognised. Professor Wills of Birmingham studied the features around Bridgnorth and took a special interest in the diversion of the Severn through the Ironbridge Gorge. Dixon of the Geological Survey was discovering evidence for temporary lakes trapped between ice and high ground near Wellington and Newport and suggested an overflowing ice-dammed lake could have cut the Gorge. Together they called this 'Lake Lapworth' after an earlier Birmingham professor.

From now on the Geological Survey allowed their imagination to run riot, proposing a vast lake covering most of the Shropshire Plain, which now entered the literature, including school textbooks. All this only hindered rather than helped our interpretation of our landscate, which had plenty of small local lakes but no big one. Water flowing under the ice sheet was the real factor in cutting the Gorge.

Some of this newer research in the sixties was actually based at Preston Montford Field Centre, which now realised it was right in the middle of a 'textbook' glacial landscape ideal for teaching

about the subject. Staff recognised the typical arch-shaped moraine half surrounding it between Forton and Ford Heath, while the sediments exposed on the steep river bank recorded changes in the local environments. In particular, they included 'varved' silts and clays consisting of fine layers, each produced by the annual cycle of winter freeze and spring thaw and the change in sediment type which resulted i.e. coarse in spring, fine in winter. As with tree rings, one could, in theory, count up the years during which the lake lasted, before being drained and replaced by sheets of sand spreading out as an outwash plain or 'sandur' from a new ice front at Ensdon.

The A5 roadworks exposed these same layers on the Montford side of Montford Bridge, where the 'spring line' at the junction of the impervious clay and free draining sand caused problems in the cutting. The solution was a step with an extra drain along the junction, thus showing its position for all to see in spite of the vegetation. Meanwhile the field centre staff have kept their exposure clean and weeded.

The value of such landscape for teaching has however been dependant upon the demands of the curriculum which have not always been helpful. Also the bigger and more famous features of the Ellesmere area have received more public attention. Nevertheless, our Bicton area offers a convenient geographically compact area which can make the subject easier to comprehend.

Most of the local glacial action took place here about 20,000 years ago. If we project those Milankovitch cycles forward, they suggest the next cold period will start in 5,000 years time. If it starts cold and dry it may be a lot longer still before it returns to Bicton once again.