Rocks, Soils and Landforms

JANE POPE

Wyre Forest Study Group, Dowles valley, 21 November 2015 Rosemary Winnall

Saturday 21st November 2015

It was a crisp, icy morning – the first really cold day for some time – and the Study Group took on an unaccustomed uniformity. Individuals were hardly recognisable in sturdy coats, gloves, scarves and woolly woodland hats. We drove down the track to Dowles Brook. Those in the first car were lucky enough, and sufficiently observant, to have a good view of a Goshawk in flight.

On reaching the parking area we inspected the rock face nearby. Susan explained that the constitution of the local sandstone and siltstone varies considerably. We could see that the large blocks at the top were stronger than the under-layer, which was flaking away, and that the erosion of the latter could, after a time trigger a fall of larger rocks. She explained that the siltstone has varying amounts of clay within it which acts as a glue – the more clay, the more solid the mix. Deposits of clay are also found within the forest's rather thin coal seams. The mineral and chemical contents give the rock its characteristics. In a few places the rock is strong enough for building use and in others it is loose and unstable. The complex geology of the Wyre Forest has been well-mapped. (See page 18 in 'The Nature of Wyre'.)

We continued upstream along the main track, pausing to look at an area where there had been a rockfall a few years ago. It was here that plant fossils could be seen among the newly exposed rock fragments, but there has been re-growth over much of the debris and there are now few fossils to be found.

We followed the valley of the Dowles Brook at Wimperhill. John pointed out that irregular landslips had caused a marsh to form and rocks and soil must have stopped short of the water as the path still runs some way above the brook itself. There were many collapsed trees, made unstable by floods and erosion until they fell near to, or into, the brook. The marsh is a wide and open area flanked by a gently rising slope, which has been made more visible by fairly extensive clearance work. Although the soils of the forest are generally thin and lack nutrients, there are

Conglomerate, Dowles valley Rosemary Winnall

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areas of fertile soil, particularly floodplains which were created from prehistoric times onwards by run-off from agricultural activities in the catchment of the brook. The richer soil has collected in pockets according to the topography of the land. This influences the plant life. On poor, leached soils birch, heather and bilberry predominate, but in nutrient-rich areas there is a much greater variety of vegetation. John mentioned that the tributaries of Dowles Brook run straight, like veins in a leaf, probably because of faults in the underlying rock. He was asked how sudden a landslide could be and replied that, although erosion might take place slowly, major flooding could trigger a very sudden 'avalanche' of rocks and soil. Susan also pointed out that, until beavers were hunted to extinction in the Middle Ages, their activity would have controlled water flow and sediment deposition, creating pools and meadows. This has happened in other parts of the country where they have been re-introduced, with benefits for flood prevention.

Our route then took us away from the stream up a steep path strewn with loose rocks until we found a sunny, sheltered spot where we could eat lunch. We had seen a few birds including a flock of Long-tailed Tits, and various flies could be seen basking in winter sunshine. Given the abrupt drop in temperature, wildlife was scarce. Of course it must be somewhere, tucked away and not readily observable – possibly observing us!

Jane Pope next to sandstone outcrop, Dowles valley, 21 November 2015 Rosemary Winnall


Dowles Brook, 2 December 2015 Nicki Farmer

After lunch we came to a site of extensive rockfall on a steep slope, the result of a rotational slip at some time in the past. Some of the rocks were in large square chunks. Others had crumbled more easily. There were mosses and lichens which take trace elements from the rock and are a part of the process of soil formation. Trees in this area were spindly because they had not been thinned and lacked nutrients. Many of the roots were exposed and the precariousness of their existence was obvious. They were a mixture of Scots Pine, Corsican Pine and oak with occasional cherry and hazel. The terrain was difficult but for those with a mountain-goat tendency there were interesting places to explore – caverns and gullies providing valuable hiding places for wildlife. The surfaces of some rocks contained pebbles of various kinds exposed by erosion of the surrounding material. Occasional limey deposits could be seen in newly-flaked rock and the local vegetation was influenced by the calcium content of the soil. Further on, as we progressed, the usual acidic soils became more prevalent and the heather and bilberry returned.

We made our way out of the gully to a higher area where there had been felling and stump-grinding. The forest pigs had also been put to work. Subsequently it had been re-planted with groups of oak saplings among which pines were self-seeding. It is, at the moment, fairly open and we thought it might be a good venue for future study. The forest is continually changing, creating a variety of habitats. Certainly this would have been the case in the past when there were many people living and working within its confines, creating a variety of habitats. It was noticed that even the run-off areas at the sides of the forest tracks have created a specific environment of their own.

The descent to our starting point was easy. We spotted some colourful fungi along the way, discussed the day's findings and were glad to feel warm and well-exercised after a very cold start.

A Wednesday Group Sequel – More Rocks and Wyre's Friendliest Apparition! 2nd December 2015

A few days later, on a very mild December day, the Wednesday Group decided to go to the same starting point but to head downstream along the Dowles Brook. The brook was fairly full because of recent rains and gurgled along robustly. We paused on the new bridge – a replacement for the old railway-sleeper bridge which had been washed away wholesale in 2007. Graham and Susan spoke about the effects of currents, floodwater and blockages on the landscape. It was clear how the banks were being undercut and landslips could occur when the underlying clay is washed away. Soil is constantly being shifted and it is possible to calculate the amount of particles in a sample of water, giving an idea of how much is on the move at any one time.

As we moved off the bridge, Mick went down to the water to try a sweep of the vegetation for unsuspecting

Wyre Forest Study Group

Mick Blythe collecting flies, 2 Dec 2015 Nicki Farmer

midges. Then, as usual, he disappeared into his large white net to see what he had caught. At that moment, two very bemused lady riders approached, their horses slightly spooked at the sight of an extraordinary spectre-like figure at their shallow fording point. "Why has he got a bag on his head" asked one of the riders and, convulsed with laughter, we tried to explain the position. Mick was in his own world but was finally persuaded to extricate himself, gallantly standing aside, net furled, for the cavalcade to pass. Perhaps they thought we were mad! Who knows?

Further downstream we entered the flood plain, rich in ferns and bryophytes, and lunchtime was spent in the shelter of the valley. After scrambling up the bank, we had a bird's-eye view of the terrain. Graham pointed out that the brook was gradually changing its course due to flooding and deposition of debris. Fallen trees were creating blockages around which the water has to find a way, creating eddies and currents. These wear away the bank on one side and deposit silt on the other side in areas of calm water. In one spot, a bar of stones had been created by natural forces. Susan spoke about Knowles Mill and showed us where the oblique dam had been and where the leat once flowed.

Then we took a steep route to an area which had been cleared of conifer. The standard oaks have set seed and there is now a developing understorey. We descended by the Longdon stream where we discussed the lack of White-clawed Crayfish and the possible reasons for their absence. Wood Ants were unusually active on a couple of nests, no doubt due to the mild weather.

These were two very informative and enjoyable walks, during which we had been able to take advantage of expertise freely offered within the group. Thank you to all concerned – we appreciate it greatly.

Wyre Forest Study Group, Dowles Valley, 2 December 2015 Nicki Farmer