

David Pannett's History of Bicton part 37

Iceland and us: a topical note

Iceland has certainly been in the news a lot recently. In the Bicton history essays we have often referred to it as the best place to see glacial landscapes 'in action', which help us understand the 'Ice Age' landscape still lurking under our feet.

Ice caps still cover some high plateaus in Iceland, as they once did in Wales. Glaciers flowing from them have carved deep valleys on their way to the surrounding plains. Here, fluctuating ice fronts built up arc shaped 'moraines', which often hold back lakes as the ice has melted back.

Such a 'moraine' forms the curving ridge from Bicton to Fords Heath, while upstream, a later one runs between Finsdon and Shrawardine, all clearly visible from the A5. Downstream from such moraines, meltwater has spread out vast sheets of sand and gravel forming both coastal plains in Iceland and the level fields west of Montford Bridge. Geologists have adopted the Icelandic term 'Sandur' to describe them both. During such deposition, blocks of ice often got left behind and buried, later melting to leave craters termed 'Kettle holes' - well seen between Calcott and Oxon.

The varied patterns of this glacial landscape have greatly influenced the historical development of the Bicton landscape on its surface. Meanwhile, in Iceland its marginal position has made it sensitive to changing climate. Viking settlement took place in the Medieval warm period, but life became harder later, especially after 1600 as glaciers advanced, reaching their furthest by the late 19th century. Is their current retreat therefore a cause for worry or rejoicing?

The volcanic activity in Iceland is, however, not represented here, but as the last few weeks have shown, its influence may still reach Britain. Some years ago, during the 'cold war' one MP pointed out the obvious geographical fact that our westerly winds constituted our best 'nuclear deterrent'. Any Russian sending a missile here could get the dust back in his face a few days later. Iceland volcanoes, especially Hekla, have been demonstrating this for centuries!

From time to time the people of Bicton would have seen fine sunsets and shared the cooler weather felt in most of Europe caused by a dirty atmosphere. In the year 1783 was a famous example: Laki burst from a fissure 20 km in length and sent a vast stream of lava down onto the coastal plain, while the wind took its dust and fumes to mainland Europe.

Iceland is part of the 'Mid-Atlantic Ridge', where crustal plates are pulling apart. Old lavas, now much eroded, form each side of the island, while the central zone is being filled in with new volcanic material from below. The volcanoes here are long fissures running south-west to north-east, or broad domes of basalt lava. This type of lava has little 'fizz' caused by trapped gases, so that conventional volcanic cones of ash are only small and nowhere like Fuji or Vesuvius. Hekla and Eyjafjalljökull are the nearest match thanks to their more explosive eruptions, as the latter is demonstrating.

This long-established volcano overlooks the sea, which has trimmed its base with dramatic cliffs, across which plunge waterfalls much loved by tourists. The summit supports an ice cap (jökull) which also fills its central crater. Since its last eruption in 1821 lava pressure has been building up again until released by blasting through this thick ice. This mixture of hot gas and steam has blown the rising lava into dust propelling it skywards in 'champagne' fashion rather than like the usual 'guinness'. Such eruptions usually calm down as gas pressure is exhausted, leaving only streams of basalt lava.

☞ The weather systems in 1783 must have been similar to those this time, since sulphurous fumes hugging the ground, drifted as far as France. Many farm workers experienced damaged lungs, while nobility escaped in the shelter of their homes, all adding stress at the time of revolution.

The chaos this year reminds us how modern society is still vulnerable to disruption by natural forces. We are relatively safe in Bicton, but just take care when booking holidays! Iceland is nevertheless still worth a visit some time.

ICELAND : outline of geology

