

The Earthquake of October 6th 1863

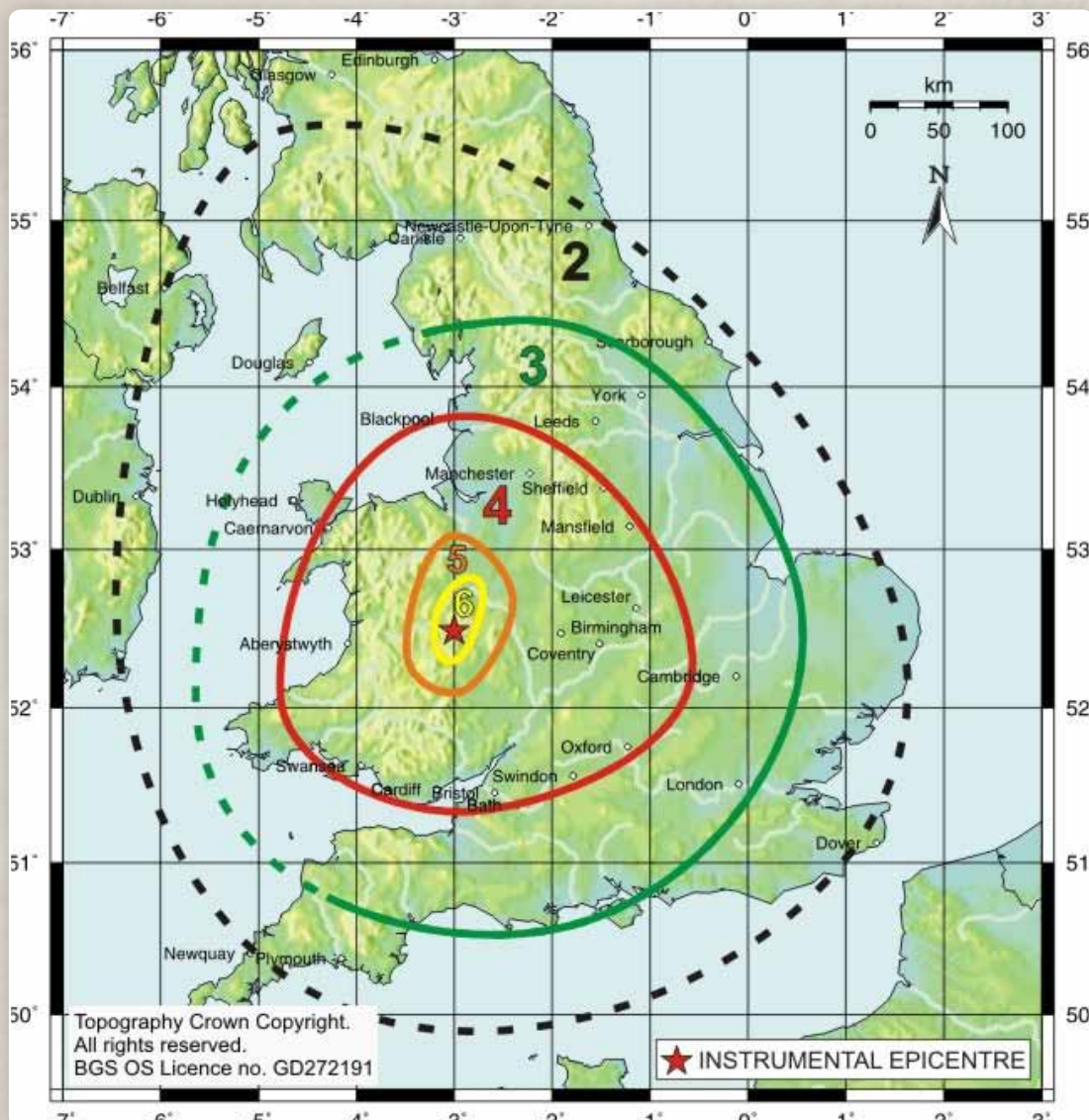
MIKE AVERILL

We don't get many earthquakes in the UK that are strong enough to cause concern but there was one on the 6th October 1863, centred in Herefordshire measuring approx 5.2 on the Richter scale, which received many reports from far and wide, including Bewdley.

According to the British Geological Survey (BGS), the UK gets an earthquake of the magnitude of 5.0 about once every 10-20 years, usually in the north or west of the country. The most severe earthquake experienced in the UK was in 1931, measuring 6.1 but luckily it was centred in the North Sea so little damage was reported. Those that are felt generally cause very little damage, however, some British earthquakes have caused considerable damage, although nothing like the devastation caused by large earthquakes in some parts of the world.

Records extrapolated back to the early 1500's show that there have been 9 earthquakes in the UK stronger than the event in October 1863. In the Midlands though the 1863 quake proved to be the second strongest earthquake in the area after one, which was once again in Herefordshire, in September 1896. More recently, in living memory there were two local earthquakes, one centred on Bishops Castle with a magnitude of 5.1 in 1998 and one at Dudley measuring 4.7 in 2002.

The 1863 earthquake was reported widely and a summary is found in the New York Times of all papers: *The shock of an earthquake, more or less severe, was felt in all parts of England at about twenty two minutes past three o'clock on the morning of the 6th inst. At some places the shock is represented as having been quite severe, and accompanied by a loud rumbling report, while at others it was slight and without noise.*



Map showing the isoseismals (lines of equal seismic activity) for the 1998 Bishops Castle centred event (with approx the same magnitude as the 1863 quake)

Wyre Forest Study Group

No damage was sustained anywhere. The London Times of the 7th devotes three of its extended columns to reports of the "affair." One writer says: "It shook wardrobes and washstands in my room, and lasted some seconds. The undulatory motion was from east to west." Another writes: "My bed shook violently, the windows rattled, the furniture shivered, and the whole house, which is usually as firm as a rock, quivered from the bottom to the top. My man, who sleeps in a distant part of the house, tells me that the silver was rattling for some time. It appeared as if a sound of a heavy explosion beneath the cellars accompanied the second shock, but that may have been a delusion."

From Worcester a correspondent writes:

"The shock was of so violent a nature as to awaken people from their sleep, and to rattle chairs, glass and furniture audibly. It is described by some persons who were awake at the time as having been accompanied by a rumbling noise, while others say they awoke by what appeared to be an explosion. At Great Malvern the windows of the Imperial Hotel, a very large and massive building at the foot of the Malvern Hills, were violently rattled, and it is said that one of the railway signals was displaced. Servants run down-stairs in affright, and general consternation appears to have been felt.

In the town of Dudley the shock was most severely felt, beds being violently shaken, and in some instances doors burst open, crockery ware broken and clocks stopped. In detached buildings in various parts of the town the effect is described as being most terrifying. The shock was followed by a rumbling sound, similar to what would be experienced by persons sleeping immediately over a tunnel as trains were passing. Many inhabitants left their beds and congregated in the street, discussing the extraordinary phenomenon."

The Manchester Guardian says of the shock in the Midland counties:

"A Policeman on duty in a suburb of Wolverhampton says, that although the air was perfectly calm the surrounding trees were shaken and their leaves rustled. He was also much alarmed at seeing a wall vibrating near to him. Wrottesley Hall, the seat of Lord Wrottesley, was shaken throughout and the inmates alarmed. This was also the case at Teddesley, the residence of Lord Hatherton. In the game preserves pheasants were observed to become alarmed as they usually are during the raging of a thunderstorm. As a rule, watch-dogs were not aroused; but there were cases in which they barked loudly. At Stourbridge some bottles containing sweetmeats were shaken from a shelf in a shop window; and at Kinver, in the same neighbourhood, the bells in a house near to the church were set ringing."

Mr. Charles Dickens describes the sensation he

experienced in Kent: He says that he was awakened by a violent swaying of his bedstead from side to side, accompanied by a singular heaving motion. It was exactly as if some great beast had been crouching asleep under the bed and was shaking itself and trying to rise.

The shock appears to have been felt the most in the midland and west midland counties. In some places a deep rumbling noise was heard. At Nottingham the noise resembled the sound of a heavy carriage approaching. The phenomena at Hereford is minutely described by the clergyman of Stratton. He says the sound at first increased with a gradual crescendo for two or three seconds, until the crash was felt, which lasted for one second and a half, and consisted of two concussions, and then subsided as gradually for some seconds, until it died away in the distance. It appeared to equal the loudest appeal I ever heard, but it was fuller and deeper and greater than thunder. In about three minutes afterward, a second faint rumble was heard.

Another source is A Scrapbook of Newspaper Articles Compiled by George Burgess (1829-1905), where these comments were noted about the West Midlands.

In the "Black Country," indeed, and throughout the Midland and West Midland counties, the earthquake appears to have been felt the most. At Birmingham walls were seen to move, and people rose from their beds to see what damage had been done, for though the rumbling, grating sound is compared to that of a passing wagon or train, it was known at once to be something more. At Edgbaston successive shocks were plainly felt, houses were shaken to their foundations, "a dreadful rattle" was rather felt than heard, and people woke one another to ask the meaning. Everything around was violently agitated.

At Wolverhampton everything in the houses vibrated to the external agitation. The houses cracked and groaned as it the timbers had been strained. The policemen on duty saw the walls vibrate, heard everything rattle about them, and were witnesses to the universal terror of the roused sleepers. From near Stourbridge we are told that a house quivered from top to bottom, the silver rattled, the furniture shivered, and it seemed as if there had been an explosion under the cellars. In South Staffordshire and East Worcester doors were burst open, crockery and furniture broken, clocks stopped, and whole populations bought out of their beds. At Cheltenham, a great distance from that neighbourhood, a deep rumbling noise was heard, the heaviest furniture was shaken, the fire-irons rattled, heavy stone walls were heard to strain and crack, and the boys at the College were each under the impression that the rest were engaged in making the greatest possible disturbance.

The earthquake appears to have extended with equal force to Bristol, to Taunton, to Exeter, to Swansea, and many miles out at sea.

More locally we need only check the notes made by George Jorden in his unpublished collection of papers, to see what he recorded. Jorden was a self taught naturalist and had an interest in all things botanical and geological. This is his account:

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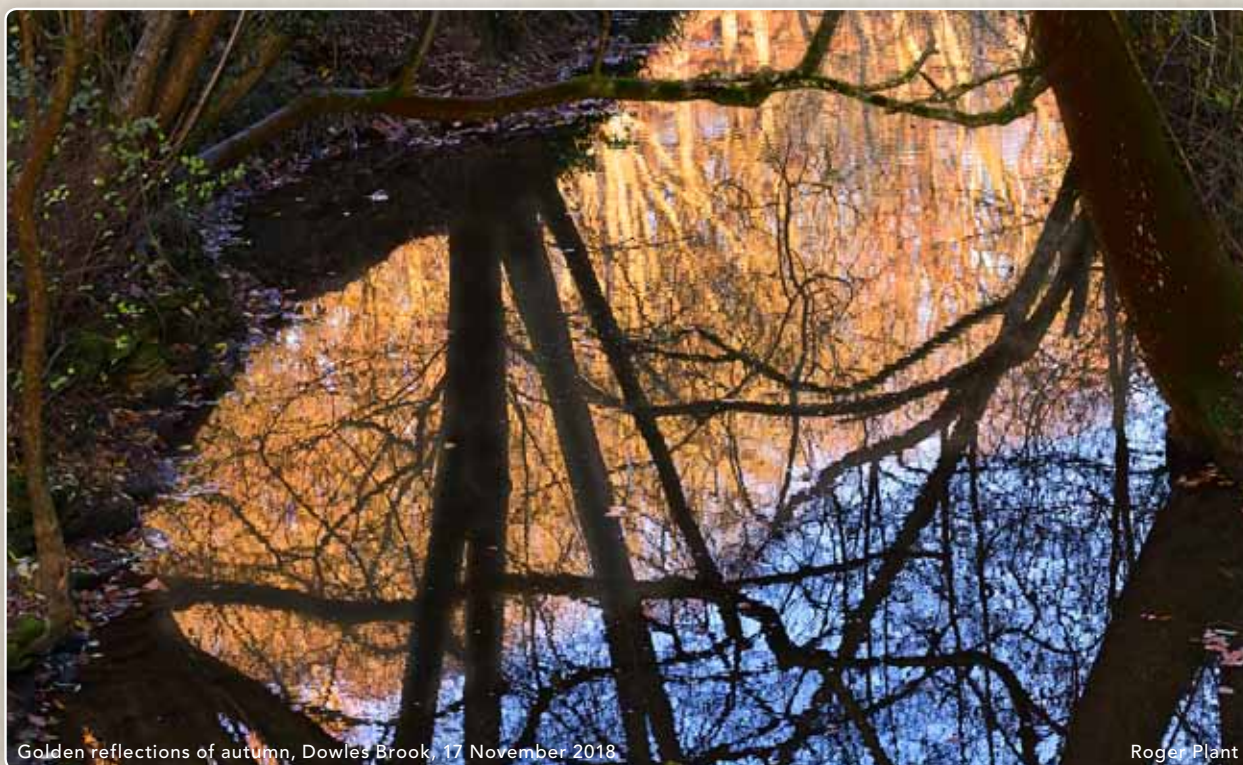
Bewdley October 6th 1863 - we had a smart shock of an earthquake about half past three in the morning. It appears from different parts of the Kingdom that it differed much in intensity. In Bewdley it differed when in an adjoining house consequently many did not feel it some got up and struck a light and searched their houses supposing thieves had broke into the house. The shock had made the utensils rattle the rumbling noise accompanying the shock appeared like a clap of thunder abruptly easing this I felt and the shock seemed to shove me in the bed. Some said they felt several shocks and several rumblings but I felt but one and the rumbling and the shock more instantaneous lasting about two or three seconds. The morning was calm and clear a slight frost no material difference in the weather before or after. About eleven years since a shock of an earthquake happened here that was very slight unaccompanied with noise. The cause of earthquakes are not satisfactorily accounted for by the learned but it may be a collision of water and the molten matter which exist in the interior of this earth. When fire and water

get into collision one may guess the consequences. The immense power of steam is witnessed by everyone on a trifling scale but what must it be in the bowels of this earth when it bursts the crust of the earth and lifts up mountains. When it is not powerful enough for that it disseminates itself through caverns and hollows producing earthquakes of various degrees of intensity.

The cause of earthquakes is not always clear but the BGS states that the Earth under our feet has many faults caused by our turbulent geological past. Some of these faults can be observed at ground level and mapped by geologists, others are hidden many kilometres below the surface. These faults are places where earthquakes can occur. The driving forces for earthquake activity in the UK are unclear; however they include regional compression caused by motion of the Earth's tectonic plates, and uplift resulting from the melting of the ice sheets that covered many parts of Britain thousands of years ago. To get an idea of the range of the effect of the 1863 earthquake the similarly sized Bishops Castle earthquake is shown on the accompanying map taken from the BGS website.

References

- British Geological Survey website. Earthquakes
- Burgess, George. 1829-1905. A Victorian Scrapbook - A Scrapbook of Newspaper Articles Compiled by George Burgess
- Jorden, George. Collection of handwritten notes and articles (unpub) Kidderminster Library
- The New York Times Archives, October 20, 1863, Collection of articles re- the October 1863 earthquake in the UK. P 8
- Isoseismals Map of the 1998 Earthquake for Bishops Castle - Courtesy of the British Geological Survey



Golden reflections of autumn, Dowles Brook, 17 November 2018

Roger Plant