

XVII. *Account of an Earthqua'e at Hafodunos near Denbigh.*

By John Lloyd, Esq. F. R. S. in a Letter to Sir Joseph Banks, Bart. P. R. S.

Read April 5, 1781.

DEAR SIR,

Hafodunos near Denbigh,
Dec. 31, 1781.

UPON the 29th day of last August, at 8 h. 37' 30', I was sitting on my * bed-side, and heard a rumbling noise, as if at a distance: the sound seemed to approach me, and when it was greatest the bed rocked and shook so much that I could scarcely keep my seat. I could have no doubt of its being an earthquake, and instantly looked at my barometer, which is of Mr. DE LUC's construction; it stood at 29.57 inches. Attached thermometer 65°. The barometer had been stationary nearly for the three preceding days, and did not seem to be affected with the shock. The morning was remarkably fine, and not a single cloud to be seen. Two of my sisters and a gentleman were walking upon the terrace in the garden by the side of a wall: they all perceived the noise, at first as if at a great distance; but when it was greatest they perceived the wall to shake, though they did not observe any agitation under their feet. As they were walking, and observed the spot when

* This house is built upon the side of a rock; and my bed-chamber, though up two pair of stairs, is on a ground-floor, the floor is not more than one foot from the solid rock in my bed-chamber.

they

they first heard the sound, and the spot they came to when it ceased, I was enabled to ascertain its duration pretty exactly, and find it to have been from fifteen to eighteen seconds. Its course was nearly from south-east to north-west. Some other persons in our house perceived a double shock; and this has been observed by many who felt it in other places. It was felt at Flint by Mrs. SEAMAN and her daughter, who observed the cups rattled upon the saucers as they sat at breakfast. Mr. PENNANT's family, at Downing, fancied that an empty waggon was coming into the back-court, which is paved. It was strongly felt at Llonrwt by the whole town, and part of a stone wall was flung down. At Carnarvon (which is in the same parallel of latitude as this place, $53^{\circ} 10'$) the shock was very slight. It was perceived in many places about Conway; but not at all by any one in town. Sir HUGH WILLIAMS felt it very strongly at his house near Beaumaris. At our friend Mr. DAVIES's, in that town, a door clapped backwards and forwards several times; and at Lord BULKELEY's seat, Boron-hill, the family were much alarmed, it was so violent. It was strongly felt at Holyhead, and at an eminent solicitor's in the island of Anglesey, the desks before several clerks in his office shook so that they could not write. It was strongly perceived at Mr. FITZMAURICE's, at Lleweny-hall in the Vale of Clwyd, and in several other places in that Vale. All the peninsula in Carnarvonshire called Llun, surrounded by St. George's Channel, was shook very much. There have been two shocks since this I have been describing. Mr. PENNANT felt one; but I was not sensible of either. The times it was felt at differ very much on account of the variations in the several dials from whence the clocks are regulated; but I am very exact as to my own time, having the day preceding the earthquake, and that very day, ascertained

ascertained my time by equal altitudes, taken with one of Mr. BIRD's astronomical quadrants of one foot radius. As every phenomenon of this kind is interesting, you may, perhaps, wish to communicate this account to the Royal Society; which you are welcome to do, if you think it worth the attention of so illustrious a body.

I have the honour to be, &c.

