# Transactions

OF THE

# BANFFSHIRE FIELD CLUB.




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www.banffshirefieldclub.org.uk

The CHAIRMAN said—Some of you may have seen a representation of a shower of meteors as seen at Newhaven, U.S., on 12th Nov. 1833. This shower was very grand. 240,000 stars were computed to have fallen during the time the shower lasted, and it attracted great attention from astronomers. The negro slaves in the United States thought the end of the world had come. It was remembered that Humboldt, the great German traveller, had described a similar grand shower which he had seen in South America, also on the 12th November, in 1799, 34 years previously. This led others to predict a similar shower for the same day of the month of November in the year 1867. The prediction proved correct, for a grand shower was seen in this country on 13th November 1866, and on the same day in the year following in the United States. The great shower had lasted more than a year; we saw the beginning of it, the Americans the end. It was now clearly established that the earth passed through a shower of meteors annually about the 13th of Nov. This much had long been known; but it was now evident that once in 33 to 34 years the shower is much greater than usual. The only way of accounting for this is to suppose that there is a constant stream of bodies, very small but infinite in number, revolving in a circle or an ellipse round the sun; that they are not uniformly scattered along the stream but in some places are very numerous, that the stream takes $33\frac{1}{3}$ years or so to go round the sun, and that the earth passes through this stream annually about the 13th November, and at no other time, because the earth and the stream cross each other only in one place, and the earth is at that place about the 13th of November. In ordinary years the meteors are so thinly strewn that the earth passes through the stream without attracting much attention, but, when it comes to the place where the meteors are densest, there is a great display of fire works. The next display will be 33 or 34 years from 1866, which will bring it to the end of the century, 1899 or 1900. It is now known that the November meteors are the train, not the tail, which follows a comet discovered by Tempel in 1865. It was but a faint telescopic comet which

passed near the earth about the middle of November 1865. The train would have for ever remained unknown had it not been that it chanced to be in the earth's path, so that when the small bodies of which it is composed pass through our atmosphere they take fire, and produce what is called a shower of shooting stars.

In the old Statistical Account of Scotland, in the description of the parish of Peterhead written in 1796 by Dr Moir, minister of the parish, there is a notice of an appearance in the sky which seems to have some connection with the great periodic showers of November meteors, or else with the comet whose train they are. Dr Moir says:—

'On the 10th of November 1766, when assisting at the Communion at St Fergus, a neighbouring parish about five miles to the N.W. of this place, I observed in the evening a very extraordinary appearance in the air; looking to the S.E. about a mile from the church, there was the appearance of a light somewhat like the aurora borealis. The rays gradually became more vivid and stationary, seeming like a gleam of fire, extending about a quarter of a mile from E. to W. It continued for several hours, and then disappeared. I have never heard of such a phenomenon in this country, though I am informed it is frequently observed in the West Indies.'

On the motion of Mr Davidson, a vote of thanks was passed to Dr Milne for presiding, and for having communicated the above note.