

XV. *Account of the Irruption of Solway Mofs in December 16, 1772; in a Letter from Mr. John Walker, to the Earl of Bute, and communicated by his Lordship to the Royal Society*.*

My Lord,

Read Feb. 13, 1772. **W**HEN I was sitting yesterday writing to your Lordship, I received the honour of yours. I shall therefore defer the account I intended of my expedition last season to the north, and give the best description I can, of the extraordinary irruption of Solway-mofs, which I went to visit, about a week after it happened.

It is not surprizing, that it has every where attracted the attention of the public; for though the cause of it is obvious, yet so far as I recollect, the alteration it has produced on the face of the earth, is greater than any we have known in Britain, from natural causes, since the destruction of Earl Goodwin's estate.

* The Society has received, from other hands, several accounts of this curious and singular phænomenon; but this, as one of the latest, being likewise the completest, was thought the most proper to be laid before the public; especially as, on comparision, few particulars of any importance mentioned in the other accounts were found wanting in this. These few, however, have been collected, and subjoined in the form of notes. M. M.

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It

It happened on the 16th of December, when there fell such a deluge of rain, over all the North of England, as has not been known, for at least two hundred years. There was a very great flood at Moffat, but I think, I have seen one or two greater, and certainly it was not so extraordinary here, as further South.

The Solway flow contains 1300 acres of very deep and tender moss, which, before this accident, were impassable, even in summer, to a foot passenger. It was mostly of the quag kind, which is a sort of moss covered at top with a turf of heath and coarse aquatic grasses; but so soft and watery below, that, if a pole is once thrust through the turf, it can easily be pushed, though perhaps 15 or 20 feet long, to the bottom. If a person ventures on one of these quags, it bends in waves under his feet; and if the surface breaks, he is in danger of sinking to the bottom*. The surface of the flow was, at different places, between 50 and 80 feet higher than the fine fertile plain, that lay between it and the river Esk. See Tab. VI. About the middle of the flow, at the place marked A, were the deepest quags, and there the moss was elevated higher above the plain, than in any part of the neighbourhood. From this, to the farm called the Gap, upon the plain at C, there was a broad gully,

* The surface was always so much of a quagmire, that, in most places, it was hardly safe for any thing heavier than a sportsman to venture upon it, even in the driest summers. A great number of Scotchmen, in the army commanded by Oliver Sinclair in the time of Henry VIII. lost their lives in it; and it is said that some people digging peats upon it, met with the skeleton of a trooper and his horse in complete armour, not many years ago.

Brook B

D Lake

E

The Gap Quays

Place of Irruption C

Tod Bank

SOLWAY MOSS

About 2 Miles long & near as broad
the deep part of it 1300 Acres

Sark. R.

Road from Moffat to Carlisle

Gratney House





Road to Carlisle

Village of Tangtown

Esk R.

F

Plain overflowd
about 400 Acres

Lake

Thorn

Bank

Scullenstown

Smalmstown

Tad fault

Pearlree

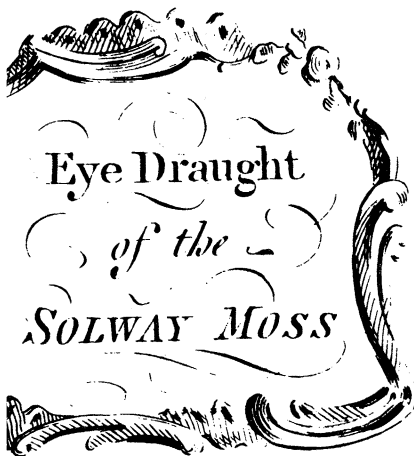
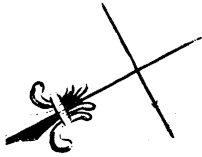
Field of the Battle of Solway Moss

to Carlisle

Eye

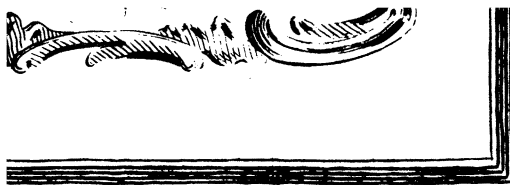
SOL

to Carlisle









Basire Sc.

though not very deep, through which the brook marked B used to run. The moss being quite overcharged with the flood, burst at these quags, about 11 o'clock at night, and finding a descent at hand, poured its contents through the gully into the plain.

It surprized the inhabitants of 12 towns in their beds*. Nobody was lost, but many of the people saved their lives with great difficulty. Next morning, thirty-five families were found dispossessed, with the loss of most of their corn and some cattle†. Some of the houses were near totally covered, and others of them I saw standing in the moss, up to the thatch, the side walls being about 8 feet high.

In the morning, above 200 acres were entirely overwhelmed; and this body of moss and water, which was of such a consistency, as to move freely, continued to spread itself on all hands, for several days. It was come to a stop, when I saw it, and had covered 303 acres, as I was informed by a gentleman, who had looked over the plans of the grounds, with Mr. Graham the proprietor: but every fall of rain sets it again in motion, and it has now overspread above 400 acres. At F, it had run within a musket shot of the post road leading from

* Those who were nearest the place of burst were alarmed with the unusual noise it made; others not till it had entered their houses, or even, as was the case with some, not till they found it in their beds.

† The case of a cow seems singular enough to deserve a particular mention. She was the only one of eight in the same cow-house, that was saved, after having stood sixty hours up to the neck in mud and water. When she was got out, she did not refuse to eat, but water she would not taste, nor could even look at, without shewing manifest signs of horror. She is now reconciled to it, and likely to recover.

Moffat to Carlisle, when I saw it, but it is now flowed over the road, and reached the Esk. This river, which was one of the clearest in the world, is now rendered black as ink, by the mixture of the moss, and no salmon has since entered into it. A farmer also told me, that, upon removing the moss, to get at a well which it had covered, they found all the earth-worms lying dead upon the surface of the ground. The land, that is covered, was all inclosed with hedges, bore excellent crops of wheat and turnips, and rented from between 11 and 14 shillings, besides the taxes and tithes, which amounted to 4 shillings per acre.

I endeavoured to guess at the depth of the moss upon the plain, by a large thorn, which stands in the middle of it, and which is buried to above the division of the branches. The farmers told me, that it stood upon a rising, more than 6 feet above the general level of the plain; and that it was upwards of 9 feet high, of clear stem. By this account, great part of the plain must be covered 15 feet deep with the moss: and near the farm called Gap, there were some considerable hollows, where they think the moss, at present, lies full 30 feet deep. The tallest hedges on the land are all covered over the top. The houses are not so much buried, because they stood mostly on the higher parts of the fields; and, towards the extremities of the moss, I observed it, in many places, not above 3 or 4 feet deep, owing likewise to the rising of the ground.

The gut at A, through which the whole of the moss flowed that covered the plain, is only about

50 yards wide, and the gully from A to C is near a quarter of a measured mile long.

The brook B, being stopped up by the moss at E, has now formed a lake at D.

About 400 acres of the flow, next the place of its evacuation, appear to have sunk from 5 to 25 feet : and this subsidence has occasioned great fissures upon those parts of the moss which refused to sink. These fissures are from 4 to 8 feet wide, and as much in depth. The surface of the flow, consisting of heath and coarse grass, was torn away in large pieces, which still lie upon the surface of the new moss, some of them from 20 to 50 feet long. But the greater part of the surface of the flow remained, and only subsided ; the moss, rendered thin by the flood, running away from under it.

Looking over the Solway moss, at the village of Longtown, where there is a bridge on the Esk, they formerly saw only the tops of the trees at Gratney, a house of the Marquis of Annandale's, 4 miles distant ; but now they see them almost to the ground. And looking over it, in another direction, they now see two farm-towns of Sir William Maxwell's, which were not before visible. So that the ridge of the flow or moss seems to have subsided about 25 feet.

I ever am, with the highest respect,

My Lord,

Your Lordship's most obliged

and devoted servant,

Moffat,
Jan. 30, 1772.

John Walker.
XVI. A

