THE LUIBEG IN THE MUCKLE SPATE

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In Scotlan's boun's sin syne
We hinna hed anither spate
Like auchteen twenty-nine.

THE night of Monday, August 3, 1829, has been commemorated in the literature of the North-east of Scotland, for this was the night of the Muckle Spate. The verse quoted above is from " The Muckle Spate o' Twenty-nine," by David Grant. Whilst most of the details now available refer principally to happenings in Morayshire, Nairnshire, and Speyside, great damage was done in Deeside, the bridges at the Linn o' Dee, Ballater, and Aboyne being destroyed, whilst the Potarch Bridge had two piers damaged. Due, however, to the unpopulated nature of the region, the course of the Luibeg from its sources to its junction with the Derry has received little or no mention, and it is proposed to attempt to describe the effects of the Muckle Spate on the Luibeg in this article.

The Spate of 1956 took place—again in August, but this time on the 14th of that month—after the writer had made some study of the earlier spate, and had the effect of clarifying much of the evidence which had become a little confused during the passage of 127 years, due, for example, to the growth of vegetation. It may be wondered whether the 1956 spate was greater than the 1829 one on the Luibeg. Successive spates, of course, widen and deepen river channels, and the Luibeg of 1956 could carry off water more rapidly than that of 1829, except possibly in the Rock Channel, described later. In 1956, however, the Allt Càrn a' Mhaim showed greater signs of disturbance than the Luibeg (above their junction), and it is likely that both were affected in 1829.

Again, some of the magnificent Scottish pines, which can live, according to the " New Statistical Account," to over 200 years old, must have been standing close to the Luibeg in 1829, and the roots of some of these were undermined by the flood-waters, so that the trees lean at a perilous angle, still remaining alive however. One such tree still stands a little north of Luibeg Cottage and another near the Black Bridge; these were undisturbed by the 1956 spate. Now in 1956 the remains of the bridge which crossed to Luibeg Cottage came to rest amongst trees on the right-of-way path below

Derry Lodge, and the evidence showed that these trees stood at least 4 feet deep in the water at that point. They were not disturbed, however, and it is reasonable to suppose that a greater depth of water than 4 feet existed to dislodge the trees affected in 1829, and these latter trees were not affected in 1956. At the flood-level indicator near Invercauld Bridge the highest water level in 1956 was 3 to 4 feet below that shown in 1829. It is more probable than not, then, in the writer's opinion, that the 1829 spate was greater than the 1956 one.

We now describe the Luibeg, under spate conditions, from its junction with the Allt Càrn a' Mhaim to its junction with the Derry. The first section is from the upper junction to the cleft which we call the Rock Channel.

Above the Rock Channel

Here the Luibeg lies in an almost level river valley, bounded on each side by steeply rising ground, which in parts gives the impression of a glacial flood channel, complete with moraines and raised beaches. From side to side it is filled with debris, stones up to a common size of 18 inches diameter with an occasional stone with a maximum dimension of 36 inches. According to Geikie's "Textbook of Geology," water flowing at 2 miles per hour will roll pebbles the size of an egg. It will be appreciated that these stones were all on the move in 1829, and that those left lying were deposited as the spate subsided and the velocity of the water fell. The debris below the Rock Channel shows where the remainder went.

The catchment area—bounded by the watersheds of Càrn a' Mhaim, Ben Macdhui, the Sputan Dearg, and Derry Cairngorm—is drained by the Luibeg, and is very roughly 4 square miles, so that 1 inch of rain will send about 250,000 tons of water down the Luibeg. Three and a half inches of water fell at Luibeg Cottage during twenty-four hours in the 1956 spate, and the rainfall would be considerably higher on the hillsides, so that about a million tons of water were involved in the spate. All this water, with the vast amount of debris picked up, was directed into the Rock Channel.

The Rock Channel

This cleft, tapering gradually, sloping steeply, and of smooth surface, in the writer's opinion could not be much more efficient in receiving the debris-laden flood-waters from the swollen Luibeg

and discharging them rapidly at its outlet below. At its narrowest part this channel has a width of 35 feet at what would be the flood surface level, and that level is 24 feet above the bed where, of course, the width is less. Even the largest stones, rolled into the channel at its entrance, would be in suspension in the narrower parts of the channel, so we would, during one of the spates, have a column of water, mixed with boulders, moving at a considerable velocity, and with great destructive force.

The sides and bottom of the channel are polished and bare of vegetation. Stones lie only in pockets, and where there are bends in the channel, large boulders are piled up. Calculations of the velocity of water in the channel are not easily made, but it is reasonable to suppose that, due to its tapering cross-section, the velocity at bed-level, or thereabouts, would be sufficient to thrust upwards, at bends, or changes in cross-section, quite large boulders. Prior to 1956 one such boulder, with its longest dimension over 6 feet, was perched on the east side of the channel, but was displaced in 1956. Another, nearly as large, now rests in another position on the west.

One can only imagine the sight and sound of such a torrent, almost level with the top of the gorge, racing with sinister force and throwing up spray. The roar of the water would be offset by the rumble of boulders being rolled and bounced down the channel, and occasionally one would be seen as it was thrown clear of the surface in an eddy. It is doubtful whether this spectacle has been seen; certainly, in 1956, those in the near vicinity were more concerned with their own affairs than with the upper Luibeg. The smooth, almost polished, surface of bed and sides of the rock channel show how it has been scrubbed with debris, large and small, during spates, and also indicates the violent movement of these solid objects during their passage through it.

At its lower section the rock channel widens and terminates in a gorge whose walls and bed are of boulder clay. Whilst in severe flood this lower gorge may be filled to a considerable height, but it widens rapidly, and the changing character brings us to a different section of the Luibeg.

From Rock Channel to Allt Preas nam Meirleach

In this section, where both the Lairig Ghru paths cross, the great bulk of the debris carried down was deposited. Particularly, the bigger boulders were dropped first as the water velocity fell. The

course of the Luibeg widens rapidly, however, and it is natural for such flood waters to meander. Under successive flood conditions a series of main channels, each differing from the other, were cut in the wide bed. The Parker Bridge spanned the channel cut by the Muckle Spate, which probably differed from those formed in the spates of earlier times and which is now normally dry following another change of course.

The quantity of material deposited by the Muckle Spate was tremendous, and the varying course of the flood waters could be imagined, as one walks over the debris noting almost stagnant areas, shown by the deposition of sand, and regions of violent clashes of water where boulder is piled on boulder. It must be remembered, however, that the picture presented thus is the final picture that formed as the floods were receding. Who knows what it was like at the height of the spate ?

The region of heavy flooding seems to have ended at the Allt Preas nam Meirleach, which appears to have always been a normal little burn, but it probably had its effect in diverting the flood waters to the east.

From Allt Preas nam Meirleach to Luibeg

As the river leaves the region of the Robbers' Copse its channel widens still more, so much so that, over the level ground, it is free to move as conditions dictate. The general impression is one of a large loch into which the debris would have been deposited at a rapid rate. We thus reach a region of aggradation, as opposed to the degradation which takes place under flood conditions in the river's higher reaches, above the flood channel.

The varying and erratic paths of the river continued to be formed and lost, and can still be traced, until a narrow channel is reached, about half-way between the Robbers' Copse and Luibeg Cottage. Standing at this spot, where a tiresome burn persists in making use of the path, and looking west, one can imagine a swirling mass of water, extending to the Robbers' Copse, quite wide but with deep channels where fast currents carried their load below the surface.

In the adjacent channel the evidence was that no great velocity of water was reached—debris still lies—and it is obvious that the upstream " loch " was sufficiently big to smooth out the variations in flow of water, also that on the hillsides the rainfall must have been very intense for a comparatively short period, possibly for a much shorter time than twenty-four hours.

Towards the east, and as the Luibeg veers round to the south, there is the evidence, in the leaning over of trees near to the river, that the flood waters of 1829 reached a substantial height, sufficient to partially uproot these Scots Pines. The Luibeg then, and as seen again in 1956, did not keep to its course, but flooded the lower banks to a considerable depth, and one moraine close to Luibeg Cottage was an island.

Luibeg Cottage itself stands on debris from the Muckle Spate. Due, however, to the deepening of the permanent channel, with a possible lower flood level in 1956, the water then reached no nearer than 6 feet of the barn.

There is some suggestion that the bog opposite Luibeg Cottage was flooded over in 1829, but such flooding may have been contributed to by the Derry, which was also in spate of course. The truth of this suggestion, however, is more probable than that made about a nineteenth-century frying pan, capable of dealing with at least three dozen eggs, and found cast up near Derry Lodge after the 1956 spate. The suggestion made locally was that this frying pan had belonged to Charlie Robertson, who lived at Corrour Bothy at the beginning of the century, and that it had been washed down from there by the spate! The writer can only end by mentioning the most famous literary reference to the Muckle Spate, that by Dr David Rorie, which ends:—

" an' a lum hat wantin' the croon."