

and are sharply scratched and scored by striæ which bear N 30 W and S 30 E. It is a most singular-looking rock-surface, and well worth a visit. Its exact situation is in the townland of Lisduff, at the south side of the road leading from Moydow to Ardagh, a little to the south of the letters I and S in 'LISDUFF,' 6-inch ordnance sheet, Longford 19. There can be little doubt as to the glacial origin of the striæ, as they coincide in direction with other striæ seen in several parts of the Longford district.

It is probable, too, that the ice-current came from the NW., or up the slope of the hill. We have no actual proof of this at Slievegalry; but about ten miles to the westward a very remarkable erratic is traceable to its parent rock. It is a hard, homogeneous, amorphous, blood-red jasper rock, and occurs *in situ* near the summit of Slievebawn Hill, 857 feet above the sea. A large block of this rock may be seen perched on a drift-covered hill at Ratheline, on the east shore of Lough Ree, somewhat less than six miles in a direction of S 30 E from the summit.

The ridges also, whether of rock or drift, and the stream-courses in this part of the country, exhibit a general parallelism in this direction, as also do most of the observed striæ, so that there is strong evidence that the district was at one period covered by an ice sheet moving from N 30 W to S 30 E.

F. J. FOOT.

GEOLOGICAL SURVEY OF IRELAND.

BOYLE, IRELAND: Oct. 11, 1865.

PRIMARY AND SECONDARY STRIÆ.

To the Editor of the GEOLOGICAL MAGAZINE.

SIR,—I am glad to find by Mr. Green's paper in your last number, that he also has remarked the *Primary* and *Secondary* striæ. In this neighbourhood I have observed three sets; the general bearing of the oldest being about N 30 E., of the second N 30 W., and of the newest nearly E and W. The first have a similar bearing to the axis of the 'dressed hummocks' of rock, and also the primary striation in the rest of Galway and Clare; the second agree with the general bearing of the valley now occupied by Lough Corrib; while the newest are perpendicular to the mouth of the valley that lies between Oughterard and Cliften, and also to the east slopes of the hills.

I would therefore *suggest*, that the first were made by the movement from NE. to SW. of the ice-field which is supposed once to have covered Ireland—that as the land sank, local systems of glaciers were formed, one of which occupied the valley of Lough Corrib, while its branches came down the different mountain-valleys. This glacier of Lough Corrib formed the second set of striæ; and as the land was still sinking it gradually melted away, while the glacier in the Oughterard valley remained longer and formed the third set of striæ. Would Mr. Green look at the features of the country in which he has remarked the striæ, and see if he could account for them in a similar way?

J. HENRY KINAHAN.

OUGHTERARD: Oct. 3, 1865.