CORRESPONDENCE

GEOMORPHOLOGY OF MURRISK AND NORTH-WEST GALWAY

SIR,—During the mapping of the Pleistocene deposits of West Mayo as an officer of the Geological Survey of Ireland in 1962 I collected evidence for a somewhat different glacial succession from that envisaged by Dewey and McKerrow (*Geol. Mag.*, **100**, 260–275).

The last glaciation of the area was represented by the westward extension of the inland or midland ice-sheet. In places the limit of this ice-sheet is represented by an end-moraine complex. This shows that the ice abutted against the eastern flank of the highlands, with long glaciers extending westwards along the main valleys such as Clew Bay and the Erriff valley. This ice limit marks the westward extension of fresh drift topography (drumlins, eskers, and kames). The great terraces of the Erriff valley are not lake terraces, but kame terraces deposited between the ice margin and the valley sides ; they form part of marginal morainic complex of this last ice advance. The ice-contact nature of the deposits can be proved in a number of localities. The manner in which they decline or slope laterally down the valley to the south-west is also consistent with this view (see also Geological Memoir to Sheet 84). Thus, the highest terrace lies at 700–800 ft. O.D. at Glenmask in the upper Aille valley ; at 400–500 ft. O.D. just south of Erriff Bridge and at 300 ft. O.D. at the mouth of Glennacally. These terraces merge downstream into the end-moraine of the glacier just above the Aasleagh Falls.

Recognition of this westerly movement as being younger than that which carried erratics of Corvockbrock granite north-west was first suggested in the Geological Memoir to Sheet 73—a view later abandoned in the special Clare Island Memoir. However, detailed field work in the Louisburgh area shows that the earlier view was the correct one. The surface drift south of Louisburgh is weathered and much disturbed by frost action, while that along the shore of Clew Bay is fresh and undisturbed.

In fact, the weathered and denuded nature of the drift in Western Murrisk is so similar to that encountered in South-east Limerick (surveyed 1959 and 1960), outside the limit of the Würm glaciation, that a similar age may be suggested. If this is so, then the north–south ice shed in Murrisk should be assigned to the Riss glaciation. The absence of fresh moraines, except in the corries themselves, also argues for extremely limited local glaciation during the Würm. This bears out a similar conclusion reached by Farrington in his investigations on the glaciation of Achill (Farrington, A., 1953, *J. Glaciol.*, **2**, 262–7).

In the light of the above evidence, the diversion of the drainage south-west down the Erriff valley can be satisfactorily explained by this latest advance of the inland ice into the valley from the north-east. This latter glaciation was weak and failed to remove the vast numbers of erratics that were carried north-east and north by the older glaciation.

The general absence of the post-glacial raised beach in West Mayo again suggests weak glaciation. It is only found at the inner end of Clew Bay (between Newport and Westport)—that is, where the last ice-sheet was thickest.

F. M. SYNGE.

DEPT. OF GEOGRAPHY,
THE QUEEN'S UNIVERSITY,
BELFAST.

24th August, 1963.