

TERRACES OF NORWAY.

SIR,—I much regret that Col. Greenwood hit upon the wrong Aardal. That which I referred to is at the east end of the Sogne Fjord. Steamers make the trip, and, once a fortnight, also call at Fjærland, within an hour's stroll of a glacier remanié, the Suphelle Bræ, which descends to certainly not more than 150 feet above the sea level. A valley to the north contains capital terrace examples, and is closed by the great glacier of Boium's Bræ. From Bergen to the Sogne Fjord, to Fjærland, and to Aardal, the Mørk Foss, back to Gudvangen, across to the Hardanger Fjord, up the Sør Fjord to Odde, thence across the Folge Fond by an easy glacier pass to Bondhus, and westward to Stavanger, would be a fortnight's deliberate trip, and afford sublime scenery, with geology enough for a glutton, besides numerous lateral excursions, should the traveller have time. He must study the times of the steamers well in laying his plans.

I am sorry Col. Greenwood did not accept my invitation to intending explorers to ask me any questions.

MARSHALL HALL.

YACHT NORNA, Sept. 19, 1871.

RIVER TERRACES.

SIR,—In the two letters on this subject which you have done me the honour to publish in your numbers for April and September, I have contended that *inland* river terraces are very simple effects of rain on rivers; that they are the remains of alluviums formed on land by the overflow of rivers; and in the report of Mr. Chief Justice Begbie's account of the "Benches of British Columbia" in the Proceedings of the Royal Geographical Society for July, the Chief Justice remarks (page 138) that the rise of the Fraser river in flood at Lilloet is 40 feet; at Fort Alexandria 25 feet. Here, then, must be two alluviums forming on land at the present day below the old terraces. Gorges, by checking the rain-floods of the river, cause these enormous rises. When, however, the beds of these gorges are deepened by erosion, the river, unable to overflow the alluvial banks which it has built up, will, in floods, tear them down and will drive them to the hill-side as two parallel terraces.

The prevalent opinion, however, in the discussion of the paper was that the terraces have been formed at the water level of lakes by materials washed down by the river, and not on land alluviums. A "bursting of the barrier" is then supposed, and "a sudden drainage" of the lake to the level of the succeeding terraces. And so a succession of "bursting of barriers" and a succession of "sudden drainages," one of each of these for each pair of terraces. Each barrier which it is required to "burst" being perhaps a gorge of the hardest possible rock, and extending for any number of miles. But to form two parallel terraces the river must have filled the lake entirely with the materials carried down. In this case there could be no "sudden drainage" of a lake which had no water in it. Or are we to suppose that in former times all rivers on entering the lakes bifurcated and deposited their materials as terraces at the level of the water on the two opposite side-shores of the lakes, leaving the

central water pellucid? And that this central pellucid water only was subjected to the "sudden drainage"? If so, in former times, the laws of rivers and lakes differed much from those of the present day. The cause supposed is an actual impossibility.

BROOKWOOD PARK, ALRESFORD, GEORGE GREENWOOD, Colonel.
9th September, 1871.

LOCAL MUSEUMS AND SCIENTIFIC SOCIETIES.

SIR,—Why does not the British Association exert its influence in stimulating local Scientific Societies to form in their Museums collections representing the Geology, Mineralogy, and Natural History of their own respective neighbourhoods? Such a system, combined with a central Museum in London, would tend more than anything to the advancement of science. At present, provincial Museums are little better than curiosity shops, with no recognized plan of arrangement whatever. Numerous valuable private collections exist throughout the country, representing the geology, etc., of various localities, which are too often dispersed and lost. Perhaps private Collectors would show more public spirit, if greater zeal and better judgment were shown by local Societies.—F.G.S. (Brighton).

A SILICIFIED CORAL FROM THE COAST OF SUSSEX, ETC.

SIR,—Rolled fragments of a Silicified Coral, resembling the Tisbury *Isastræa*, are occasionally found on the coast of Sussex and the Isle of Wight. Major Barnes, of Southampton, who has for many years collected the south-coast agates, has found four specimens, one on the beach at Ryde, two at Sandown, and one at Hastings. I also obtained a fine specimen on the beach at Hove, near Brighton. The only locality from which they could have been drifted, if belonging to the Oolite, is Portland. Does the Tisbury Coral occur there? or, can they be derived from the Upper Greensand, like the silicified wood found at Hove?

SPENCER GEO. PERCEVAL.

MISCELLANEOUS.

OCCURRENCE OF DIAMOND IN XANTHOPHYLLITE.—Writing from St. Petersburg to the Editor of the *Jahrbuch für Mineralogie*, 1871, part 3, Jeremejew announces the discovery of microscopic crystals of diamond in the xanthophyllite of the Schischimskiw mountains in the Urals. Magnified 30 diameters they are distinctly visible, and with a power of 200, their crystalline form can be determined with great precision. It is a hexakistetrahedron combined with a slightly developed tetrahedron, the faces of the first form being rounded, those of the latter completely flat. The greater part of the crystals are colourless and completely transparent, and some few are slightly brown. They lie in parallel position in the matrix, their trigonal intermediate axes being vertical to the foliation of the xanthophyllite. The green plates of the latter near the rounded aggregations of the talcose slate and serpentine, contain an unusually large number of crystals, and they are also found in these rocks themselves.