would gain access to the district having at the time of the last submergence been to some extent choked with ice, which thus checked the tidal action inland from the present coast; and thought that possibly both glaciers and the sea had together contributed towards the formation of the terraces. These, he observed, were by no means confined to Gley Roy itself, but were to be seen on a large scale, and at a lower level in the valley of the Spean, if not elsewhere.

Mr. Prestwich observed that both sides of the question had an *à priori* argument in their favour. There was no doubt of the almost universal glaciation or of the depression below the sea to a depth of at least 1000 feet, and therefore that marine action was possible. The circumstance of the cols marking the height of each terrace was, however, strongly in favour of the freshwater theory; but, on the other hand, there seemed an absence of sufficiently elevated land in the Glen Roy district for the origination of a glacier, such as was required by this theory.

The Chairman suggested the necessity of actual sections being made to show the nature of the terraces and the condition of the rocks below. He referred to a case on a much larger scale in the Yungma valley of East Nepaul, recorded by Dr. Hooker, in which the phenomena at Glen Roy were repeated on a larger scale, and, in connexion with each terrace, a glacier and its moraine could be traced.

CORRESPONDENCE.

FISH-REMAINS IN THE DEVONIAN BEDS OF CORNWALL.

Sir,—In 1868 I recognized, in Mr. Pengelly's collection of Cornish fossils at Torquay, the structure of the Upper Silurian and Old Red fish *Pteraspis* or *Scaphaspis*, in the supposed coral the *Steganodictyum Cornubicum* of McCoy. This identification was afterwards confirmed by Prof. Huxley and Mr. Ray Lankester, and it has an important signification upon the question of the age of the rocks of South Devon and Cornwall, inasmuch as the *Pteraspis* has, I understand, been found by Mr. Etheridge in the lower Devonian rocks of Lynton and Lynmouth.

As I am not aware that any further investigations have been carried on as regards the Cornish rocks, the following notes may have some interest for those amateurs in geology who, like myself, enjoy passing leisure hours in the investigation of the records of the rocks.

When on a visit to Penzance in February last, I took the opportunity of examining, through the courtesy of the Hon. Curator, the collection of Looe and Polperro fossils presented by Mr. Peach, Mr. Couch, and others, to the Museum of the Royal Geological Society of Cornwall. It appears that as early as 1846, these fossils were described by Mr. Peach as the remains of *fish*, in the *Transactions* of the Geological Society of Cornwall, from specimens found by Mr. Couch at Scilly Cove, on the east side of the harbour at Polperro. From what I saw in the Penzance Museum, I determined to examine the Looe and Polperro district, and requested my friend Sir W. Guise, who had already gone over with me the Old Red districts of Herefordshire and Monmouthshire, and the rocks of North Devon, to join me at Plymouth. Our time was limited, and I can only say that I wish we had gone earlier, for I know of no district more likely to repay the geologist for prolonged and thorough investigation. The place for head-quarters should be that romantic little town Polperro, which may be best reached from Liskeard, and where

comfortable, though limited, quarters may be obtained at "The Ship." Mr. Loughrin, a ready guide and good naturalist, knows the geology of the district, and especially the localities where the fish-bed may be seen *in situ*.

As to the geological position of the beds, I was unable to determine them, as they appear to me to be faulted through the overlying Devonians of Plymouth, etc. Their dip too is reversed.

As regards mineralogical character, the fish-bearing slates look like some beds shown me by Mr. Pengelly at Mudstone Bay, near Torbay, and which are there faulted through the Torbay strata. In these Mudstone beds Mr. Pengelly, I believe, has found fish-remains. Mr. Etheridge, Palæontologist to the Geological Survey, considers the Polperro and Looe rocks are on the same horizon as the Lynton and Lynmouth strata, and I think this is very likely, more especially as at Lantiret Bay, between Polperro and Fowey, they pass into red slaty beds and yellowish grits, which are not unlike the base of the Countesbury and Foreland beds at Lynton; the Lantiret-Countesbury beds (if such they are) being denuded by the action of the sea near the junction with the bone-bed. My friend, Dr. Holl, thinks that the Polperro are not much above the Plymouth limestones.

PENDOCK, TEWKESBURY,
18*th March*, 1872. W. S. SYMONDS.

[In reference to the occurrence of Devonian Fish-remains at Lynmouth, it may be stated that Mr. J. Wetherell of that village has found a number of these in the rocks to the West of Lynmouth, where the blocks on the shore are exposed to the action of the sea. A notice of their occurrence was read by Dr. Fairbank to the Geological Society of London, Nov. 23rd, 1870, but the paper has not been published. See abstract, GEOL. MAG., 1871, Vol. VIII., p. 38. See also notice of Fish-remains in Cornwall, GEOL. MAG., 1868, Vol. V., pp. 247, 296, and 437.—EDIT. GEOL. MAG.]

GEOLOGICAL SURVEY APPOINTMENTS.—In our notice of last month we stated that Mr. Bristow had been appointed "Local Director" instead of *Senior Director* for England and Wales. We may add that Mr. H. H. Howell, F.G.S., has been promoted to the post of District Surveyor, and Mr. J. Clifton Ward, F.G.S., has been appointed a Geologist on the English staff.

OBITUARY.

WE regret to have to record the somewhat sudden death of Dr. Auguste Krantz, of Bonn-on-the-Rhine, who died from an attack of *erysipelas* during a visit to Berlin on the 6th April last. Dr. Krantz of Bonn represents one of the longest established and most able members of that rare class, a scientific merchant in rocks, fossils, and minerals—one, who not only knew accurately the commercial value of his collections, but was intimately acquainted with the scientific worth of every specimen which passed through his hands. Indeed, there are few museums which have not been enriched from his cosmopolitan repository. He leaves an immense and valuable collection both of Minerals and Fossils, the result of the labours of a long life devoted to these pursuits. Dr. Krantz was in his 62nd year. We believe it is the intention of Madame Krantz to carry on her husband's business, with which she is well acquainted.