

In this paper the author described in great detail the geological observations made by him during a journey, in company with Dr. Beke, in the Sinaitic peninsula.

26. "Giants' Kettles at Christiana." By MM. W. C. Brögger and H. H. Reusch. Communicated by Prof. Kjerulf, F.M.G.S.

The authors first refer to the popular notices about Giants' kettles, and describe in detail a number of these pits, which were examined and emptied near Christiania. They then mention the theories concerning their origin. From their own facts and reading they conclude that many of these remarkable pits were made at the bottom of "Moulines" during a glacial period, when the locality was covered with ice on the scale of existing ice in Greenland. The contents of these pits are traced to their parent rocks, which are higher up towards the great valley of Gulbrandsdal, in which glacial phenomena abound. They are inclined to conclude that moraine matter was washed off the glacier-ice from time to time, and left in the pits at last.

The Society then adjourned till the 4th November, 1874.

CORRESPONDENCE.

AMPHICENTRUM IN A NEW HORIZON.

SIR,—While carefully looking over a series of fossil teeth from the Sub-carboniferous Limestone, near Richmond, that had been lying in my cabinet for some time, I discovered two beautiful scales of *Megalichthys*, and an undoubted jaw of *Amphicentrum* nearly perfect. It is principally to the jaw that I desire to direct attention, for I am not aware that any remains of *Amphicentrum* have ever been found in the Limestone itself, though they have been obtained from the shales both above and below it, and are comparatively common in the shales of the Upper Coal-measures. This specimen is larger than the jaws usually found in the more recent formation, being half an inch long and one-eighth of an inch broad at the articular extremity; it presents two ridges, which are joined for some distance along the anterior portion of the surface of the jaw, but which diverge widely as they proceed backwards; these ridges are denticulated, and the denticles are most distinct on the posterior portion, where they resemble small rounded tubercles. The whole of the exposed surface is very plentifully covered with minute pores, which give it an irregularly granular aspect. I have no hesitation in ascribing this specimen to the same species as that found in the Coal-measures, and named *A. granulosum*, Young. The interest attached to this discovery is increased when we remember that the remains found in the Coal-shales must have belonged to fishes that existed in lakes, rivers, or estuaries, while the fishes that lived during the formation of the Sub-carboniferous Limestone must have roamed in salt water; *Amphicentrum* must, therefore, have lived both in fresh and salt waters, like some modern fishes.

The remainder of the teeth in this collection belong to *Cladodus*, *Cochliodus*, *Helodus*, *Petalodus*, *Pleuroodus*, and *Pristodus*, many of which fishes are also found in the Upper Coal-measures, and therefore existed in both waters. W. J. BARKAS, M.R.C.S.E., etc.

PALÆOZOIC STARFISHES.

SIR,—Will you allow me to add another Palæozoic Starfish to your very excellent list given in the January number of the *MAGAZINE*, and which you have probably overlooked. I refer to the genus *Cribellites*, G. Tate (*C. carbonarius*, G. Tate), Proceedings Berwickshire Nat. Field Club, v. p. 71, obtained from a Sandstone in the Carboniferous Limestone series, near Shilbottle, Alnwick.

EDINBURGH, August 10, 1874.

R. ETHERIDGE, JUN.

PROTOGINE.

SIR,—In a very recent number of the *Academy* mention is made of a fossil, in the Museum at Turin, of considerable interest: a fragment of protogine containing remains of plants, which are supposed to prove the sedimentary origin of that rock. But may not the so-called Protogine be a sedimentary rock formed of the elements of Protogine, and whose history is similar to that of some of the varieties of the so-called Arkose, and named by some French geologists *granite régénéré* or *recomposé*? Mr. Scrope, in his excellent description of the volcanic district of Central France, speaks of such a rock not easily distinguished from the Granite, of whose elements it is composed, and on which it lies. There is an example of this exposed in a quarry above the village of Royat, near Clermont-Ferrand.

Many granites may well be supposed to have had a sedimentary origin—for the ultimate analysis of certain sedimentary rocks agrees very closely with that of granite—but it is scarcely conceivable that they should still retain any such proof of such an origin as that which this fragment is said to possess. If this should meet the eye of Mr. Scrope, I would venture to ask him whether the fragment referred to may not improbably be supposed to belong to a rock whose origin is similar to that of the reconstituted Granite of the Limagne of Auvergne.

BULTHY HILL, MIDDLETOWN,
WELSHPOOL, July 29.

ROBERT GARDNER, JUN.

MISCELLANEOUS.

CAPE TOWN.—On June 30th an earnest effort was made by Mr. Fairbridge, Mr. C. Watermeyer, Mr. Dowling, Mr. Solomon, and other influential members of the House of Assembly, to induce Parliament to appoint a GOVERNMENT GEOLOGIST for the Colony. After an animated discussion, on the motion being put, twenty-three members voted for the appointment, and twenty-four against. A little more pressure next session ought to insure a good majority in favour of the appointment. Such a rich and important geological region as the Cape of Good Hope ought no longer to remain unexplored, or only in the hands of amateurs.