

part of the Oawaru formation. They consisted of fragments of species of the genus *Isis* and of *Corallium*. These were compared with those from the Australian Tertiaries, and the author inferred that both deposits were formed under similar conditions, and that they were at least homotaxial, whatever their precise geological age might be.

7. "On some Fossil Corals from the Tasmanian Tertiary Deposits." By Prof. P. Martin Duncan, F.R.S., V.P.G.S.

The author described a new species of *Dendrophyllia* possessing very unusual characters, the epitheca replacing the true wall, and giving the specimen a marked Palæozoic appearance. The fossil was obtained from a Tertiary deposit, and was associated with *Placotrochus deltoideus*, a well-marked coral, characteristic of a definite geological horizon in Victoria, namely the lower beds of the Cape Otway section, belonging to the Lower Cainozoic period. For this coral he proposed the name of *Dendrophyllia epithecata*. A much worn reef-coral was found associated with the above.

CORRESPONDENCE.

ON THE NOMENCLATURE OF ROCKS.

SIR,—In "A Handy-book of Rock Names" it was suggested that some of the rocks therein included as granitoid varieties of Liparite "ought probably to be classed among the granitic rocks."¹ This opinion seems also to be shared by Mr. J. W. Judd, F.G.S., as in his lately published description of the Ponza Islands,² he particularly mentions the granitoid rocks of that island and certain others in the Euganean Hills, Hungary, etc., which he considers to be of the same class as the North American rocks, for which Richthofen has suggested the name Nevadite, or granitic-rhyolite. If we accept this name, we add to our granites:

NEVADITE (Richthofen), a granitic rock, having a more or less crystalline felsitic matrix, inclosing crystals of quartz, one or two feldspars (orthoclase and albite or oligoclase), mica or amphibole.

This granitic rock represents the passage rock between trachyte and normal granite; similarly, as a siliceous elvanite, among the older rocks, is the passage rock between felstone and normal granite. There has, however, still to be discovered and described, the passage rocks between augite and granite; and such rocks I suspect to exist in the neighbourhood of Carlingford Lough, Ireland (parts of Cos. Armagh, Down, and Louth). In this area my colleague, W. A. Traill, has found either four or five distinct intrusive granites: first, Newry granite of pre-Carboniferous age; second, Mourne granite of post-Carboniferous age; third, elvanite, probably of the same age as the Mourne granite; and fourth and fifth, granitic rocks, possibly of Tertiary age. The latter rocks seem principally to occur in the Carlingford district on the south of the Lough, and are variable in character; some being similar in aspect to some of the typical elvanites; while

¹ A Handy-book of Rock Names, p. 71. London, Robert Hardwicke, 1873.

² GEOL. MAG. July, 1875, p. 298, et seq.

others are more or less coarsely crystalline rocks, in which pyroxenic minerals usually predominate. These rocks are protruded in larger or smaller masses, and allied to them are dykes of a maculated basic rock, one of the hybrid rocks of Durocher. These dyke rocks are very undecided in composition, and in places may be classed as dolerite, while in others they must be called either Felstone or Trachyte. These maculated rocks seem to graduate into Dolerite and Augite, similar to and probably of the same age as the Tertiary dolerites of the Co. Antrim. A typical elvanoid rock belonging to one of these groups (fourth or fifth) occurs at Goragh Wood (where it is extensively worked), coming up as a mass through the older Newry granite. This rock would answer the description for Nevadite, and possibly may be one of the granitic rocks belonging to the trachytes of Antrim. The rocks in the country about Carlingford Lough at present are only partially known; this, however, ought not to be for long, as they have been carefully examined by Mr. Traill.

In conclusion, I may mention that in the Mourne district to the north of the Lough, Mr. Traill found some of the dykes similar to and probably of the same age as the maculated dykes of the Carlingford district, that at their margins suddenly changed into a vitrioid rock, locally called Bottleite, that when examined by our colleague, F. Rutley, F.G.S., was pronounced to be Trachalite. This trachalite in places assumes a fibrous structure, apparently somewhat similar to that described in the obsidian of Ponza by Judd, and from fibrous it seems in places to pass into a minute columnar structure, the rock at the same time changing into anamesite or basalt. Judd seems to be of opinion that this fibrous structure is due to extreme pressure; with this I cannot agree, as it may occur in places where the dykes evidently occur filling shrinkage fissures. Many, indeed most, fibrous varieties of minerals and rocks, seem to be due to crystalline structure, the substance being deposited from solution; this, however, is not always the case, as in some instances the process seems to have been somewhat similar to drawing out heated glass into hairs. Such, however, could scarcely be due to pressure, and in many places where observed it looks as if the foundations of the dyke had given way, and that films between the consolidated portion of the dykes, or one of its walls, had been drawn out while the dyke was sinking.

WEXFORD.

G. H. KINAHAN.

GLACIAL EROSION.

SIR,—There are some points in Mr. Goodchild's interesting communications on Glacial Erosion (*GEOL. MAG.* pp. 323, 356), concerning which I should like to make a few remarks. As I have not the advantage of much knowledge of the principal district which he describes, I cannot attempt to discuss them in detail, but as most points in his description appear to me to be common to all similar districts that I have seen, I venture to offer two or three general criticisms.

He objects (p. 328) to the theory which attributes the formation of rock ledges mainly to fluvial action, because of (1) their height