form of dikes, or in dense masses from 50 to 700 feet in thickness overlying the strata (No. 4). They sometimes pass into syenite of so crystalline a form, that it may rank as a plutonic formation; and in one region, at Ploverfield, in Glen Cloy, a fine-grained granite (6 a) is seen associated with the trap formation, and sending veins into the sandstone or into the upper strata of No. 4. This interesting discovery of granite in the southern region of Arran, at a point where it is separated from the northern mass of granite by a great thickness of secondary strata and overlying trap, was made by Mr. L. A. Necker of Geneva, during his survey of Arran, in 1839. We also learn from late investigations by Professor A. C. Ramsay, that a similar fine-grained granite (No. 6 b) appears in the interior of the northern granitic district, forming the nucleus of it, and sending veins into the older coarse-grained granite (No. 2). The trap dikes which penetrate the older granite are cut off, according to Mr. Ramsay, at the junction of the fine-grained.

It is not improbable that the granite (No. 6 b) may be of the same age as that of Ploverfield (No. 6 a), and this again may belong to the same geological epoch as the trap formations (No. 5). If there be any difference of date, it would seem that the fine-grained granite must be newer than the trappean rocks. But, on the other hand, the coarser granite (No. 2) may be the oldest rock in Arran, with the exception of the hypogene slates (No. 1), into which it sends veins.

An objection may perhaps at first be started to this conclusion, derived from the curious and striking fact, the importance of which was first emphatically pointed out by Dr. MacCulloch, that no pebbles of granite occur in the conglomerates of the red sandstone in Arran, though these conglomerates are several hundred feet in thickness, and lie at the foot of lofty granite mountains, which tower above them. As a general rule, all such aggregates of pebbles and sand are mainly composed of the wreck of pre-existing rocks occurring in the immediate vicinity. The total absence therefore of granitic pebbles has justly been a theme of wonder to those geologists who have successively visited Arran, and they have carefully searched there, as I have done myself, to find an exception, but in vain. The rounded masses consist exclusively of quartz, chlorite-schist, and other members of the metamorphic series; nor in the newer conglomerates of No. 4 have any granitic fragments been discovered. Are we then entitled to affirm that the coarse-grained granite (No. 2), like the fine-grained variety (No. 6 a), is more modern than all the other rocks of the island? This we cannot assume at present, but we may confidently infer that when the various beds of sandstone and conglomerate were formed, no granite had reached the surface, or had been exposed to denudation in Arran. It is clear that the crystalline schists were ground into sand and shingle when the strata No. 3 were deposited, and at that time the waves had never acted upon the granite, which now sends its veins into the schist. May we then conclude, that the schists suffered denudation before they were invaded by granite? This opinion, although not inadmissible, is by no means