

and prove to be garnet of specific gravity 3.353. The crystals were examined by professor Cumming, and those of analcime analysed by him, and found to have a specific gravity of 2.293, or 2.394. Minute garnets in the form of rhombic dodecahedrons were found by the Rev. J. Harrison under the basaltic mass which overhangs the Tees, below Caldron Snout in Teesdale, in altered shale and limestone.

The segregation of mineral substances in rocks adjoining trap dykes is noticed by Mr. Milne, in his account of the geology of Dumfriesshire.

Since it thus appears that in many instances where the masses of igneous rock were considerable, perfect garnets have been produced by heat in the neighbouring sedimentary strata, though these were not in other respects re-crystallised, we turn with interest to the well known and general (though not universal) fact of the occurrence of garnets in the "ancient strata of gneiss and mica schist, as a valuable addition to the evidence brought by the crystalline limestone associated with the same strata, in favour of the opinion that the whole mass of these rocks has been subjected to a pervading high temperature. For the occurrence of garnets in mica schist and gneiss is entirely unconnected with any local effect of heat derived from particular masses of granite, greenstone, &c.; nor can their occurrence be often accounted for by any supposition of their having formed part of more ancient rocks, which by disintegration yielded them to the watery currents concerned in accumulating the primary strata; for they are in general *perfectly crystallised*, among fragmentary scales of mica, and worn and broken felspar and quartz, or granular aggregates of those substances, scarcely differing in arrangement or aspect of the parts from particular sandstones and coarse argillaceous slates. The term so commonly employed of "crystalline schists," for mica schist, gneiss, &c., appears to be very little justified by accurate examination; for in general, we