in North Wales his friend Roderick Impey Murchison (1792–1871) was engaged on the borders of the Principality in attacking the sedimentary (grauwacke) strata that emerge from under the base of the Old Red Sandstone, as will be more particularly noticed in Chapter XIII. He had not advanced far in this investigation before he in turn was confronted with many examples of what were evidently igneous rocks, intercalated among the stratified formations to which he was more specially directing his attention. In one of his papers, read before the Geological Society in 1824, he shows at what an early period in his inquiries he had detected proofs of true volcanic masses associated with these formations. He there remarks "that as some of the porphyritic and felspathic rocks alternate conformably with strata of marine origin, containing organic remains of a very early period, and as some of the layers in which such remains are imbedded have a base of true volcanic matter, the date of the origin of this class of rock is thereby fixed. These conformable alternations of trap and marine sediment establish a direct analogy between their mode of production and those replications of volcanic ejections and marine deposit which are now going on beneath the present seas; whilst they further explain the manner in which, in times of the highest geological antiquity, the porphyry-slates were arranged in parallel laminæ with the sedimentary accumulations of that age. The existence of certain strata containing organic remains, yet possessing a matrix composed in great measure of the same materials as the adjacent ridges of trap-rock, has strengthened the inference that some of the ebullitions