

remains occur; for, among the secondary strata, abounding in such remains, we often meet with alternating beds, in which they are never found; but we do not, on that account, class them with primary rocks. In arranging transition rocks, I most decidedly, place the English mountain limestones among them, as I have done in the former editions of this work. I know no circumstance in Geology that evinces more strongly the tenacity with which errors are cherished, when they have been some time entertained, than the determination of English geologists to separate mountain limestone from transition limestone,—in opposition to analogy, and to the universal opinion of geologists on the Continent. This separation, as a mere matter of classification, would be in itself of little importance; but, it has tended, more than any other circumstance, to perplex both foreign and English geologists, in their attempts to assimilate the rock formations of England, with those on the continent of Europe.

When a general attention was first excited, in this country, to the study of Geology, access to the Continent was extremely difficult, and we were left to explore, as well as we could, the geology of our own island, enlightened only by the dark-lantern of German Geognosy. Many characters were given of transition rocks, or flœtz or parallel rocks, founded on local observations in Germany, which did not apply to the rocks in other countries: it was found that the characters of our metalliferous limestone did not agree very well with either, and therefore English geologists have retained the name of mountain limestone; and the appellation of transition limestone was restricted to a lower bed, small in extent, and comparatively unimportant. When I first visited the Continent, and examined the cabinets of some eminent geologists, I was particularly struck with finding the *analogues* of our principal beds of mountain limestone, exhibited as types of true transition limestone. On my return to Paris the following year, I took specimens of our mountain limestone from Derbyshire, Westmoreland, Somersetshire, and Wales; and also of the lower limestones from Shropshire and Devonshire; and presented them to MM. Brongniart and Brochant. The whole of the specimens they recognised as transition limestones, and selected the encrinal and dark madreporic mountain limestones, as the true types, *par excellence, des Calcaires de Transition*.

The following arrangement of transition rocks comprises the lowest rocks in which organic remains occur, and those which are metalliferous or are associated with metalliferous rocks:—

TRANSITION CLASS (conformable).

1. Slate, including flinty slate and other varieties.
2. Greywacke and greywacke-slate, passing into old red sandstone.
3. Transition limestone. Mountain limestone.