

tinct impressions of a similar kind. There can be scarcely a doubt, that they were the real foot-marks of a digitated animal having short toes and claws, and the foot broad in proportion to its length. The breadth of the foot is above one inch. The part of the sandstone in Mr. Murray's possession, appeared to be composed principally of granular fragments of reddish quartz rock and felspar, with spots of chlorite or hornblende. As remains of reptiles have been found in the zetchstein or magnesian limestone on the Continent, which is as ancient as the new red sandstone, may not this animal have been a reptile allied to the tortoise?

Since the publication of the third edition of this work, Professor Buckland has, I believe, ascertained that the foot-marks are similar to the foot-marks which some species of tortoise make in sand.

Before concluding the account of the red sandstone, it may be proper to repeat, that in a formation of such complexity, it is often difficult to determine to which part of the series any particular bed belongs, unless its situation be indicated by some of the limestone beds, which sometimes occur in different parts of it. Thus, in Devonshire, the porphyritic beds and conglomerates may belong to the lowest, or to the middle series of sandstones: their position, with respect to the rocks on which they rest unconformably, does not assist in the discovery. In Yorkshire, the very lowest series rest on coal measures, as stated by Professor Sedgwick, in his masterly and luminous description of the geological relations of the magnesian limestone, from Northumberland to Nottinghamshire. At Charnwood Forest, the uppermost series rests on ancient granitic and slate rocks, as represented in Plate III. fig. 4. *a, a*. In the lowest beds, resting on the slate, I observed indications of their mode of formation, which I intend afterwards to describe. Professor Sedgwick first ascertained the true relations of the lower sandstone; but, twenty years before, in the first edition of this work, (1813, p. 270.) I gave a brief account of the Pontefract sand rock, as the last of the rock formations over coal, in a description of a section from the Yorkshire to the Lancashire coast:—"The magnesian limestone is succeeded by yellow siliceous sandstone, on which the town of Pontefract is built. We may consider this as the boundary of the low calcareous district: proceeding in a direction to Wakefield, we soon come upon the argillaceous coal strata of the middle district."

Professor Sedgwick arranges the red sandstone and magnesian limestone in an ascending series.

1. Lower red sandstone, yellow and red.
2. Marl slate and compact limestone.
- 2 *a*. Compact and shelly limestone, and variegated marls.
3. Yellow magnesian limestone.
4. Lower red marl and gypsum.
5. Upper thin bedded limestone.
6. Upper red sandstone.
7. Upper red marl and gypsum.