

minor stream in Derbyshire, Lancashire, and Yorkshire, and on the Thames, on the banks of its long sweeping curves where it passes through the Cretaceous escarpment between Appleford and Wallingford. In this way rivers must act and have always acted. It was during a residence on the banks of the Moselle in 1860 that I first learned this lesson.

On the banks of the Thames below Maidenhead, and on those of many other rivers, there are frequent terraces, often cut out in more ancient gravels, which it had previously deposited. This is one of the effects of the past and present progressive action of rivers, close to or at various distances from any river as it now exists, according to its size and other circumstances. Sometimes these terraces have even been cut in solid rock, but more frequently in Boulder-clay, or in old gravels. Cases such as the following are frequent. The hills or tablelands on either side are, perhaps, made of solid rock, and the terraces lying between the higher slopes and the rivers consist of gravel of comparatively old date. The river at one time flowed over the top of the highest gravel terrace, and winding about from side to side of the valley, and cutting away detritus, it formed the terraces one after another, the terrace on the highest level being of oldest date, and that on the lowest level, that bounds the modern alluvium, the latest.

Thus, in the following figure, No. 1 represents the solid rocks of a country, covered on the top of the tableland with Boulder-clay, No. 2, these bounding a wide valley partly filled with ancient gravel, No. 3, which originally filled the valley from side to side as high as the uppermost dotted line, 4; but a river flowing through, by degrees bore part of the loose detritus