

very different nature from those of the equivalent strata in the south of England, and though I have examined these sections from end to end, I shall quote from the measured sections of Mr. Etheridge, and give the latest information.

Resting directly on the Alum shales of the Upper Lias, there are sands intermingled with bands of shale, the whole being about 50 feet thick. All the fossils, which are generally scarce, are of marine species, and the whole of the strata are known to palæontologists as the zone of *Ammonites Jurensis*, and it is generally considered to be the equivalent of the Midford Sands of the South of England, or the Sands of the Inferior Oolite, as named by William Smith.

Above these come strata, locally known as Dogger, consisting of about 30 feet of brown sands, which are sometimes ferruginous and red. They are interstratified with shaley sands, and the whole contains numbers of the marine fossils of the Inferior Oolite.

On these there lie about 200 feet of sandstone, destitute as far as known of the remains of any kind of life, except a few *land plants*. Then comes about 25 feet of sandy limestone, known as the Millepore Bed, full of fossils common in the Inferior Oolite of the south. This is succeeded by about 80 feet of shales interstratified with sandstones, as yet destitute of the remains of molluscs, but what is of especial interest, there are at least eight *distinct bands of coal*, interstratified chiefly with the shales, and several other lines of carbonaceous matter more interrupted and broken. What adds to the importance of this fact is, that the coal-beds have not been formed of drifted vegetation, for underneath each bed there occurs an *underclay* or