

## RHÆTIC, OR PENARTH SUB-PERIOD.

THE attention of geologists has been directed within the last few years, more especially, to a series of deposits which intervene between the New Red Marl of the Trias, and the blue argillaceous limestones and shales of the Lower Lias. The first-mentioned beds, although they attain no great thickness in this country, nevertheless form a well-defined and persistent zone of strata between the unfossiliferous Triassic marls and the lower Liassic limestone with *Ostrea Liassica* and *Ammonites planorbis*, *A. angulatus* and *A. Bucklandi*; being everywhere characterised by the presence of the same groups of organic remains, and the same general lithological character of the beds. These last may be described as consisting of three subdivisions, the lowermost composed of alternations of marls, clays, and marly limestones in the lower part, forming a gradual passage downwards into the New Red Marls upon which they repose. 2. A middle group of black, thinly laminated or paper-like shales, with thin layers of indurated limestone, and crowded in places with *Pecten Valoniensis*, *Cardium Rhæticum*, *Avicula contorta*, and other characteristic shells, as well as by the presence, nearly always, of a remarkable bed, which is commonly known as the "Bone-bed." This thin band of stone, which is so well known at Aust, Axmouth, Westbury-on-Severn, and elsewhere, is a brecciated or conglomerated band of variable thickness which, sometimes a sandstone and sometimes a limestone, is always more or less composed of the teeth, scales, and bones of numerous genera of Fishes and Saurians, together with their fossilised excrement, which will be more fully and subsequently described under the name of Coprolites, under the Liassic period.

The molar tooth of a small predaceous fossil mammal of the *Microlestes* family (*μικρός*, *little*; *θησις*, *beast*), whose nearest living representative appears to be some of the *Hypsiprymnidæ* or Kangaroo Rats, has been found by Mr. Dawkins in some grey marls underlying the bone-bed on the sea-shore at Watchett, in Somersetshire; affording the earliest known trace of a fossil mammal in the