

added, by the transference of the Tilestones from the lower part of the Old Red Sandstone group, to the upper part of the Silurian group underneath; but in order the better to show how ichthyic discovery has in its slow course penetrated into the depths, I shall retain the divisions recognized as those of the system when that course began. The highest or most modern Silurian deposit, then, (No. 1 of the accompanying diagram,) is the *Upper Ludlow Rock*; and it is in the superior strata of this division that the bone-bed discovered in 1838 occurs; while the exceedingly minute vertebrate remains described by Professor Phillips in 1842 occur in its base. The division next in the descending order is the *Aymestry Limestone*, (No. 2;) the next (No. 3) the *Lower Ludlow rock*; then (No. 4) the *Wenlock or Dudley Limestone* occurs; and then, last and oldest deposit of the *Upper Silurian* formation, the *Wenlock shale*, (No. 5.) It is in the fourth, or *Wenlock Limestone* division, that the defensive spine described in the "Edinburgh Review" for 1845 as the oldest vertebrate organism known at the time, was found;* while the vertebrate organism found by Professor Phillips belongs to the fifth, or base deposit of the *Upper Silurian*. Further, the American spines of *Onondago* and *Oriskany*, described in 1846, occurred in rocks deemed contemporary with those of the *Wenlock* division. We next cross the line which separates the base of the *Upper* from the top of the *Lower Silurian* deposits, and find a great arenaceous formation, (No. 6,) known as the *Caradoc Sandstones*; while the *Llandeilo Flags*, (No. 7,) the formation upon which the sandstones rest, compose, according to the sections of Sir Roderick, published in 1839, the lowest

* "The shales *alternating* with the *Wenlock Limestone*." (*Edinburgh Review*.)