species of the various families of mollusca have been collected. The ancient forms of terebratulæ (*brachiopodous mollusca*), which first appeared in the saliferous strata (page 474) abound in the mountain limestone; and in some localities the rocks are formed of spiriferæ, productæ, and terebratulæ, conglomerated by calcareous cement. Bivalves, comprising about ten fluviatile or fresh-water species, occur in some of the coal-measures, forming regular layers, called by the miners *muscle-bands*, from the character of the shells (*uniones*), of which they are chiefly composed. The marine tribes are in a great measure confined to the limestone below the coal. But in Yorkshire, Professor Phillips has discovered a remarkable exception; in the coal-measures of that county, there is a thin layer of marine shells, intercalated between fresh-water strata. The nautili, ammonites, and other cephalopoda, amount to sixty species; and two very remarkable genera of this order appear:—the bellerophon (Tab. 91, fig. 4), which is a cephalopodous animal, having a shell without septa or partitions; and the orthoceras, or orthoceratite (Tab. 91, fig. 13). The latter may be described as a straight nautilus; it is a conical, chambered shell, having entire septa, pierced with a siphunculus; a reference to the remarks on the fossil nautilus will explain the nature and functions of this structure (see page 317). These shells are often of considerable magnitude; a specimen from Sweden, in my collection, is above twenty inches in