

Ammonite occurs in the Portland limestone above, in the state of casts, without any vestige of the shell. In some strata the shell is replaced by calcareous spar; in others by silex or flint.\* In the pyritous clays and shales of the Lias, the shell, and all its delicate internal mechanism, are transmuted into brilliant sulphuret of iron, forming the most exquisite natural electrotype imaginable. Polished vertical sections of these fossils often exhibit the inner cells filled with transparent white calcareous spar; sometimes with groups of crystals of sulphate of lime. The Ammonites of the Galt, and of the Kimmeridge Clay, are also frequently imbued with the same mineral.

There are about two hundred identified species of Ammonite in the British strata, ranging through all the secondary formations; they have not been found in the Tertiary deposits. They vary in size from half an inch to four feet in diameter.†

Certain species are restricted to particular formations, and are therefore oftentimes of essential aid in determining the relations of a deposit; for example, the *Galt* contains several species not found

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\* See the admirable figure of a chalcedonic specimen, exhibiting the foliated septa of an Ammonite, discovered by Miss Etheldred Benett, *Bd.* pl. 41.

† I have seen imprints of the large Chalk Ammonite, *A. peramplus* (Min. Conch. pl. 357.), on the shore off Rottingdean, and Beachy Head, which indicated even larger proportions.