that the whorls are contiguous and more or less embracing, the chambers numerous, and the siphuncle dorsal, or on the outer edge. The mouth is usually more or less bordered or lobed, and in some cases constricted at a longer or shorter distance below its margin. Several hundred forms have been figured as species, but some reduction of the number will most likely take place as we become more and more acquainted with the variations of form at successive periods of growth, the aberrations of specific characters from local influences, and not unlikely the even possible differences of the sexes.

The first English work in which the Ammonites communis was described and figured is, we believe, Sowerby's "Mineral Conchology," in which a variety is also figured under the title of Ammonites angulatus.

The beautiful fossil we have figured is a perfect specimen of the species, possessing, without the slightest damage, the constricted and bordered mouth of the adult individual. S. J. M.

MR. PRESTWICH'S REPLY
TO THE LETTER OF THE REV. C. KINGSLEY ON THE "HAGGERSTONE."

To the Editor of THE GEOLOGIST.

London, 22nd February, 1858.

SIR,—I quite agree with the Rev. Mr. Kingsley that the Haggerstone of the Isle of Purbeck is not a transported boulder, but merely a remnant *in situ* of some partially-removed Bagshot strata. I also think it probable that a great part of the Bagshot series of Hampshire and Dorsetshire is derived from the wear and destruction of a land of the older and crystalline rocks—such rocks as now form the surface of Cornwall and Brittany; and as the strata show greater fineness of material at White Cliff Bay than at Alum Bay, in the Isle of Wight, and as again they are still coarser around Poole Harbour, where they often pass into grits, it is probable that much of the material of which they are formed was drifted from a land nearer to the Poole area than to the Hampshire area. On prolonging a line from the latter to the former, it will point in a direction west and south-west; *i.e.*, towards an old land, of which Cornwall and Brittany remain as the non-submerged portion. The evidence afforded by the organic remains points to the same conclusion, for the plant remains are more numerous, and on the whole better preserved as we proceed from east to west, being few and indistinct at White Cliff Bay; more numerous as well as more distinct at Alum Bay; and still more plentiful at Bournemouth and around Poole harbour—the leaves having become necessarily more and more decayed as they were drifted away from the land in which they grew. At the same time, shell remains are very scarce around Poole, and are altogether absent at Alum Bay; but they appear in some abundance at White Cliff Bay, and are most numerous at Bracklesham Bay, where, farther out in the old sea, marine life flourished under

more secure and perfect conditions. At the same time, the old rivers of this Bagshot Sand Period traversed a land abounding probably in decomposing granitic and syenitic rocks, such as we now find in Cornwall and Brittany and also in the north-west of Spain, and bore down to sea, during certain periods, the fine kaolin clays and other impalpable soils of the district that now form the argillaceous beds and valuable clays of the tertiary lands of Dorsetshire and Hampshire; whilst stronger floods or currents drifted at intervals out into the same sea the coarser sediment and fine quartzose grits forming the other portion of the decomposing rocks before alluded to. I do not mean to say that the changes were periodic,— they were more probably secular, resulting from a change in the directions of the old rivers; for we cannot suppose the great thick beds of sand and of clay to be each the measure of a single period of flood or of calm. Each generally shows, on the contrary, a change maintained for a given time. Mr. Kingsley has called attention to a very interesting subject, requiring yet much labour to elucidate. I throw out these remarks merely as a guide to the direction in which I conceive they should tend; the first step being, not to go to a distance in search of a solution to a problem without first looking, as Mr. Kingsley did, for an explanation on the spot, and within the area, where the thing observed and questioned presents itself.

I am, Sir,

Your most obedient servant,

J. Prestwich.

NOTES AND QUERIES.

The Rev. C. Kingsley's Letter. (Page 75.)

We are under the impression that Mr. Prestwich, in some of his papers on Tertiary Geology, has referred the origin of the Dorsetshire clay beds and their accompanying sands to the action of certain rivers that traversed an old granitic and basaltic land, of which Brittany and Cornwall are remaining portions.

What Mr. Kingsley terms "a guess" is a very good hypothesis that would find much support in the published researches of Mr. Prestwich. The three lectures delivered at the Clapham Athenæum by the latter gentleman, and recently printed under the title of "The Ground beneath Us," contain an outline map of a portion of the old Tertiary lands, with much interesting information bearing on the question.

A very careful examination of the structure of the particular beds around Poole, conducted almost yard by yard, would be essential to the full comprehension and decision of the point Mr. Kingsley has mooted.

A great deal of special information on the physical history of the Tertiary sands and clays will be found in the numerous communications of late years, by Mr. Prestwich, in the Quarterly Journal of the Geological Society; and Mr. H. Sorby's article in the Edinburgh New Philosophical Journal on the old æstuary deposits of the Isle of Wight will also help in the research.

Such valuable interrogations as Mr. Kingsley's deserve every attention, and we believe our readers may anticipate a ready reply, in our next number,* from one

* An explicit reply from Mr. Prestwich having reached us just before going to press, we have inserted it on the preceding page; but as the above notice contains reference to published works on the subject, we have thought it best to allow it to remain.