must not expect many converts to his geological heresy unless he give us irresistibly convincing proofs. We are not willing to close our columns against any expression of opinion, however rash or wrong it may at first sight appear,—the wildest might turn out right at last; but we cannot permit any further discussion of these Portland fissures, unless positive sections to scale with the position of these mammal bones or some practical details are submitted to us.—ED. GEOL.]

Age of the Trinidad Strata.

DEAR SIR,—Perhaps you will allow me to make a remark in connection with a statement occurring in Mr. Guppy's paper on the Parian Formation of Trinidad. He mentions sandstones containing a Trigonia, Belemmites, and other fossils belonging to a period represented by a series of rocks on the continent of Europe, known as the Neocomian. What I wish to suggest is, that it is more than probable that the beds in Trinidad were not of Neocomian age, as Mr. Guppy says. Are we to suppose it probable, or even possible, that there was no variation of fauna in geological periods, and that the occurrence of two or three species of mollusca together in different localities, furnishes proof of their existence? Can geologists point to certain species of shells, and say, "Wherever these are found together imbedded, we know the rocks containing them to have been contemporaneous"?

Suppose the existing fauna of the world to become fossils, where should we find species to characterize it? By what two or three species would a geologist be able to distinguish the deposit from any that preceded it? Would he not be very likely to place the Australian beds as contemporaneous with our Oolites (the absence of Cephalopoda being the only remarkable difference)? and he would most probably, according to the system now pursued in geological classification, assign a different period to nearly every existing fauna. Geologists are, it seems, too much impressed with an idea of "contemporaneity." As Professor Huxley said, in his Address to the Geological Society, 1862, "it would have been very much better for geology if so loose and ambiguous a word as 'contemporaneous' had been excluded from her terminology, and if in its stead some term expressing similarity of serial relation, and excluding the notion of time altogether, had been employed to denote correspondence in position in two or more series of strata." Professor Huxley proposes to substitute the word "homotaxis" as more correct, and avoiding the production of an erroneous impression. Edward Forbes was in the habit of asserting that the similarity of the organic contents of distant formations was *primâ facie* evidence, not of their similarity, but of their difference of age. It would be well if geologists were more attentive to these facts. Many conclusions which are now held as undeniable would be shaken from their foundations, and geology would have a difficulty removed from her path which must sooner or later make itself known. E. R. LANKESTER.

Remarkable Coal-Plant.

SIR,—I have lately found in a seam of coal a stem of Sigillaria which throws considerable light on the compound character of some of our common Coal-plants, and tends somewhat to simplify a portion of fossil botany. The circumference of the specimen is 1 foot 6 inches, and after the removal

of a coaly envelope of outer bark, presents the irregularly-ribbed and furrowed surface, with occasional scars, so often seen on old Sigillariæ and their main roots. The central axis is cylindrical, and shows on its transverse section a *Medullosa* resembling one described by Cotta. The outside of this cylinder is striated longitudinally, like a Calamite, and not to be distinguished from the *Calamites remotus* of Brongniart. Next comes a cylinder of wedge-shaped bundles of barred vessels, in radiating series, parted by spaces resembling medullary rays, in all respects similar to that found in *Stigmaria*, *Sigillaria*, and *Anabathra*. Outside of the last, with a small interval, is another cylinder composed of vessels not barred, arranged in radiating series, and parted by large wedge-shaped bundles of vessels running towards the circumference. The structure of this outer cylinder is identical with that of *Calamodendron*, and its exterior has the irregularly-ribbed and furrowed appearance previously alluded to.

Yours truly,

EDWARD WILLIAM BINNEY.

Manchester, June 10th, 1863.

FOREIGN INTELLIGENCE.

The question of the contemporaneity of man with extinct species of animals has again been brought before the Academy of Sciences by a paper of M. J. Desnoyers, on the 8th ultimo, in which he announced his having met with materials indicating the co-existence of man with the *Elephas meridionalis*, in a deposit in the environs of Chartres, of greater age than the drift of the valleys of the Somme and the Seine. These indications are kinds of notches or streaks made by the human hand, which he has observed on many of the fossil bones of many of the great extinct mammals found in that deposit at Saint-Prest, near Chartres. M. Desnoyers also notices indications of the same character in bones from other localities. The conclusions deduced in his paper are—that fossil bones of *Elephas meridionalis*, *Rhinoceros leptorhinus*, *R. Etruscus*, *Hippopotamus major*, many of large and small deer, and other species of mammifers characteristic of the Upper Tertiary or Pliocene strata, discovered in an undisturbed deposit of that geological age, bear numerous and evident traces of notchings, scratches, and cuts which are perfectly analogous to those which have been observed on the fossil bones of other more recent species, some of which, now extinct, accompanied the *Elephas primigenius*, *Rhinoceros tichorhinus*, *Ursus spelæus*, *Hyæna spelæa*, etc., and others still living, such as the Reindeer and other deer, the Aurochs, etc., but remains of which are found commingled together in ossiferous caverns, in drift-beds, or in peat. Like vestiges have been met with on numbers of bones of existing species in the excavations for houses, and in Celtic, Celto-Roman, and Saxon graves. The marks noted on the fossil bones from the most ancient beds appear to have had, for the most part, the same origin as those on the more recent bones, and cannot be, so far as we yet know anything to the contrary, attributed to any other source than the act of man. Other striæ, finer, rectilinear, and inter-crossing, which are seen also in great number on the bones from the Pliocene deposit of the neighbourhood of Chartres and from other localities, are analogous to those seen on striated and rolled boulders of ancient and modern glaciers. The section at Saint-Prest, unanimously recognized as Upper Tertiary, or Pliocene, and anterior to all the