posit above, abounding in Cyclas, opercula of Bithynia?, and traces of other Planorbis-like shells, very small flint-pebbles and occasional peaty layers 4

Total 93

CORRESPONDENCE.

Age of Prehistoric Man.

Sir,—In Professor King's valuable paper on the "Glacial and Post-glacial Deposits," in the 'Geologist' of last month, the learned author of this most interesting paper says: "The genus Homo belongs to both the glacial and post-glacial period; it was represented as early as the close of the subaqueous epoch, or the beginning of the second subaerial division of the glacial period, by a low form or extinct species, a view strongly countenanced by the Neanderthal skeleton, as well as the rudely chipped flint-implements occurring in the elephant-gravels of Amiens, Hoxne, and other places. Probably a higher type existed at the same time, as indicated by the skulls found in the Engis caves near Liége."

I must venture to express an opinion that the theory which assigns the Engis and Neanderthal skeletons to any particular division of the glacial period is scarcely warranted by the facts before us. Without wishing to throw any doubt on the demonstrated antiquity of the Engis skull, of which the age is fully proven, in the words of Huxley, to carry us back to the "further side of the vague biological limit which separates the present geological epoch from that which immediately preceded it," I would wish to ask what is the geological or palæontological proof of the following propositions:—

1. That the Neanderthal skeleton was probably coæval with the remains from the Liége caverns.

2. That it was coæval with the "high-level" flint-implement gravels of the Somme valley or of Hoxne.

3. That the species of man to which it belonged is extinct, *i. e.* different from a race having the same general cranial character as some existing Australians.

Sir Charles Lyell, in his 'Antiquity of Man,' remarks justly that the Neanderthal skull has given rise to surprise "because, having no such decided claims to antiquity [as the skull from Engis], it departs so widely from the normal standard of humanity;" and concludes his remarks on the evidences thus: "If we conceive the [Neanderthal] cranium to be very ancient, it exemplifies a less advanced stage of progressive development and improvement. If it be a comparatively modern race, owing its peculiarities of conformation to degeneracy, it is an illustration of what the botanists have called 'atavism,' or the tendency of varieties to revert to an ancestral type, which type, in proportion to its antiquity, would be of lower grade."

The fact cannot be too prominently brought before us, and must again be borne in mind, that no flint-implements or any other works of art were found in the Neanderthal cave, and that the tusk of bear which was found

* Page 89. † Page 92.

at the same level as the human skeleton has not been identified with any recent or extinct species; likewise that the depth in the mud or loam (five feet thick in all) in which the skeleton was found has not been recorded.

A priori probability would lead biologists to infer that pithecoid man first existed on this planet; but in the present stage of the controversy it is, in my opinion, most hazardous to frame a table on the mere probability of a fact.

Yours very truly,

C. Carter Blake.

The Portland Fissures with Human Remains.

Sir,—Will you allow me to make some remarks on the letter of Mr. Jicks in the 'Geologist' of this month, in which he seems to doubt the correctness of the facts which I mentioned in my letter in the 'Geologist' of last month, that the remains of man and of extinct mammalia have been found mingled together in fissures of the rock of Portland Island, which fissures do not extend to the surface of the rock?

The whole question depends, of course, on the nature of evidence which I produced of the truth of these facts. My first evidence was the testimony of the writer of an article in 'Willis's Current Notes' for the month of August, 1852, who had himself visited Captain Manning, at Portland Castle. He states expressly—on the authority, of course, of Captain Manning—that on several of the ledges, in the fissures of the Portland rock, which do not extend to the surface-soil by 5 or 10 feet, a number of bones of all kinds of animals have been found, including those of the human species. The truth of this statement has been in the fullest manner confirmed to me by Captain Manning himself, who showed me, at the Castle, his collection of bones, which were those of men, the elk, the reindeer, the elephant, etc. He said that the fissures in which they were found did not extend to the surface of the rock. He also said, what is stated in 'Willis's Current Notes,' that Dr. Buckland, who visited him at the Castle, being first attracted to the island by the discovery of a fossil boar's head, having doubts as to the place where the bones were found, accompanied him to the fissure, where a lad was let down, who brought up more of the bones in his presence.

The next evidence which I produced was an article in the 'Times' of the 1st of last January, relating to the fortifications recently built in Portland Island. The article states that in these fissures, "commencing about 20 feet below the surface of the ground, human bones have been found with those of wild boars, and horns of reindeer, not fossilized, but with all their osseous structure as perfect as if they were not fifty years old." The high preservation of these bones proves that they must have remained entirely excluded from the air from the time that they entered the limestone formation to the period of their discovery.

Can the facts which I have mentioned be disproved,—that human and mammalian bones have been found in fissures of the Portland rock, which do not extend to the surface of the rock? If these facts are true, which may be easily ascertained by any person's visiting the island, they prove, beyond a doubt, that the human and mammalian bones must have been embedded in the rock *before* its consolidation, and consequently, that the men and animals to whom they belonged must have inhabited some other dry land, probably now destroyed.

Again, what can explain the association in the fissures of the bones of the reindeer, an arctic animal, with those of a tropical animal, the elephant,