

these. Certainly at the present day there are no gaping chasms on the surface of the island, and this may have led to its being commonly said that the gullies are closed at the top. It seems probable that, where the massive Portland rock is capped by slaty stone, the latter may have continued to roof the fissures, and, as a rule, the fissures may not affect the Purbecks; but I cannot speak on this point from observation.

In the fissure which I entered I was stopped by a true talus of surface-mould, abounding in Helices and Cyclostomæ, with a few splinters of bone. These materials had most evidently been gradually introduced through some orifice in the upper surface by the action of rain. I may have traversed the fissure for about fifty yards. The true bottom was not visible; for a quantity of loose stones had been cast into it. The part of it where the bones were found is now choked up. I should conclude, from the description which Mr. Maddock gave me, that the bones, in falling from above, lodged upon a ledge of rock; and probably, if the base of the fissure were reached, many more would be found there.

Among these bones were no human bones. I did not see any such that had been found in the fissures in the Government works, but I saw a sling-stone, formed of Portland flint, which Lieutenant Home assured me he had himself taken from a gully, at a depth of 80 feet from the surface. He also told me that he had once in his possession a brecciated mass of bones, containing among them human bones; and that it had been found in a gully in making the ditch of the fort, but that it had been stolen.

The explanation given above of the cause of the formation of the fissures is that which commends itself to the intelligent persons engaged upon the Government works, and was suggested to me in the first place by Mr. Home. I subjoin a sketch of the top of a gully on the north-west side of the Vern Hill, looking north.

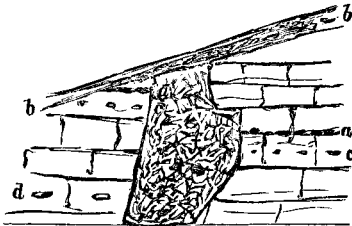


Fig. 3.—Section of gully, N.W. side of Vern Hill, Portland.

In this case the gully was evidently once open, though now filled with rubble. The beds have sunk about two feet on the east side.

I remain, Sir, faithfully yours,

O. FISHER.

Elmstead, Colchester, June 17th, 1863.

#### *The Portland Ossiferous Fissures.*

SIR,—With reference to Mr. Allen's letter in your number for last month, I beg to say that I do not doubt the truth of his statement, but merely the soundness of the inferences drawn therefrom. I presume he is aware that in what he says about the "deluge" and the bones of extinct animals he is opposed to some of the most advanced geologists of the present day, in the opinion of whom the idea of a "universal deluge" must be given up, and who also think that the fossil remains of elephants, rhinoceroses, etc., belonged to species peculiarly adapted to exist in a temperate and even a comparatively arctic climate, of which the "Siberian mammoth" and woolly rhinoceros mentioned by Professor Owen, in his 'History of British Fossil Mammalia,' are appropriate examples. Hoping you will excuse my thus trespassing on your valuable space,

I remain, yours truly,

CHARLES JECKS, JUN.

Woodlands, Thorpe, near Norwich, June 8, 1863.