

there are numerous lateral fissures of various dimensions, which also contain the precious metals. The fissures near the eastern extremity converge inwards in a slanting direction towards the central area of the great central fissure vein; while those on the western side also converge inwards to the centre from the opposite direction, indicating that the centre of the main fissure is the focus or principal body of the precious ore. The great main fissure extends from the Buffalo Mine on the east to the west for 8,000 feet, and gold and silver are present throughout the entire distance. In a tunnel cut on the bank of the Yuba River to the south of Atlanta Mountain, the precious ores were found at a depth of 1,600 feet beneath the surface.

It will thus be seen that here there is a continuous lode rich in the precious metals 8,000 feet in length and 1,600 feet in depth, and where proved by the Yuba tunnel 70 feet broad. If the lode is as broad throughout its entire length, an important problem is suggested as to how such a fissure became charged with the precious metals.

NO. XVI.—A SHORT NOTICE OF THE LATE MR. JAMES COUTTS.
By JOHN YOUNG, F.G.S., V.P.

[Read 15th April, 1886.]

I AM sorry to have again to bring before the Society this session another loss it has sustained by the death of our respected friend Mr. Coutts, which took place on the 19th March last, in the 76th year of his age. He was a member of the Society for the last eleven years, but was long previously known to many of us who were also members of the Natural History Society, of which he had been a member for nearly 20 years. Although his studies in natural science were taken up only after he had considerably passed the prime of life, yet he showed an enthusiasm in pursuit of them that was worthy of a younger frame. During all his membership he was a most regular attender of the meetings and excursions, and his familiar form will on these occasions be missed by all his friends.

Mr. Coutts attended my Class of Geology in the Mechanics' Institution for nearly ten sessions, and at the age of 66 or 67 he presented himself at the Government Science and Art Examina-

tions, gaining from the Department a 2nd class certificate for geology, an honour which he was deservedly proud of.

He wrote several short papers on geological subjects, which were printed in our *Transactions*, or in the *Proceedings* of the Natural History Society, and was a constant exhibitor at our meetings of a great variety of specimens, invariably accompanied by a note of remarks which he had worked up in the most painstaking manner. During the last few years, as will be remembered, he, meeting after meeting, brought under the notice of members many of the choicer and rarer fossils from the collection of his friend, Mr. Andrew Patton, of East Kilbride, and only last year he spent a great amount of time and trouble in the preparation for the *Transactions* of a list of Carboniferous fossils found in East Kilbride, which was appended to Mr. Patton's paper on the Geology of that district. [See vol. vii., pt. 2, p. 324.]

Mr. Coutts' last appearance before the Society was at the opening meeting of this session, when he read a short notice of the life and work of his recently deceased friend and our esteemed corresponding member. [See page 171.]

Although it had been noticed by his friends that during the past year Mr. Coutts' health and strength had considerably failed, yet as he stood here that evening testifying to the worth of his departed friend, there was no one amongst us whose mind was crossed by the thought that Mr. Coutts himself was so shortly to be called away, and before the close of the same session. It is pleasing to us to know that his interest in all matters geological continued to the last, and that so long as he was able he beguiled his leisure hours by naming and arranging his small geological cabinet, which was almost entirely the fruits of his own collecting.*

In conclusion, I have to ask you to pass a vote of condolence with Mr. Coutts' widow and family, with an expression of our regret at the loss they have sustained, and also that our Secretary should send an extract from the minutes to Mrs. Coutts.

* Since the date at which this paper was read, Mr. Coutts' cabinet has passed into the possession of the Museum of Science and Art, Edinburgh.