

of paired resultant strains, acting along N.E.—S.W. and N.W.—S.E. directions, the precise directive angle varying in proportion as the east-west or the north-south stresses due to crust compression were the more powerful, and also in accordance with particular local modifications of the regional strains. At the close a vote of thanks was cordially given to Mrs. Gordon.

#### CORRESPONDENCE.

##### EOLITHS FROM SOUTH AND SOUTH-WEST ENGLAND.

SIR,—Kindly insert the following correction and addition to my paper on "Eoliths from South and South-West England" in the March number.

1. *Corrigendum*.—Instead of Bat's Corner read *Kettle's Corner*, Parsonage Farm (Chapel Croft Field), near Ash. Mr. Harrison informs me that it is so marked in the 6 inch map of the district. Bat's Corner was the name given me on December 24th, 1894, when I visited the pit with Mr. Harrison, but as tenants change so do the names of their farms. Probably Kettle was the name of a former tenant.

2. *Addendum (Bibliography)*, with sincere apologies for the omission.

1899. *Newton, E. T.*—Presidential Address to the Geologists' Association, February 5th, 1897: Proc. Geol. Assoc., vol. xv, pp. 69–72.

1902. *Haddon, A. C.*—"Early Man and his Life," third paper: National Home Reading Union Magazine, p. 45.

PLYMOUTH, March 6th, 1903.

R. ASHINGTON BULLEN.

##### THE ORIGIN OF THE ARCHÆAN ROCKS.

SIR,—Some references to the Archæan rocks made by Mr. G. W. Bulman in the GEOLOGICAL MAGAZINE for March (p. 126) call for a word of comment. I do not understand what he means by "pre-Archæan deposits." There are no rocks older than the Archæan, whether we use the term as equivalent to "pre-Cambrian" or limit it to the "Fundamental Complex." Then he remarks that "Geologists are yet sorely perplexed with the problem of the Archæan rocks. They have not yet decided whether they are metamorphosed ordinary sediments, [or ?] part of the original solidified crust of the earth, or chemical precipitates from a hot primitive ocean." But these alternatives are *not* the problem. There is no perplexity whatever about a large proportion of the Archæan rocks. The Longmyndian and Torridonian are known to be mainly sedimentary; the groups identified as Pebidian, Uriconian, and Charnian are known to be predominantly volcanic; and the rock-masses called Malvernian and Hebridean are generally admitted to be igneous plutonic. A similar variety of origin has also been ascertained with respect to many of the Archæan rocks of North America, Bohemia, and elsewhere. There are, of course, some Archæan rock-groups whose genesis has not yet been determined with certainty; but these are only a *part* of "the problem of the Archæan rocks."

C. CALLAWAY.

CHELTENHAM, March 5th, 1903.

FLINT IMPLEMENTS FROM THE FAYUM, EGYPT.

SIR,—I have read with great pleasure the paper by Mr. Hugh J. L. Beadnell, in the February number, on “Neolithic Flint Implements from the Northern Desert of Fayûm, Egypt.”

I was in Egypt last year, and brought home a collection of flints from the Fayum and other districts. I bought my Fayum specimens from the Arabs. The principal locality was Kasr Qurum. I have all the types figured by Mr. Beadnell except Plate IV, Fig. 2, and many not figured by him.

My specimens are all of the finest workmanship, the production of a race who could only have attained to this degree of perfection after a long period. I have also a number of ‘wideners’ from 4 to 6 inches long, of exquisite workmanship, and mostly for left-handed boring.

I have, however, a number of implements of entirely different types, formed of an impure sort of chert or quartzose flint; these are deeply patinated, and weather-worn to an extent I have never seen in flints of any kind, not even eoliths. They are probably of early Neolithic age, before man had acquired the art of putting a keen, sharp edge on his implements.

JAMES NEILSON.

MILNBANK HOUSE, DERMISTON, GLASGOW.

OBITUARY.

DR. HUGH EXTON, F.G.S.

DR. HUGH EXTON, F.G.S., was President of the South African Geological Society at Johannesburg from its commencement in 1895; but in December, 1902, retired from the chair on account of ill-health, and died 7th January, 1903. His exertions whilst serving as Medical Officer to H.M. troops during the late war, and afterwards in military camps at Ladysmith and Harrismith, seriously affected his health; and we learn that the meeting of the Society in the second week of January, 1903, was postponed in respectful consideration of his death at the time. He had retired to King William Town, British Kaffraria, on his resignation. Dr. Exton was elected a Fellow of the Geological Society of London in 1883; he presented a collection of the Auriferous Conglomerate of the Witwaters Rand, with a note and plan, in 1899 (see *Quart. Journ. Geol. Soc.*, vol. xlv, Proc., pp. 3 and 4). In 1901 he communicated to the *GEOLOGICAL MAGAZINE*, November and December, pp. 509 and 549, some interesting notes on the geology of the neighbourhood of Ladysmith, and further notes on the geology near Harrismith were expected.

FREDERICK WILLIAM JUSTEN, F.G.S.—We deeply regret to record the death of Mr. F. W. Justen, only son of Mr. Frederick Justen, F.L.S. (Dulau & Co.), our publisher. Mr. Justen, who died on March 16th at the early age of 42 years, was an expert in scientific literature, and his loss will be severely felt by his father and his many friends.