uplands (Ardennes). Relation of topography to geological structure; the northern lowlands a Palæozoic platform covered by Cretaceous and Tertiary; the Namur Basin a Devono-Carboniferous synclinorium; the Ardennes also a Devono-Carboniferous synclinorium with a Silurian ridge on the north and Cambrian "massifs" on the south. Geological history of the country; pre-Devonian rocks; the great Devonian transgression. The late Carboniferous (Armorican or Hercynian) folding. The Ardennes—London ridge and its influence on Mesozoic and Tertiary stratigraphy. The Cretaceous transgression. The Anglo-Franco-Belgian Basin of Eocene times. Pliocene: Diestian and Lenham Beds. Tectonics — three great epochs of folding; late Silurian, late Carboniferous (Armorican), Cretaceo-Tertiary (Alpine). The Brabant stable block and its influence on Armorican folding. Some notes on the districts to be visited.

"Possible causes of Mountain Folding." By A. J. Bull, M.Sc., F.Inst.P., F.G.S.

Salient features of the earth's crust, the lines of folded mountains bordered by large regions of no compression. Occasional evidence of tension. Fjords. Fissure eruptions.

Explanations of folding by (*a*) the assumption that the earth is cooling, (*b*) periodic contraction of the earth due to molecular rearrangement, (*c*) penetration of oceanic water into the crust, (*d*) loading of the crust by terrigenous deposits and other hypotheses. Difficulties of accepting some of these explanations.

Other factors to be considered. Radio-active content of rocks. Isostatic adjustment. Strength of the crust. Crustal tides. Probable condition of the earth's interior. Heterogeneous composition of crust. Suggested explanation of folding as being due to underdrag of crust by convective currents in the asthenosphere, produced by local heating and expansion, enhanced possibly by changes of crystalline form in the cooler parts.

OBITUARY.

M. Rene Fourtau.

By the death of M. René Fourtau, palæontological science has sustained a severe, and in some respects, irreparable loss. Born on 26th February, 1867, he was mainly educated at the College of St. Caprais, Agen. He came to Egypt in 1888, and was associated with the railway administration for some years, being for a while in control of boring operations undertaken in the Delta in connexion with bridge construction. He early became interested in the problems of Egyptian geology, and came into contact with leading palæontological authorities, such as M. de Loriol.

When the Geological Survey of Egypt was founded in 1896,

M. Fourtau at first adopted a somewhat critical attitude. As he became acquainted with those who formed its staff, he realized that they were as keenly interested in geological study as he was himself, and this led first to mutual recognition and then fuller co-operation. Acting on a suggestion made by one of the authorities at the Natural History Museum, the collection of sea-urchins in the Cairo Geological Museum was submitted to him for identification and study. The satisfactory results obtained led to his being given the rearrangement of the fossil collections at the Museum, and finally to his appointment as Palæontologist to the Geological Survey of Egypt. Here he proved a most helpful colleague, examining the rich collections which the Petroleum Research parties sent in from the field, and promptly sending them the results. The catalogues of the Invertebrates in the Cairo Geological Museum, published during this period, and illustrated by the well-known artist, M. Gauthier, of Sens, remain a permanent monument to his industry and scientific acumen.

In 1916 he entered the field of vertebrate palæontology under interesting circumstances.

The Denbighshire Yeomanry were camped at Moghara, 80 miles south-west of Alexandria, a locality already well known to geologists as an important source of Miocene fossil vertebrates. It was not long before the officers and men discovered these relics of the past, and were greatly puzzled at their presence in so arid a waste. A large crocodile skull was sent to the Cairo Geological Museum, and as a result the writer went to Moghara and explained the nature of the occurrence to the troops. It was also arranged with Col. Lloyd, the officer commanding, for the collections to be housed at the Geological Museum pending decisions as to their final destination, and M. Fourtau was deputed both to secure their safe transport, and make further examinations of the exposures. It was also decided that he should issue a description of the collections while they were still assembled at one spot, the result being the interesting memoir (Contribution à l'Étude des Vertébrés Miocènes de l'Égypte, Cairo, 1918), of which advance copies were issued during the war.

Fourtau also carried out several other important fossil collecting expeditions as part of his duties, these including visits to the Wadi Natrun and a closer examination of the region of North Sinai, made notable by M. Barthoux' discovery of Jurassic strata.

Special leave had been granted him to enable him to study the palæontological results, in Europe, Professors de Stifani and Stefanini placing working rooms at his disposal for this purpose in the Istituto Superiore di Geologia of Florence. He had scarcely commenced his work there before he fell ill, his death occurring on 2nd November, 1920.

Fourtau was gifted with a remarakble memory, and great powers or work. His enthusiasm brought him in close touch with a number of earnest workers in his own branch of science. He has left behind him two memoirs dealing with the North Sinai sea-urchins, which it

is hoped to publish, as also an account of the geology of the neighbourhood of Cairo and other papers.

W. F. HUME.

Frederick T. Maidwell, F.G.S.

BORN 26TH MARCH, 1872. DIED 1ST MAY, 1921.

WE regret to announce the death of Mr. Frederick T. Maidwell, F.G.S., which took place suddenly on 1st May, at Runcorn, in his fiftieth year. He was born in 1872 at Gunnerside, in Swaledale, and a few months after his birth his parents removed to Coventry, where his father held the position of head master of St. Mark's New School until his death in 1882. The following years were full of difficulty and struggle, but after a short time spent in teaching at his father's old school, and later at the Bablake Secondary School, Coventry, he became interested in handicraft subjects, and qualified as an instructor. He held positions at Wolverhampton and Dudley, and finally in 1908 removed to Runcorn on accepting an appointment under the Education Authority there, which he retained until his death. He rendered useful service to the town in many ways, serving on the Free Library Committee, and also taking a very active interest in the local volunteer movement during the period of the war. Geology claimed a great portion of his leisure, and while in the Midlands he was an ardent member of the Warwickshire Naturalists' and Archæologists' Field Club, and several of his early papers are printed in its proceedings. He was indefatigable in observing and recording particulars of sections, old and new, in the Liverpool district, and published several papers in the Proceedings of the Liverpool Geological Society, of which he was a valued member, most of them relating to the Triassic strata of Cheshire. He also devoted some time to the study of the fossil footprints of the Trias, the results of which he recorded in two of his most important communications, in which he gave very careful descriptions of a number of Rhynchosauroid types, including webbed forms. His death removes an earnest, patient, and painstaking worker, greatly esteemed by all who knew him. He leaves a widow and three children.

T. A. J.