

to the work of the Geological Survey in these and in other practical questions.

The Ballot for the Council and Officers was taken, and the following were declared duly elected for the ensuing year:—*Council*: W. T. Blanford, LL.D., F.R.S.; Professor T. G. Bouney, D.Sc., LL.D., F.R.S.; Sir John Evans, K.C.B., D.C.L., LL.D., F.R.S.; E. J. Garwood, Esq., M.A.; J. W. Gregory, D.Sc.; Alfred Harker, Esq., M.A.; F. W. Harmer, Esq.; R. S. Herries, Esq., M.A.; Henry Hicks, M.D., F.R.S.; Rev. Edwin Hill, M.A.; G. J. Hinde, Ph.D., F.R.S.; W. H. Hudleston, Esq., M.A., F.R.S., F.L.S.; Professor J. W. Judd, C.B., LL.D., F.R.S.; H. W. Monckton, Esq., F.L.S.; F. W. Rudler, Esq.; Professor H. G. Seeley, F.R.S., F.L.S.; A. C. Seward, Esq., M.A., F.R.S.; Professor W. J. Sollas, M.A., D.Sc., LL.D., F.R.S.; A. Strahan, Esq., M.A.; Professor W. W. Watts, M.A.; W. Whitaker, Esq., B.A., F.R.S.; Rev. H. H. Winwood, M.A.; A. S. Woodward, Esq., F.L.S.

Officers.—*President*: W. Whitaker, Esq., B.A., F.R.S. *Vice - Presidents*: Henry Hicks, M.D., F.R.S.; Professor J. W. Judd, C.B., LL.D., F.R.S.; Professor W. J. Sollas, M.A., D.Sc., LL.D., F.R.S.; Rev. H. H. Winwood, M.A. *Secretaries*: R. S. Herries, Esq., M.A.; Professor W. W. Watts, M.A. *Foreign Secretary*: Sir John Evans, K.C.B., D.C.L., LL.D., F.R.S., F.L.S. *Treasurer*: W. T. Blanford, LL.D., F.R.S.

CORRESPONDENCE.

EGYPTIAN CRETACEOUS SHELLS.

SIR,—Dr. Blanckenhorn, of the Geological Survey of Egypt, has recently favoured me with some detailed evidence, which goes to prove that a part of the Cretaceous mollusca from Egypt described by me in the GEOLOGICAL MAGAZINE for 1898, p. 394, as having been collected in districts eastwards of the Nile and Nile Valley, are of Campanian age, and not Turonian. This renders it desirable to regard the following species as Campanian: *Ostrea Lyonsi*, *O. Villei*, *Protocardia biseriata*, *Trigonoarca multidentata*, and *Arctica Barroisi*. Dr. Blanckenhorn further calls attention to the Cretaceous rocks of Abu Roasch, which he recognizes as belonging to the two horizons of Turonian and Santonian, and not to the former only, as indicated in my paper. In support of this age I alluded to the discoveries of M. Jules Welsch among similar deposits in Algeria; and without repeating this information I feel justified, in the absence of more important palæontological evidence from this area of Egypt, in considering these beds as Turonian. R. BULLEN NEWTON.

SUB-OCEANIC PHYSICAL FEATURES.

SIR,—I must reply to Professor Hull's very kind letter that I do mean, that it may have been in consequence of their original union on two sides of a rent, that the physical features on the opposite sides of the Atlantic possess a remarkable similarity. I wish to inquire of those who are studying the submarine declivities, whether or not this similarity is more marked in them than in the coastlines.

It was expressly for the purpose of eliciting opinions upon this question that I wrote. Professor Hull gives his, that such a rent is impossible. I should imagine that he has not fully considered my

“Speculation on the Origin of Ocean Basins,” or he would have given his reasons for saying so. The matter appears to me to turn upon the question, whether there was a hardened crust upon the earth at the time of the genesis of the moon, or whether there was not. If there was, I do not see any impossibility in my explanation of the origin of the oceans; and it agrees with several remarkable facts, such as the greater density of the crust beneath the oceans, and this very point of the apparent rent between the Eastern and Western Hemispheres. It is obvious that, if my speculation is correct, we need go no further to account for the origination of these great declivities.

I would respectfully ask geologists interested in this subject to refer to my article in *Nature*, vol. xxv (1882), p. 243, or to chap. xxv of my “Physics of the Earth’s Crust,” second edition, that they may see what my speculation really is before rejecting it.

O. FISHER.

HARLTON, CAMBRIDGE.
March 7, 1899.

THE EASTERN SLOPE OF THE NORTH ATLANTIC BASIN: IS IT
A STEEP OR A GRADUAL INCLINE?

[The Editor has received the following note from Rear-Admiral Sir William Wharton, K.C.B., F.R.S., the Hydrographer of the Admiralty; and as it bears directly upon the nature of the so-called ‘escarpment’ of Professor Hull, referred to by Mr. A. J. Jukes-Browne in his recent letters, and also to Mr. Hudleston’s important article, we think it will be perused with great interest by the readers of the GEOLOGICAL MAGAZINE.—EDIT]

SIR,—In reply to your question as to what is known of the steepness of the slope of the eastern margin of the North Atlantic Basin, and whether there are on it any submarine vertical precipices 7,000 feet or so in height, I can only say, in regard to the latter, that while no man could affirm positively that none may exist, it is certain that there is not a shred of evidence in their favour.

In 1862, in the early days of telegraphy, H.M.S. “Porcupine,” commanded by Captain Hoskyn, was sent especially to investigate this edge of the deep water west of Ireland, with a view to ascertaining whether the slope was such as would prevent the maintenance of a submarine cable laid on it. He searched the edge for a distance of 180 miles, and perhaps the following sentences from his report may be taken to sum up his results so far as your inquiry is concerned :—

“Much pains were taken, by sounding at short intervals, to discover if anything like a precipice existed. Our steepest incline shows a difference of level of 3,060 feet in 2·7 miles, or about 19 feet in 100 feet. On the parallel of 51° 20′ we have a dip of 7,680 feet in a distance of 14 miles. The intermediate soundings give no evidence of a precipice, but a mountain of this height on the land would present an imposing appearance, with perhaps some steep escarpments.”