

apophyllite in three types, square, tabular, and pyramidal; pyrrhotite in thin hexagonal plates; tourmaline in black, brown, green, blue, and pink crystals, sometimes zoned; garnet in colourless cubo-dodecahedra and trapezohedra, sometimes including wollastonite hairs; wollastonite abundantly in pure-white fibrous masses.—J. B. Scrivenor: On a Calcium-iron-garnet from China. It is interesting on account of its unusually easy solubility in hydrochloric acid without ignition.

### III.—ZOOLOGICAL SOCIETY OF LONDON.

November 25, 1913.—Professor E. W. MacBride, M.A., D.Sc., F.R.S., Vice-President, in the Chair.

Mr. T. H. Withers, F.G.S., contributed a paper, communicated by Dr. W. T. Calman, F.Z.S., based upon a large series of Cirripede remains from the Cenomanian Chalk Marl in the neighbourhood of Cambridge. The greater number of the specimens are referred to two species of the family Pollicipedidæ, and add materially to our knowledge of the phylogeny of the pedunculated Cirripedes. Both forms are remarkable for their advanced form of scutum, in which the umbo is sub-central, and show that the transition of the scutal umbo from an apical to a sub-central position was acquired independently by unrelated forms in distinct lines of development.

## OBITUARY.

SIR ROBERT STAWELL BALL, LL.D., F.R.S., F.R.A.S.

BORN JULY 1, 1840.

DIED NOVEMBER 25, 1913.

SIR ROBERT BALL was born in Dublin and was the son of Dr. Robert Ball, an ardent naturalist and Director of the Museum in Trinity College. After graduating as University student in Mathematics in that college, Robert Ball (the younger) was appointed Astronomer to the 3rd Earl of Rosse at Parsonstown in King's County. He was elected a Fellow of the Royal Society in 1873, and eventually became Lowndean Professor of Astronomy and Geometry in the University of Cambridge and Director of the Cambridge Observatory. To geologists he was known chiefly as the author of a small volume on *The Cause of an Ice Age* (1891), a work reviewed by the Rev. Osmond Fisher (*GEOL. MAG.*, 1892, p. 231). He described it as containing "a very clear and agreeably written exposition of the commonly received Astronomical theory of Glacial periods", as adding "fresh force to Dr. Croll's hypothesis", but as "rather too triumphant" from the geologist's point of view. Since then Croll's hypothesis has been practically demolished by Mr. E. P. Culverwell in the pages of this Magazine (1895) and the Astronomical theory of the Ice Age has been abandoned. Sir Robert Ball was likewise author of a work entitled *The Earth's Beginning* (1901).