

THE
GEOLOGICAL MAGAZINE.

VOL. LVII OF WHOLE SERIES.

JANUARY--DECEMBER, 1920.

THE
GEOLOGICAL MAGAZINE

OR
Monthly Journal of Geology.

WITH WHICH IS INCORPORATED
THE GEOLOGIST.
GEOLOGY DEPARTMENT,
BIRKBECK COLLEGE, E.C.4

EDITED BY
HENRY WOODWARD, LL.D., F.R.S., F.G.S., F.R.M.S.,
LATE OF THE BRITISH MUSEUM OF NATURAL HISTORY; PRESIDENT OF THE
PALÆONTOGRAPHICAL SOCIETY; ETC.

AND
R. H. RASTALL, M.A., M.INST.M.M., F.G.S.,
UNIVERSITY LECTURER IN ECONOMIC GEOLOGY, CAMBRIDGE.

ASSISTED BY
PROFESSOR J. W. GREGORY, D.Sc., F.R.S., F.G.S.
F. H. HATCH, Ph.D., M.INST.M.M.
PROFESSOR J. E. MARR, Sc.D., F.R.S., F.G.S.
SIR JETHRO J. H. TEALL, Sc.D., LL.D., F.R.S., V.P.G.S.
PROFESSOR W. W. WATTS, Sc.D., LL.D., M.Sc., F.R.S., F.G.S.
HENRY WOODS, M.A., F.R.S.
ARTHUR SMITH WOODWARD, LL.D., F.R.S., F.L.S., F.G.S.

VOL. LVII OF WHOLE SERIES.
JANUARY—DECEMBER, 1920.

LONDON:
DULAU & CO., LTD., 34-36 MARGARET STREET,
CAVENDISH SQUARE, W.1.

1920.

STEPHEN AUSTIN AND SONS, LTD.
PRINTERS, HERTFORD

LIST OF PLATES.

PLATE	FACING PAGE
I. Quartzite Pebbles, Oldhaven Beds.	70
II. Carboniferous Fossils, Siam	178
III. Fig. 1 : Lateritized Norite, Wilberforce, Sierra Leone. Fig. 2 : Residual Laterite derived from Granite, Baoma, Sierra Leone	220
IV. New Lower Devonian <i>Homalotiti</i>	303
V. Jurassic Ammonites from East Africa	311
VI. Memorial Tablet to Professor James Nicol, Aberdeen	387
VII. Ambulacra of <i>Apatopygus</i> , Oligopodia, and young <i>Echinolampas</i>	393
VIII. Diamond Pipes in Brazil	447
IX. Forsterite Marble, Sleaford Bay	449
X. James Hall, Albany Museum, New York, U.S.A.	483
XI. Diopside and Microcline Rock, Sleaford Bay	492
XII. Cretaceous Echinoidea from Persia	500
XIII. <i>Spharocoryphe thomsoni</i> Reed	534
XIV. Four species of <i>Etheridgina</i>	538
XV. New Ammonite genus, <i>Dayiceras</i>	543
Separate Folding Map : Geology of Ningi Hills, Nigeria (<i>not numbered</i>)	440

LIST OF ILLUSTRATIONS IN THE TEXT.

	PAGE
Sketch-map showing positions of sections of strata near Leighton Buzzard	8
Diagram showing part of beds in the working face of Harris's Pit . . .	10
Diagram of section of <i>Asteroceras obtusum</i>	27
Diagram showing discontinuous siphuncular tube in a Hildoceratid Ammonite	29
Diagram of section in western face of a sand-pit north side of Mile Tree Farm	57
Transverse section of Branksome Chine	72
Longitudinal section of Branksome Chine	73
Longitudinal section of Alum Chine	73
Longitudinal section showing relation of the old and new valleys to the changing shore-line	74
Diagrammatic section showing quartzose conglomerate at Caldon Low . . .	78
Synoptic view of the two interpretations of the section in Harris's Pit . . .	112
<i>Posidonomya Becheri</i> Bronn, var. nov. <i>siamensis</i>	118
Fruit of fossil Charophyte from Locle, Switzerland	127
Sketch-map of North Arran, showing faults and the granite	149
Section from Catacol Bay, through Meall nan Damh, etc. ; section across Glen Rosa	153
Sections across the valley of the Garbh Allt, west of Glen Rosa	158
Sections across the valley of the Gleann Easbuig	159
Sketch-map of the Snowdon district	161
Section from Snowdon to Mynydd Mawr	162
Hypothetical sketch of Snowdon at end of pre-Glacial times	163
<i>Arvicola melitensis</i> sp. nov. Crown view of first and second right lower molars	210
<i>Homalonotus bifurcatus</i> sp. nov.	305
Sketch-map of Castle-an-Dinas	348
Section of workings, Castle-an-Dinas Mine	349
Elutriation curves of sediments to show meaning of "Equivalent Grade"	366
Types of elutriation curves of arenaceous sediments	413
Diagram showing thickness of Thanet Beds	414
Provisional classification of the finer arenaceous sediments	415
Elutriation curves of Thanet Beds	416
Graph showing relation between equivalent grades of Thanet Beds	417
Section along shore at Sleaford Bay	451
Diagrammatic sketch of flat surface of dolomite	461
Logarithms in miles from Charlton	467